INDUSTRY REPORT:

LEADERSHIP IN SUSTAINABLE URBAN WATER MANAGEMENT

AN INVESTIGATION OF THE CHAMPION PHENOMENON
WITHIN AUSTRALIAN WATER AGENCIES

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National Urban Water
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Leadership in Sustainable Urban Water Management:
An Investigation of the Champion Phenomenon Within Australian Water Agencies

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DISCLAIMER

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NATIONAL URBAN WATER GOVERNANCE PROGRAM

The research presented in this industry report is part of the *National Urban Water Governance Program* (the Program), which is located at Monash University, Melbourne. The Program comprises a group of social research projects investigating the changing governance of urban water management in Australia.

The Program is intended to facilitate progress towards achieving a 'Water Sensitive City', a long-term aim of Australia's National Water Initiative, by drawing from a number of social theories concerning institutional and technological change processes, and by undertaking comprehensive social research across Australia.

Three key questions guiding the Program's core research are:

1. What institutional factors are most important for enabling change towards a Water Sensitive City?

2. How can current reform processes be effectively informed and adapted to advance a Water Sensitive City?

3. What are the implications and future roles for professionals in the urban water sector?

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FOREWORD

The way that we manage water in our cities is changing. The Australian water industry is experiencing powerful drivers for change such as drought, climate change and population growth. Increasingly, the industry is responding to these pressures by embracing more sustainable forms of water management, such as water sensitive urban design. In areas where substantial progress is being made, there are emergent leaders or 'champions' who play a critical role in initiating and driving processes of change.

As an industry, we need to know more about the processes of change that move organisations, like urban water agencies, and broader institutions towards more sustainable forms of water management. Last year's Industry Report by the National Urban Water Governance Program titled "*Transition to Water Sensitive Urban Design: The Story of Melbourne, Australia*" highlighted the importance of champions in these processes. The research presented in this report takes the next step, by using research findings, theory and research methods from the leadership literature to closely examine these champions and related leadership processes. As such, it provides new insights from a different perspective on an essential ingredient of change – leadership.

While there is still more to learn about leadership in the context of promoting sustainable urban water management, this report represents a major step forward in our understanding of champions who operate at a middle management and executive level in Australian publicly-managed water agencies. From a practical perspective, the report provides new, evidence-based guidance on ways to build leadership capacity within water agencies to assist the transition to more water sensitive cities.

This report also provides an insight into the enormous effort that groups of leaders in water agencies make to promote sustainable practices, often against substantial resistance. The National Urban Water Governance Program acknowledges the effort of these individuals, as well as the leadership demonstrated by the agencies, who have helped to fund the research underpinning this report.

I commend this report to you. Through André's dedication and rigour he has produced a substantial research outcome and unique insight into the champion phenomenon, well before the completion of his PhD. I am sure that after reading this report you will also look forward to his next instalment.

Associate Professor Rebekah Brown
National Urban Water Governance Program Leader
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EXECUTIVE SUMMARY

AIMS OF THIS REPORT

This report has two objectives. First, it aims to communicate the main findings of a research project that investigated the nature of emergent leaders ('champions') in Australian publicly-managed water agencies who play a key role in promoting sustainable urban water management (SUWM). Second, it aims to communicate a suite of management strategies that can be used within water agencies to: create a supportive leadership context for champions and other leaders involved with the SUWM leadership process; foster effective champions at an executive level ('executive champions'); attract, recruit, supervise and develop the leadership abilities of champions at a middle management level ('project champions'); and encourage distributed (group-based) leadership[1] throughout water agencies to assist the SUWM leadership process.

This report represents a resource to water managers who are seeking evidence-based strategies to help accelerate the transition to 'water sensitive cities' (see Brown *et al.*, 2008). It also provides an opportunity for SUWM leaders to learn more about leadership, reflect on their own leadership performance, and identify strategies for improvement.

OVERVIEW OF THE RESEARCH DESIGN

The research project primarily aimed to identify the attributes of SUWM project champions and use this knowledge to generate practical management strategies to enhance the 'champion phenomenon' in Australian water agencies. As illustrated in **Figure ES-1**, the project involved two phases. Phase 1 was an international literature review that examined five bodies of relevant literature. These were the 'SUWM champion', 'environmental sustainability and leadership, 'champions of innovation', 'organisational leadership' and 'leadership development' literatures. This review led to the development of two *preliminary* conceptual models. These were a model of leadership by SUWM champions and a model of strategies to enhance leadership involving SUWM champions. The review also helped to identify relevant leadership research methods and theories that could be used for Phase 2.

Phase 1 – International Literature Review (2006-07)

- Conducted an international literature review that involved five bodies of literature with numerous themes (Appendix 1 provides a summary).
- Examined industry and academic literature.

Phase 2 – Multiple Case Study (2007-08)

- Investigated SUWM project champions and other leaders involved in the SUWM leadership process in six publicly-managed water agencies in four Australian States.
- Used qualitative and quantitative data collection methods such as group and individual interviews, 360 degree questionnaires and document analysis.
- Used the multiple case study methodology shown in Figure 4 (Section 3.1), including the validation of key findings from the cross-case analysis with industry practitioners via consultation with individuals and workshops.

Figure ES-1 – Overview of Phase 1 and 2 of the project's research design

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[1] 'Distributed leadership' involves several leaders contributing to a process of influence (Gibb, 1954; Gronn, 2000). It is also known as shared (Carson *et al.*, 2007; Pearce *et al.*, 2007), connected (Drath, 2003b) or collective (Hiller *et al.*, 2006) leadership.

Phase 2 was a multiple case study that involved six publicly-managed water agencies located across Queensland, Victoria, Western Australia and New South Wales. The majority of these agencies were local government authorities. Agencies were chosen following consultation with practitioners in the water industry to identify well-known and respected SUWM project champions. These agencies represented a diverse group of organisations in terms of their size, governance arrangements, and the parts of the water cycle they managed. Research within each case study agency included a group interview and a series of individual interviews with staff who were anonymously nominated by their peers as fulfilling six SUWM-related leadership roles, including the roles of project and executive champion. A '360 degree questionnaire' (see Chappelow, 2004) was administered to each of these leaders, their supervisors and up to five of their peers. In addition, relevant documents were analysed and a 'context interview' was undertaken to gather additional information on contextual factors within and outside the agency that affected the SUWM leadership process. A case study report was prepared for each agency. This was followed by a cross case analysis to identify key findings. These findings and related management recommendations were subsequently validated through consultation with the leaders who were involved with the research, as well as academic and industry partners of the National Urban Water Governance Program.

This research design had several strengths. First, it ensured the key findings of the project were grounded in the literature (i.e. peer-reviewed international literature relating to relevant empirical research and theory). Second, it involved in-depth, context-sensitive, empirical, leadership research from six case study agencies that involved multiple methods and sources, as well as qualitative and quantitative data collection methods. Such an approach represents best practice leadership research (see Bryman, 2004; Conger, 1998). Finally, the findings have been validated through consultation with a diverse group of industry practitioners. This approach generates a high degree of confidence that the research findings can be generalised to other Australian publicly-managed urban water agencies.

WHY THIS RESEARCH WAS DONE

In the last decade, Australian academics, industry practitioners and politicians have concluded that SUWM champions often play a critical 'change agent' role in the transition to more water sensitive cities. For example, recent research by the National Urban Water Governance Program concluded that "an important driver of Melbourne's transition [to a more water sensitive city] was the legacy of a committed and innovative group of associated champions working across multiple sectors to advance change" (Brown & Clarke, 2007, p. iv). Despite numerous reports of the value of champions to water agencies, very little context-sensitive, empirical and published research has been conducted that focuses on these leaders. For example, to the author's knowledge there has been no attempt, prior to this project, to examine these leaders using conceptual models, theories and research methods from the international leadership literature.

Another reason for investing in leadership research within the urban water sector is that the current nature of this industry and surrounding context places an increased value on leadership, including emergent forms. In Australia, this context is currently characterised by complex problems and institutional arrangements, significant change, crises, uncertainty, new technology, and an absence of formal procedures to help implement new technologies. In such environments, the need for, and value of, leadership within organisations substantially increases (see Conger, 1993). In addition, there is increasing awareness of the need for different forms of leadership and leaders with particular attributes (e.g. traits, skills and behaviours) to address 'complex challenges'[2], such as driving the transition to water sensitive cities. For example, the literature suggests that in this context, leaders are needed who have the ability to create environments where innovation can occur, undertake advanced forms of social networking, coordinate group-based leadership activities, and exercise influence across organisational boundaries (Commonwealth of Australia, 2007; Drath 2003a & 2003b; Uhl-Bien *et al.*, 2007). This view is broadly consistent with descriptions of the champion phenomenon in Australian water agencies.

Further justification for this research is that Australian industry practitioners and academics have recommended that champions should be recruited and developed to assist water agencies to deliver SUWM. To do this, a sound understanding of the attributes and working environment of these leaders is required. In addition, successful leadership development programs typically use validated conceptual models of leadership and leaders to build the leadership capacity of individuals and teams. Thus, context-sensitive research on these champions and the SUWM leadership process is needed to design customised leadership development initiatives.

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[2] Also known as 'wicked' problems (Commonwealth of Australia, 2007).

KEY RESEARCH FINDINGS

The project found that practitioners in the urban water industry typically defined SUWM champions as emergent leaders who were adept at influencing others to adopt SUWM principles and practices, and had a specific set of personality characteristics, personal values, types of knowledge, skills, types of power and behaviours. These attributes are summarised in (Section 4.1), and were generally consistent with the attributes that were subsequently identified by gathering data on the attributes of champions in each case study agency. The use of the term 'SUWM champion' by industry practitioners was also context-dependent, being most commonly used when an emergent leader was working in an environment where there was some resistance to change.

Examination of the leadership activities of champions and their colleagues led to the development of a *conceptual model of typical SUWM leadership processes* in publicly-managed urban water agencies (see **Figure ES-2**). This model conceptualises SUWM leadership as being a process of influence to promote SUWM that typically has three phases (i.e. *Initiation*, *Endorsement* and *Implementation*),

involves several leaders, is strongly affected by context, and different styles of leadership dominate each phase. Project champions are often highly visible as emergent leaders at the *Initiation* phase, as they trigger new SUWM policies or projects. They are often catalysts for change and strongly drive the process during this phase. During this phase they are similar to "key change agents" in Ottaway's (1983) typology of 10 types of change agent. During the *Initiation* phase, the dominant leadership style is 'focussed' (Gibb, 1954), where champions operate primarily as individual leaders. During the subsequent *Endorsement* phase, project champions often receive assistance from more senior leaders, including executive champions, and commonly take advantage of 'windows of opportunity' that open as their leadership context changes. During this phase, the dominant leadership style is 'instrumental' (Bryman *et al.*, 1996b) as formal, senior leaders provide direction and allocate resources to the SUWM initiative. During the final *Implementation* phase, many leaders from across organisational boundaries collaborate to deliver the SUWM policy or project. During this phase, the dominant leadership style is 'distributed' (Gibb, 1954).

1. Initiation Phase
(focussed leadership)

- Initiation of a SUWM project or policy.
- The leadership process is dominated by individuals (i.e. Gibb's [1954] 'focussed' leadership).
- Initiatives often originate from project champions at a middle management level.
- Initiatives sometimes originate from political champions, but rarely from executive champions. Executive champions play an 'enabling' role in all three phases (see Uhl-Bien *et al.*, 2007).
- Project champions are usually essential, highly visible, and strongly drive the initiatives.

2. Endorsement Phase
(instrumental leadership)

- Initiatives are endorsed by formal leaders with high levels of position power (e.g. executives).
- The leadership process is dominated by formal leaders (i.e. Bryman *et al.*'s [1996b] 'instrumental leadership').
- Resources are allocated for implementation.
- The context can be instrumental in opening or closing 'windows of opportunity' to affect change.
- Executive champions are usually essential.
- Project champions are often involved in presenting initiatives to decision makers, and building coalitions of support.

3. Implementation Phase
(distributed leadership)

- Initiatives are delivered, usually through multi-disciplinary and cross-boundary project teams involving many leaders and high levels of collaboration.
- The leadership process is group-based (i.e. Gibb's [1954] 'distributed' leadership).
- Project champions often play an important role in bringing teams together from across organisational boundaries, coordinating leadership activities, and steering projects around obstacles.
- Leaders occupying the six roles described in Appendix 4 are typically involved.

Figure ES-2 – A process model of SUWM leadership in publicly-managed urban water agencies

The most effective project champions had attributes and a leadership context that enabled them to operate effectively during *all three* phases of the model shown in **Figure ES-2**[3]. For example, they were unusually strong transformational leaders[4], they often worked in tandem with executive champions, they had substantial levels of both position and personal power, they excelled at particular types of distributed leadership behaviours, they had excellent strategic social networks, and they received strong support from other SUWM leaders in their organisations.

The research project identified a large number of strongly developed attributes of the SUWM project champions. These are summarised in the revised *conceptual model of leadership by SUWM project champions* in **Figure ES-3**. This model also identifies those attributes that were associated with most effective project champions, as well as attributes that could be used to distinguish between the project champions and typical 'non-champion' leaders from the same organisations who played other important roles in the SUWM leadership process (e.g. the roles of 'technical innovator' and 'maintainer / implementer'). This model describes specific personality traits (i.e. personality characteristics and personal values), areas of knowledge, demographic attributes (i.e. generation, seniority, tenure, experience working in the SUWM field, professional mobility, nature of tertiary education and influential life experiences), leadership styles, core leadership behaviours, influence tactics, types of power, tactics for building power, and typical leadership outcomes at an individual, team and organisational level. As one example, the model indicates that the SUWM project champions had high to very high levels of the 'openness to experience' personality trait[5], which was a distinguishing attribute compared to local control groups.

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[3] A multi criteria analysis was used to assess the relative leadership effectiveness of the six studied project champions. The raw data for this analysis originated from their supervisors and peers. These raters provided confidential ratings of leadership effectiveness based on their observations. For more information on this aspect of the research, see Section 5.5.1 and Appendix 5.

[4] These leaders engage in a style of leadership that involves moving collaborators "beyond immediate self-interests through idealized influence (charisma), inspiration, intellectual stimulation, or individualized consideration" (Bass, 1999, p. 11). For more information, see Section 6.1.

[5] This refers to a person's innate propensity to be creative, innovative and open to new approaches.

Supportive Contextual Factors (Internal)

Organisational culture (OC):
- 'Adaptive orientation' at the branch level (e.g. third tier).[1]
- Supportive of emergent leaders at the branch level.
- Strong to very strong environmental values at the branch level.
- Often a highly supportive dominant OC, characterised by support for learning, innovation, risk-taking, collaboration and sustainability.*

OC change management and leadership development (LD) programs:
- Organisation-wide and complementary OC change management and LD programs that encourage distributed leadership.*

Support from colleagues:
- Strong support from colleagues across the organisation.
- Often support is lateral (from peers) and vertical (from executives and politicians) in the organisation.*

Resources (funds and skills):
- Well resourced organisations.
- Existence of several funding strategies for SUWM.
- Proactive succession planning and recruitment of project champions.

Organisational task system:
- Predominantly 'boundary spanning units' at the branch level.[2]

Nature of core tasks:
- Typically complex and require a high level of creativity and personal effort / sacrifice.

Organisational size:
- Commonly medium-sized (540 to 1,200 staff).

Strength of SUWM policy framework:
- Commonly strong to very strong.

Personal Characteristics

Personality traits:
- Personality characteristics:
  - Extroversion†: Borderline introvert / extrovert* to strong extrovert.
  - Confidence†: High to very high* levels.
  - Openness to experience†: High to very high levels.
  - Persistence and commitment: High levels.
  - Agreeableness†: Low to very low levels.
  - Motivation and determination†: High levels.
  - Vision and a strategic perspective: High levels.
  - Enthusiasm: High* to very high levels.
  - Propensity to focus on communication†: High to very high levels.
  - Energy: Medium to high levels.
  - Regulatory focus†: Strong 'promotion focus'.[3]
- Personal values:
  - Strength of agreement between personal values and the SUWM philosophy: Moderate* to strong.
  - Strength of personal commitment to environmental sustainability: Moderate to strong.

Behaviours

Leadership style:	• Use transformational leadership, especially the inspirational motivation element.†*
	• Use distributed leadership, with a preference for some behaviours (see below).†*
Core behaviours:	• Questioning the status quo; and gathering political and managerial support: Both high to very high levels.†*
	• Articulating a vision for SUWM; 'scanning behaviours'[4]; establishing pilot projects; expressing enthusiasm and confidence; and persisting under adversity: All high to very high levels.†
	• Communicating clearly and frequently; coordinating leadership; and getting the right people involved: All high to very high levels.
Influence tactics:	• Frequent use of numerous influence tactics.†
	• Rational persuasion used "fairly often" to "frequently".
	• Ingratiation used "fairly often" to "frequently".†
	• Inspirational appeals, consultation and personal appeals: All used at least "fairly often".†
	• Exchange and coalition tactics: Both used at least "sometimes".†

Outcomes influence future behaviour.

Outcomes
Individual performance at SUWM leadership:
Team performance at SUWM leadership within the organisation:
Organisational performance at delivering SUWM on-the-ground:

Figure ES-3 – The revised conceptual model of leadership by SUWM project champions (using a framework that has been modified from Yukl, 1989)

Demographics:

• Generation:	Currently Generation X (born: 1961 - 1980) and Baby Boomers* (born: 1944 - 1960).
• Seniority in organisation:	Level 2 (senior manager) to 4 (team leader). More commonly level 4.
• Tenure in organisation:	≥ 5 years.
• Experience working in the SUWM field†:	≥ 3 years.
• Professional mobility†:	High level*.
• Nature of tertiary education:	Highly varied, but commonly non-engineering.
• Life experiences (childhood):	Often experienced periods of hardship and/or took on high levels of responsibility.
• Life experiences (adulthood):	Influential mentors*; periods of extensive travel; and/or a highly diverse work history†.

Knowledge:

• General knowledge re SUWM: Moderate to high* levels.
• Strategic and normative knowledge: Both moderate to high levels.
• Relational knowledge: Moderate to very high levels.
• Knowledge of local and/or State government politics: Low to very high*.

Supportive Contextual Factors (External)

Pace and extent of change:

• The local environment is subject to rapid and substantial change.

Crises and associated community and political concern:

• Water and waterway-related crises are driving change through community and political concern.

The local physical environment, waterway history and community ownership of waterways:

• Local waterways are highly valued but are under threat.

• The region has a history of local waterway-related problems.

• There is a strong connection between the community and local waterways.

Power

Types:	• Relative use†: Personal > position power.
	• Level of personal power†: High.
	• Level of position power: Low to moderate*.
	• Level of expert power: High.
	• Level of referent power: Low to moderate*.
Tactics:	• Networking type: Operational > personal > strategic.
	• Strategic networking†: Very weak to very strong*.
	• Strong and valuable relationships with more senior champions†.
	• Preference for the 'strong tie strategy' of social networking.*5

Outcomes help to build knowledge and experience.

Outcomes help to build or reduce power.

NOTES

* = Often associated with the most effective champions.

† = Often a distinguishing attribute for SUWM project champions when compared to 'non-champion' SUWM leaders from the same agencies.

For a description of highlighted terms, see:

1. Pawar & Eastman (1997) and Shamir & Howell (1999).

2. Pawar & Eastman (1997).

3. Higgins (1998).

4. Andersson & Bateman (2000).

5. Granovetter (1973).

• Highly varied: Multi criteria analysis ratings ranged from 51% to 94%.
• Little variation: moderate to high levels.
• Little variation: moderate to high levels.

Major differences between project champions were identified early in the multiple case study process. For example, some were less extroverted and took fewer risks, but were more persistent and collaborative. Further investigation of these differences led to descriptions of two types of SUWM project champion (i.e. a diplomat and maverick type). Typical differences between these champions are described in (Section 8.2). Additional examples of these differences include the tendency of diplomat champions to be more emotionally stable, have higher levels of self-awareness, greater ability to influence in both vertical and lateral directions in their organisations, and be more effective leaders in supportive environments than maverick champions. The research also found that in environments that were relatively hostile towards SUWM, maverick champions could be highly effective. These environments were best suited to maverick champions who had the ability to directly influence executives and politicians. In short, the nature of the local leadership context strongly influences which type of champion is likely to be more effective.

The differences between these two types of champion reflect differences in their personality traits (e.g. the propensity to take risks) and their leadership context (e.g. the existence of supportive colleagues across the organisation). As a champion's context changes it is possible that they could modify their leadership behaviours and style. For example, a maverick champion could become more collaborative as their surrounding context becomes more supportive. This would, however, be a challenging leadership development task, especially from maverick champions given their lower levels of self-awareness.

Several lines of evidence confirmed that Distributed Leadership Theory (Gibb, 1954; Gronn, 2000) was highly relevant to the SUWM leadership process and leadership activities of the project champions. Principally, champions clearly engaged in a leadership process that involved many leaders. The most effective project champions worked in organisations where distributed leadership was common amongst executive champions, project champions and 'non-champion' SUWM leaders. These project champions were also unusually proficient at some distributed leadership behaviours, such as 'gathering political and managerial support'. In addition, distributed leadership behaviours were generally more relevant to diplomat than maverick champions. Coordination of distributed leadership was also important both within the organisation and region. At a regional level, 'bridging organisations' like regional SUWM capacity building programs often played a valuable coordination role.

The project champions also engaged in transformational leadership, although only two of the six champions were unusually strong transformational leaders compared to local control groups. Transformational leadership-related behaviours and personality characteristics of champions were strongly related to the 'inspirational motivation' element of this leadership style[6]. These were often distinguishing attributes of champions. In general, the most effective champions were the strongest transformational leaders, as predicted by Transformational Leadership Theory (Bass, 1985) and published empirical research (see DeGroot *et al.,* 2000; Lowe *et al.,* 1996).

The research found that 11 contextual factors significantly affected the SUWM leadership process and the activities of project champions in the case study agencies. Those that operated within water agencies included the nature of the organisational culture, the existence of complementary corporate programs to manage the dominant organisational culture and build distributed leadership capacity, the nature of support from the champion's colleagues (including executive champions), available resources (i.e. funds and human resources), the type of organisational task system in the champion's work unit, the nature of core tasks in this unit, the organisational size and the strength of the organisation's SUWM policy framework. Those factors that operated outside water agencies included: the pace and extent of change (e.g. population growth); crises and associated community and political concern (e.g. severe drought); and the nature of the local physical environment, waterway history and the degree to which the community felt ownership of local waterways. A brief description of these factors is provided in the revised *conceptual model of leadership by SUWM project champions* in **Figure ES-3**.

Although the focus of the research was on project champions, it found that executive champions often played a number of important roles in the SUWM leadership process. These include attracting, recruiting and planning the succession of project champions, working in tandem with these champions (e.g. providing resources and sharing the risk of projects), and helping to develop the leadership abilities of these champions. There was also evidence to support the view that the executive champions played an 'enabling leadership' role, as predicted by Complexity Leadership Theory (Uhl-Bien *et al.,* 2007) which is a recent extension to Distributed Leadership Theory. This role involved creating an environment for innovation and collaboration, where project champions and other SUWM leaders could initiate, drive and deliver SUWM projects.

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[6] This element involves giving meaning to the work of collaborators, arousing team spirit, displaying enthusiasm, confidence, persistence and optimism, clearly communicating a leadership vision, as well as demonstrating commitment to the vision and shared objectives (Avolio & Bass, 2004; Bass *et al.,* 2003).

The research identified two types of executive champion, namely transformational and enabling types. The transformational champions were relatively rare and had attributes that more closely matched the description of executive champions from the literature compared to enabling champions. Transformational champions were strong transformational leaders with very high levels of the 'inspirational motivation' element of this leadership style. Compared to the enabling champions, they had higher levels of enthusiasm and energy, were more innovative and had a greater propensity to take risks. They also had stronger personal values relating to sustainability. These champions were more focused on managing the organisation's dominant culture, while enabling champions were more focused on managing structures, processes and tasks. The transformational champions were also stronger communicators, more senior in their organisations, and associated with higher performing organisations in terms of on-the-ground delivery of SUWM practices.

Transformational executive champions were particularly valuable as they had the greatest ability to change the dominant organisational culture of an agency so that it was supportive of SUWM, SUWM project champions and distributed leadership. Supportive cultures typically valued innovation, continuous learning, responsible risk-taking, collaboration and sustainable practices. Agencies with these cultures hosted effective diplomat project champions.

THEORETICAL AND PRACTICAL IMPLICATIONS

From a theoretical perspective, the research tested and refined two preliminary conceptual models that were developed following an international literature review. The *revised* models of leadership by SUWM project champions (**Figure ES-3**) and strategies to enhance leadership by these champions and the SUWM leadership process (**Figure ES-4**) include many aspects that were predicted and validated, as well as some new, unexpected findings. The most important aspects of the revised models are consistent with the international literature. For example, the literature review concluded that distributed and transformational leadership theories were likely to be relevant to SUWM project champions. This was found to be the case. In addition, an association was found between the most effective project champions and those that had unusually strong transformational and distributed leadership abilities compared to local control groups. Again, this finding is consistent with the literature.

The research has also contributed to the theoretical understanding of the 'champion phenomenon' by producing a process model of SWUM leadership in water agencies (**Figure ES-2**). This model is significant as it explains the relationships between the three phases of typical SUWM leadership processes, the dominant leadership styles that occur within each phase (i.e. focused, instrumental and distributed leadership), the influence of contextual factors, and input by different types of leaders, including project and executive champions. It is a major step forward from more simplistic models that involve champions, like the Tandem Model of Championship[7] (Witte, 1977).

Another theoretical implication is support for the view that SUWM champions have a set of personality characteristics, skills and behaviours that are ideally suited to leadership in contexts that are dominated by 'complex challenges', such as making the transition to water sensitive cities. Specifically, the research found a high degree of consistency between the attributes of leaders that are suggested in the literature as being needed to address these types of challenges and the most strongly developed attributes of SUWM champions. For example, executive champions engaged in 'enabling leadership' (Uhl-Bien *et al.*, 2007) to create environments where emergent leaders could collaborate and innovate, even in organisations where the dominant organisational culture was hostile towards SUWM. In addition, project champions (especially the diplomat variety) were highly persistent, undertook advanced forms of social networking, frequently questioned the status quo, excelled at working across organisational boundaries and coordinated group-based processes of leadership.

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[7] This model involves executive and project champions working together in the same organisation to drive innovative projects.

Strategies to Create a Supportive Leadership Context for SUWM

• Foster a supportive dominant organisational culture (e.g. that values learning and collaboration).
• Encourage project champions (PCs) to build strong social networks (laterally and vertically).
• Develop a stable and substantial funding base for SUWM initiatives.
• Implement a strong policy framework for SUWM.
• Help PCs to prepare for future opportunities to advance SUWM.
• Foster greater connection between the local community and waterways to build support for SUWM.

Strategies to Attract and Recruit SUWM Project Champions

• Attract in preference to recruit (e.g. use public appearances of transformational executive champions to attract transformational PCs to the organisation).
• Use knowledge of PC attributes (e.g. personality characteristics, personal values and demographics) as shown in Figure 32 (Chapter 8) to help identify potential PCs when recruiting staff.
• Use knowledge of the strong 'promotion regulatory focus'[2] of PCs (i.e. their need for personal growth and achievement) to attract them to a project or role.
• Provide opportunities across the organisation for PCs to emerge by volunteering to lead new SUWM projects.

Strategies for Supervising SUWM Project Champions

• Provide promising PCs with at least a 'moderate' level of position power (e.g. a position at or above the 'team leader' level of management).
• Encourage champions to develop social networks and exercise influence *both* laterally and vertically in their organisations.
• Identify potential PCs early, and provide best practice leadership development opportunities.
• Use selection guidelines to maximise the organisation's return on investment from leadership development programs (LDPs). These include: the personal characteristics shown in Figure 32; age (i.e. early career professionals); a strong commitment to learning and personal development; a desire to lead; a high need for achievement; persuasive and inspirational communication skills; strategic thinking ability; pragmatism; a high general mental ability; confidence; and a propensity to be self-motivated.
• Implement and regularly revise individual leadership development plans for PCs once they have begun a LDP.
• Be aware that PCs can emerge strongly as SUWM leaders but operate well below their potential as leaders.

Strategies to Develop the Leadership Ability of SUWM Project Champions

• Ensure PCs have access to a best practice LDP (see Chapter 10 and Appendix 1).
• As part of the LDP, regularly deliver customised 'feedback intensive programs' (i.e. leadership development 'short courses') for PCs. These usually run for 3 to 6 months, involve 360 degree feedback, intensive training and produce ongoing, individual leadership development plans. These plans should include a suite of actions to build leadership strengths and overcome weaknesses.
• As part of the LDP, PCs are likely to benefit most from:
  - Mentoring arrangements to help build knowledge, strategic networks, referent power and awareness of their leadership context.
  - Anonymous, 360 degree feedback mechanisms to identify leadership strengths and weaknesses, as well as build self-awareness.
  - Training that helps PCs to use the leadership styles, core behaviours and power building tactics listed in Figure 32.
  - Training on advanced strategies for social networking.
  - Challenging job assignments to build personal power (e.g. expert and referent forms) as well as new networks and knowledge.

Figure ES-4 – The revised conceptual model of strategies to enhance leadership by SUWM project champions and the SUWM leadership process

- Seek to align values (i.e. values in the organisational culture, personal values of SUWM leaders, and sustainability values).
- Use 'cross-boundary SUWM leadership teams' to build collegial support for PCs.
- Match PCs with transformational leadership abilities with 'boundary spanning units'[1] in the organisation (e.g. strategic planning and policy units).
- Implement mechanisms to encourage efficient collaboration in large organisations (e.g. regular strategic discussion forums).
- Use independent scientific monitoring and public reporting mechanisms to build community, political and managerial support for SUWM.

Strategies to Foster Effective SUWM Executive Champions

- Encourage the emergence of executive champions (ECs) by providing opportunities for executives to voluntarily lead major SUWM projects that cross 'functional silos' in an agency.
- Recruit and select ECs (especially the transformational type) using knowledge of their attributes (see Chapter 9).
- Develop leadership abilities of ECs using knowledge of their core behaviours (see Chapter 9).
- Encourage ECs to create a supportive environment for SUWM.
- Encourage ECs to plan for succession in the EC and PC roles, and proactively recruit PCs when required.
- Encourage ECs to identify potential PCs and guide their development.
- Encourage ECs to help design and deliver LDPs for other SUWM leaders.
- Encourage ECs to work in tandem with PCs and help to build their leadership capacity.

Strategies to Encourage Distributed Leadership for SUWM

In addition to strategies that encourage a supportive context for collaboration and distributed leadership:
- Encourage the use of behaviours associated with diplomat champions when developing the leadership ability of PCs (see Figure 33).
- Routinely look for candidates with leadership potential as part of ongoing recruitment processes in addition to job-specific competencies.
- Encourage members of cross-boundary, multi-disciplinary SUWM teams to view leadership as having both 'focused' and 'distributed' components, and emphasise the need for coordination of distributed leadership in teams.
- Provide all SUWM team members with access to LDPs that focus on distributed and transformational leadership behaviours.
- Use a 'team charter process' for new SUWM teams.
- Use 'team leadership coaches' for well resourced SUWM teams during major projects.
- Ensure organisational performance incentives value the achievement of team goals.

NOTES
For a description of highlighted terms, see:
1. Pawar & Eastman (1997) or Section 7.2.
2. Higgins (1998) or Section 5.2.

From a practical perspective, the conceptual models of the SUWM leadership process (**Figure ES-2**) and leadership by SUWM project champions (**Figure ES-3**) provide a sound theoretical framework for the development of a suite of evidence-based management strategies to build SUWM leadership capacity within Australian water agencies. Such strategies are described in Chapter 10 and summarised in **Figure ES-4**. In particular, better understanding of the SUWM leadership process has led to the recommendation that strategies to enhance the leadership abilities of project champions need to be accompanied by strategies to create a more supportive context for SUWM, build the leadership abilities of executive champions, and promote distributed leadership throughout water agencies.

The identification of two types of project champion also has practical implications. As indicated in **Figure ES-5**, the decision whether to recruit and develop diplomat or maverick project champions should reflect the extent to which the leadership context is supportive of SUWM. Using Brown's (2008) typology of five SUWM-related organisational development phases, the context within a water agency would typically become more supportive of SUWM from the *Project* to the *Integrated* phase. As the context becomes more supportive, it also becomes more suited to the emergence and effective operation of the highly collaborative diplomat project champions. Another implication of **Figure ES-5** is that maverick champions should try to use the signature behaviours of diplomat champions (see in Chapter 8) more frequently if their organisation is evolving towards the *Integrated* phase and their leadership context is becoming more supportive of SUWM. This is likely to be a challenging process requiring self-awareness, commitment and a customised individual leadership development plan.

Five Phases of Organisational Development for Adopting SUWM

Project
- SUWM driven by a technical officer.
- SUWM seen as a one-off project.
- Low performing agencies.

Outsider
- Driven by an environmental officer or group ('outsiders').
- Low budget and priority for SUWM.
- Poor inter-agency relationships.

Growth
- Driven by a team.
- Growing resources and commitment.
- Unclear roles and responsibilities.
- Maverick champions more common.

Insider
- Driven by a high profile SUWM champion (maverick and diplomat types).
- Strong networks between the champion and external groups.
- Stronger inter-agency relationships.

Integrated
- Driven by many leaders throughout the agency.
- SUWM is 'core business'.
- The culture values cooperation and learning.
- High performing agencies.

Context more suited to *maverick* project champions

Context more suited to *diplomat* project champions

- From the *Project* to *Integrated* phase, the context within water agencies typically becomes more suited to the emergence and effective operation of diplomat project champions. This changing context is likely to be characterised by a more supportive dominant organisational culture and SUWM policy framework, more supportive executives, a relatively strong resource base for SUWM, and greater levels of distributed and collaborative SUWM leadership.

- SUWM champions may be most visible during the *Insider* phase (see Brown, 2005a & 2008), where their power has grown so they become influential change agents who challenge traditional water management practices. At the *Integrated* phase, however, they may be less conspicuous, as they are just one of many leaders in their agency working on SUWM leadership processes. During the *Integrated* phase, diplomat project champions may be seen by their colleagues as "champions" *only* when they work outside the agency (i.e. in less supportive contexts).

Figure ES-5 – The relationship between project champion type, context and Brown's (2008) typology of SUWM-related organisational development

NOTES:

- The five phases in Brown's typology are not necessarily sequential as organisations may skip developmental phases. They may also move in either direction.

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LIST OF ACRONYMS

COAG	Council of Australian Governments.
CSA	Case study agency.
EC	Executive champion.
LDP	Leadership development program.
MCA	Multi criteria analysis.
NSW	New South Wales.
NUWGP	National Urban Water Governance Program.
OC	Organisational culture.
PC	Project champion.
SMART	Simple multiple attribute rating technique.
SUWM	Sustainable urban water management.
WSAA	Water Services Association of Australia.

1. INTRODUCTION

This report has two objectives. First, it aims to communicate the findings of a research project that investigated the nature of emergent leaders ('champions') in Australian water agencies who play a key role in promoting sustainable urban water management (SUWM). This project investigated definitions used in the water industry relating to SUWM champions and leadership involving these champions, the many attributes of these leaders, types of SUWM champion, the relevance of leadership[8] theories, and contextual factors that influenced leadership involving these champions. Second, this report aims to communicate a suite of management strategies that can be employed within urban water agencies to: create a supportive leadership context for SUWM champions and the leaders who work closely with them; foster effective SUWM champions at an executive level; attract, recruit, supervise and develop the leadership abilities of SUWM champions at a middle management level; and encourage SUWM leadership that is distributed throughout the organisation.

The research associated with this report is part of a PhD project within the National Urban Water Governance Program at Monash University. As such, the scope of the research project and this report has practical limitations. Specifically, the research focused on SUWM champions within publicly-managed urban water agencies in Australia, such as local government authorities and water corporations. In addition, it primarily investigated champions at a middle management level (i.e. 'project champions'; see Section 4.2.1).

The following chapter (Chapter 2) provides background information on what is known about SUWM champions, the role they play in helping organisations and regions move towards more water sensitive cities, explains the rationale for the research project, and explains the relationship between the project and the National Urban Water Governance Program. The methodology chapter (Chapter 3) provides an overview and explanation of the project's research design. Chapter 4 summarises the research findings relating to the views of urban water industry practitioners with respect to definitions of SUWM champions and leadership by these champions, as well as their views of possible types of SUWM champion. Chapter

4 includes a new, three-phase process model of SUWM leadership in publicly-managed urban water agencies that involves SUWM champions as well as several other leaders. Chapter 5 highlights the key attributes of SUWM project champions, such as strongly developed personality traits and frequently used influence tactics. This chapter also flags attributes that were associated with more effective champions and two types of champion. Given the large number of attributes addressed in Chapter 5, it is a lengthy chapter. A summary of the key findings of this chapter can, however, be found in (Section 8.2). Chapter 6 explores the relevance of leadership theories to SUWM champions and the SUWM leadership process. This chapter focuses on transformational (Bass, 1985) and distributed (Gibb, 1954; Gronn, 2002) leadership theories, as these were identified as having the greatest potential relevance during a review of the international literature (see Chapter 3).

Chapter 7 highlights the contextual factors that strongly influenced leadership processes involving SUWM champions, both within and outside the case study agencies. Chapter 8 brings together the research findings of the previous chapters to form a conceptual model of leadership by SUWM project champions to supplement the three-phase process model of SUWM leadership in Chapter 4. This chapter also summarises the main differences between two types of SUWM project champion. Chapter 9 examines the nature of 'executive champions' (see Section 4.2.1) involved with promoting SUWM, including types of executive champion, and key roles they played in the leadership process. Chapter 10 provides a suite of management strategies that flow from the research findings, and can be used to strengthen the leadership capacity of organisations that are committed to implementing SUWM. This chapter includes a conceptual model of strategies to enhance leadership by SUWM project champions and the SUWM leadership process. Finally, Chapter 11 provides concluding remarks, including some key messages for practitioners in urban water management agencies who have the capacity to attract, recruit and develop leaders who can play an important role in accelerating the transition to more water sensitive cities.

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[8] This report defines leadership as a process of influence that occurs within the context of relationships between leaders and their collaborators, and involves establishing direction, aligning resources, generating motivation and providing inspiration to achieve mutual interests (adapted from: Rost, 1993; and Kotter, 1998).

2. BACKGROUND

2.1. THE TRANSITION TO MORE WATER SENSITIVE CITIES

There is growing awareness that traditional approaches to urban water management that involve profligate water and energy use, little recycling and generation of considerable waste, are no longer sustainable due to impacts such as waterway degradation as well as vulnerability to shortages of water supply (Butler & Maksimovic, 1999; Wong, 2006; Wong & Brown, 2008). These approaches are now seen as being inconsistent with the contemporary values of many Western countries (see Ashley *et al.*, 2004; Brown *et al.*, 2006a; Niemczynowicz, 1999). Within this context, a new paradigm of 'sustainable urban water management' has emerged (see Brown, 2008; Wong, 2006) building on early contributions from Mouritz (1996) and Newman & Kenworthy (1999). In Australia, terms such as 'water sensitive urban design' (Lloyd *et al.*, 2002) and 'integrated urban water management' (Mitchell, 2004) are commonly used to describe the application of this paradigm.

Adopting the SUWM paradigm at a city-wide scale and thereby making the transition to water sensitive cities (Brown *et al.*, 2008; Monash University, 2007) is, however, problematic. As highlighted by Brown & Farrelly's (2007) meta-analysis of the literature, numerous impediments exist to the adoption of this paradigm; the bulk of which are socio-institutional rather than technical. These socio-institutional barriers result in a phenomenon called 'institutional inertia' (Brown, 2005b; Brown *et al.*, 2006a) where the "agreed vision for sustainable water management is not realised in the delivery of such outcomes in the current institutional system" (Brown *et al.*, 2006a, p. 5-2). It is within an environment of institutional inertia that emergent leaders known as 'champions' sometimes emerge to act as change agents (White, 2006) and promote the SUWM paradigm.

2.2. WHAT IS KNOWN ABOUT SUWM CHAMPIONS

There is no consistent definition of champions within the international literature (see Andersson & Bateman, 2000; Howell *et al.*, 2005; Markham *et al.*, 1991; Schon, 1963; White, 2006). Strong and repeated themes indicate that champions are emergent leaders and may be a specific type of change agent (see Ottaway, 1983). They are often centrally involved with effecting a transformation within an organisation or broader institution, particularly early in the process of change (Ottaway, 1983). This transformation may involve the adoption of a new philosophy, technology and/or work-related process (Andersson & Bateman, 2000; Howell *et al.*, 2005; Shane *et al.*, 1995).

Prior to this research project, only Bright (2006) had attempted to define SUWM champions. Bright saw these leaders as "people who decide to overtly and energetically support greater awareness and implementation of sustainable urban water management regardless of whether they have a specific or formal responsibility to do so" (White, 2006, p. 5). This report offers a revised definition in Chapter 4, which is based on research into the use of the term within Australian water agencies.

The international literature on 'champions of innovation' highlights the existence of two types of champion that may exist within an organisation. These are 'project / product champions' and 'executive champions' (see Howell & Higgins, 1990a; Howell *et al.*, 2005; Maidique, 1980). This relatively mature body of literature suggests project champions act as change agents on a daily basis within organisations or broader institutions, and primarily rely on personal forms of power. In contrast, executive champions are more senior leaders with high levels of position power who allocate resources to innovations and who share some of the associated risks (see Maidique, 1980). Executive champions rarely promote innovations on a daily basis and may work in tandem with project champions (Witte, 1977). As highlighted in Chapter 4, this typology was found to be relevant to SUWM champions.

There has been a paucity of focused, in-depth, context-sensitive research on SUWM champions that has been grounded in leadership theory and has used established leadership research methods. Knowledge relating to SUWM champions prior to this research project primarily originates from only three research projects. First, Brown (2003 & 2008) investigated the implementation of sustainable forms of urban stormwater management within local government agencies in Sydney. Although champions were not the focus of her research, Brown identified that in some agencies, stormwater officers acted as SUWM champions. She also described some of the roles, skills, personality

traits, and demographic features of these leaders. Brown's research included a five phase typology of SUWM-related organisational development (see in Chapter 11). Using this typology, Brown found that SUWM champions were most visible as change agents during the penultimate *Insider* phase.

Second, within the 'grey literature', White (2006) interviewed a small number of SUWM practitioners in Australia who were perceived to be SUWM champions. She also undertook a study tour which involved gathering data from similar leaders in North America. This project highlighted attributes potentially associated with these leaders. White's research findings are regarded as preliminary given the lack of an anonymous peer nomination process to identify champions, and a control group to determine whether any of the identified attributes were unusual compared to other leaders involved with the SUWM process.

Finally, Brown & Clarke (2007) investigated the historic institutionalisation of water sensitive urban design across metropolitan Melbourne from 1965 to 2006. This case study highlighted some of the personality traits of influential SUWM champions. In addition, this research recognised the interplay between champions and their context, and identified eight enabling contextual variables that assisted these leaders to successfully promote the adoption of water sensitive urban design.

The research findings of Brown (2003 & 2008), Brown & Clarke (2007) and White (2006) that relate to SUWM champions have been integrated with relevant research findings from other bodies of literature (e.g. literature on 'environmental champions' and 'champions of innovation') to develop a preliminary conceptual model of leadership by SUWM champions (Taylor, 2007). This model is explained in Section 2.4.

2.3. THE ROLE AND VALUE OF SUWM CHAMPIONS

It is now widely accepted in Australia that SUWM champions can play a critical role in the transition to water sensitive cities. This conclusion is supported by academics (see Brown, 2003; Brown & Clarke, 2007; Brown *et al.*, 2006a; Mitchell, 2004), industry practitioners (see Edwards *et al.*, 2006 & 2007; Keath & White, 2006; Newton *et al.*, 2006; White, 2006) and politicians (see Commonwealth of Australia, 2002). To illustrate, Brown & Clarke (2007) concluded that "an important driver of Melbourne's transition [to a more water sensitive city] was the legacy of a committed and innovative group of associated champions working across multiple sectors to advance change" (p. iv). Further, they stated that during numerous oral histories, interviews and workshops "the roles of key champions were continuously highlighted and discussed by participants (including fellow champions) as key drivers for Melbourne's transition" (p. 43). From an industry perspective, White's (2006) view that "strategic investment by the water industry in the development of change agents [champions] is essential to drive a culture of change and implement sustainable urban water management" (p. 4) reflects the value that some practitioners place on these leaders.

While the case for SUWM champions often being an ingredient for change is strong, it would be unwise to conclude that SUWM champions are *always* a catalyst for promoting SUWM. This point is supported by Brown *et al.* (2006a), who recommended that efforts to build institutional capacity to promote SUWM should not focus on only one aspect of institutional capacity (e.g. fostering champions). The key message here is that efforts to attract, recruit and develop SUWM champions are unlikely to be successful at facilitating change in water agencies if they are not part of a more comprehensive suite of institutional capacity building initiatives.

Another reason for caution when making generalisations about the role and value of SUWM champions is that leadership is acutely sensitive to context (Bryman *et al.*, 1996b; Pettigrew & Whipp, 1991). Consequently, the role and value of SUWM champions will be strongly influenced by contextual factors (see Brown & Clarke, 2007). The research presented in Chapter 7 reinforces this point.

2. BACKGROUND

2.4. GROUNDED CONCEPTUAL FRAMEWORKS FOR RESEARCHING SUWM CHAMPIONS

The primary focus of this research project was to investigate the nature of SUWM project champions and use this knowledge to develop practical management strategies to enhance their emergence and effectiveness. Consequently, the initial stages of the project produced preliminary conceptual models for these two aspects. The preliminary models were developed following a review of the international literature. As such, the models are grounded in peer-reviewed, empirical research and relevant leadership theory. The methodology used for the literature review is explained in Chapter 3, and a summary of the review's findings is provided in Appendix 1. The two preliminary models are explained in the following sections, and refined versions are presented in Chapters 8 and 10 which summarise the knowledge generated from this project.

2.4.1. PRELIMINARY CONCEPTUAL MODEL OF LEADERSHIP BY SUWM CHAMPIONS

The preliminary conceptual model of leadership by SUWM champions is provided in Appendix 2. The structure of this model is based on Yukl's (1989) "integrating conceptual framework" for leadership effectiveness, while its content reflects this project's literature review. The model does not distinguish between project and executive champions, as the literature review found no research that recognised or examined the differences between these two types of leaders in the context of SUWM. The following paragraphs highlight six features of this model.

First, the model indicates that personal characteristics, such as personality traits, provide the potential for this form of leadership (see Kirkpatrick & Locke, 1991; Yukl, 1989) by interacting with contextual factors to influence the behaviour and power of champions. The literature review found that SUWM champions are likely to have: distinctive personality characteristics (e.g. persistence); a strong commitment to environmental values; high levels of emotional intelligence[9]; a set of core skills that correlate with their key leadership behaviours (e.g. transformational leadership skills); a sound general knowledge of urban water management, as well as excellent knowledge of the strategic and relational dimensions of their institutional environment; and a distinctive demographic profile (e.g. highly diverse and relevant work experience).

Second, the model highlights that the type and amount of power held by champions may interact with contextual factors to affect their choice of leadership behaviours. The literature review found that these champions are likely to rely on personal forms of power which they derive primarily from broad, diverse and strategically developed social networks. Successful project champions may work in tandem with executive champions and are likely to be central in their social networks[10]. Third, champion behaviours interact with contextual factors to produce leadership outcomes (e.g. the delivery of SUWM projects). Typical leadership behaviours are likely to include those associated with transformational leadership (see Bass, 1985 & 1999), coordinating distributed leadership within groups (see Gibb, 1954; and Gronn, 2002), and using a wide variety of influence tactics (e.g. rational persuasion and ingratiation) to suit their leadership context.

Fourth, the outcomes of an episode of leadership may affect the future power and behaviour of champions, as well as develop personal characteristics, such as their skills, knowledge and experience. Fifth, the model includes numerous contextual factors that are likely to assist leadership by SUWM champions. These factors primarily originate from research investigating conditions that promote the emergence and effectiveness of transformational leaders (e.g. Klein & House, 1995; Pawar & Eastman, 1997; Shamir & Howell, 1999). These are potentially relevant, as the literature review found strong evidence to suggest that SUWM champions probably engage in transformational leadership (see Appendix 1).

Finally, the model includes personality traits and behaviours that indicate that SUWM champions engage in distributed as well as transformational leadership. Both of these styles of leadership are based on empirically validated leadership theories. Chapter 6 explains these theories and examines their relevance to SUWM project champions. In short, Bass (1999) defined transformational leadership as the leader moving their collaborators "beyond immediate self-interests through idealized influence (charisma), inspiration, intellectual stimulation, or individualized consideration" (p. 11). Transformational Leadership Theory (Bass, 1985 & 1999) describes sets of personality traits (e.g. enthusiasm and persistence) and behaviours (e.g. developing a shared vision of the future and communicating this vision) that are frequently displayed and used by transformational leaders. In contrast, Distributed Leadership Theory (Gibb, 1954; Gronn, 2000) conceptualises leadership as a process of influence that occurs in groups and involves more than one leader. Leaders and 'followers' in these groups may exchange roles over time to achieve group goals (Pearce *et al.*, 2007). This behaviour-based theory does, however, recognise that instances of leadership may lie anywhere along a continuum between 'focused' and 'distributed' leadership (Carson *et al.*, 2007; Gronn, 2002). Focused leadership is the traditional leadership perspective that focuses on an individual, such as a designated team leader (Gibb, 1954).

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[9] Emotional intelligence is the ability to perceive emotions accurately, use emotions to facilitate thought, understand emotion, and manage emotion (see Mayer & Salovey, 1997; Rosete & Ciarrochi, 2005).

[10] In this context, centrality is defined as champion popularity, the extent to which they engage in information brokering between people in their networks, and the extent to which they associate with powerful people in their networks (see Balkundi & Kilduff, 2005).

2.4.2. PRELIMINARY CONCEPTUAL MODEL OF STRATEGIES TO ENHANCE LEADERSHIP BY SUWM PROJECT CHAMPIONS

The second preliminary conceptual model brought together key findings from the international literature regarding how to enhance leadership by SUWM project champions within publicly-managed water agencies. This model is provided in Appendix 3, and includes the following five groups of potential strategies: attraction and recruitment activities to identify potential champions; supervision-related activities to foster champion emergence and leadership activities that benefit the organisation; selection of potential or actual champions who are likely to benefit most from leadership development activities; ongoing leadership development activities that are customised for champions; and indirect activities to promote champion emergence and effectiveness that involve the management of contextual factors within a water agency.

2.5. THE RATIONALE FOR INVESTIGATING LEADERSHIP BY SUWM CHAMPIONS

The rationale to examine different forms of leadership within the urban water sector and then develop ways to enhance leadership is twofold. First, there have been numerous calls for improved leadership within the urban water sector in Australia and North America (see Allon & Sofoulis, 2006; Brown, 2003 & 2005b; Chanan & Woods, 2006; Grigg, 1993; Mass, 2003; Sadler, 1998). Second, the current context of urban water management in Australia is one that demands exemplary leadership. This context is currently characterised by significant change, crises, uncertainty, many alternative approaches, complex problems and institutional arrangements, new technology, and an absence of formal procedures to assist the adoption of new technology (see Commonwealth of Australia, 2002; Engineers Australia, 2006; Kaspura, 2006; Mitchell, 2004; WSAA, 2007). In such environments, the need for, and value of, leadership substantially increases (Conger, 1993).

There are three additional reasons why leadership research should now focus on leadership involving SUWM champions. First, despite the potential value of SUWM champions (see Section 2.3), very little context-sensitive, empirical and published research has been conducted on these leaders. For example, to the author's knowledge there has been no attempt, prior to this project, to examine these leaders using conceptual models, theories and research methods from the international leadership literature.

Second, the challenge of making the transition to 'water sensitive cities' (Brown *et al.*, 2008) is consistent with the description of 'complex challenges' (Drath, 2003a & 2003b), which are also known as 'adaptive' (Bouwhuis, 2007) or 'wicked' problems (Commonwealth of Australia, 2007). These challenges are characterised by complexity, the propensity to cross jurisdictional boundaries, disagreement among stakeholders on the causes and solutions, many inter-dependencies, instability, the need to change people's behaviour, and a history of chronic policy failure (Commonwealth of Australia, 2007). They also require new ways of thinking (e.g. systems thinking), new problem-solving methods and tools, learning and innovation (Drath, 2003a; Marion & Uhl-Bien, 2001; Uhl-Bien *et al.*, 2007).

To respond to these problems it is thought that strong leaders are needed throughout organisations who have a specific set of leadership skills and can adopt specific leadership styles. For example, the literature suggests that in this context, leaders are needed who have the ability to create environments where innovation can occur, undertake advanced forms of social networking, coordinate group-based leadership activities, and exercise influence across organisational boundaries (Commonwealth of Australia, 2007; Drath 2003a & 2003b; Uhl-Bien *et al.*, 2007). It is possible that the existence of SUWM champions in Australian water agencies represents the emergence of leaders whose personality characteristics, skills and leadership styles are inherently suited to the complex problem of promoting the widespread adoption of SUWM. From this perspective, leadership research is needed to examine this proposition.

Finally, the recruitment and development of champions has been proposed as one initiative to help deliver widespread adoption of SUWM practices in Australia (Brown *et al.*, 2006a; Lloyd, 2001; White, 2006; White & Lloyd, 2004). To do this, a sound understanding of the attributes and working environment of these leaders is required. In particular, successful leadership development programs typically use validated conceptual models of leadership to encourage leaders to revise their existing mental models and modify specific behaviours (Avolio, 2005). Thus, research on these leaders is needed to help build best practice leadership development programs.

2.6. RELATIONSHIP BETWEEN THIS RESEARCH AND THE NATIONAL URBAN WATER GOVERNANCE PROGRAM

The research presented in this report is part of the National Urban Water Governance Program, based at Monash University. This research program is primarily seeking to answer the following three research questions: What *factors* are most important for enabling change towards a 'water sensitive city' (see Figure 1.), given that this concept represents a radical challenge to traditional ways of managing water on a city-wide scale. How can current *water reform* processes be informed and adapted to advance the water sensitive city? What are the practical *implications* for urban water managers and strategists? The research program is producing a suite of industry and academic publications to communicate answers to these questions (see www.urbanwatergovernance.com). These publications include reports on SUWM barriers and drivers, SUWM champions, strategies to build institutional capacity to promote SUWM, and SUWM-related transformative change interventions. This industry report is part of this suite of publications.
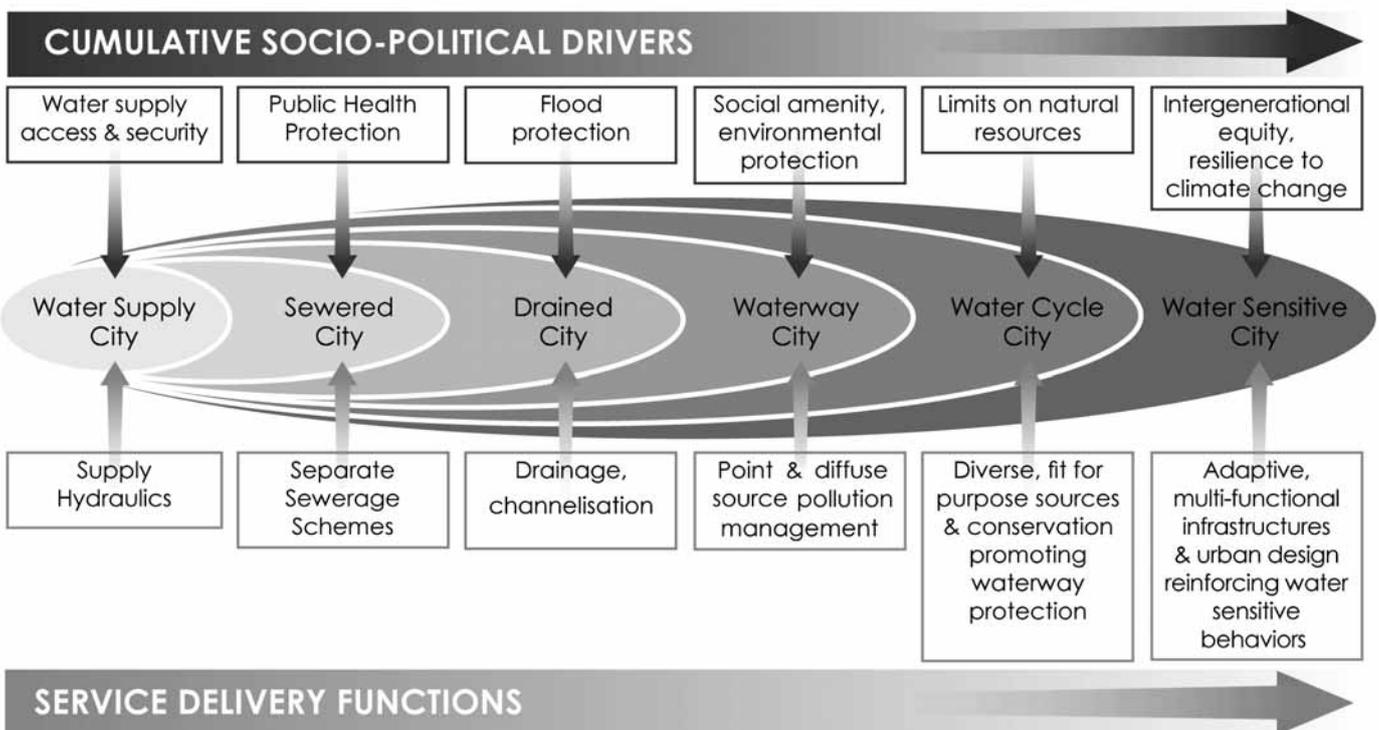
Figure 1 – A transitions framework for urban water management that includes the concept of a 'water sensitive city' (from Brown *et al.*, 2008)

3. METHODOLOGY

3.1. OVERVIEW OF THE RESEARCH DESIGN

This report summarises the findings from the first two phases of a three-phase research project. The key activities within each phase are summarised in Figure 2. Phase 1 (2006-07) was an international literature review involving five bodies of literature. As indicated in Figure 3, these were the SUWM champion, environmental sustainability and leadership, 'champions of innovation', organisational leadership, and leadership development literatures. This review is summarised in Appendix 1. It led to the development of the *preliminary* conceptual models of leadership by SUWM champions (see Appendix 2) and strategies to enhance leadership by SUWM project champions in water agencies (see Appendix 3). It also identified relevant leadership research methods for subsequent phases.

Phase 1 – International Literature Review (2006-07)

- Conducted an international literature review, that involved five bodies of literature with numerous themes (see Figure 3).
- Examined industry and academic literature.

Phase 2 – Multiple Case Study (2007-08)

- Investigated SUWM project champions and other leaders involved the SUWM leadership process in six publicly-managed water agencies in four Australian states.
- Used qualitative and quantitative data collection methods such as group and individual interviews, 360 degree questionnaires and document analysis.
- Used the methodology in Figure 4, including the validation of key findings from the cross-case analysis with industry practitioners.

Phase 3 – Field Experiment Involving a Customised Leadership Development Program (2008-09)

- Will design, deliver and evaluate a customised, three to six month, feedback intensive leadership development program using the findings from Phases 1 and 2.
- The program will primarily aim to enhance behaviours associated with the most effective SUWM champions.

Figure 2 – Overview of the research design

Sustainable urban water management champion literature:
- Champions
- Change agents

Environmental sustainability and leadership literature:
- Champions and change agents
- Environmental leaders
- Leadership in the context of organisational change

Champions of innovation literature:
- Personal characteristics
- Behaviours
- Effectiveness
- Management strategies

Organisational leadership literature:
- Conceptual models (incl. elements such as leader traits, skills, knowledge, demographics, behaviours / styles and power)
- Leadership theory (e.g. transformational and distributed leadership)
- Leadership in the context of organisational change
- Contextual factors that affect leadership

Leadership development literature:
- Attraction strategies
- Recruitment strategies
- Selection strategies
- Development methods
- Methods to alter the organisational context to enhance leadership

Figure 3 – The bodies and themes of reviewed literature

3. METHODOLOGY

Phase 2 (2007-08) involved a multiple case study (Yin, 2003). The author gathered and analysed data from six publicly-managed urban water agencies across Queensland, Victoria, Western Australia and New South Wales, using the process outlined in Figure 4. Table 1 summarises some of the key features of these agencies, such as the parts of the urban water cycle they managed. The use of six case study agencies is a response to Yin's (2003) recommendation that researchers should use more than five case studies to generate a high degree of certainty in multiple case study research. The case study agency selection process firstly identified organisations that hosted SUWM project champions who were strongly and repeatedly nominated when the author consulted with SUWM practitioners in industry and academia in four Australian states. The process then involved selecting six organisations that represented a diverse group of agencies in terms of the parts of the water cycle they managed, their geographic location, drivers for change, size and governance arrangements.
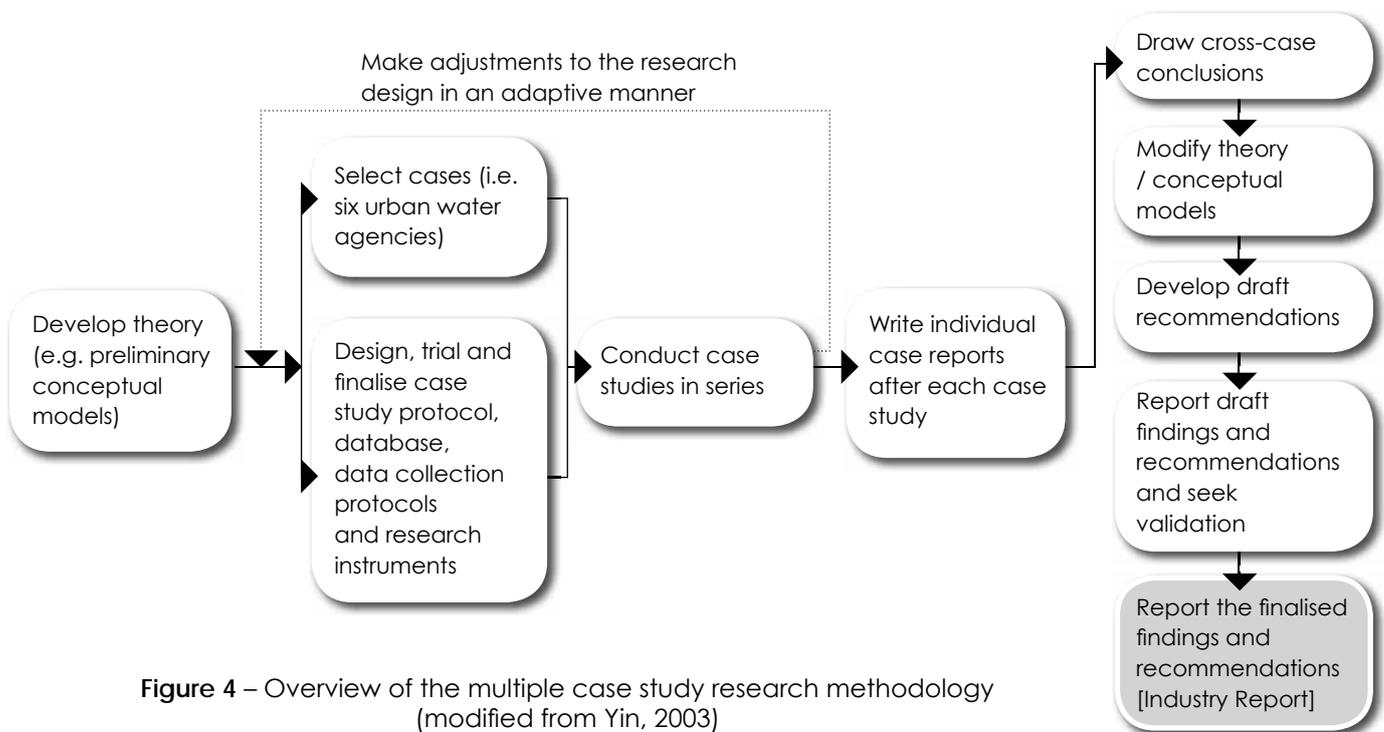
Figure 4 – Overview of the multiple case study research methodology (modified from Yin, 2003)

Table 1 – Some key features of the six case study agencies

Governance Arrangements	Agency Size (approximate staff numbers)	Parts of the Water Cycle They Managed			
		Water Supply	Wastewater	Stormwater	Waterways
Local government authority (LGA).	Medium (540 – 1,200).	No.	No.	Yes (shared).	Yes (shared).
LGA.	Large (>1,200).	Yes (shared).	Yes.	Yes.	Yes.
LGA.	Medium (540 – 1,200).	Yes (shared).	Yes.	Yes.	Yes.
Publicly owned corporation.	Medium (540 – 1,200).	Yes (shared).	Yes (shared).	Yes (shared).	Yes (shared).
LGA.	Medium (540 – 1,200).	No.	No.	Yes.	Yes (shared).
LGA.	Medium (540 – 1,200).	No.	No.	Yes.	Yes (shared).

NOTES:
• "Yes (shared)" = responsibility for managing this part of the urban water cycle was shared with another agency.
• The case study agency names and codes have not been included in this table to help protect the anonymity of the surveyed champions.

Within each case study agency, the author initially conducted group interviews with four to six staff who played important but different roles in promoting SUWM. These interviewees were selected by a liaison officer within each agency who was closely involved with the SUWM leadership process. As part of each group interview, the author facilitated an anonymous peer nomination process to identify staff members who were performing six specific leadership roles, including the roles of SUWM project champion and SUWM executive champion. These roles are described in Appendix 4. These descriptions were initially derived from the literature (see Esteves & Pastor, 2002; Howell & Higgins, 1990a; Maidique, 1980) and then refined through consultation with practitioners in the SUWM industry before being used in each case study agency.

Within each agency, the author conducted 30 to 90 minute individual interviews with the people most strongly nominated by their peers for the six leadership roles in Appendix 4, and administered a two-part '360 degree questionnaire' (see Chappelow, 2004). This questionnaire gathered data from the leaders, their supervisors and five of their peers. The individual interview protocol and the 360 degree questionnaire were primarily designed to test the validity of the preliminary conceptual model of leadership by SUWM champions (Appendix 2). The individual interviews asked a series of open questions that related to all parts of the conceptual model. Some of the data collected from these interviews were subsequently coded to allow quantitative analysis. The questionnaire included multi-item scales from the literature (e.g. the Ten Item Personality Inventory [Gosling et al., 2003] to assess the strength of personality characteristics such as 'openness to experience'), a proprietary leadership questionnaire (i.e. the 45 item Multifactor Leadership Questionnaire [MLQ - Form 5X; Avolio & Bass, 2004] to measure the frequency of transformational leadership behaviours and leadership effectiveness), and customised questions that gathered data on specific aspects of the preliminary conceptual model.

The author also conducted an interview in each case study agency to gather additional information on the context in which SUWM project champions worked, given the importance of context on leadership (Bryman et al., 1996b). These interviews included a hand-out to help interviewees describe contextual factors using typologies from the literature, such as the distinction between organisational cultures with 'adaptive' or 'efficiency' orientations (see Pawar & Eastman, 1997). In addition, the author analysed relevant documents (e.g. the primary SUWM-related strategic plans and policies in each agency) to help understand the local context for SUWM leadership. Finally, the key findings and recommendations from Phases 1 and 2 were validated through consultation with industry practitioners involved with each of the case study agencies and the National Urban Water Governance Program.

Phase 3 (2008-09) will involve a customised, three to six month, 'feedback intensive' leadership development program (see Guthrie & King, 2004), which will be conducted as a field experiment. The outcomes of Phase 1 will guide the program's design, delivery and evaluation, while the outcomes of Phase 2 will inform the program's content.

Brief descriptions of data analysis methods are provided in Chapters 4 and 5 as different types of data are introduced and discussed. A critical element of the data analysis, however, was the use of four types of control group to help identify project champion attributes. First, the attributes of the six project champions were compared to those in the preliminary conceptual model of these leaders (see Appendix 2) that was built using research findings reported in the literature. Second, the attributes of each project champion were compared to those of 'non-champion' leaders who occupied four leadership roles in the same organisation. Appendix 4 includes a description of these 'non-champion' roles.

Third, the attributes of the three most effective project champions were compared to the attributes of the other three champions. To do this, the author used the 360 degree questionnaire to obtain supervisor and peer ratings of leadership effectiveness, and a multi criteria analysis. An overview of the methodology is provided in Appendix 5. It is emphasised that all six project champions were widely regarded as influential leaders and assets to their organisations, so the "least effective" project champions should not be regarded as ineffective leaders.

Finally, once it was clear that there were two types of project champion (i.e. diplomat and maverick types), the attributes of these types were closely compared. These four types of controls are summarised in Figure 5. They collectively allowed the author to identify strong and distinguishing attributes of SUWM project champions, as well as those associated with the more effective champions and the two types of project champion.

Control group 2:
Each project champion was compared to the four 'non-champion' SUWM leaders from the same organisation (see Appendix 4).

Most effective champion

Diplomat project champion (shaded)

Control group 4:
The diplomat project champions were compared to the maverick champions.

Control group 3:
The three most effective project champions were compared to the other three champions.

Maverick project champion (not shaded)

Control group 1:
The project champions were compared to the research findings reported in the literature (as summarised in a preliminary conceptual model; see Appendix 2).

Least effective champion

Figure 5 – Four types of control groups that were used to analyse the attributes of the six SUWM project champions

NOTES:
• PC = project champion.
• While PC2 was assessed as the least effective of the six project champions, all of these leaders were highly regarded in their regions and organisations as being influential in progressing SUWM.

3.2. RATIONALE FOR THE RESEARCH DESIGN

The rationale for the research design has four dimensions. First, the three phases (see Figure 2) allowed the author to develop a strong conceptual framework that was grounded in peer-reviewed empirical literature and theory (Phase 1), test this framework using data from urban water agencies (Phase 2), and test the practical application of newly generated knowledge (Phase 3).

Second, the international literature review (Phase 1) was expanded well beyond just the SUWM champion / change agent literature given the paucity of published research on SUWM champions and the opportunity to benefit from more mature bodies of relevant literature. Wolfe & Gertler (2002) highlighted the potential value of this approach, suggesting that "the most important innovations arise when previously separate and distinct bodies of knowledge are brought together in innovative ways" (p. 22).

Third, using a multiple case study (Phase 2) provided many benefits. Critically, it ensured that all of the leadership-related data from the case study agencies was gathered with an understanding of the leadership context. Multiple case studies are ideally suited for researching phenomena that are strongly affected by contextual factors (Yin, 2003), such as leadership (Bryman *et al.*, 1988 & 1996b; Parry & Sinha, 2004; Pettigrew, 1987). Multiple case studies are also suited to research projects that seek to understand why phenomena occur, but where behavioural events cannot be controlled (Yin, 2003). In addition, the multiple case study research design provided a practical framework within which the author was able to use a mix of qualitative and quantitative data collection methods. Such an approach has been strongly encouraged

by leadership researchers (see Berson, 1999; Bryman, 2004; Carless, 1998; and Conger, 1998), as researchers can enjoy the benefits of qualitative methods (e.g. acquisition of rich data on the contextual environment of leadership) and quantitative methods (e.g. close examination of champion attributes using validated psychometric instruments).

Finally, the multiple case study allowed the author to use source and methodological triangulation (see Bryman, 2004; Punch, 2005) to test the validity of the preliminary conceptual model of leadership by SUWM champions. For example, to assess the extent to which transformational leadership was used by SUWM leaders in each case study, the author used three methods (group interviews, individual interviews and the MLQ instrument within the 360 degree questionnaire) and gathered data from up to 48 people per case study agency (i.e. six individual leaders, their supervisors, up to five of their peers, as well as up to six per people in the group interview). This approach helped to identify strong, replicated findings.

In conclusion, the project's research design has produced research outcomes that: are grounded in peer-reviewed, empirical research findings and theory from five bodies of international literature; have been derived from in-depth, context-sensitive, empirical, leadership research from six case study agencies, that involved multiple methods and sources, as well as qualitative and quantitative data collection methods; and have been validated through consultation with a large group of industry practitioners. This approach generates a high degree of confidence that the findings can be generalised to other Australian publicly-managed urban water agencies.

4. INDUSTRY PERCEPTIONS OF SUWM CHAMPIONS

This chapter examines the views of practitioners in the Australian SUWM water industry with respect to: the definition of a 'SUWM champion'; possible types of SUWM champion; and the definition of leadership by SUWM champions (sometimes called 'championship'). The author sought early clarification of these issues, given the lack of widely-accepted definitions or descriptions in the industry. Subsequent chapters of this report examine whether these views are consistent with the measured attributes of SUWM champions.

4.1. AN INDUSTRY DEFINITION OF SUWM CHAMPIONS

Group interviewees in the case study agencies referred to specific personality characteristics, personal values, types of knowledge and skills, types of power, behaviours and contextual factors in order to define SUWM champions who operated in organisations such as theirs. These defining attributes are listed in Table 2. Overall, interviewees indicated that SUWM champions were emergent leaders who had these attributes and were adept at influencing others to adopt SUWM principles and practices.

Table 2 – Attributes commonly used to define SUWM champions in group interviews

Attribute Type	Repeated and/or Strongly Emphasised Attributes
Personality characteristics	• Innovative and creative (linked to the 'openness to experience' personality trait – see Section 5.2.1).* • Persistent and resilient.* • Passionate / enthusiastic about the issue being championed.* • Credible and highly respected by colleagues. • Strongly driven to influence others and promote change.
Personal values	• Strong personal commitment to the issue being championed and environmental sustainability.*
Knowledge and skills	• A good general knowledge of the urban water industry.* • Knowledgeable of urban water management technology, but were not necessarily specialists.* • Advanced skills at exercising influence (e.g. via strong political skills, communication skills and choosing the right influence tactic for a given target and context).*
Power types	• Power from strong social networks (e.g. with technical experts and politicians).* • Power from their credibility and respect amongst colleagues. This power was slowly earned.* • Power from a good general knowledge of urban water management.*
Behaviours	• Adept at identifying influence opportunities, choosing the right influence tactics for the right target and time, and executing a variety of tactics*. • Focused on developing and encouraging colleagues.* • Proficient at advanced forms of social networking.*
Leadership context	• The term 'SUWM champion' has most relevance in an organisational context where there is resistance to change.

NOTES:

Where there was disagreement within a group on a characteristic attribute, it was omitted from this table. Only strongly emphasised and/or repeated attributes have been included. * = Attributes that were subsequently confirmed by empirical research involving SUWM project champions in the case study agencies (for a summary of these findings, see Figure 32 in Chapter 8).

Personality characteristics as well as types of knowledge and skills were used in all case studies to define SUWM champions. This highlights the potential importance of innate personality traits (e.g. persistence) as well as abilities that can be consciously developed (e.g. general knowledge of the urban water industry). In relation to personality characteristics, group interviewees from several case study agencies stressed that SUWM champions were: innovative and creative; persistent and resilient; passionate about the issue being championed; credible; respected by colleagues; and strongly driven to initiate change.

With respect to personal values, group interviewees from several case study agencies felt that SUWM champions were typically passionate about the issue they were promoting (as argued by Markham *et al.* [1991] in relation to 'champions of innovation') as well as the philosophy of environmental sustainability. Several group interviewees also suggested that the strong drive of champions was related to the strength of their personal commitment to the issue being championed. One interviewee referred to this level of commitment as being "almost a religious fervour".

Group interviewees believed that these champions also had advanced skills in exercising influence (e.g. via political skills, communication skills and choosing the right influence tactic for a given target and context). They also were seen as having a very good general knowledge of the urban water industry, and had knowledgeable of the technical dimensions of water management, but were not necessarily technical specialists.

In relation to power, group interviewees generally felt SUWM champions relied primarily on personal rather than position power (see Yukl, 1981) to exercise influence. Specifically, their power was thought to be derived from their unusually strong social networks (e.g. involving technical experts and politicians), slowly-earned credibility and respect amongst colleagues, and expert knowledge (e.g. a good general knowledge of urban water management).

Signature leadership behaviours of SUWM champions that were suggested by interviewees included identifying opportunities for influence, choosing the right influence tactics for the right target and time, and executing a variety of tactics. They were also adept at developing and encouraging colleagues, and undertaking advanced forms of social networking. Although the views expressed about SUWM champions in each case study were overwhelmingly positive, a few interviewees referred to dysfunctional behaviours, such as "haranguing" and engaging in marketing activities with "little substance" behind their rhetoric. These views indicate that SUWM champions were not always seen as assets to an organisation.

Descriptions of behaviours and personality characteristics that were used by group interviewees to define SUWM champions were coded against five leadership styles, namely, transformational, transactional, laissez-faire, instrumental and distributed leadership. These styles are described in Table 4 (Section 5.4). The coding data from each case study are plotted in Figure 6. These data indicate that industry stakeholders generally felt SUWM champions were transformational leaders (see Bass, 1985).
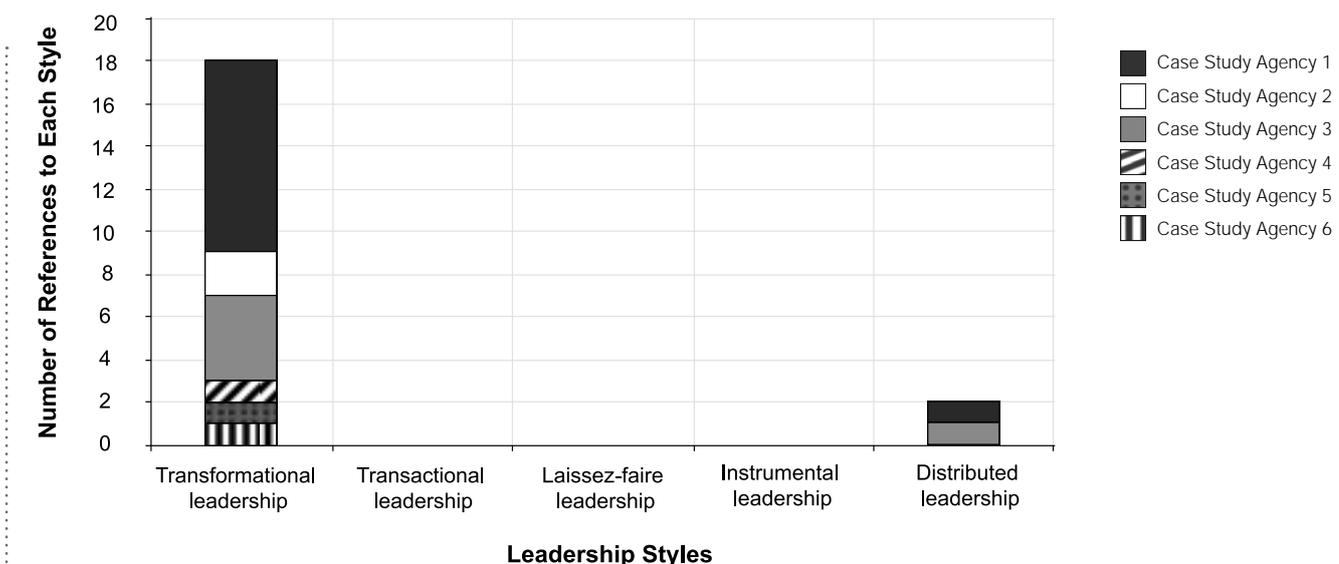
Figure 6 – Coding of leadership styles embedded within SUWM champion definitions

NOTES:
• For a description of each leadership style, see Table 4 in Section 5.4.
• The first three styles in this figure originate from the 'Full Range Leadership Model' (Avolio, 1999; Avolio & Bass, 2002; Bass & Avolio, 1990). Antonakis & House (2004) recommended extending the 'Full Range Leadership Model' to include instrumental leadership (see Bryman *et al.*, 1996b). In addition, distributed leadership (Gibb, 1954) has been added given the relevance of this style to SUWM champions and the SUWM leadership process (see Chapter 6).

Interviewees in one case study agency felt strongly that the term 'SUWM champion' was context-dependent. In this agency, highly visible leaders were labelled 'champions' by their colleagues if they were promoting SUWM in organisational contexts outside the agency where there was significant resistance to change. The term was not used, however, to describe the same leaders when they were working within their own agency to promote SUWM, as there was a strong, dominant organisational culture that was supportive of SUWM. In short, interviewees felt the champion label was more relevant to individualistic and highly visible leaders who were battling organisational inertia to promote SUWM. This view is consistent with Ottaway's (1983) description of 'key change agents', who initiate processes of change, have a high degree of independence, and need less direction than other types of change agents.

4.2. POSSIBLE TYPES OF SUWM CHAMPION

To further understand industry perceptions and definitions of SUWM champions, group interviewees were asked if they felt there were different types of SUWM champion that operated in and around agencies such as theirs. It was widely felt that there were different types of champion, although interviewees were tentative in their descriptions of possible typologies. The following three sections outline their views.

4.2.1. PROJECT AND EXECUTIVE CHAMPIONS

Group interviewees in all case study agencies supported the relevance of the project and executive champion typology emanating from the 'champions of innovation' literature (see Howell & Higgins, 1990a) and the Tandem Model of Championship (Witte, 1977). Interviewees from the local government agencies strongly and consistently emphasised that effective SUWM champions at an executive level were rare in local government (especially within the first two tiers of management) and were usually 'enabling' leader-managers (see Uhl-Bien *et al.*, 2007) rather than enthusiastic, inspirational, transformational leaders (see Bass, 1985 & 1999). The enabling executive champions typically did not initiate SUWM projects and were not highly visible, but were strongly supportive of project champions at lower levels, provided project champions significant freedom and resources, and shared some of the risk associated with SUWM innovations.

Interviewees provided two possible reasons why enabling executive champions appeared to be more common in local government. First, the nature of executive roles and typical organisational cultures in local government would not attract strongly transformational leaders who were instinctive change agents and looking for environments that were highly receptive to change. Second, executive managers in local government have to manage a very large number of issues, which limits their ability to get heavily involved with championing any one issue.

As part of the methodology to identify project and executive champions in each of the case study agencies, group interviewees were asked to anonymously nominate colleagues who best matched six internal leadership roles relating to SUWM. These roles are described in Appendix 4. The resulting data provides additional support for the relevance of the project and executive champion typology. Figure 7 plots the strength of nominations for the people most strongly nominated for both champion roles in each of the case study agencies. The nomination strength is a function of the percentage of possible nominations the person received from their peers, as well as the strength of the 'match' between their attributes and the champion role description (also expressed as a percentage). Data relating to 'match strength' was gathered during the anonymous peer nomination process.

Figure 7 indicates that project and executive champions received moderate to strong nominations in all six case study agencies. In addition, the strength of nominations for project champions was generally stronger than for executive champions, especially in local government agencies. The author offers two explanations for the relatively weak nominations for local government executive champions. First, the relatively low percentage of possible nominations is likely to reflect that four of the five executive champions were the enabling type (see Chapter 9) with a low organisational profile. Second, the relatively low 'match strength' is also likely to reflect the rarity of transformational executive champions in the local government agencies, as the two executive champions in Figure 7 whose attributes best matched the executive champion role description from the literature were the transformational type.
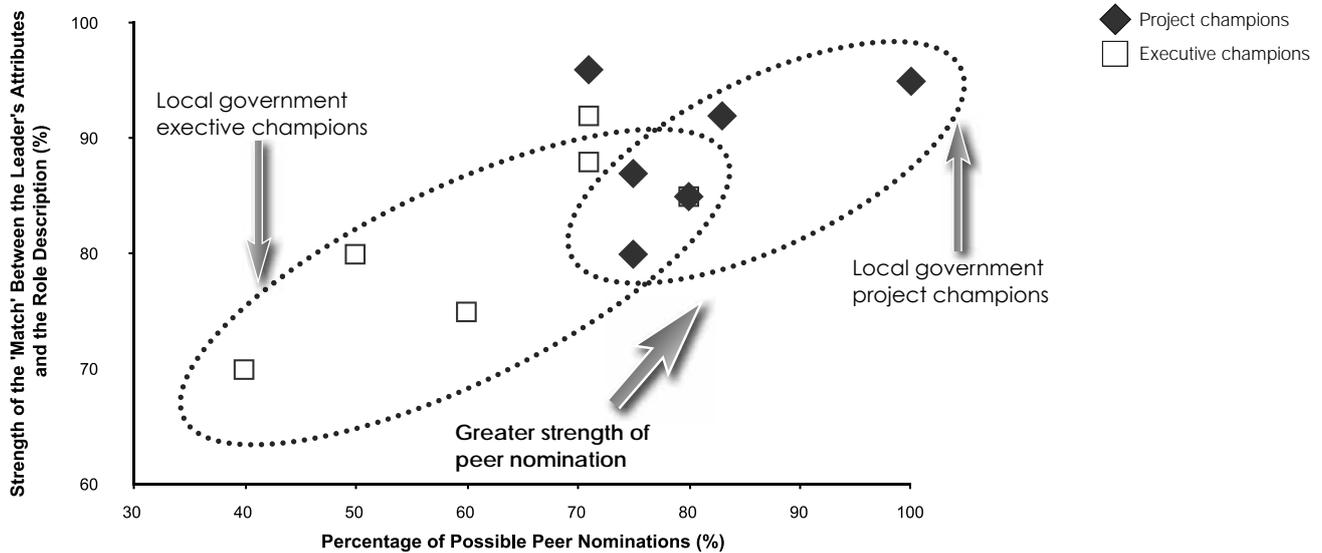
Figure 7 – The strength of nominations for identified project and executive SUWM champions

NOTES:

• For the role descriptions provided during the nomination process, see Appendix 4.

• A 'match strength' was provided with each nomination, indicating the extent to which the person's attributes matched the leadership role description.

The anonymous peer nomination process also indicated that in two of the case study agencies, the most strongly nominated project champions were in the process of becoming executive champions. These project champions received more than 50% of the possible number of peer nominations for the executive champion role. These were senior project champions at the second and third tier of management, as shown in Figure 8. The data in Figure 8 also indicate that the studied project champions most commonly occupied formal organisational roles at the fourth tier of management (i.e. the 'team leader' level), while executive champions typically occupied roles at the second or third tier of management. In five of the six case study agencies, the project and executive champion roles were separated by only one tier of management.
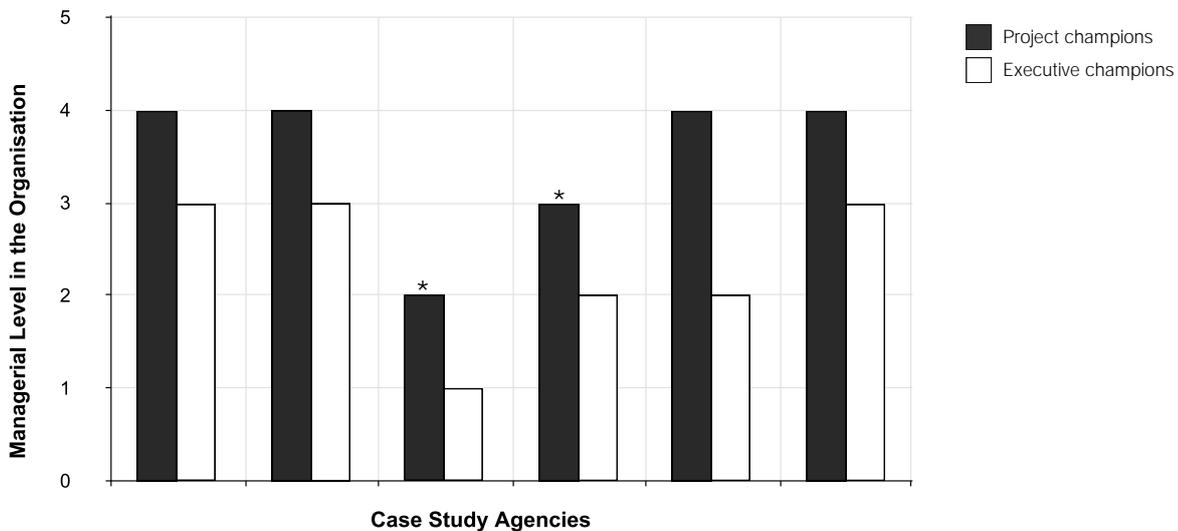
Figure 8 – The managerial level of the most strongly nominated project and executive champions

NOTES:

• A 'managerial level' of 1 is equivalent to the chief executive officer or managing director role.

• * = project champions who also received peer nominations for the executive champion role.

4.2.2. POLITICAL AND EXTERNAL CHAMPIONS

The anonymous peer nomination process indicated that political SUWM champions were common, with one to five people being nominated for this role in each of the case study agencies. Political champions were local government mayors, other councillors and State government ministers. Strongly nominated political champions were less common. For example, only two case study agencies hosted a political champion who received 100% of the possible nominations for this role.

External SUWM champions were also common, with two to six people being nominated for this role in each of the case study agencies. These champions included local academics, engineering consultants and staff from organisations that helped to build SUWM-related institutional capacity in the region. The strength of nominations for external champions was, however, relatively weak. For example, no external SUWM champion received more than 60% of possible peer nominations.

Group interviewees felt that the similarities between external SUWM champions and those within water agencies far outweighed their differences. They did, however, suggest some possible differences between SUWM champions in academia, the consulting industry and publicly-managed water agencies. These differences are summarised in Table 3. Only two possible points of difference were mentioned in more than one of the case study agencies. First, interviewees felt that water agency SUWM champions typically had personal values that included a deep-seated commitment to environmental sustainability and community service, and these values were consistent with those embedded within their organisation's culture[11]. In contrast, interviewees felt that SUWM champions in the consulting industry typically had stronger personal values that related to meeting financial goals, and more superficial personal values relating to environmental sustainability and community service.

Second, interviewees suggested that the most effective SUWM champions in publicly-managed water agencies tended to be generalists, who have the personality characteristics and skills to patiently work across organisational boundaries with people who are often resistant to change. Interviewees felt that some SUWM champions in the consulting industry would struggle in such a role, as they appeared to lack the necessary patience, diplomacy and 'people skills'. Some individuals were mentioned, however, who had successfully worked as SUWM champions in water agencies, academia and the consulting industry. Clearly caution is needed here, given these views emanate from only one industry sector. Research beyond the scope of this project is required to test the validity of these suggested points of difference.

Table 3 – Possible points of difference between SUWM champions in different industry sectors

Strength of Views	SUWM Champions in Publicly-managed Water Agencies	SUWM Champions in Academia	SUWM Champions in the Consulting Industry
Stronger: Aspects mentioned in several case study agencies	• Deep-seated personal values relating to environmental sustainability and community service. • Alignment between personal values and those embedded in the organisation's culture. • Many have the personality characteristics and skills to work effectively across organisational boundaries with people who are resistant to change.		• Stronger personal values relating to meeting financial goals, and more superficial values relating to environmental sustainability and community service.
Weaker: Aspects mentioned in only one case study agency	• Tend to be generalists rather than specialists.	• Specialists, with greater expert power. • Tend to be more introverted. • Tend to have less operational experience.	• Tend to have less knowledge of the local needs of the community. • May have a strong desire to stay working in a technical area and maximise their influence in the water industry.

NOTE: These are generalisations derived from practitioners in only one sector of the Australian urban water management industry, potentially with a local government bias.

[11] These views may represent a 'local government perspective', given five of the six agencies were local government authorities.

4.2.3. POLICY, TECHNICAL, LIMELIGHT, SHADOW, DIPLOMAT AND MAVERICK CHAMPIONS

Group interviewees in several case study agencies felt there were SUWM project champions who had a good non-technical general knowledge of SUWM and worked in policy areas ('policy champions') and those who were technical specialists and worked in operational areas ('technical champions'). This distinction, however, may simply be a reflection of where emergent leaders work in their organisations rather than any fundamental difference in leadership attributes.

Another typology that was tentatively proposed by group interviewees in three case study agencies was that some SUWM champions were quiet while others were outspoken. Specifically, members of the quieter group were generally introverted, preferred to work behind the scenes and were not outstanding communicators ('shadow champions'). Members of the outspoken group were more extroverted, were highly visible and were excellent communicators ('limelight champions'). This tentative typology implies that champions can be both introverted and extroverted.

Finally, group interviewees in one case study agency made a distinction between project champions that are "charming", have advanced 'people skills', excellent social networks and strong knowledge of the organisation ('diplomat champions') and those that are rebels, innovators, take risks and question the status quo ('maverick champions').

In summary, the group interviews in the six case study agencies provided strong evidence that members of the Australian urban water industry believed that there were different types of SUWM champions that operate within and around publicly-managed Australian water agencies. Suggested types include project, executive, political and external champions (e.g. academic and consultant champions). For project and executive champions, there may also be the sub-types based on the distinctions between: 'technical' and 'policy' project champions; 'limelight' and 'shadow' champions; and 'diplomat' and 'maverick' project champions. As discussed in Chapters 5, 8 and 9, the empirical data relating to the most strongly nominated SUWM champions in the case study agencies indicate that there are two types of project champion (i.e. a maverick and diplomat type) and executive champion (i.e. an enabling and transformational type).

4.3. AN INDUSTRY DEFINITION OF LEADERSHIP BY SUWM CHAMPIONS

Very few group interviewees in the case study agencies used the term 'championship' despite the common use of the noun 'champion' in the industry, and the use of the verb 'championship' in the academic literature (see Howell & Shea, 2006). Instead, interviewees used and preferred the more generic term 'leadership' to describe the core activities of SUWM champions.

To define leadership by SUWM champions, group interviewees referred to key actions that were undertaken to promote SUWM in their organisation. A synthesis of these actions from across the six case study agencies is provided in Figure 9 as part of a new 'process model of SUWM leadership in publicly-managed urban water agencies'. Figure 9 is also informed by data collected from individual interviews, 360 degree questionnaires and document analysis (see Chapters 5, 6, 7 and 9).

1. Initiation Phase
(focussed leadership)

- Initiation of a SUWM project or policy.
- The leadership process is dominated by individuals (i.e. Gibb's [1954] 'focussed' leadership).
- Initiatives often originate from project champions at a middle management level.
- Initiatives sometimes originate from political champions, but rarely from executive champions. Executive champions play an 'enabling' role in all three phases (see Uhl-Bien *et al.*, 2007).
- Project champions are usually essential, highly visible, and strongly drive the initiatives.

2. Endorsement Phase
(instrumental leadership)

- Initiatives are endorsed by formal leaders with high levels of position power (e.g. executives).
- The leadership process is dominated by formal leaders (i.e. Bryman *et al.*'s [1996b] 'instrumental leadership').
- Resources are allocated for implementation.
- The context can be instrumental in opening or closing 'windows of opportunity' to affect change.
- Executive champions are usually essential.
- Project champions are often involved in presenting initiatives to decision makers, and building coalitions of support.

3. Implementation Phase
(distributed leadership)

- Initiatives are delivered, usually through multi-disciplinary and cross-boundary project teams involving many leaders and high levels of collaboration.
- The leadership process is group-based (i.e. Gibb's [1954] 'distributed' leadership).
- Project champions often play an important role in bringing teams together from across organisational boundaries, coordinating leadership activities, and steering projects around obstacles.
- Leaders occupying the six roles described in Appendix 4 are typically involved.

Figure 9 – A process model of SUWM leadership in publicly-managed urban water agencies

In summary, interviewed industry practitioners saw leadership by SUWM champions ('championship') as being a process of influence to promote SUWM that involved the initiation of a project or policy, acquisition of managerial endorsement and resources, and collaboration with colleagues across organisational boundaries to deliver the initiative. Industry practitioners emphasised the important role SUWM project champions often play as emergent leaders who *initiate* processes of change (i.e. during Phase 1 in Figure 9). Once again, this highlights similarities between SUWM project champions and 'key change agents' in Ottaway's (1983) typology of 10 types of change agent.

5. KEY ATTRIBUTES OF SUWM PROJECT CHAMPIONS

5.1. INTRODUCTION TO THE CHAPTER

This chapter identifies a large number of strong and/or distinguishing attributes of the SUWM project champions that the author researched in the six case study agencies. This research tested the validity of the preliminary conceptual model of these leaders (Appendix 2). The structure of this chapter reflects the structure of this model, while the content of this chapter has been used to revise the model. The revised model is provided in Chapter 8 (Figure 32) and represents a one-page summary of this chapter.

To highlight the practical significance of identifying specific attributes of these leaders, 'management implications' are included in shaded text boxes throughout this chapter. Chapter 10 brings these implications together in the form of a suite of management recommendations.

In addition to examining the relevance of attributes to all of the studied project champions, this chapter also examines the relevance of these attributes to the most and least effective of these champions, and to two types of project champion. Appendix 5 summarises the methodology that the author used to assess the *relative* leadership effectiveness of the project champions. In short, the author used a multi criteria analysis to process confidential data from their supervisors and peers. This data related to perceived leadership effectiveness, both in the context of SUWM as well as overall. Once again, it is emphasised that the "least effective" of the studied project champions were still widely regarded as influential leaders and valuable assets to their organisations.

Research on individual project champions confirmed that there were two types of champion, namely 'maverick' and 'diplomat' types. A summary of the differences between these champions is given in Figure 33 in Chapter 8. Three of the six project champions were of the diplomat variety (i.e. PC3, PC4 and PC6). Of the four most effective champions, three were of the diplomat variety, including the top two. In most contexts, therefore, the diplomat type was more effective. Project champion 1 (PC1) was, however, an exception. This maverick champion was associated with a medium to high level of leadership effectiveness, and worked in a context that was relatively hostile to SUWM and favoured maverick-style leadership. This contextual issue is discussed further in Section 7.2, but it is emphasised here that maverick champions can be highly effective in *some* contexts (e.g. organisations with dominant organisational cultures that are relatively hostile towards SUWM). The maverick champion type should therefore not be dismissed as being inferior to the diplomat type.

The distinction between these two types of SUWM project champion has ramifications for the practical application of this research. For example, Brown (2005a & 2008) identified five phases of organisational development in Australian local government agencies that were promoting more sustainable forms of urban stormwater management[12]. As agencies evolve from the *Project* to the *Integrated* phase within this framework, the context typically becomes more supportive of SUWM and distributed forms of SUWM leadership. It also becomes more suited to the highly collaborative diplomat project champions. This means that as a water agency evolves from the *Project* to the *Integrated* phase it should benefit from maverick project champions initially, but as the context becomes more supportive of SUWM, the agency would be better served by diplomat project champions. Another option would be for maverick project champions to consciously change their leadership style as their leadership context evolves and becomes more receptive to distributed and collaborative forms of SUWM leadership. While this is possible, it would be a significant leadership development challenge for most maverick champions given some of their attributes (e.g. relatively low levels of self-awareness). These issues are discussed in more detail in Chapter 11.

5.2. PERSONAL ATTRIBUTES

5.2.1. PERSONALITY CHARACTERISTICS

Extroversion

Extroversion relates to a person's propensity to be sociable, assertive, energetic, enthusiastic, loud and active (Gosling *et al.*, 2003; Judge *et al.*, 2002). Individual interview and 360 degree questionnaire data indicate that three of the six project champions had high levels of extroversion, two were borderline extroverts, and one was a borderline introvert. For four of these leaders, their relatively high level of extroversion was a 'distinguishing' attribute compared to control groups[13]. Data from the questionnaire are shown in Figure 10. Thus, extroversion was a common characteristic, and was often distinguishing.

[12] These are outlined in Figure 36 (Chapter 11).

[13] In each case study agency, the four leaders who were most strongly nominated for the 'non-champion' leadership roles in Appendix 4 were used as a local control group when project champion attributes were being assessed (see Figure 5 in Chapter 3). This allowed the author to identify 'distinguishing' attributes of project champions. The term 'distinguishing' is used throughout this report when the strength of a project champion's attribute is substantially different from the local control group (e.g. ≥10% on a Likert scale).
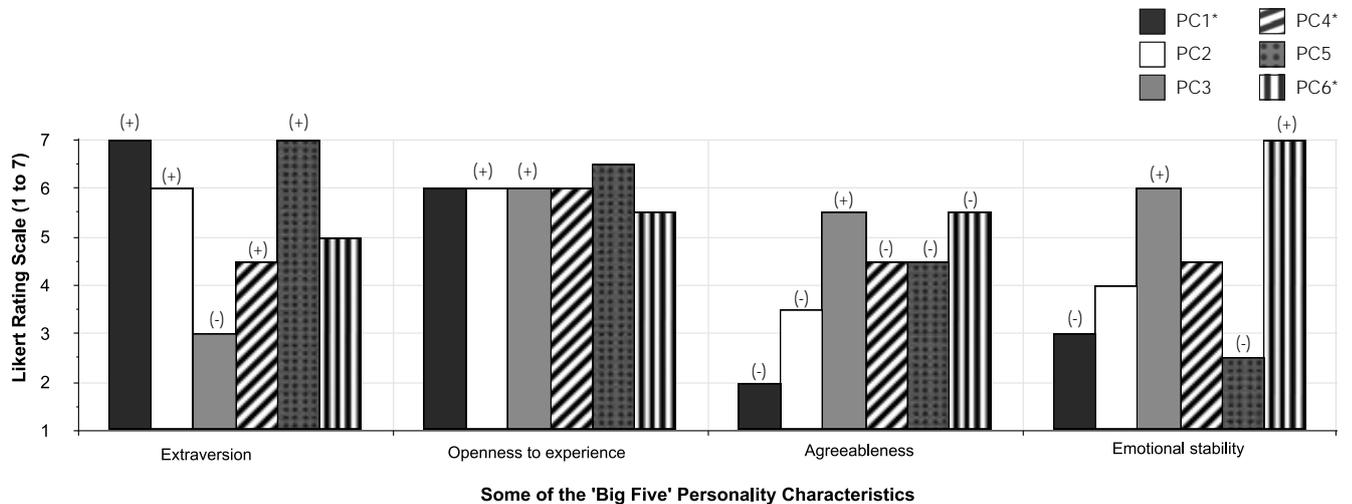
Figure 10 – The strength of four of the 'Big Five' personality characteristics (self-assessed)

NOTES:

• Only those characteristics associated with strong findings have been presented. Data for conscientiousness has, therefore, been omitted. For descriptions of the 'Big Five' personality characteristics, see Judge *et al.* (2002).

• These data resulted from using the Ten Item Personality Inventory (Gosling *et al.*, 2003) within the customised 360 degree questionnaire. This instrument asked users to rate their extent of agreement with a set of ten items (e.g. "I see myself as extroverted, enthusiastic"). Key for the scale: 1 = disagree strongly; 2 = disagree moderately; 3 = disagree a little; 4 = neither agree nor disagree; 5 = agree a little; 6 = agree moderately; and 7 = agree strongly.

• PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

Two of the three most effective project champions had relatively low levels of extroversion (i.e. were borderline extroverts). In contrast, two of the three least effective project champions had high levels of extroversion. These data provide some evidence that moderate levels of extroversion may be associated with more effective champions.

As shown in Figure 10, all of the maverick champions (PC1, PC2 and PC5) had high to very high levels of extroversion. In contrast, all of the diplomat champions had relatively low levels of extroversion. These data highlight that extroversion is one of the distinguishing features between these types of champion (see Chapter 8).

The finding that the diplomat champions (i.e. PC 3, PC4 and PC6) were all borderline introverts / extroverts was surprising, given their advanced skills in networking and communication. When this was raised with one of these champions, they stated:

> I reckon I see the good side of people, so I like dealing with people, enjoy dealing with people. I think everyone's got something to offer and can be appreciated for what they can contribute. So yes, I do have my periods where I have had enough of people and I don't want any more. So I just like to go home and have a bit of my own time.

These champions tended to prefer working on a one-to-one basis with people, which has the potential to develop stronger relationships and networks. For some, their relatively low levels of extroversion made advanced forms of networking more difficult. All of these champions had unusually high levels of self-awareness (discussed later in this chapter), which helped them recognise the potential for their relatively low levels of extroversion to impede important leadership behaviours, such as finding mentors and strategic networking.

Management implications (extroversion):

• During recruitment and selection processes where potential SUWM champions are being sought, look for the extraversion trait using psychometric instruments (with the assistance of qualified organisational psychologists), interviews and/ or referees. Case study data suggest champions are usually extroverts and the level of extroversion is a distinguishing attribute. The more effective champions tend to be borderline extroverts, with the diplomat type being borderline introvert / extroverts, and the maverick type being more extroverted.

• Consider the stage of the organisation's development using Brown's (2005a & 2008) five phase model (Figure 36 in Chapter 11), and recruit or select the type of potential project champion that is best suited to the organisational context. As water agencies evolve from the *Project* to the *Integrated* phase, the context typically becomes more supportive of SUWM and more suited to diplomat project champions. This important consideration is discussed further in Chapter 11.

Openness to experience

Openness to experience relates to a person's propensity to be innovative, creative and open to new approaches (Gosling *et al.*, 2003). Individual interview data, as well as data from the self and peer-assessed 360 degree questionnaire, collectively indicate that five of the six project champions had high to very high levels of this characteristic. This was also a distinguishing attribute for four of these champions. The self-assessed data from the 360 degree questionnaire is shown in Figure 10 for illustrative purposes. Thus, openness to experience was a very common characteristic, and was often distinguishing.

The following three quotes from different project champions were made in relation to the strength of their openness to experience personality characteristic, and collectively highlight the relevance of this trait:

> Well, that's my thing, yes, very much along those lines. … Whenever I've had my end of year interviews around personal development I would be asked … Where do you want to be in five years' time? … The answer I always gave was: Well, I want to be doing challenging and interesting work. I want to be continuing to learn and I want to be in an environment that I can enjoy working with people I enjoy working with. … [I've] just got to be continually open to that new experience and other people's ideas. But that again doesn't make me impatient to move on. … I'm not erratic, I'm fairly stable.

> I've really only worked for a small number of organisations, but roles and job descriptions within those have changed quite a number of times over 17 years and instinctively I get a bit excited about change …

> … I'm always forging change in practices and the way we do things … Always trying to push it, do it differently and take a few risks.

In relation to this personality characteristic, the author identified no substantial differences between the most and least effective project champions. This was also the case when data for maverick and diplomat champions were compared.

Management implications (openness to experience):

• During recruitment and selection processes where potential SUWM champions are being sought, look for the 'openness to experience' trait using psychometric instruments, interviews, referees and/or resumes. Case study data suggest this characteristic is usually highly developed and often distinguishing.

Agreeableness

Agreeableness relates to a person's propensity to be trusting, caring, compliant and gentle (Judge *et al.*, 2002). Interview and questionnaire data indicate that four or the six project champions had low to very low levels of this characteristic. A lower level of agreeableness was often a distinguishing attribute, as shown in Figure 10, where the self-assessed questionnaire data indicate that it was a distinguishing attribute for five of the six champions.

In relation to this personality characteristic, the author identified no substantial differences between the most and least effective project champions. The interview and questionnaire data do, however, indicate that maverick champions tended to have lower levels of agreeableness. This is illustrated in Figure 10, where the ratings for the three maverick champions (PC1, PC2 and PC5) are less than or equal to the equivalent ratings for the diplomat champions. In one case study agency, interview and questionnaire data indicated that a maverick champion with low levels of agreeableness (and emotional stability) had difficulty working collaboratively with colleagues across the organisation, and was seen by their peers as an individual who focused on exercising influence with executives and politicians to get results. The following quote from one of their peers illustrates this finding:

> Whilst I fully agree [this project champion's name] is an emerging leader, the ability to bring the team along with [him / her] is not a focus. [The project champion's] achievements are in the realm of changing executive and senior level attitudes and strategic direction.

The finding that the diplomat champions have higher levels of agreeableness than the maverick champions is consistent with research by Mount *et al.* (1998) who found that the importance of the agreeableness trait in explaining job performance increased in environments that required collaboration. As discussed later in this chapter, the diplomat champions were highly collaborative.

Management implications (agreeableness):

• During recruitment and selection processes where potential SUWM champions are being sought, look for the agreeableness trait using psychometric instruments, interviews and/or referees. Case study data suggest these champions often have low to very low levels of this characteristic, which is often a distinguishing attribute. In addition, diplomat champions tend not to have extremely low levels of agreeableness.

Emotional stability

Emotional stability relates to a person's propensity to be calm, secure and not hostile (Gosling *et al.*, 2003; Judge *et al.*, 2002). Interview and questionnaire data indicated no clear relationship between this characteristic and all project champions. That is, it was not commonly strong or weak, and not commonly distinguishing. Similarly, the author identified no substantial differences between the most and least effective project champions for this characteristic.

Some clear differences were, however, apparent between the maverick and diplomat champions. Specifically, all of the diplomat champions had a higher level of emotional stability than the maverick champions. This is illustrated in Figure 10, where the ratings for the three diplomat champions (PC3, PC4 and PC6) are all higher than the equivalent ratings for the maverick champions. The following quote originates from a project champion with a relatively low level of emotional stability:

> I think my real weakness is when I get frustrated with someone I can't keep it to myself. … I never hold back on just letting people know. I just can't keep anything to myself.

As highlighted in Chapter 9, emotional stability is also a trait that is highly developed amongst executive champions. This helps to explain why the two project champions who were in the process of becoming executive champions were both of the diplomat variety. In addition, the finding that diplomat champions have relatively high levels of emotional stability is consistent with research by Mount *et al.* (1998) who found that the importance of the emotional stability trait in explaining job performance increased in environments that required collaboration.

Management implications (emotional stability):

- During recruitment and selection processes where potential diplomat SUWM champions are being sought, look for the emotional stability characteristic using psychometric instruments, interviews and/or referees. Case study data suggest that diplomat champions tend to have moderate to high levels of emotional stability. In addition, there is evidence to suggest this trait is associated with project champions who move into executive champion leadership roles.

Task versus relationship orientation and preference for working individually or part of a team

Data collected from individual and group interviews highlighted that some of the project champions had a strong preference for working relatively independently and focusing on tasks, while others were highly collaborative and focused on building relationships. These data do not show strong trends for all project champions or for the most effective champions. They do, however, highlight differences between maverick and diplomat champions. Specifically, the maverick champions tended to have a greater 'task orientation' (see Yukl, 1989). In addition, their propensity to work individually was equal to, or greater than, their propensity to work in teams. In contrast, the diplomat champions had a 'relationship-orientation' (see Yukl, 1989) or balanced concerns for relationships and tasks. In addition, their propensity to work individually was equal to, or less than, their propensity to work in teams.

The following quote from a project champion illustrates the tendency for some champions to prefer working on their own. Speaking about personality characteristics that influenced their leadership, this champion also indicated he / she had never had an influential mentor and had not actively sought to set up mentoring arrangements.

> It's certainly been a trend that I've been a very independent worker. I've enjoyed being part of a team occasionally, but I've not had … someone who's been there to educate me and guide me or provide industry knowledge to.

This tendency for some champions to be highly independent and avoid establishing strong mentoring arrangements poses a risk to nascent champions, especially when combined with other characteristic traits such as confidence and openness to experience. Specifically, there is a risk they could push an initiative too fast or in a direction that surprises executives or politicians. This occurred in two of the case study agencies in association with project champions who did not have influential mentors at the time.

Management implications (relationship / task orientation and preference for working individually or as part of a team):

- During recruitment and selection processes where SUWM champions are being sought, examine their preference for task versus relationship orientation and preference for working individually or as part of a team using interviews, referees and/or work histories. Case study data suggest that diplomat champions tend to have a 'relationship-orientation' or balanced concerns for relationships and tasks. In addition, their propensity to work individually is usually no greater than their tendency to work in teams. Maverick champions, however, tend to have a stronger 'task-orientation' and preference for working individually.

Confidence

Confidence in the ability to deliver tasks was a personality characteristic that was commonly strong and a distinguishing attribute of the project champions, but was not included in the preliminary conceptual model of these leaders (Appendix 2). Interview data indicate that all of the project champions exhibited high levels of confidence in their ability to implement SUWM policies and projects, and this confidence was a distinguishing attribute for four of these leaders.

For this personality characteristic, the author identified no substantial differences between maverick and diplomat champions. Of the four project champions who had high and distinguishing levels of confidence, however, three of these were the three most effective project champions. This provides some evidence that unusually high levels of confidence may be associated with the most effective project champions.

Interviews with project champions revealed an association between the characteristic of persistence and confidence. This point is illustrated with the following quote from a project champion:

> I don't give in on stuff. If I get a few setbacks I just tend to roll with it. But generally I keep going. But then again, I think you've got to have some confidence that you can achieve.

Management implications (confidence):
- During recruitment and selection processes where potential SUWM champions are being sought, look for high levels of confidence that they can deliver work-related tasks, assuming they have had several years of relevant work experience[14]. This attribute is commonly distinguishing. Methods to assess this attribute include psychometric instruments, interviews and/or referee checks. Care is needed not to mistake narcissism as confidence during recruitment, given the well-documented dangers of narcissistic leaders and their tendency to perform well in interviews (see Hogan & Kaiser, 2005; Rosenthal & Pittinsky, 2006).

Persistence and commitment

The closely associated characteristics of persistence and commitment were commonly strong amongst project champions, as predicted by the preliminary conceptual model. Specifically, interview and questionnaire data collectively indicate that five of the six champions had high levels of both persistence and commitment. These characteristics were not, however, commonly distinguishing attributes, with only two of the champions having levels of these characteristics that were unusually high compared to local control groups. The peer-assessed data from the 360 degree questionnaire are presented in Figure 11 for illustrative purposes. These data indicate that the peers of the project champions usually felt that persistence and commitment (when considered as a package) were characteristics that had a 'high' to 'very high' degree of relevance, but were not commonly distinguishing attributes.

In relation to this combination of personality characteristics, the author identified no substantial differences between the most and least effective project champions. This was also the case when data for maverick and diplomat champions were compared.

Management implications (persistence and commitment):
- During recruitment and selection processes where potential SUWM champions are being sought, look for strongly developed characteristics of persistence and commitment using psychometric instruments, interviews and/or referees.

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[14] As highlighted in Figure 32 (Chapter 8), the studied SUWM project champions had at least three years of SUWM-related work experience.
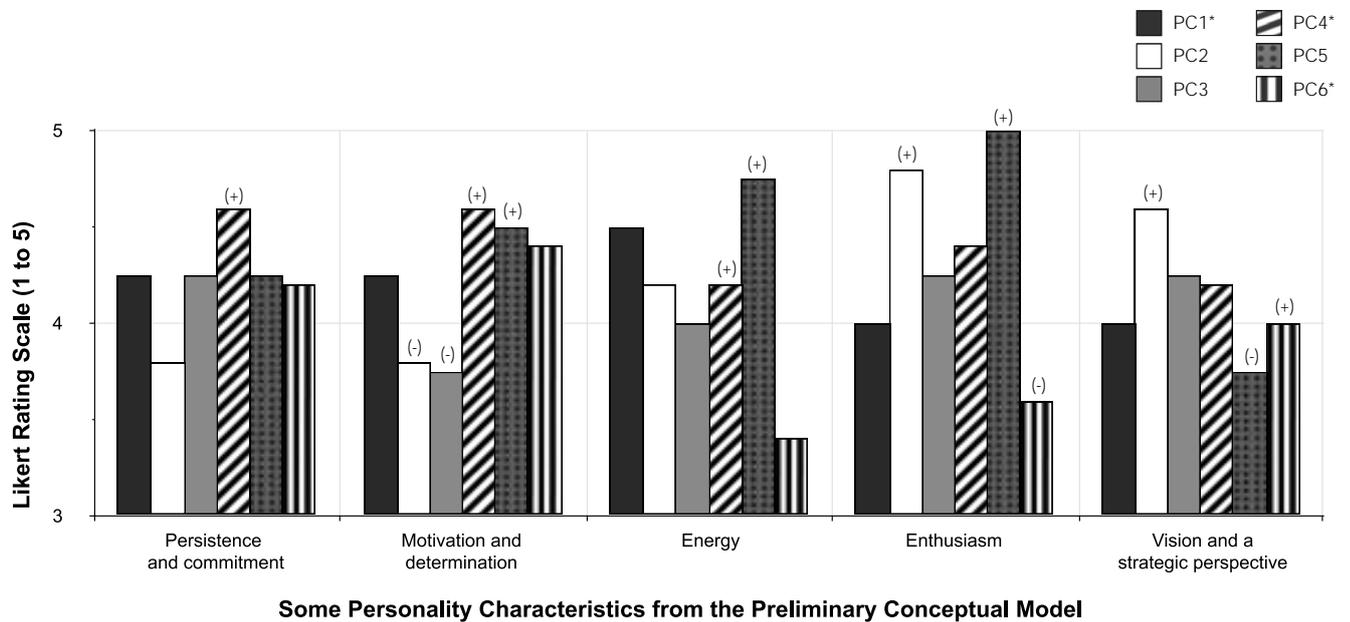
Figure 11 – The relevance of specific personality characteristics (peer-assessed)

NOTES:

• The 360 degree questionnaire asked peers to rate the extent to which specific personality characteristics were relevant, based on single Likert scales. Key for the scale: 1 = none; 2 = low; 3 = moderate; 4 = high; and 5 = very high.

• PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

Motivation and determination

The closely associated characteristics of motivation and determination were also commonly strong amongst project champions, as predicted by the preliminary conceptual model. Specifically, interview and questionnaire data *collectively* indicate that five of the six champions had high levels of both of these characteristics. The possession of high levels of motivation and determination was often a distinguishing attribute, with three of the studied champions having levels of these characteristics that were unusually high compared to local control groups. The peer-assessed data from the 360 degree questionnaire are presented in Figure 11 for illustrative purposes. These data indicate that the *peers* of project champions commonly felt that motivation and determination (when considered as a package) was an attribute that usually had a 'high' to 'very high' degree of relevance.

The relevance of the motivation characteristic is reflected in the following quote from a project champion who had a propensity to strongly drive SUWM projects:

> I'm really driven and move very quickly on projects, and [I] try to … see that quick movement as a way of motivating. … I'm a real driver.

In relation to this combination of personality characteristics, the author identified no substantial differences between the most and least effective project champions. This was also the case when data from maverick and diplomat champions were compared.

Management implications (motivation and determination):

• During recruitment and selection processes where potential SUWM champions are being sought, look for strongly developed characteristics of motivation and determination using psychometric instruments, interviews and/or referees. These characteristics when considered as a package often represent a distinguishing attribute.

Energy

Interview and 360 degree questionnaire data indicate that five of the six project champions had moderate to high levels of energy. This was, however, a distinguishing attribute for only two of these leaders. Peer-assessed data from the 360 degree questionnaire are indicative of the combined data set, and are shown in Figure 11.

In relation to this personality characteristic, the author identified no substantial differences between the most and least effective project champions. This was also the case when data for maverick and diplomat champions were compared.

Management implications (energy):
- During recruitment and selection processes where potential SUWM champions are being sought, look for the presence of high levels of energy using interviews and/or referees.

Enthusiasm

Interview and 360 degree questionnaire data indicate that five of the six studied project champions had moderate to high levels of enthusiasm. This was, however, a distinguishing attribute for only two of these leaders. Peer-assessed data from the 360 degree questionnaire are indicative of the combined data set, and are shown in Figure 11.

The data provide some evidence that the more effective champions were associated with high but not extreme or distinguishing levels of enthusiasm. Specifically, none of the three most effective champions were associated with extremely high or unusually high levels of enthusiasm compared to local control groups. This was not the case, however, for two of the three least effective champions.

The data also indicate an association between maverick champions and extremely high and distinguishing levels of enthusiasm. Two of the three maverick champions had such levels of enthusiasm. In contrast, all of the diplomat champions were associated with moderate to high, but not extreme or distinguishing levels of enthusiasm.

Management implications (enthusiasm):
- During recruitment and selection processes where potential SUWM champions are being sought, look for the presence of high levels of enthusiasm using interviews and/or referees. Case study data suggest that moderate to high, but not extreme, levels of enthusiasm are associated with diplomat and more effective champions. Extremely high and distinguishing levels of enthusiasm were more common amongst maverick and less effective champions.

Vision and a strategic perspective

Interview and 360 degree questionnaire data indicate that all of the project champions had a strong propensity to develop water-related strategic visions and adopt strategic perspectives in their roles. This was, however, a distinguishing attribute for only two of these leaders. Peer-assessed data from the 360 degree questionnaire are indicative of the combined data set, and are shown in Figure 11.

In relation to this personality characteristic, the author identified no substantial differences between the most and least effective project champions. This was also the case when data for maverick and diplomat champions were compared.

Management implications (vision and a strategic perspective):
- During recruitment and selection processes where potential SUWM champions are being sought, look for the propensity to develop strategic visions and adopt strategic perspectives using interviews and/or referees.
- To assist project champions to develop strategic visions and adopt a strategic perspective for SUWM issues, encourage strategic networking (see Section 5.3.3), structured mentoring relationships with executives who have these abilities, and ensure these champions have access to relevant strategic planning information (e.g. strategies and data). Job assignments in other areas of the organisation would also be beneficial. Such initiatives should be part of an individual leadership development plan which should be prepared after a 'feedback-intensive' leadership development program (see Section 10.4.3 and Appendix 1).

Self-awareness

The author used the level of agreement between self-ratings and ratings by others (peers and supervisors) in the 360 degree questionnaire as an indicator of self-awareness for all surveyed leaders (see Atwater & Yammarino, 1992 & 1997). Using this approach, the author calculated average paired differences using 29 items from the Multifactor Leadership Questionnaire (Avolio & Bass, 2004) that related to transformational leadership behaviours and positive leadership outcomes. The Paired T Test (SPSS, version 15.0) was used to determine if these differences were statistically significant. As a 'rule of thumb', average paired differences greater than 8-9% were found to be statistically significant ($p < 0.05$) for all of the surveyed leaders. Empirical data from the organisational leadership literature indicates that leaders with high levels of self-awareness are usually more effective, and leaders that have a propensity to over-rate themselves compared to other raters involved with 360 degree assessments have the potential to be the most ineffective leaders (Atwater & Yammarino, 1992 & 1997; Eichinger & Lombardo, 2004).

This literature also highlights a positive correlation between 'self-rater agreement' and transformational leadership, and recommends that leadership development program seek to maximise 'self-rater agreement' (Atwater & Yammarino, 1992). The key point here is that self-awareness is a critical indicator of the potential to be an effective leader.

Data from the Paired T Test are shown in Figure 12. These data indicate that great variation exists in the level of self-awareness amongst the project champions. There is evidence to suggest that the more effective champions had higher levels of self-awareness, which is consistent with the leadership literature. For example, the two most effective project champions (PC4 and PC6) had average paired self-rater differences that were statistically insignificant. This indicates they had relatively high levels of self-awareness. In contrast, the two least effective project champions (PC2 and PC5) had average paired self-rater differences that were statistically significant, and in the case of PC5, relatively large (i.e. PC5 over-rated themselves on the questionnaire scale by 20% on average). This indicates PC2 and PC5 had relatively low levels of self-awareness.
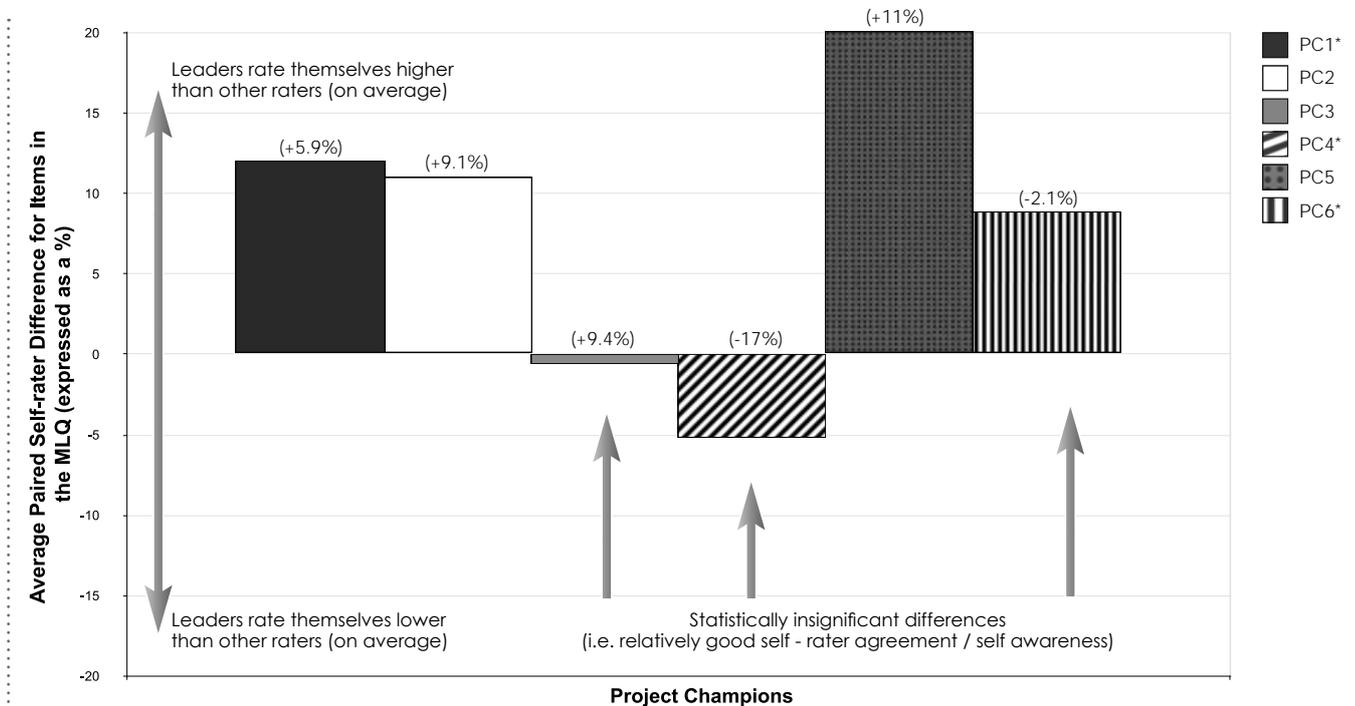
Figure 12 – The extent of self-rater agreement as an indicator of self-awareness

NOTES:

• The average paired differences were calculated using data relating to 29 items from the Multifactor Leadership Questionnaire (MLQ; Avolio & Bass, 2004) and the Paired T Test (SPSS, version 15.0).

• PC = project champion. * = the three most effective champions. The numbers in brackets indicate the extent to which the project champions' ratings were different from relevant control groups. For example, PC1's rating was 5.9% higher than the averaged equivalent data from the surveyed 'non-champion' leaders in his / her organisation.

The data in Figure 12 also highlight some important differences between the maverick and diplomat champions. All of the diplomat champions had average paired self-rater differences that were statistically insignificant. This indicates they had relatively high levels of self-awareness. This was the opposite for all of the maverick champions, and represents a potential constraint to their leadership effectiveness and development (see Atwater and Yammarino, 1997; Avolio, 2005; Eichinger & Lombardo, 2004).

Management implications (self-awareness):

• During recruitment and selection processes where effective, diplomat-type SUWM champions are being sought, look for high levels of self-awareness using referees and/or 360 degree feedback tools.

• Use professionally designed and anonymous 360 degree feedback tools to assess the level of self-awareness as part of leadership development programs. This will help developing champions to identify the potential for 'blind spots'. Where necessary, implement strategies to improve self-awareness (e.g. regular 360 degree feedback mechanisms, routine post-project debriefing procedures that examine the champion's leadership behaviours, and carefully designed mentoring arrangements).

Propensity to focus on communication

Advanced aspects of communication were included in the preliminary conceptual model under the headings of 'core skills' and 'behaviours'. During interviews with project champions, however, it was apparent that some of these leaders had an innate propensity to carefully focus on aspects of communication. This included taking great care when developing communication products, engaging in high levels of marketing, as well as focusing on one-to-one communication and active listening. To illustrate, one project champion commented:

> I'm good on the detail around communication. … I get into the detail of some form of communication … a document or something like that. I'm always really careful about what something communicates ...

All of the project champions showed a propensity to focus on communication activities, albeit in different forms and directions. Some favoured one-to-one communication, some favoured written communication, some were highly proficient at communicating vertically their organisations, and some excelled at communicating laterally in their organisations. This attribute was unusually strong and a distinguishing attribute for three of the champions. All three were diplomat champions. No strong association was found between this attribute and the relative leadership effectiveness of champions.

Management implications (propensity to focus on communication):

- During recruitment and selection processes where potential SUWM champions are being sought, look for a natural tendency to focus on aspects of communication. For example, placing importance on the development of communication products, one-to-one communication and active listening.

- Support project champions who have this tendency to develop advanced communication skills through specialist training that has elements of assessment, challenge and support. Such training should form part of a champion's individual leadership development plan.

Other personal characteristics and traits

Other personality characteristics and traits in the preliminary conceptual model that have been examined in the case study agencies, but did not generate strong findings include a propensity to engage in risk-taking, conscientiousness, tolerance to uncertainty, extra role behaviours, innovation and emotional intelligence. The lack of strong findings in relation to risk-taking is unexpected, given reports in the literature that champions are risk-takers (e.g. Maidique, 1980; Markham & Aiman-Smith, 2001). Peer-assessed data from the 360 degree questionnaire indicate that only two of the project champions had 'high' levels of this personality characteristic (both maverick champions), and it was a distinguishing feature for only one. While these champions clearly take some risks, this tendency appears to be moderated by common behaviours such as the use of pilot projects (see Section 5.4.2).

5.2.2. PERSONAL VALUES

Values providing motivation

Individual interviews explored the personal values that provided motivation for SUWM-related leadership. The resulting data support two conclusions. First, while there was a high level of diversity with respect to the personal values project champions nominated, for five of the six champions, the primary motivating values were social, while environmental values were secondary. Primary values included the need to "make the world a better place", show respect for individuals, uphold social justice and look after the "community good".[15] The importance of these social values is illustrated in the following quotes from different project champions:

> The fact that I'm working in an environmental field – it's as much an accident of history as anything else. Working for a better environment is part of making the world a better place. I just think the two are very much linked. … essentially I think I'm motivated by making the world a better place for people.

> I think one my strongest values is around 'everyone deserves a fair go' and that includes the environment and everything else. I am not an environmentalist. I'm in the water business equally as passionately as I would be if I was in the mining business, which is kind of a bit at odds. It's about standing up - people need to stand up and be counted.

> I try to shape most of what I do in my professional and personal life around a couple of key values. Probably the bigger one is social justice … My environmental values fall under that.

> It's probably fair to say whilst I appreciate the environment and all things environmental in terms of management, I've been trained as a civil engineer and I guess have a 'build things, problem solving, what's the problem, here's the solution' sort of attitude to things and hence I don't think my motivation is strongly pinned to the environment. But don't read that as I don't care about it, I certainly do, but that's not the motivating factor …

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[15] There may be a local government bias embedded in these findings, given five of the case study agencies were local government authorities. It is likely that people with strong 'public good' values would be attracted to local government roles.

Second, using Higgins' (1998) distinction between 'promotion' and 'prevention' regulatory focus to understand motivation, the interview data indicate all of the project champions were strongly promotion-focused and this was commonly a distinguishing attribute. This means that these leaders were more motivated by advancement, growth and achievement, rather than avoiding negative consequences, fulfilling duties and maintaining secure positions in their organisations.

No substantial differences could be found between the motivating values of the most effective and least effective champions. This was also the case when data from maverick and diplomat champions were compared.

The strength of environmental values

While only one of the project champions nominated "deep green" personal values (see Harding, 1998) as a significant motivating factor for their SUWM leadership, most had a strong commitment to the philosophy of environmental sustainability. Specifically, five of the champions agreed either "moderately" or "strongly" with the statement that they had a "strong personal commitment to the philosophy of environmental sustainability". As shown in Figure 13, however, this level of commitment was not a distinguishing attribute.
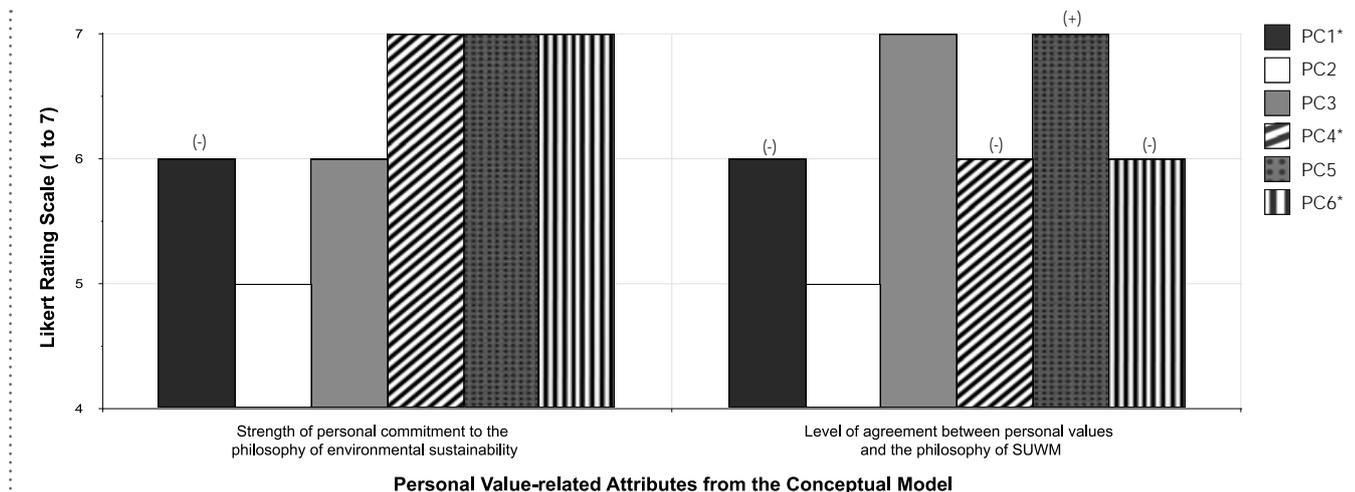
Figure 13 – Aspects of personal values relating to the preliminary conceptual model (self-assessed)

NOTES:

• The 360 degree questionnaire asked people to rate the extent to which they agreed with the statements: "I have a strong personal commitment to the philosophy of environmental sustainability"; and "there is a high level of agreement between my personal values and the philosophy of SUWM". Key for the scale: 1 = disagree strongly; 2 = disagree moderately; 3 = disagree a little; 4 = neither agree nor disagree; 5 = agree a little; 6 = agree moderately; and 7 = agree strongly.

• PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

When one of the interviewed champions was questioned about why so few of the studied champions had "deep green" environmental values, they stated:

> Well, I think in the end it probably makes for … avoiding a few pitfalls. I think if you are completely driven by the environment, then your ability to engage other people is probably going to be affected … If you're trying to change and if you're trying to work collaboratively with people, I think they have to see that you're in it for the good of all, not for the good of you and I think it's far easier to lead people if they see that.

These comments appear particularly relevant to diplomat champions, who work collaboratively across organisational boundaries and form strong relationships with people from a range of stakeholder groups with different personal values.

No substantial differences could be found between the most effective and least effective champions in terms of the strength of their personal environmental values. This was also the case when data from maverick and diplomat champions were compared.

Strength of agreement between personal values and the philosophy of SUWM

As shown in Figure 13, five of the project champions agreed either "moderately" or "strongly" with the statement that "there is a high level of agreement between my personal values and the philosophy of SUWM". Strong agreement was, however, not often a distinguishing attribute.

The three most effective champions had a "moderate" degree of agreement, which was unusually low compared to relevant control groups. A possible explanation for this finding is that their effectiveness does not flow solely from the level of agreement between their personal values and the philosophy of SUWM. Instead, it may flow from the degree of alignment between their personal values and the values embedded in the organisation's culture, local community values, the personal values of colleagues heavily involved with the process of promoting SUWM (i.e. those that collaborate during the *Implementation* phase of the leadership process shown in Figure 9), and the philosophy of SUWM. In case study agency 4, there was a moderate to high degree of alignment between *all* of these elements, and this was the case study with the most effective project champion (PC4). The following quote from this project champion emphasises the importance of such alignment:

> … it's about that alignment. I mean, again, you wouldn't be here if you didn't want to carry out the needs of the community. So I suppose there's a certain alignment of the members of the team that actually carry out this work, including me. I couldn't exist in an area that was 'rock hard engineering' [and] environment wasn't really a factor.

No substantial differences could be found between diplomat and maverick champions for the level of agreement between personal values and the philosophy of SUWM.

Management implications (personal values):

- During recruitment and selection processes where potential SUWM champions are being sought, look for: moderate to strong personal environmental values which are secondary to social values as a motivating factor[16]; a strong 'promotion regulatory focus' (i.e. motivated by achievement and growth); and moderate to strong agreement between personal values and the philosophy of SUWM.

- During activities to attract potential champions to organisations, ensure marketing messages recognise that champions have a strong 'promotion regulatory focus' (e.g. highlight potential for personal achievement and growth).

- Senior leader-managers (e.g. executive champions) should aim to deliver moderate to strong alignment between: the personal values of colleagues who must work closely to promote SUWM in the organisation (including project champions); the values embedded in the organisation's culture; local community values; and the philosophy of SUWM. This can be done through strategic recruitment, project team design, and the active management of organisational culture.

5.2.3. KNOWLEDGE

General knowledge

The author assessed the extent to which project champions had general knowledge of the technical, social, financial and ecological dimensions of SUWM through individual interviews and the 360 degree questionnaire. Collectively, these data indicate that all of the project champions had moderate to strong general knowledge, which was often distinguishing. This is illustrated by the self-assessed data from the questionnaire which is plotted in Figure 14.

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[16] Public good-related social values are likely to be strongest amongst champions that are attracted to local government roles.
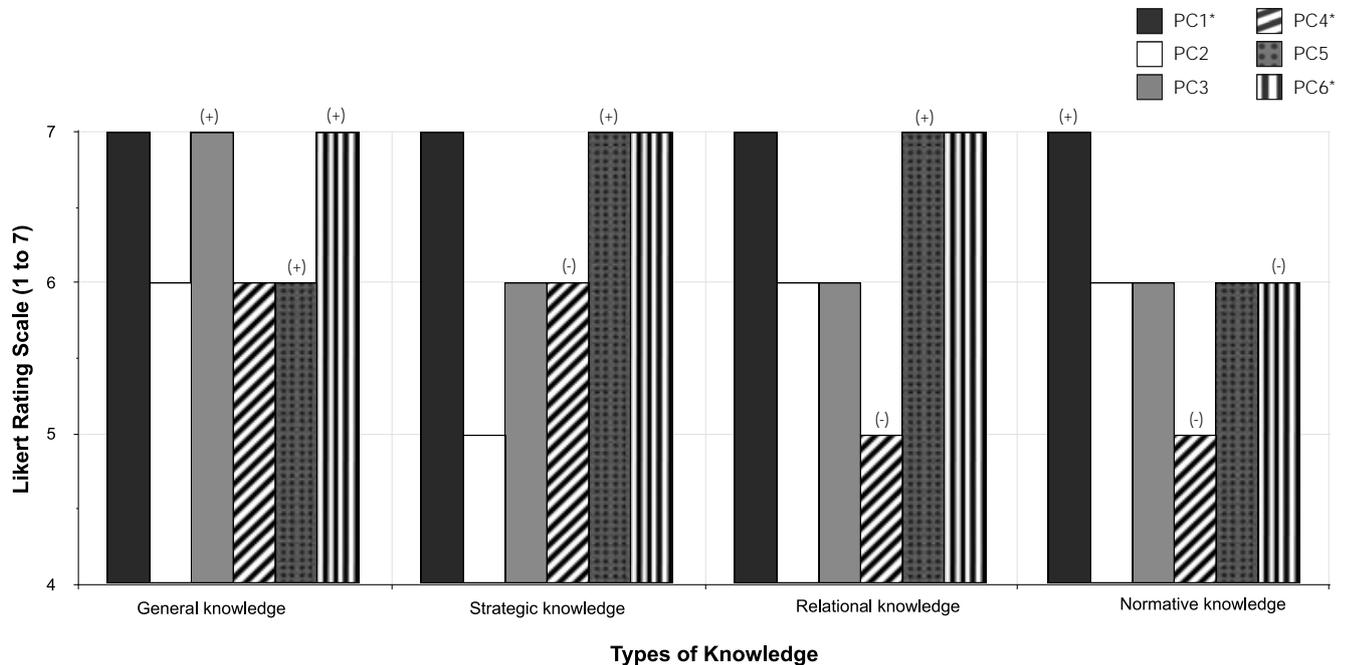
Figure 14 – Levels of different types of knowledge (self-assessed)

NOTES:

• The 360 degree questionnaire asked leaders to rate the extent to which they agreed they possessed particular types of knowledge (e.g. via statements such as "I have a good general knowledge of the technical, social, financial and ecological dimensions of SUWM"). For definitions of strategic, relational and normative knowledge, see Dutton *et al.* (2001). Key for the scale: 1 = disagree strongly; 2 = disagree moderately; 3 = disagree a little; 4 = neither agree nor disagree; 5 = agree a little; 6 = agree moderately; and 7 = agree strongly.

• PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

All of the project champions were generalists rather than technical specialists. That is, they had a good general knowledge of SUWM, but relied upon their social networks to access specialist knowledge, as needed. The following quotes from a project champion who came from a technical engineering background illustrates that he / she had become a generalist who relied on colleagues to access specialist knowledge:

> I'm quite comfortable … having that general understanding of how something has been done [or] will be done. I'm comfortable now … [to] let someone else do it. …

> I've really benefited a lot from developing relationships with those people [i.e. organisational colleagues] and being able to use their knowledge and their contacts to cross-promote and find support and confidence.

Analysis of the entire dataset indicated that the more effective project champions typically had greater general knowledge. Similarly, diplomat champions usually had higher levels of general knowledge than maverick champions. For example, two of the diplomat champions had very high and distinguishing levels of general knowledge, while none of the maverick champions had similar ratings.

Strategic, relational and normative knowledge

Using definitions derived from Dutton *et al.* (2001), the author investigated the extent of each project champion's' strategic, relational and normative knowledge. Strategic knowledge involved understanding their organisation's vision and strategic objectives with respect to SUWM, as well as its plan for achieving these. Relational knowledge involved identifying influential SUWM stakeholders within their organisation and broader institutions, and understanding the relationships between them. Normative knowledge involved understanding the culture of their organisation.

The findings for these three types of knowledge were similar. Specifically, the project champions typically had moderate to strong levels of these types of knowledge, but these levels were not commonly distinguishing attributes. In addition, there were no substantial differences between the most and least effective project champions, or the maverick and diplomat champions. These findings are consistent with the self-assessed data from the 360 degree questionnaire plotted in Figure 14 for illustrative purposes.

Project champions highlighted the importance of all of these types of knowledge. In general, the more senior champions were more cognisant of the value of relational and normative knowledge, as emphasised in the following quote from a project champion who was in the process of becoming an executive champion:

> I think it's only dawned on me how important that stuff is in … probably the last 10 years. It's just becoming more and more important to me …. I think 10 years ago I would do stuff without recognising where it was coming from. I think now I'm just more conscious of where it's coming from and more deliberately try and understand probably both those things [relational and normative knowledge]. Where are the relationships and what are the cultures?

Knowledge of local and State government politics

Another important type of knowledge that emerged during the interviews but was not included in the preliminary conceptual model was knowledge of local and state government politics. This form of knowledge was particularly important in some local government case study agencies. Interview data indicate that the level of this knowledge amongst the project champions varied from low to very high, and was a distinguishing attribute for two champions. The following quotes originate from one of these champions who was adept at developing an understanding of local politicians:

> Obviously each one [i.e. councillors] is quite different individually, even though they might be linked by certain beliefs and factions. So, yes, getting to know those political identities and working out what's good for them and … what expectations they have. I try and do that at a personal level. … working out how they operate, how to win them over, how to actually influence them more.

One champion worked in an organisation that established a suite of regular discussion forums where middle management staff could regularly interact with executives and councillors to discuss projects and strategic issues. As the following quote illustrates, this initiative helped the champion to develop political knowledge, in addition to strategic networks:

> This particular council … has these [regular discussion forums] and that is certainly an opportunity to get to know the elected councillors individually on specific issues, as opposed to just seeing them in a meeting forum on a Monday night or whatever. … I think it's a good idea and it's worked quite well. So the networks are made a lot stronger than normal ...

The interview data indicate the more effective champions typically had higher levels of political knowledge. For example, two of the three most effective champions had high and distinguishing levels of political knowledge. In contrast, none of the three least effective project champions mentioned this form of knowledge as being important to their leadership activities during interviews. No substantial differences were identified, however, between the diplomat and maverick champions for this type of knowledge.

Management implications (knowledge):

- During recruitment and selection processes where mature SUWM champions are being sought, use interviews and referees to look for: moderate to high levels of general, strategic, relational and normative knowledge; and high levels of political knowledge. In particular, look for high levels of general knowledge relating to SUWM, and a sound knowledge of how local politics affects water agencies.

- Leadership development initiatives for champions should aim to build these five types of knowledge, and recognise that senior project champions appear to have a greater recognition of the importance of relational and normative knowledge. Specific initiatives would be similar to those associated with developing advanced forms of networking (see Section 5.3.3). In addition, developing champions should be encouraged to build their general SUWM-related knowledge through training, conferences, post-graduate education, job assignments and mentoring.

- Executives in local government authorities should consider establishing a regular, SUWM-related forum to allow promising project champions at a middle management level to regularly interact with executives and councillors to build general, strategic, relational, normative and political knowledge, as well as important strategic networks.

5.2.4. DEMOGRAPHICS

Gender

Two of the six project champions were female (i.e. 33%). This is a relatively high proportion, given that the percentages of females in the six 'non-champion' control groups were 0% (in three case study agencies), 25% (in two case study agencies) and 50% (in one case study agency). Gender was included in the preliminary conceptual model as females, on average, use transformational leadership behaviours more frequently than males (see Bass, 1999; Gronn, 1995; Sarros *et al.*, 2001) and this form of leadership was hypothesised as being relevant to SUWM project champions (see Appendix 1). As discussed in Section 6.1, transformational leadership behaviours were used by the project champions, but only two of these leaders were commonly transformational and both of these were male. Thus, the rationale for including gender in the conceptual model is not supported. In addition, the data do not support any association between gender and relative champion effectiveness or type.

Generation

Four of the project champions belonged to 'Generation X' (born 1961 to 1980) and the remaining two were 'Baby Boomers' (born 1944 to 1960). This finding supports the preliminary conceptual model. The four most effective champions were also the oldest, indicating that in general, the older champions were more effective. This finding is expected, given the time needed to develop networks, sources of power and a variety of leadership skills. In addition, all of the maverick champions belonged to Generation X, while the two Baby Boomers were both diplomat champions. In general, therefore, diplomat champions tended to be older than maverick champions.

Tenure

The tenure of the project champions in their organisations ranged from less than a year to 16 years. Five of these champions, however, had tenures greater than three years. The champion with the shortest tenure had first emerged as a SUWM leader in another organisation. These data suggest that it does take at least three years of experience working in the local region to build a reputation as a SUWM project champion. This experience does not, however, need to be within the one organisation. These data also indicate that champions can stay with an organisation for long periods, despite their strongly developed openness to experience personality characteristic (see Section 5.2.1). For example, four of the champions had spent more than five years in their organisation.

The author identified no substantial differences between the most and least effective champions for this demographic attribute. Diplomat champions, however, generally had longer tenures than maverick champions.

Experience in traditional urban water management

The project champions had between zero and 20 years of experience in traditional urban water management (e.g. drainage and centralised wastewater treatment). Four of these champions had at least eight years of experience. This demographic attribute was, however, not a distinguishing feature of the champions. The existence of several champions with many years of traditional water management experience is inconsistent with the preliminary conceptual model.

The more effective champions typically had more experience in traditional water management. For example, all of the three most effective champions had at least eight years experience, while two of the three least effective champions had no experience. No substantial differences were found, however, when data for maverick and diplomat champions were compared.

Experience in sustainable urban water management

The project champions had between three and 10 years of experience in SUWM (e.g. water sensitive urban design). Four of these champions had substantially more experience than typical 'non-champion' SUWM leaders in their organisations. The author found no substantial differences between the most and least effective project champions for this demographic attribute. Diplomat champions, however, tended to have considerably more experience in SUWM than maverick champions (i.e. nine to 10 years compared to only three to five years).

Professional mobility

The number of roles or jobs that the project champions had occupied in the five years from 2002 to 2007 ranged from one to three. For four of these champions, this level of mobility was substantially higher than typical 'non-champion' SUWM leaders in their organisations (i.e. it was a distinguishing attribute). Even the project champions who had long tenures had a history of taking on a variety of roles. For example, one project champion with a tenure of 16 years said: "I've probably been in 10 different roles since I've been here".

The data indicate that the most effective project champions tended to have higher degrees of professional mobility, even though they were generally older. For example, the three most effective champions had levels of professional mobility that were greater than, or equal to, the three least effective champions. No substantial differences were found, however, when data for maverick and diplomat champions were compared.

Managerial level

All of the project champions occupied a position within the second to fourth tier of management in their organisations. Four of the champions were operating at the fourth tier of management (i.e. the 'team leader' level).

The author found no substantial differences in this attribute when data from the most and least effective champions were compared. The managerial level of the diplomat champions was, however, greater than or equal to the managerial level of the maverick champions. This finding may reflect that diplomat champions are generally older. Another explanation is that they are more strongly associated with specific behaviours (e.g. high levels of collaboration and the ability to gather political and managerial support) and personality characteristics (e.g. emotional stability and self-awareness) which would help them to take advantage of promotional opportunities.

Nature of tertiary education

The project champions had differing backgrounds in terms of their tertiary education. Even though the urban water management industry is highly populated by engineers, only one of the project champions had an undergraduate engineering degree. This finding may reflect that these champions typically emerged in policy and strategic planning units (see Section 7.2) rather than in technical service delivery units. It may also reflect that champions with a non-engineering background are not devaluing a major source of personal power when they start to actively promote SUWM practices. Another possible explanation is that the personality traits that influence a person's decision to pursue a career as a civil engineer in a publicly-managed water agency are different to those that typically drive the emergence of SUWM project champions (see Section 5.2).

The author found no substantial differences between the most effective and least effective champions for this demographic attribute. This was also the case when data from maverick and diplomat champions were compared.

Influential life experiences in childhood

Two common themes emerged when project champions recalled childhood experiences that were influential in their development as leaders. First, three of the champions recalled significant hardships at school or as a result of family breakdown. This was a distinguishing attribute for two of these champions. Second, three of the champions mentioned taking on high levels of responsibility as a child, such as looking after younger siblings. This was also a distinguishing attribute for two of these champions. Although these two demographic attributes do not

represent strong findings, they are consistent with life histories of transformational leaders reported in the literature (see Bass, 1999).

The author found no substantial differences between the most effective and least effective champions for these two demographic attributes. The three champions who reported taking on unusually high levels of responsibility as a child were, however, all maverick champions.

Influential life experiences in adulthood

Three common themes emerged when the project champions recalled adult experiences that were influential in their development as leaders. First, five of the champions had benefited from influential mentors. This was a distinguishing attribute for three of these champions. The four most effective champions mentioned having several mentors, while the two least effective champions had either never had an influential mentor or only one. No substantial differences were found between the maverick and diplomat champions for this attribute. The finding that some strongly nominated project champions had not had more than one influential mentor was unexpected, given the value of this leadership development activity (see Giber et al., 1999). The tendency of some champions not to proactively establish structured relationships[17] with mentors may reflect their high levels of self-confidence and independence (see Section 5.2.1), but also represents a missed opportunity to develop their leadership abilities.

Second, four of the champions had a work experience background that was highly diverse. This included taking on a range of jobs, different professions and working in different geographic locations. For three of these champions, this attribute was distinguishing. This finding is consistent with the tendency for these leaders to have a strongly developed openness to experience personality characteristic (see Section 5.2.1). The author found no substantial differences between the most and least effective champions, or between the maverick and diplomat champions for this demographic attribute.

Finally, four of the champions reported periods of extensive travel particularly during early adulthood. For example, two champions reported travelling around Australia for 12 months. For two champions, extensive travel was a distinguishing attribute. The following quote from a project champion illustrate how extensive travel influenced aspects of their personality and consequently influenced their leadership style:

---

[17] Typically, a structured mentor-mentee relationship would involve a written agreement between both parties that includes clear developmental objectives and role descriptions.

Certainly one of the things that have certainly made me who I am, I think, is the fact that we've travelled - I've travelled all my life. … by the time I was 33 or something like that, 34, I'd lived in about 34 different houses. … I think that diversity of experience has certainly made me more adaptable.

The finding that the life history of the studied project champions often included periods of extensive travel is also consistent with these leaders having a strongly developed openness to experience personality characteristic. The author found no substantial differences between the most and least effective champions, or between the maverick and diplomat champions for this demographic attribute.

Management implications (demographics):

• During recruitment and selection processes where mature SUWM champions are being sought, use interviews and referees to look for:

  - Members of Generation X (born 1961 - 1980) or Baby Boomers (born 1944 - 1960), at present.

  - Candidates with at least three years experience in SUWM.

• Where potential SUWM champions are being sought, look for:

  - Candidates with a history of professional mobility (i.e. taking on a variety of roles and jobs), and a non-engineering undergraduate degree.

  - Influential life experiences that may include periods of hardship and high levels of responsibility during childhood, as well as periods of extensive travel, highly diverse work experience and influential mentors during adulthood.

  Also recognise that younger leaders (e.g. those entering the 'team leader' level) generally have greater potential to consciously change their leadership behaviours to become more effective (Adair, 2005).

• When planning leadership development initiatives, recognise that:

  - Project champions are likely to stay with the organisation for at least five years. Early investment in a leadership development program with the positive 'return on investment' (see Phillips, 2007) will maximise the net benefit to the organisation.

  - Some project champions have an unusually strong tendency not to proactively set up structured mentoring arrangements with respected leaders. These champions are likely to be of the maverick type who could greatly benefit from well-designed mentoring arrangements (see McCauley & Van Velsor, 2004). Such arrangements should form part of individual leadership development plans that are prepared during a 'feedback intensive' leadership development program (see Appendix 1).

5.3. POWER

5.3.1. PREFERENCE FOR USING PERSONAL OR POSITION POWER

Power is the potential to influence others (Hughes *et al.*, 1995). Personal power is derived from the personality traits and skills of the leader, as well as the outcomes from previous episodes of leadership. In contrast, position power is derived from a person's formal role within the organisation (Yukl, 1981).

As shown in Figure 15, all of the project champions showed a preference for using personal power. The strength of this preference was a distinguishing attribute for half of these leaders. This finding supports the preliminary conceptual model, and the literature that indicates effective leaders tend to use personal power more often than position power (Hughes *et al.*, 1995; Yukl, 1989), even where they have access to high levels of position power. The finding is also consistent with their role in exercising influence across organisational boundaries as well as vertically in their organisations. That is, exercising influence with colleagues who are not their staff. The author found no substantial differences between the most effective and least effective champions, or the maverick and diplomat champions for this attribute.
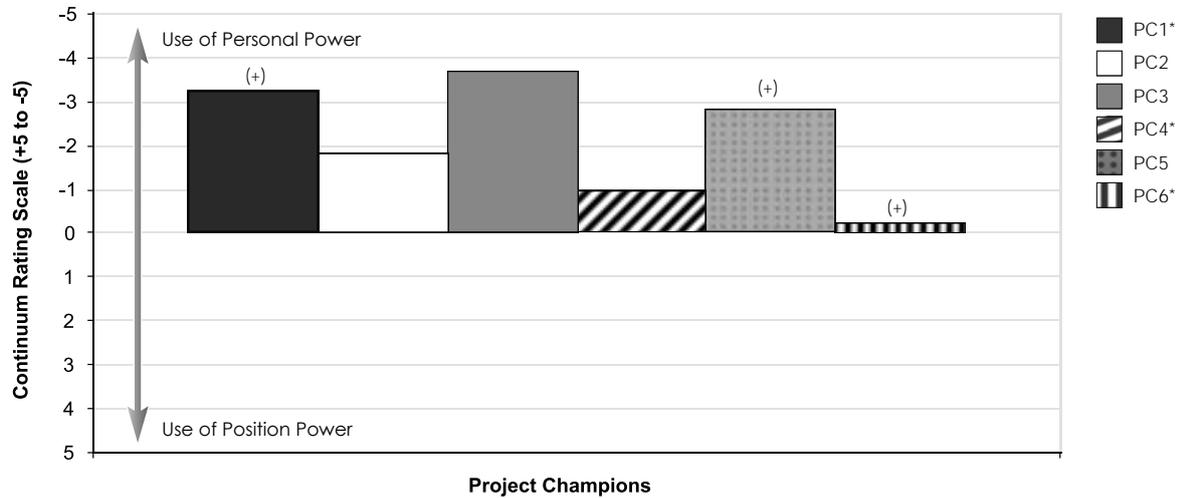
Figure 15 – Preference for using personal or position power (peer-assessed)

NOTES:

• The 360 degree questionnaire asked people to rate the relative extent to which the leader being rated used personal and position power on the continuum rating scale shown above. Definitions of these types of power from Yukl (1981) were provided.

• PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency).

Management implications (personal power):

• Ensure that leadership development initiatives focus on building skills and knowledge that foster personal power. Such skills include networking (especially the strategic form; see Section 5.3.3) and the ability to use distributed and transformational leadership behaviours (see Section 5.4). Relevant forms of knowledge include general (i.e. SUWM-related), strategic, normative, relational and political (see Section 5.2.3).

5.3.2. TYPES OF POWER

The author used data from individual interviews and the 360 degree questionnaire to evaluate the level of different types of power held by the project champions. The typology consisted of personal and position power (Yukl, 1981), as well as expert, reward, referent and coercive power (French & Raven, 1959). As levels of reward and coercive power were very low and not distinguishing, data on these forms of power have not been presented here.

Personal power

As shown in Figure 16, five of the champions had moderate to strong levels of personal power, and this was a distinguishing attribute for four of these leaders. Interview data indicate that the personal power of these leaders was primarily derived from their social networks, 'people skills' (e.g. communication skills), knowledge (e.g. of SUWM and relationships in their organisations) and credibility that had been built in their organisations as a result of delivering positive outcomes. The author found no substantial differences between the most and least effective champions, or the maverick and diplomat champions for this attribute.
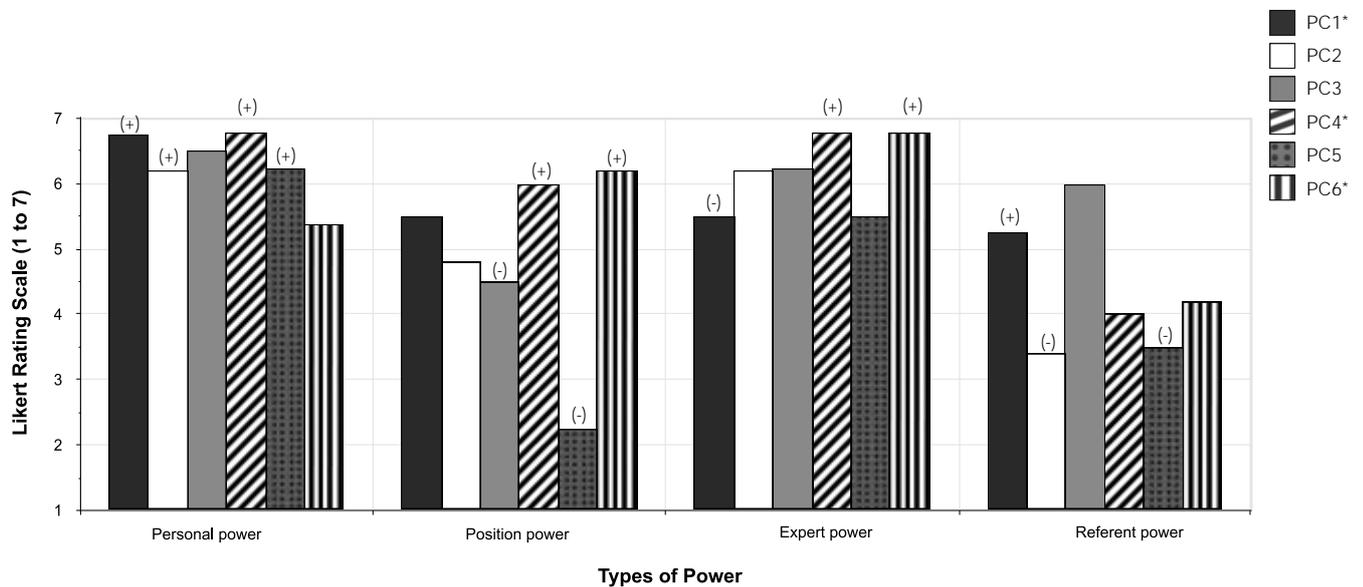
Figure 16 – Levels of power (peer-assessed)

NOTES:

• The 360 degree questionnaire asked people to rate the extent to which they agreed the leader being rated possessed "high levels" of particular types of power. For descriptions of these types of power, see Yukl (1981) and French & Raven (1959). Key for the scale: 1 = disagree strongly; 2 = disagree moderately; 3 = disagree a little; 4 = neither agree nor disagree; 5 = agree a little; 6 = agree moderately; and 7 = agree strongly.

• PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

Position power

High levels of position power were not common amongst the project champions. Nor was it a distinguishing attribute for many champions. Only two of these leaders had moderate to strong levels of position power (see Figure 16). For five of the champions, their level of position power was lower than their personal power, as predicted by the preliminary conceptual model.

The author found no substantial differences between maverick and diplomat champions for this attribute. The three most effective champions, however, had the highest levels of position power (see Figure 16). These data suggest that having at least a moderate degree of position power is advantageous when combined with moderate to high levels of personal power. To illustrate, one of the more effective project champions with relatively high levels of position power stated that such power "opens doors and gives you opportunities" to create change.

Management implications (position power):

• Senior leader-managers should place potential or actual project champions in positions in the organisation that have moderate levels of position power as soon as they have the necessary skills. This level of power usually begins at the 'team leader' level (i.e. the fourth tier of management).

Expert power

Although the project champions were SUWM generalists rather than technical specialists, they were still commonly perceived by their peers as "experts" in the field of SUWM. Four of the champions had moderate to high levels of SUWM-related expert power (see Figure 16), but this was rarely a distinguishing attribute. Champions acquired expert power through their social networks inside and outside the organisation, continuing education (e.g. conferences and postgraduate degrees), and learning through experience. The following quote from a champion who had high levels of expert power reveals one strategy for building such power, namely networking with respected academics:

> The other power area for me is the research area. So getting to know people who are academically known … and the way to do that is through doing those network projects, either through grants or through engaging them directly to do projects or research using their undergraduates.

While the author found no substantial differences between the most and least effective champions for this attribute, the diplomat champions tended to have higher levels of expert power than the maverick champions. For example, all of the diplomat champions had higher levels of expert power that the maverick champions, and for two of these diplomat champions this relatively high level of power was a distinguishing attribute.

Management implications (expert power):

- Assist project champions to develop SUWM-related expert power by facilitating training in advanced forms of social networking, ensuring that a commitment to learning is a strong part of the organisation's culture, supporting innovative projects with a research element, diverse job assignments, and encouraging further education that is relevant to the field of SUWM.

Referent power

Referent power is derived from associating with powerful people and groups. Data relating to this form of power were inconsistent. Specifically, data from peer-assessments (see Figure 16) indicate that only one of the project champions had moderate to strong levels of referent power, and it was not commonly a distinguishing attribute. The self-assessed data was, however, substantially different (see Figure 17). Four of the champions rated their own level of referent power as being between moderate and strong, and this was a distinguishing attribute for all four leaders. Data from individual interviews suggests that the reason for this difference is that referent power was predominantly used by the champions for influencing

vertically in their organisations and therefore its use was not frequently observed by their peers across the organisation. For example, PC6's peer-assessed rating was relatively low (4.2 on the 1 to 7 Likert scale), but his / her self-assessed rating was much higher (6) and was distinguishing (i.e. the equivalent rating for typical 'non-champions' SUWM leaders in this organisation was only 2.8). Individual interview data indicate this champion had substantial reservoirs of referent power. This power resulted from building good strategic networks (see Ibarra & Hunter, 2007) with executives and councillors. Such power was particularly valuable when PC6 sought to influence more senior leaders in his / her organisation.
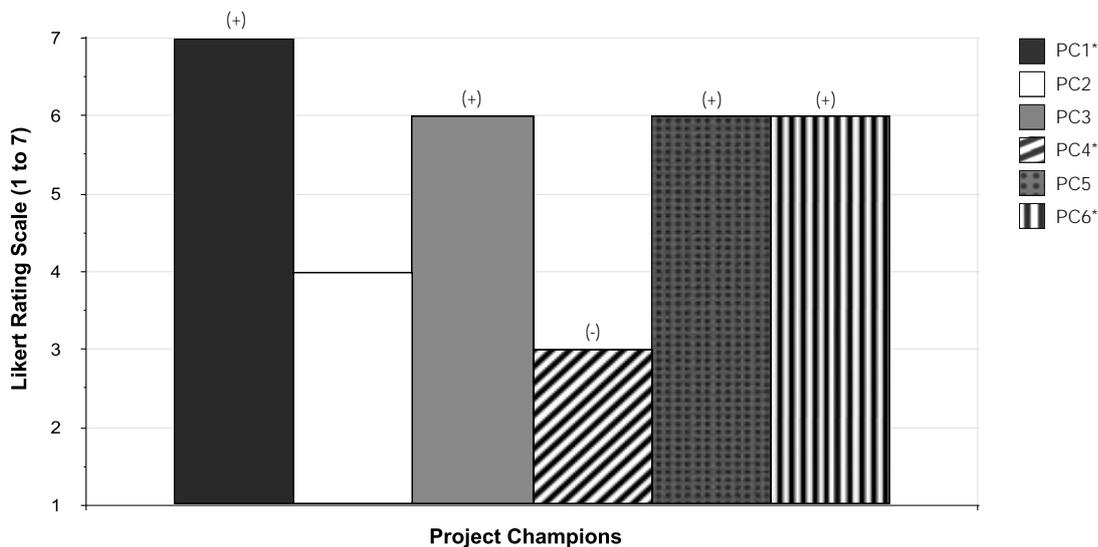
Figure 17 – Referent power (self-assessed)

NOTES:

- The 360 degree questionnaire asked people to rate the extent to which they agreed the leader being rated possessed "high levels" of particular types of power. For descriptions of this type of power, see French & Raven (1959). Key for the scale: 1 = disagree strongly; 2 = disagree moderately; 3 = disagree a little; 4 = neither agree nor disagree; 5 = agree a little; 6 = agree moderately; and 7 = agree strongly.
- PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

There was often a strong relationship between the level of the champions' referent power and their networking strategies. This relationship is illustrated in the following quote from a champion with relatively high levels of referent power who had a tendency to establish networks with executives when first approaching external organisations, rather than approaching middle managers or technical officers:

> I learnt that often the best way to do something, if you want to do something, [is] just go straight to the person at the top. … generally speaking, the person at the top will be quite happy to talk to you. You know, they're usually approachable, normal people, and again I think I've always tried to engage those people in anything I've done and therefore I think I've probably gained that referent power.

Overall, the data indicate that referent power is often a strong and distinguishing source of power for those project champions who excelled at being able to influence more senior leader-managers in their organisations. The author found no substantial differences between the most and least effective champions, or the maverick and diplomat champions for this attribute.

Management implications (referent power):

• Assist project champions to develop referent power by encouraging champions to establish structured mentoring relationships with powerful individuals, encourage the acquisition and use of advanced social networking skills, and facilitate opportunities for champions to build networks with powerful individuals (e.g. executives, politicians and respected academics). For example, regular discussion forums relating to SUWM policy and projects where technical and managerial staff have an opportunity to speak freely with executives and local government politicians could be used to help developing champions build strategic networks, knowledge and power.

• Strategically use job assignments (see Appendix 1) to help champions develop power (i.e. expert and referent forms) as well as new social networks and knowledge. Such assignments should be part of a champion's individual leadership development plan.

5.3.3. TACTICS TO BUILD POWER

Social networking

During interviews, the project champions placed an emphasis on the importance of networking to gather information, build power and form relationships that can be used to exercise influence. The importance of this behaviour is highlighted in the following quote from a champion who was asked about the tactics he / she used to build power:

> I think it's just networks. I think it's just going and spreading the word, going and seeing people. Having some clarity about that sort of vision or purpose if you like.

Another champion stated simply that "you can have all the technical ability and you can be absolutely brilliant, but unless you can manage [and] foster relationships, you just don't get anywhere".

Interviews illuminated differences in the type of networking used by project champions. Using Ibarra & Hunter's (2007) typology of operational, personal and strategic networking, all of the project champions were moderate to strong operational networkers. That is, they were able to develop functional relationships across organisational boundaries with colleagues who needed to be involved with the delivery of day-to-day tasks. All of the project champions also had moderate to strong personal networks. That is, they had relationships with like-minded colleagues, particularly outside the organisation (e.g. in academic institutions), who could be used to achieve personal goals. The greatest difference, however, was in the area of strategic networking. That is, developing relationships to advance long-term organisational goals (e.g. networks with key executives inside and outside the organisation, as well as local politicians). For three of the champions, strategic networking was one of their strongest leadership attributes, while two champions did not appear to engage in strategic networking.

The following two quotes originate from project champions who were proficient at all three forms of networking. The first quote illustrates how one champion built relationships with executive decision-makers that were based on trust to build personal power and exert influence:

> Making sure I have the ear of the people that make the decisions. … So making sure I have their ear - their trust in me. So building up trust because that builds up my power - because ultimately they'll revert to you to … either to (a) provide them with the answer or (b) make the decision.

The second quote provides an insight into the tactics one champion used to build strategic networks with local government politicians:

> … I've tried … getting to know those political players a little bit better on a personal level and working out how they operate, how to win them over, how to actually influence them more. *[Interviewer: Is getting access to councillors difficult?]* Usually, yes. *[Interviewer: What's the trick from a middle management level?]* Usually it's defining what their interests are, if they have particular passions, whether it be a certain place or whether it be a certain issue, finding out what that is and then maybe going out of your way a little bit to actually help them on that or give them information on it.

Another clear difference between the champions was the dominant *direction* of their networking activities and influence attempts in their organisations. Three champions had a strong propensity to network and exercise influence laterally in their organisation (i.e. working closely with colleagues at a similar organisational level). One champion strongly favoured vertical networking and attempts at exerting influence (i.e. working closely with executive decision-makers and politicians). Only two champions were proficient at networking and exerting influence in both directions.

The data support an association between champion effectiveness and strategic networking ability. Specifically, the four most effective champions had moderate to strong strategic networks, while the two least effective champions had very weak strategic networks. This finding is consistent with research by Ibarra & Hunter (2007) who found that strategic networking is the most challenging type of networking, is typically underdeveloped, but is commonly a characteristic behaviour of the most effective organisational leaders.

The data also support an association between the diplomat champions and strategic networking ability. For example, all of the diplomat champions had moderate to strong strategic networks, while two of the maverick champions had very weak strategic networks. Another difference related to the dominant direction of networking and exercising influence. All of the maverick champions had a strong preference for one direction. In contrast, two of the diplomat champions had the tendency to network and exercise influence both vertically and laterally in their organisations.

Social network features

To examine the validity of the preliminary conceptual model, the author collected data on four social network features using the 360 degree questionnaire. These features were network centrality, use of the 'weak tie strategy', use of the 'strong tie strategy', and working in tandem with more senior champions. For background information on these features, see Appendix 1. Using descriptions of network centrality from Balkundi & Kilduff (2005), the questionnaire explored whether project champions were popular, brokered information between people in their networks, and associated with powerful people. No strong findings emerged from the data analysis, and therefore the conceptual model was not supported with respect to project champions having a central position in their social networks.

The weak tie strategy of social networking aims to form acquaintances with many people in different groups to generate diversity in a leader's social network (Granovetter, 1973). It is a strategy that is useful for quickly gathering information. It can also be used to build power when leaders strategically aim to develop weak relationships with two people in a network who are not directly connected (Burt, 1992)[18]. Data from the questionnaire indicate that conscious use of the weak tie strategy was not a common tactic of any of the project champions (see Figure 18), and therefore the preliminary conceptual model was not supported.

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[18] This tactic is known as filling 'structural holes' (Burt, 1992).
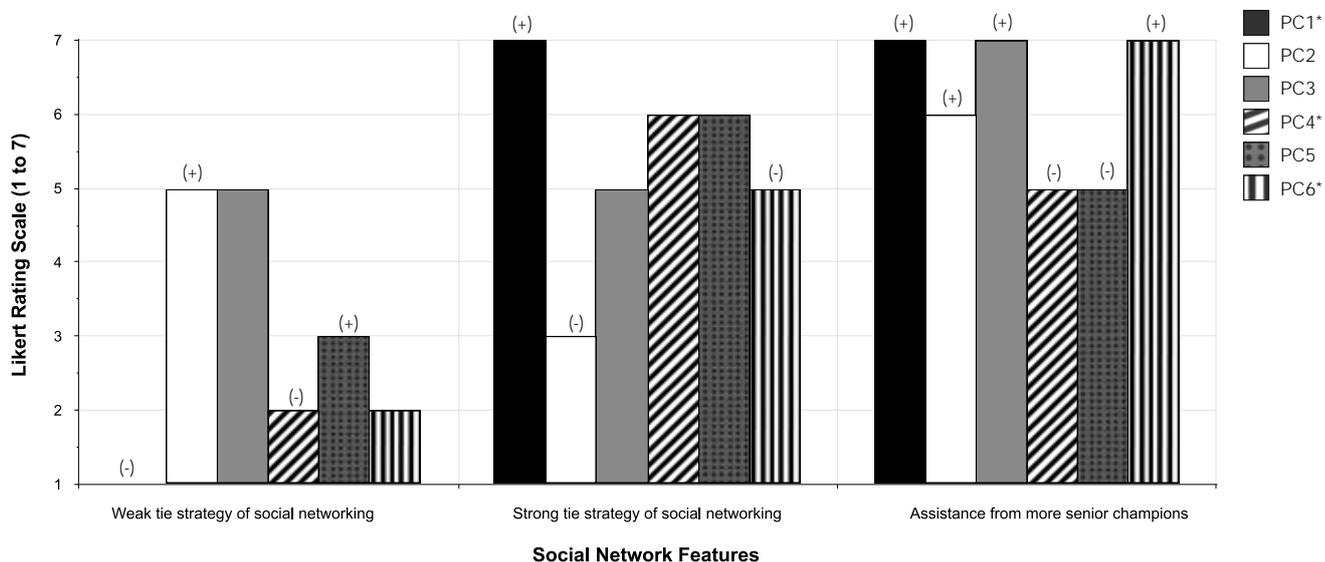
Figure 18 – The strength of several social network features (self-assessed)

NOTES:

• The 360 degree questionnaire asked people to rate the extent to which they agreed the leader being rated had particular social network features. These features are described in the text. Key for the scale: 1 = disagree strongly; 2 = disagree moderately; 3 = disagree a little; 4 = neither agree nor disagree; 5 = agree a little; 6 = agree moderately; and 7 = agree strongly.

• PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

One of the reasons why project champions did not place an emphasis on building large social networks with a diverse group of stakeholders was the presence of local 'bridging organisations' (see Brown & Clarke, 2007). These organisations took the form of regional capacity building programs (e.g. 'Clearwater' in Melbourne) and influenced five of the case study agencies. The existence of these organisations made it easy for the champions to quickly access information and expertise, without having to invest the time to build and maintain large social networks.

The strong tie strategy of social networking aims to form a relatively small number of relationships characterised by a high level of importance, exchange frequency and mutual benefits (Granovetter, 1973). Effective leaders strategically use a small number of these relationships to connect to people who are central in other social networks (e.g. those in other organisations). Four of the champions showed a strong preference for this strategy compared to the weak tie strategy (see Figure 18). This preference was, however, rarely a distinguishing attribute.

All of the three most effective project champions showed a very strong preference for using the strong rather than the weak tie strategy (see Figure 18). This preference was stronger than, or equal to, the three least effective champions. The author found no substantial differences, however, between maverick and diplomat champions for this attribute.

Individual interview and questionnaire data indicate that four of the champions benefited greatly from working with more senior SUWM champions (e.g. executives or politicians). To illustrate, four of the champions agreed with the statement: "My ability to influence others in this context often relies on assistance from champions (i.e. emergent leaders) at the senior management, executive and/or political level" to at least a "moderate" extent (see Figure 18). This network feature was a distinguishing attribute for these champions. This finding supports the preliminary conceptual model and the 'Tandem Model of Championship' (Witte, 1977).

Some project champions did not rely on *direct* support from senior leaders, but benefited *indirectly* by working in a supportive environment. For example, as shown in Figure 18, PC4 only relied on assistance from more senior champions "a little", but was able to successfully promote SUWM due to a highly supportive context. This context included: a team of colleagues located across the organisation who had similar personal values and enjoyed working together; an organisational culture that was aligned with the SUWM philosophy, valued innovation and encouraged learning; and a position in the organisation where the project champion had access to considerable position power. In addition, data from the anonymous peer nomination process indicates that this champion was making the transition to an executive champion. In this case study agency, a number of senior leaders, including a mayor with transformational leadership abilities and a strong commitment to sustainability, helped to create an environment where a SUWM project champion could operate effectively without needing high levels of direct assistance from a more senior leader.

For the attribute of working in tandem with more senior champions, the author found no substantial differences between the more and least effective champions, or the maverick and diplomat champions. There was, however, a strong association between the champions who had the ability to exercise influence and network vertically in their organisation and those that worked in tandem with more senior champions. For example, PC1, PC3 and PC6 had the strongest ability in this area, and all agreed "strongly" that they relied on the assistance of more senior champions (see Figure 18).

During the individual interviews with project champions, none of these leaders indicated that they *consciously* designed and built their social networks, were aware of relevant social network theory, or deliberately used tactics such as filling 'structural holes' in social networks to build power (see Burt, 1992). As one champion stated, "my networks have sort of grown organically". Thus, champions recognised and strongly emphasised the importance of social networking, but their tactics were guided by intuition rather than knowledge of proven strategies to build powerful networks.

Management implications (building power through social networks):

• Ensure project champions are trained in social networking strategies. This training should: draw on relevant research and theory; outline networking strategies that can be used for gathering information, building power and exercising influence; emphasise the 'strong tie strategy' of social networking; and help to build skills in strategic networking.

• Encourage champions to develop social networks and exercise influence in both a lateral and vertical direction in their organisations. This means supervisors must allow competent champions to develop direct working relationships with executives and politicians, where appropriate.

• Recognise the power of the 'Tandem Model of Championship' (Witte, 1977), where an executive and project champion work closely together to promote SUWM. As shown in Figure 8 (Section 4.2.1), executive champions and project champions are usually only separated by one management level in water agencies. In addition, the studied project champions benefited most when they reported directly to executive champions.

• Where the 'Tandem Model of Championship' is operating, executive champions can help to build the personal power of project champions by: providing guidance, information and resources; connecting them with powerful people; and publicly acknowledging them when they have been successful. Executive champions can also assist indirectly by helping to create a supportive environment for emergent leadership (see Section 7.2).

• Where project champions do not report directly to executive champions, strengthen the relationship between the two leaders through structured mentoring arrangements.

5.4. KEY BEHAVIOURS

The leadership behaviour of the project champions was investigated in three ways. First, the author used individual and group interviews as well as the 360 degree questionnaire to explore the relevance of five styles of leadership, namely transformational, transactional, laissez-faire, distributed and instrumental leadership. These styles represent different leadership behaviours and are described in Table 4. Transformational and distributed leadership were examined as they were highlighted by the literature review as being potentially relevant (see Appendix 1). Transactional and laissez-faire leadership styles were measured with transformational leadership as they are part of the 'Full Range Leadership Theory / Model' (Avolio, 2005 & 1999; Avolio & Bass, 2002; Bass & Avolio, 1990). Instrumental leadership was also included as Antonakis & House (2004) recommended extending the 'Full Range Leadership Model' to include this form of leadership.

Table 4 – Descriptions of the leadership styles that were examined

Leadership Style	Description
Distributed leadership	A process of influence that occurs in groups and involves more than one leader (Gibb, 1954; Gronn, 2000). An example is when leaders from across a water agency work together to promote a SUWM project or policy, and the process is advanced by different leaders at different times. Thus, the overall SUWM leadership process shown in (Section 4.3) is an example of distributed leadership.
Transformational leadership	A leader moving their collaborators "beyond immediate self-interests through idealized influence (charisma), inspiration, intellectual stimulation, or individualized consideration" (Bass, 1999, p. 11). • **Idealised influence (charisma):** involves the leader being a role model, demonstrating ethical conduct, developing a shared vision of the future, encouraging alignment of personal values to the vision, as well as taking and sharing risks with collaborators. • **Inspirational motivation:** involves the leader giving meaning to the work of collaborators, arousing team spirit, displaying enthusiasm, confidence, persistence and optimism, clearly communicating the vision, as well as demonstrating commitment to the vision and shared objectives. • **Intellectual stimulation:** involves the leader promoting creativity and innovation amongst their colleagues (e.g. encouraging them to question assumptions, reframe problems and try new approaches), and seeking the input of collaborators when problem-solving. • **Individualised consideration:** involves the leader paying close attention to the individual needs of colleagues (e.g. through effective, two-way communication) and helping to develop these individuals through techniques such as coaching and mentoring, as well as providing a supportive climate for personal development (Avolio & Bass, 2004; Bass *et al.*, 2003).
Transactional leadership	"The exchange relationship between leader and follower to meet their own self-interests" (Bass, 1999, p. 10). This style of leadership is characterised by: • the use of **contingent rewards** (e.g. rewarding greater performance with a higher salary); • **active management-by-exception** (e.g. pro-actively monitoring performance of staff and taking corrective action when necessary); or • **passive management-by-exception** (e.g. only responding to poor performance of staff when problems occur) (Avolio & Bass, 2004).
Laissez-faire leadership	Non-leadership. Individuals avoid taking action (Bass, 1999).
Instrumental leadership	Where a leader gives "clear direction as to how work should be done and provides resources for the accomplishment of that work" (Bryman *et al.*, 1996b, p. 358).

Second, the author used individual interviews and the 360 degree questionnaire to explore the relevance of 19 specific behaviours from the preliminary conceptual model (see Appendix 2). Finally, the author used data from the individual interviews and questionnaire to examine the relevance of nine influence tactics to identify which ones were most relevant to project champions, as well as to assess the frequency and diversity of tactics they employed.

5.4.1. LEADERSHIP STYLES

Coded data from group and individual interviews, as well as data from the customised component of the 360 degree questionnaire and the Multifactor Leadership Questionnaire collectively indicate that of the five leadership styles examined, transformational and distributed leadership were relevant. This finding supports the preliminary conceptual model.

Analysis of these two leadership styles involved many lines of evidence and consequently Chapter 6 has been dedicated to discussing and reporting related findings. In short, the transformational leadership style, which includes the use of both transactional and transformational leadership behaviours (Avolio & Bass, 2004), was relevant to all of the project champions, but only two of these leaders exhibited moderate to high levels of transformational leadership compared to control groups. These two champions were the most effective and were also diplomat champions. In addition, some distributed leadership behaviours were also found to be highly relevant to the champions (e.g. coordinating leadership across the organisation, getting the right people involved, and gathering political and managerial support). Champions who were highly proficient at these group-based leadership behaviours were generally the most effective and were usually diplomat champions.

5.4.2. KEY BEHAVIOURS

Of the 19 behaviours included in the preliminary conceptual model, 10 were found to be relevant to the project champions. These behaviours are discussed below, and are listed in Figures 19 and 20. These figures displayed peer-assessed data from the 360 degree questionnaire that indicates the relevance of these behaviours to the project champions.
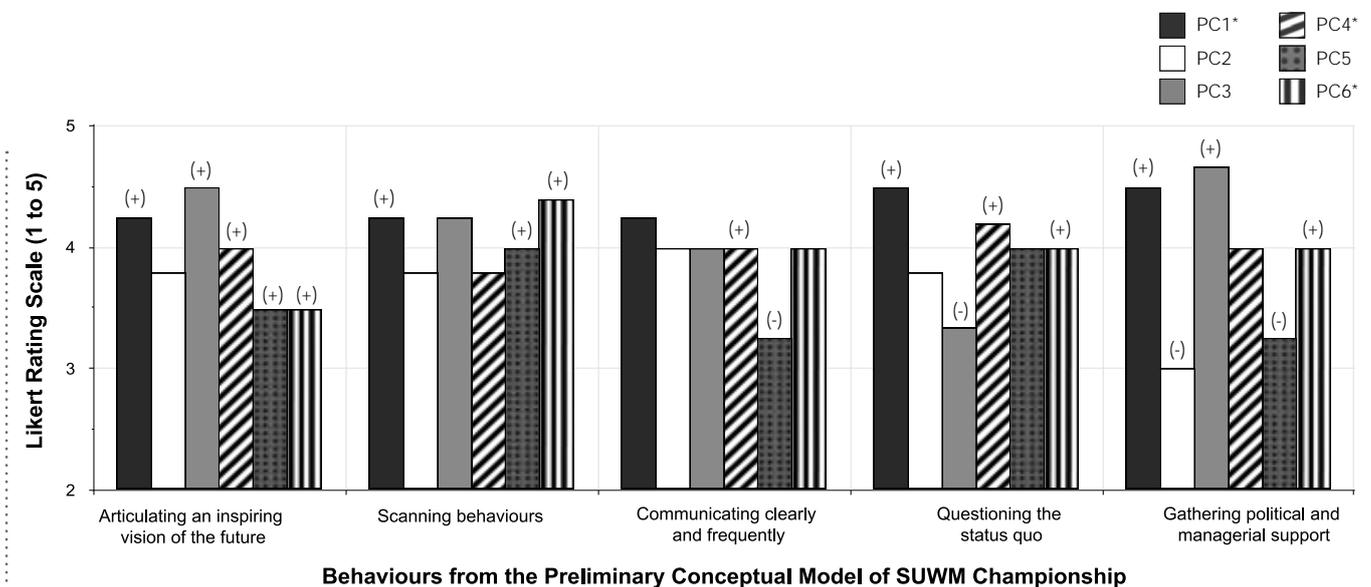
Figure 19 – Ratings for the relevance of specific behaviours (peer-assessed) – Part 1

NOTES:

• The 360 degree questionnaire asked people to rate the extent to which specific behaviours were relevant to the leader being rated. Key for the scale: 1 = none; 2 = low; 3 = moderate; 4 = high; and 5 = very high.

• PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

Figure 20 – Ratings for the relevance of specific behaviours (peer-assessed) – Part 2

NOTES:

• The 360 degree questionnaire asked people to rate the extent to which specific behaviours were relevant to the leaders being rated. Key for the scale: 1 = none; 2 = low; 3 = moderate; 4 = high; and 5 = very high.

• PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

Articulating an inspiring vision of the future

As indicated in Figure 19, this behaviour was often rated by the peers of champions as having a "high" to "very high" degree of relevance, and was usually a distinguishing attribute. This behaviour is part of the transformational leadership style (see Table 4), and is unusual in that five of the champions had peer-assessed ratings for the relevance of this behaviour that were at least 10% higher than the equivalent average ratings from 'non-champion' SUWM leaders in their organisations. For this behaviour, the author found no substantial differences between the more and least effective champions, or between the maverick and diplomat champions.

Scanning behaviours

'Scanning behaviours' aim to identify issues and events of relevance to an organisation, and include networking inside and outside the organisation to gather new information and ideas (see Andersson & Bateman, 2000). These behaviours commonly had a "high" to "very high" degree of relevance and were often distinguishing attributes (see Figure 19). They were also assisted by the presence of 'bridging organisations' (see Brown & Clarke, 2007), such as regional SUWM capacity building programs. The author found no substantial differences in scanning behaviours between the more and least effective champions, or between the maverick and diplomat champions.

Communicating clearly and frequently

Data on communication-related behaviours were consistent with data on the innate tendency of the studied project champions (especially the diplomat variety) to focus on communication (see Section 5.2.1). All of the project champions engaged in high levels of communication, but used different approaches. For example, some preferred one-to-one communications, others preferred initiating influence attempts with written communication, and others preferred working in small groups. To illustrate, the following quote originates from a champion who preferred working in small groups rather than one-to-one:

> … one-to-one I find is a disappointing opportunity, because if you've got three or four in the room, then you can move things a lot quicker because they're communicating with each other and expanding the ideas - each other's ideas - so that's a much better thing.

"Communicating clearly and frequently" was commonly rated by peers of champions as having a "high" to "very high" degree of relevance, but was rarely a distinguishing attribute (see Figure 19). While the author found no substantial differences between the more and least effective champions for this behaviour, the diplomat champions generally placed greater importance than the maverick champions on one-to-one communication and active listening.

Questioning the status quo

Questioning the status quo is a behaviour that was rated as having a "high" to "very high" degree of relevance and was often distinguishing (see Figure 19). This behaviour is also part of the transformational leadership style (see Table 4). While the author found no substantial differences between maverick and diplomat champions, this behaviour was more relevant to the most effective champions. For example, in Figure 19, the three most effective champions received relevance ratings between "high" and "very high". In contrast, the three least effective champions received ratings between "moderate" and "high".

Gathering political and managerial support

The ability to gather political and managerial support for SUWM initiatives relates to the distributed leadership style. Relevance ratings were commonly "high" to "very high", and this behaviour was often a distinguishing attribute. Two champions, however, were associated with relevance ratings from their peers that were unusually low (see Figure 19). Thus, some champions excelled at this behaviour, while others struggled. To illustrate, the following quote is from a champion who acknowledged difficulties with engaging executives and politicians:

> I'm really driven and move very quickly on projects and see that quick movement as a way of motivating. … when I need to seek senior management support and councillor support - this is where I often come unstuck because I've just had the confidence to just do it myself, and I haven't sought their involvement … So sometimes, I'll get to the end and they'll go, "What's this?" … So that's still something that I still sort of do wrong …

As illustrated in Figure 19, the three most effective project champions had relevance ratings for this behaviour of between "high" and "very high". In contrast, two of the three least effective champions had unusually low ratings around the "moderate" level. Differences between diplomat and maverick champions followed a similar pattern, with this behaviour being generally more relevant to, and more commonly distinguishing amongst, diplomat champions.

Establishing pilot projects

Establishing pilot projects was a behaviour that was commonly rated as having a "high" to "very high" degree of relevance and was often a distinguishing attribute (see Figure 20). Pilot projects served many purposes, such as minimising the risks associated with adopting new SUWM technologies, engaging sceptical stakeholders, building networks with technical experts to build personal power, and demonstrating leadership in the region. The use of this behaviour did not differ substantially between the most and least effective champions, or the diplomat and maverick champions.

Coordinating leadership

The project champions commonly coordinated the activities of several leaders within and outside their organisations to promote SUWM in the region. Relevance ratings for this distributed leadership behaviour were commonly between "high" and "very high" and the behaviour was sometimes a distinguishing attribute (see Figure 20). Published empirical research involving distributed leadership within teams has found that it can be more effective than focused leadership only if leaders coordinate their roles (Mehra *et al.*, 2006).

While the author found no substantial differences between the most and least effective project champions for this behaviour, it was generally more relevant to diplomat champions. For example, in Figure 20, the relevance ratings for all the diplomat champions were between "high" to "very high", while the equivalent ratings for all the maverick champions were between "moderate" and "high".

Expressing enthusiasm and confidence

Expressing enthusiasm and confidence is part of the transformational leadership style (see Table 4). Relevance ratings for this behaviour were usually "high" to "very high" and this behaviour was commonly a distinguishing attribute (see Figure 20). Two champions in particular had extremely high ratings, with their average peer ratings being 5 on a 1 to 5 Likert scale. Both these champions were of the maverick variety, suggesting an association between this type of champion and unusually frequent expressions of enthusiasm and confidence. This finding is consistent with the research findings relating to the personality characteristic of enthusiasm (see Section 5.2.1). The author found no substantial differences between the more and least effective project champions for this behaviour.

Persisting under adversity

Data on the behaviour of persisting under adversity are also consistent with data relating to the personality characteristics of persistence and commitment (see Section 5.2.1). Specifically, relevance ratings were usually "high" to "very high" and this behaviour was often a distinguishing attribute. The author found no substantial differences between the most and least effective champions for this behaviour. It was, however, generally more relevant to diplomat champions. For example, in Figure 20 the relevance ratings for the diplomat champions were between "high" and "very high". In contrast, the equivalent ratings for the maverick champions were between "moderate" and "high".

Getting the right people involved (collaborating)

Bringing the right people together for SUWM projects is a distributed leadership behaviour that was usually rated as having a "high" to "very high" degree of relevance, but was not often a distinguishing attribute. While the author found no substantial differences between the most and least effective champions, this behaviour was more relevant to the diplomat champions than the maverick champions. The diplomat champions had an unusually strong tendency to be collaborative rather than directive, work across organisational boundaries, build and use social networks, and coordinate distributed leadership[19]. To illustrate, one diplomat champion stated:

> … a key behaviour with me has always been collaboration, being affiliative. … You've got to be able to work across agency boundaries. … And I reckon part of my success of being able to get change is about getting people to work together. So I think, yes, being collaborative is really important.

> … generally I just think the world works through networks of people who somehow all see that same end point. And organisations are like that. … It's about trying to define a common purpose and to have people willingly want to contribute to that common purpose and do their bit …

Management implications (key behaviours):

• Encourage developing project champions to proficiently use all ten of the 'key behaviours' highlighted in this section, in addition to the behaviours associated with transformational and distributed leadership (see Chapter 6). In particular, an emphasis should be placed on using those behaviours associated with the more effective champions (i.e. questioning the status quo and gathering political and managerial support). Learning how to effectively use such behaviours should form the core of tailored leadership development programs for SUWM project champions.

• Ensure that the organisation's dominant culture supports these leadership behaviours.

5.4.3. INFLUENCE TACTICS

The author used data from the individual interviews and the 360 degree questionnaire to assess the type of influence tactics project champions used, the frequency that they used these tactics, and whether they customised these tactics for their leadership context. The questionnaire gathered data on the use of nine influence tactics, using a typology from Yukl *et al.* (1993). The data indicate that the range of tactics used by champions was similar to the 'non-champion' SUWM leaders in their organisations, but several tactics were used more frequently by the champions. Figure 21 presents data on the frequency that the champions used seven influence tactics (i.e. rational persuasion, inspirational appeals, consultation, ingratiation, personal appeals, exchange and coalition tactics). Data are not presented here on 'pressure' or 'legitimating' tactics (see Yukl *et al.*, 1993), as none of the surveyed leaders frequently used these tactics.

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[19] All of the champions used these behaviours to some extent. The key point is that these were 'signature behaviours' for the diplomat champions. They used them more frequently and to greater effect.
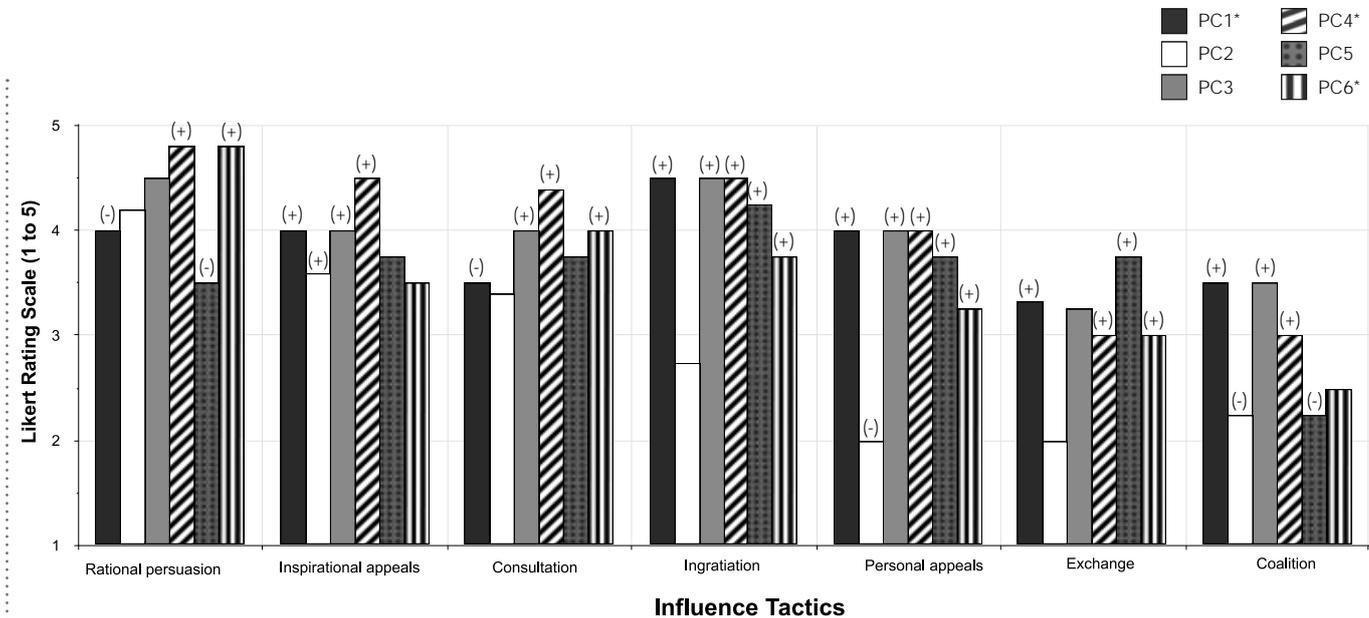
Figure 21 – Ratings for the frequency of specific influence tactics (peer-assessed)

NOTES:

• The 360 degree questionnaire asked people to rate the frequency that these influence tactics were used by the person being rated. Key for the scale: 1 = not at all; 2 = once in a while; 3 = sometimes; 4 = fairly often; and 5 = frequently. For descriptions of these influence tactics, see Yukl *et al.* (1993).

• PC = project champion. * = the three most effective champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

Collectively, the data in Figure 21 indicate that the project champions generally used all seven influence tactics at least "sometimes". The tactics of 'rational persuasion' and 'ingratiation' had the highest frequency of use, and were typically used at a frequency between "fairly often" and "frequently". In addition, the frequent use of 'inspirational appeals', 'ingratiation', 'personal appeals' and 'exchange' tactics were distinguishing attributes for at least four of the champions. That is, these four tactics were typically used more frequently than in relevant control groups.

The author identified no substantial differences in the use of influence tactics between the most and least effective champions. The diplomat champions, however, generally used the 'consultation' and 'rational persuasion' tactics more frequently than maverick champions. This finding is reflected in the following quote from a self-described maverick champion:

I'm not very consultative … I don't consult for the sake of consulting. I tend to consult if I'm not really sure on something or I think, okay, this is the world according to [the champion's name], I'd better get someone else's opinion. … you get things done, but the other side is that people are left behind and not feeling very good about themselves …

Half the champions indicated that they were highly aware of their leadership context and used this awareness when formulating influence strategies. These champions were the eldest and most senior, but the author found no strong association between this attribute and relative leadership effectiveness or champion type. The following quote illustrates how some champions were acutely aware of their environment. It originates from a champion who was comfortable letting a wide range of SUWM initiatives evolve, and patiently waiting to see which ones became effective as the surrounding context changed. This champion stated that he / she learnt from a mentor to:

… get as many balls in the air as you can and out of that will emerge the things that are going to succeed and some of them will succeed because they're the things that are going to deliver you the outcomes you want. Others won't succeed, not because they're not the thing that you need, but because the time and the place just aren't right for it. So don't be too judgmental, I think, would be one way of looking at that.

Overall, the data on influence tactics support the preliminary conceptual model in that a wide range of influence tactics were employed by the champions. In addition, some champions were highly aware of their leadership context and designed influence strategies to suit this context. The data do not support the view, however, that project champions use a wider range of influence tactics than 'non-champion' SUWM leaders. Rather, the project champions generally used more frequent attempts at influence, particularly in relation to 'inspirational appeals', 'ingratiation', 'personal appeals' and 'exchange' tactics. This finding reflects their tendency to be persistent (see Section 5.2.1), as illustrated in the following quote from a project champion:

> … if people aren't responding you try and look at other ways to get to the problem. [I] don't just try one particular method … So if people aren't responding in one way I will try different ways and eventually I'll find a way that they respond best to.

Management implications (influence tactics):

• Build the skills of SUWM project champions so they can proficiently use the seven types of influence tactic shown in Figure 21, as part of customised leadership development programs.

• Encourage developing project champions to be persistent and try alternative influence strategies until successful.

• Through mentoring, help developing project champions to become more aware of their leadership context and customise their influence strategies to suit this context.

5.5. OUTCOMES OF LEADERSHIP

5.5.1. INDIVIDUAL LEADERSHIP EFFECTIVENESS

To examine the relative effectiveness of the project champions in promoting SUWM in their organisations and broader institutions the author used a multi criteria analysis (MCA). An overview of the analysis is provided in Appendix 5. In short, the analysis used the Simple Multiple Attribute Rating Technique (see Ashley *et al.*, 2004). It also used supervisor and average peer ratings from the 360 degree questionnaire that related to generic leadership effectiveness as well as effectiveness at promoting SUWM. Data on generic leadership effectiveness were gathered using the multi-item scales of the Multifactor Leadership Questionnaire (Avolio & Bass, 2004). Data relating to SUWM leadership effectiveness were gathered using a single item Likert scale measuring the extent of agreement with the statement: "The person I am rating is effective at influencing people within my organisation and broader institutions to adopt the SUWM philosophy and/or practices".

For the MCA, the most weight was placed on leadership effectiveness criteria that used supervisor ratings, which is a convention in organisational leadership research (see Eichinger & Lombardo, 2004) and research involving 'champions of innovation' (see Howell *et al.*, 2005).

Leadership effectiveness criteria that used peer ratings were also included, as in complex jobs, supervisors and peers have different observational opportunities (Conway & Huffcutt, 1997; Harris & Schaubroeck, 1988). In addition, the case study data prompted the design of an MCA that assessed leaders as having a high level of leadership effectiveness when they were rated as effective by both their supervisors and peers. The rationale for this approach is threefold. First, the three-phase process model of SUWM leadership (see Figure 9 in Section 4.3) indicates a need for champions to exercise influence vertically (e.g. in Phase 2) and laterally (e.g. in Phase 3) during the process. Second, the finding that some project champions were more proficient at influencing laterally, vertically or in both directions (see Section 5.3.3) suggests that some champions may be associated with substantially different leadership effectiveness ratings from their peers compared to equivalent ratings from their supervisors. Analysis of the leadership effectiveness ratings from peers and supervises showed that this was the case for several champions. Finally, consultation with international experts on 360 degree leadership effectiveness ratings indicates this approach is valid given the context of the research (Dr Scott Taylor, pers. comm., 2008).

The author also conducted a sensitivity analysis that explored changes in relative leadership effectiveness when weights were altered in the MCA (see Appendix 5). This analysis found the result of the MCA to be robust.

The outcome of the MCA was a ranked list of the project champions, with the order reflecting their relative leadership effectiveness. This ranked list was: PC4 (most effective), PC6, PC1, PC3, PC5 and PC2. The analysis also revealed that despite all of the project champions being widely regarded as influential leaders and valuable assets to their organisations, some champions were substantially more effective than others. To illustrate, the MCA 'utility score' for PC4 was 94% (expressed as a percentage of the maximum possible score), while the equivalent score for PC2 was 51%.

These results demonstrate that it is possible for a project champion to emerge strongly as a SUWM leader, be regarded as such by their peers, be highly valued in their organisations and regions, but still have substantial capacity to improve as an effective leader. This underlines the potential value of identifying these leaders early and building their leadership capacity through customised leadership development programs.

The results from the MCA also indicate that the two most effective project champions were of the diplomat type, while the two least effective champions were of the maverick type. It is suggested, however, that it would be unwise to conclude that diplomat champions would always be more effective than maverick champions. To illustrate, PC1 was an effective champion working in an organisation that was relatively hostile towards SUWM. In this context it is considered unlikely that any of the diplomat champions would have been more effective than PC1.

Management implications (individual leadership effectiveness):

- Senior leader-managers should recognise that a project champion may strongly emerge as a SUWM leader in the organisation, but this does not automatically mean that they will be operating at their full potential. This highlights the need to identify potential champions early and ensure customised, evidence-based leadership development initiatives are delivered to realise their potential.

- In addition to actively developing the leadership ability of project champions, senior leader-managers should match the type of project champion they recruit to their leadership context. In general, diplomat champions are more suited to organisations that are highly supportive of SUWM and have high levels of distributed leadership. In less supportive environments, maverick champions who primarily exercise influence through strategic networks with executives and politicians are more likely to be effective. This issue is discussed further in Chapter 11.

5.5.2. GROUP AND ORGANISATIONAL EFFECTIVENESS

The author assessed the effectiveness of the *group* of people in each case study agency who worked together to promote the SUWM philosophy and/or practices. Data were gathered using two multi-item scales from Keller (1986) within the 360 degree questionnaire. One of these scales examined group effectiveness from the perspective of project quality using statements such as: "The group of people in this organisation who work together to promote the SUWM philosophy and/or practices collectively produce outcomes / products that represent value to the organisation". While the other examined the group's ability to meet budgets and timelines using statements such as: "The group of people in this organisation who work together to promote the SUWM philosophy and/or practices collectively deliver projects that meet allocated budgets".

As supervisor ratings are typically used to assess leadership performance (see Eichinger & Lombardo, 2004; Howell *et al.*, 2005), the author used average ratings from all of the surveyed supervisors in each of the agencies to assess the leadership effectiveness of the six groups of people. Figure 22 displays the average group leadership effectiveness ratings using data from both scales. These data indicate that group effectiveness ratings for all six groups were between "moderate" and "strong" and varied by less than 10% on the relevant scale.
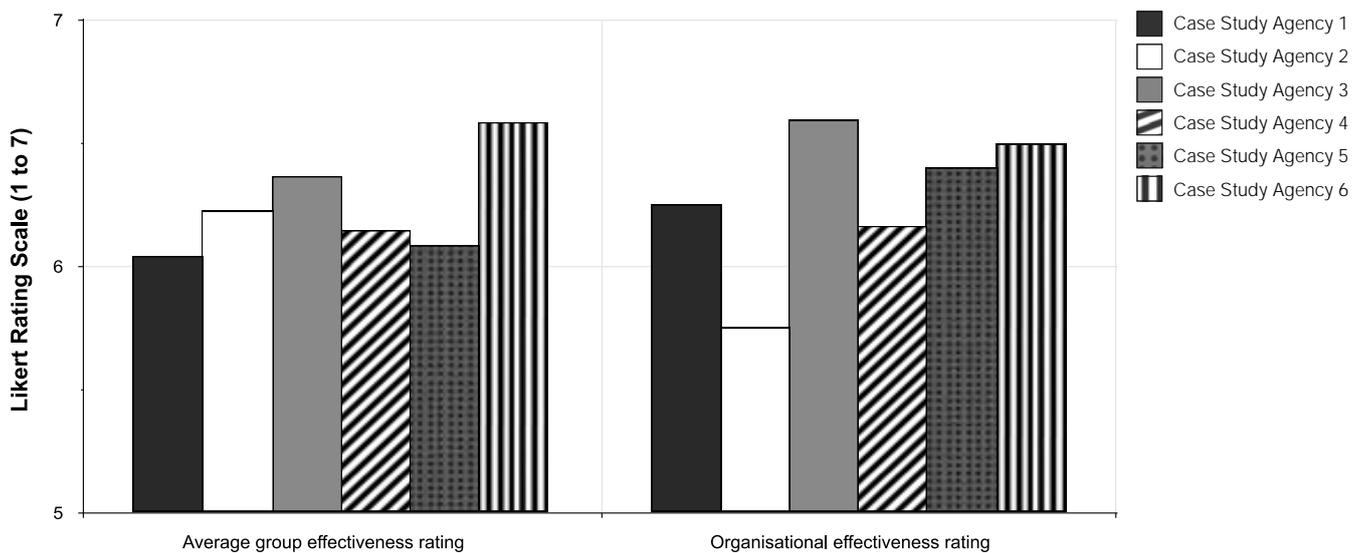
Ratings of Group and Organisational Leadership Effectiveness

Figure 22 – Group and organisational leadership effectiveness (averaged supervisor ratings)

NOTES:

- The 360 degree questionnaire asked supervisors to rate the extent to which they agreed with a number of statements relating to group and organisational effectiveness. See the text for examples of these statements. Key for the scale: 1 = disagree strongly; 2 = disagree moderately; 3 = disagree a little; 4 = neither agree nor disagree; 5 = agree a little; 6 = agree moderately; and 7 = agree strongly.

- CSA = Case study agency. * = the three case study agencies that hosted the most effective project champions.

The author also gathered data on organisational effectiveness in *delivering* SUWM by measuring the extent of supervisor agreement with the statement: "The organisation that employs the person I am rating is effective at facilitating widespread, on-the-ground delivery of SUWM projects (e.g. developments with water sensitive urban design features)". The resulting data are also presented in Figure 22. Five of the case study agencies had organisational effectiveness ratings between "moderate" and "strong", while one was below the "moderate" rating.

The data in Figure 22 indicate that even though project champions are critical in the transition to SUWM (Brown & Clarke, 2007; Taylor, 2007), the substantial differences in the individual leadership effectiveness of the six project champions did not translate to equivalent differences in levels of group and organisational effectiveness. For example, PC4 was a highly effective individual champion, but his / her organisation received only moderate effectiveness ratings at the group and organisational level. There are at least two explanations for this finding. First, there are a large number of contextual factors that influence leadership outcomes and are beyond the control of project champions. As discussed in Chapter 7, some of these are highly significant, such as the presence of cooperative colleagues across the organisation (including executive champions), the organisational culture and the available resources. Second, there is a time lag between the activities of effective SUWM champions and group or organisational outcomes (e.g. widespread adoption of water sensitive urban design). For example, one champion was rated relatively highly as an individual leader, but had been in the organisation for less than a year. In this case, his / her contribution to SUWM-related group and organisational outcomes would have been limited.

These comments underline two points. First, group and organisational measures of leadership effectiveness are not good indicators of the contribution of any one leader (see Kaiser *et al.*, 2008). Second, building the leadership abilities of a single SUWM project champion in an organisation is unlikely to produce short-term improvements in the widespread delivery of SUWM in the region unless accompanied by other initiatives. Thus, recruiting and developing SUWM project champions should be part of a broader effort to build: SUWM leadership capacity throughout water agencies using the strategies recommended in Chapter 10; and SUWM-related institutional capacity within the region, using strategies such as those recommended by Brown *et al.* (2006a).

The data in Figure 22 also provide evidence of an association between diplomat champions and organisations with higher levels of group and organisational leadership effectiveness. To illustrate, the two groups with the highest effectiveness ratings included diplomat champions, while the two groups with the lowest effectiveness ratings included maverick champions. In addition, the two organisations with the highest effectiveness ratings hosted diplomat champions, while the organisation with by far the lowest organisational effectiveness ratings hosted a maverick champion. This evidence is considered weak, given previous comments about lag effects and the many other factors that moderate the relationship between champion activities and outcomes at the group and organisational level. This tentative finding is, however, consistent with the view that as organisations develop from the *Project* to *Integrated* phase in Brown's (2005a & 2008) typology of SUWM-related organisational development, the context becomes more supportive of SUWM and distributed SUWM leadership. During the *Integrated* phase when organisational outcomes for SUWM should be at their peak, the internal environment would be less receptive to maverick champions with individualistic tendencies, and more receptive to highly collaborative diplomat champions / leaders. This was the situation in case study agency 3 (the organisation with the highest level of organisational effectiveness), where an unusually large number of SUWM leaders worked together in a highly supportive environment to promote SUWM, and the most strongly nominated diplomat project champion was seen by some colleagues as a "champion" when they worked *outside* the organisation in more hostile environments to promote SUWM, but just another strong "leader" *within* the organisation.

Management implications (leadership outcomes):

• Recruiting and developing SUWM project champions should be seen as part of broader efforts to build leadership capacity within the organisations (see Chapter 10), which in turn are part of broader and long-term efforts to build institutional capacity in the region (see Brown *et al.*, 2006a).

• As the context within the agency becomes more supportive of SUWM and the agency evolves towards the Integrated phase of SUWM-related organisational development (see Brown, 2008), increasingly focus on recruiting and developing diplomat champions / leaders. This highly collaborative type of emergent leader is more suited to contexts with high levels of support for SUWM and distributed leadership (e.g. a water agency with many SUWM leaders who are strongly supported by the agency's executives, dominant culture and SUWM policy framework).

6. RELEVANCE OF TRANSFORMATIONAL AND DISTRIBUTED LEADERSHIP THEORIES

6. RELEVANCE OF TRANSFORMATIONAL AND DISTRIBUTED LEADERSHIP THEORIES

This section examines the relevance of transformational and distributed leadership theories to SUWM project champions in publicly-managed Australian water agencies, using data from the multiple case study.

6.1. RELEVANCE OF TRANSFORMATIONAL LEADERSHIP THEORY

6.1.1. INTRODUCTION

The literature review found that SUWM champions are likely to be transformational leaders (see Appendix 1). Bass (1999) defined transformational leadership as moving the "follower beyond immediate self-interests through idealized influence (charisma), inspiration, intellectual stimulation, or individualized consideration" (p. 11). These elements include specific behaviours and personality characteristics, which are described in Table 4 (see Section 5.4). This section assesses whether the studied project champions were transformational leaders. It also examines whether the most effective champions had greater transformational leadership ability, as in most work contexts there is a positive correlation between the frequency of transformational leadership behaviours and leadership effectiveness (see DeGroot *et al.*, 2000; Lowe *et al.*, 1996; Patterson *et al.*, 1995). Finally, the section also assesses whether the diplomat and maverick champions engaged in different levels of transformational leadership behaviour.

6.1.2. INDUSTRY BELIEFS REGARDING TRANSFORMATIONAL LEADERSHIP AND SUWM CHAMPIONS

When asked to describe the features of the most effective SUWM project champions in publicly-managed urban water agencies such as theirs, group interviewees in five of the case study agencies frequently cited elements of transformational leadership (see Figure 23). Similar results were obtained when the group interviewees' definitions of 'SUWM champions' were also coded and analysed (see Figure 6, Section 4.1).
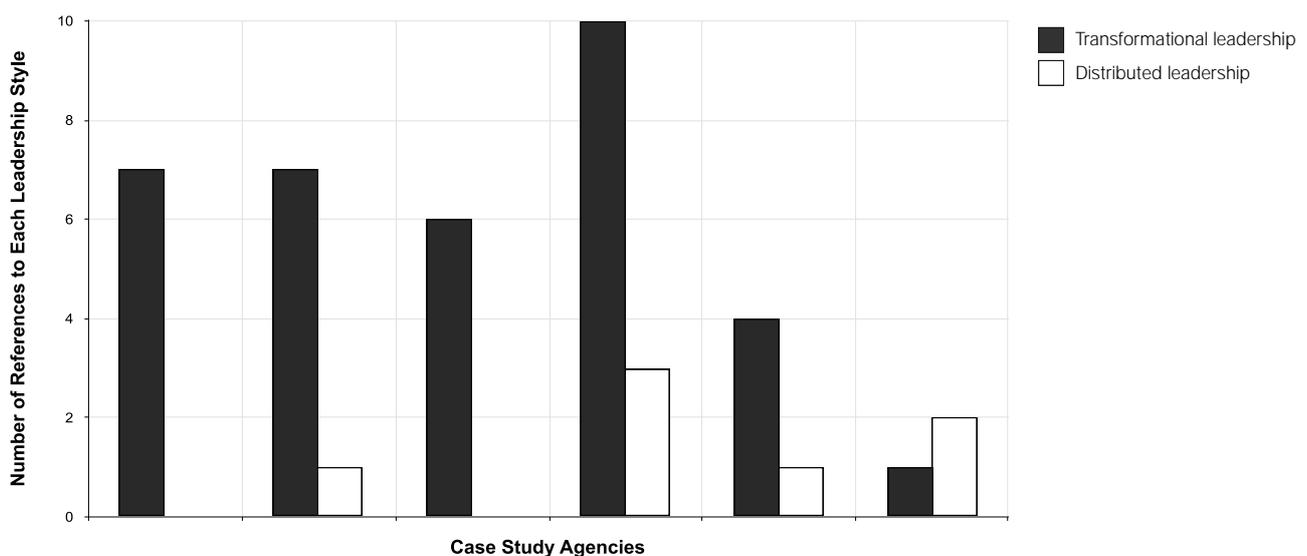
Figure 23 – Number of references to two leadership styles when group interviewees described the most effective SUWM project champions

NOTES:

• Interview coding included transformational, transactional, laissez-faire, instrumental and distributed leadership styles. These styles are described in Table 4 (Section 5.4). References were, however, only made to the transformational and distributed leadership styles.

Group interviewees also provided moderate to strong support for the relevance of transformational leadership theory to SUWM champions (both project and executive types), following an explanation of the theory by the author. In four of the case study agencies, however, group interviewees emphasised that highly transformational SUWM champions were rare in their organisation, particularly at executive levels. These four organisations were all local government agencies. The reason most commonly offered for the rarity of transformational executive champions was the existence of conservative, managerial cultures[20] that did not attract or support strong transformational leaders.

Group interviewees generally felt that the 'inspirational motivation' element of transformational leadership (see Table 4) was most relevant to SUWM champions. There was also some support for the relevance of the 'intellectual stimulation' element.

The group interviews helped to reveal 'implicit leadership models' (see Lord & Maher, 1991) in the water industry regarding effective SUWM champions. Overall, group interviewees believed there was a moderate to strong association between transformational leadership and these leaders. As indicated in the following sections, the strength of these beliefs was stronger than one would expect based

solely on the transformational leadership data collected from the six project champions. Implicit Leadership Theory (Lord & Maher, 1991) suggests that as people mature and are socialised, they develop a set of implicit beliefs about the characteristics and behaviours of effective leaders. Australia's individualistic national culture (Ashkanasy *et al.*, 2002; House *et al.*, 2002) and the Romance of Leadership Phenomenon[21] (Meindl *et al.*, 1985) may have helped to shape the implicit leadership models of group interviewees, resulting in beliefs that over-emphasise the importance of individual leadership behaviours and under-emphasise the importance of group-based leadership behaviours.

6.1.3. TRANSFORMATIONAL ATTRIBUTES OF THE SUWM PROJECT CHAMPIONS

Individual interviews

Content analysis of individual interviews with champions and their colleagues in 'non-champion' leadership roles (see Appendix 4) provides an indication of the relative extent to which each leader used the transformational leadership style. As shown in Figure 24, all project champions referred to elements of transformational leadership more frequently than typical 'non-champion' leaders in their organisations when describing their typical leadership behaviours. The same pattern was observed for five of the executive champions.
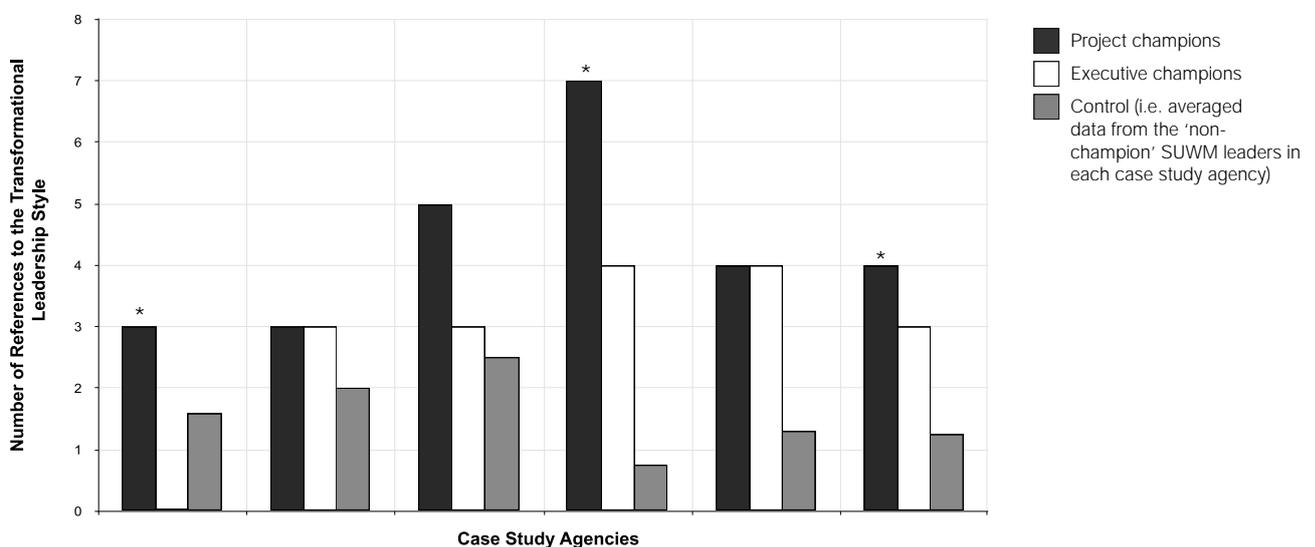
Figure 24 – Number of references to the transformational leadership style when leaders described the behaviours they typically used to promote SUWM

NOTES:

• Interview coding also included the transactional and laissez-faire elements of the 'Full Range Leadership Theory / Model' (Avolio, 1999; Avolio & Bass, 2002; Bass & Avolio, 1990). These elements are described in Table 4 (Section 5.4). The transactional and laissez-faire leadership data have not been plotted here, as none of the interviewed champions referred to these elements more than once.

• * = the three most effective project champions. PC4 was the most effective. PC2 was the least effective.

[20] Organisational cultures that encourage 'management' behaviours rather than 'leadership' behaviours. See Kotter (2001) for a distinction between these two sets of necessary behaviours.

[21] This phenomenon refers to the culturally ingrained tendency of some people to have generalised beliefs that leadership is a very significant factor in determining organisational performance, and consequently overemphasise the role that some individual leaders play in the process of leadership (Ehrlich *et al.*, 1990; Meindl *et al.*, 1985).

6. RELEVANCE OF TRANSFORMATIONAL AND DISTRIBUTED LEADERSHIP THEORIES

The Multifactor Leadership Questionnaire

The Multifactor Leadership Questionnaire (MLQ) is a well validated and widely used instrument to measure transformational leadership. Data on the frequency that the project champions engaged in elements of transformational leadership are shown in Figure 25. These data indicate that the project champions typically used elements of transformational leadership at frequencies that were similar to, or higher than relevant control groups. PC4 was a relatively strong transformational leader, with three of five elements

being rated as being used at least "fairly often" and at frequencies that were at least 10% higher on the scale than the relevant control group. PC6 also had elevated levels of transformational leadership ability, with three of five elements being rated as being used at least "fairly often", and two of these elements being rated at frequencies that were at least 10% higher on the scale than the relevant control group. The remaining champions had levels of transformational leadership ability that were similar to relevant control groups.
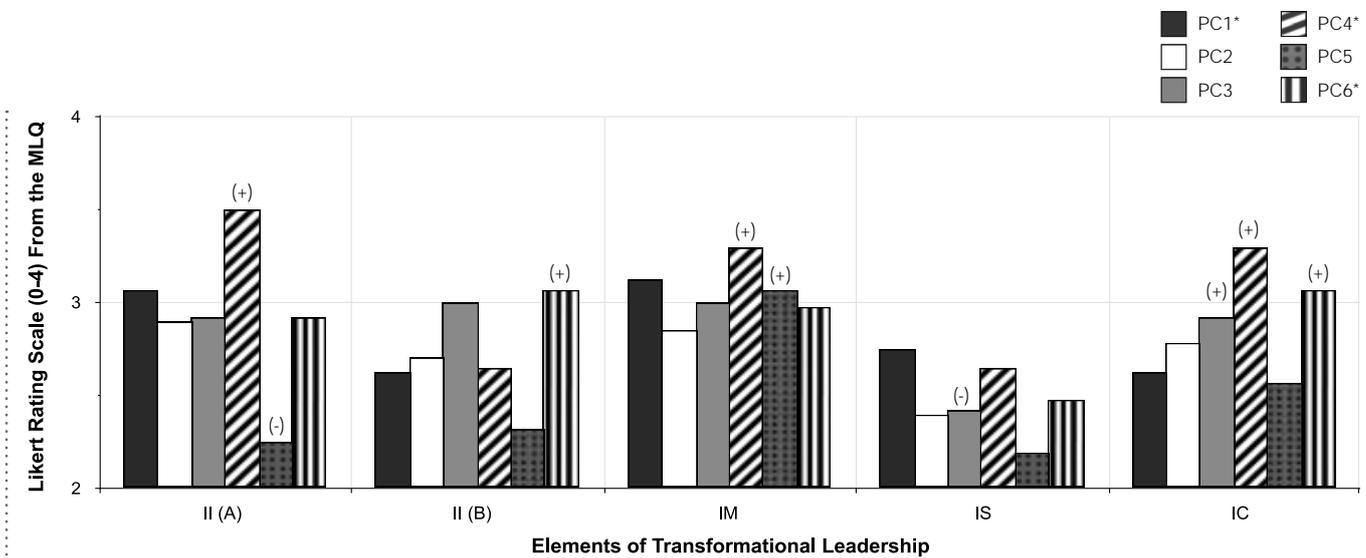
Figure 25 – The frequency that elements of transformational leadership were used by SUWM project champions (peer-ratings)

NOTES:

- The 45 item MLQ asked people to rate the frequency that the leader being rated used various behaviours (e.g. "the person I am rating talks optimistically about the future"). For details of the proprietary MLQ instrument, see Avolio & Bass (2004). Key for the scale: 0 = not at all; 1 = once in a while; 2 = sometimes; 3 = fairly often; and 4 = frequently, if not always.

- II(A) = idealised influence / charisma (attributes); II(B) = idealised influence / charisma (behaviours); IM = inspirational motivation; IS = intellectual stimulation; and IC = individualised consideration. For descriptions of these elements, see Table 4 (Section 5.4). * = the three most effective project champions (PCs). (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

The data shown in Figure 25 indicate that the behaviours relating to the 'inspirational motivation' (IM) element of transformational leadership (see Table 4) were commonly used by five of the project champions. This finding is consistent with the views of group interviewees and the preliminary conceptual model of SUWM championship (see Appendix 2).

Data on the frequency that the project champions used transactional and laissez-faire leadership behaviours are shown in Figure 26. These data indicate that all the champions engaged in 'contingent reward' behaviours at least "sometimes", which is consistent with these champions being transformational leaders under the 'augmentation model' of transactional and transformational leadership theory (see Avolio & Bass, 2004). Ratings for the active and passive forms of 'management by exception', as well as 'laissez-faire' leadership are all low, which is also consistent with these champions being transformational leaders (see Avolio & Bass, 2004)
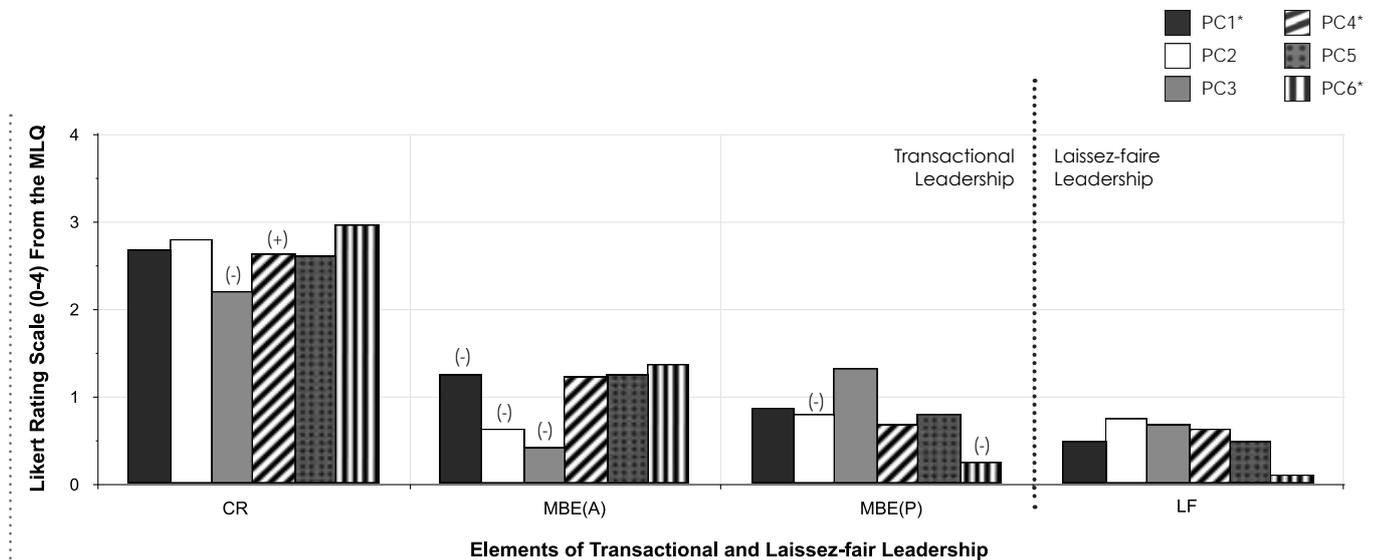
Figure 26 – The frequency that elements of transactional and laissez-faire leadership were used by SUWM project champions (peer-ratings)

NOTES:

• The 45 item MLQ asked people to rate the frequency that the leader being rated used various behaviours (e.g. "the person I am rating delays responding to urgent questions"). For details of the proprietary MLQ instrument, see Avolio & Bass (2004). Key for the scale: 0 = not at all; 1 = once in a while; 2 = sometimes; 3 = fairly often; and 4 = frequently, if not always.

• CR = contingent reward; MBE(A) = management by exception (active); MBE(P) = management by exception (passive); and LF = laissez-faire leadership. For descriptions of these elements, see Table 4 (Section 5.4). * = the three most effective project champions (PCs). (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

Overall, the data from the MLQ support the view that the SUWM project champions were transformational leaders. In addition, the 'inspirational motivation' element of transformational leadership was generally the strongest. Only two of these leaders, however, had unusually strong transformational leadership ability compared to typical 'non-champion' SUWM leaders in their organisations (i.e. PC4 and PC6).

Customised 360 degree questionnaire

In addition to the MLQ, the customised component of the 360 degree leadership questionnaire gathered data on specific personality characteristics and behaviours that were included in the preliminary conceptual model of SUWM champions. Some of these form the basis of transformational leadership (e.g. enthusiasm and persisting under adversity). Figure 27 displays data relating to five relevant personality characteristics. These data indicate that the peers of the champions generally felt that four of these personality characteristics were "highly" relevant to these leaders: namely, the propensities to be persistent / committed, have vision and a strategic perspective, be enthusiastic, and be innovative. Half of these characteristics relate to the 'inspirational motivation' element of transformational leadership. None of these characteristics, however, were commonly distinguishing attributes of the champions.
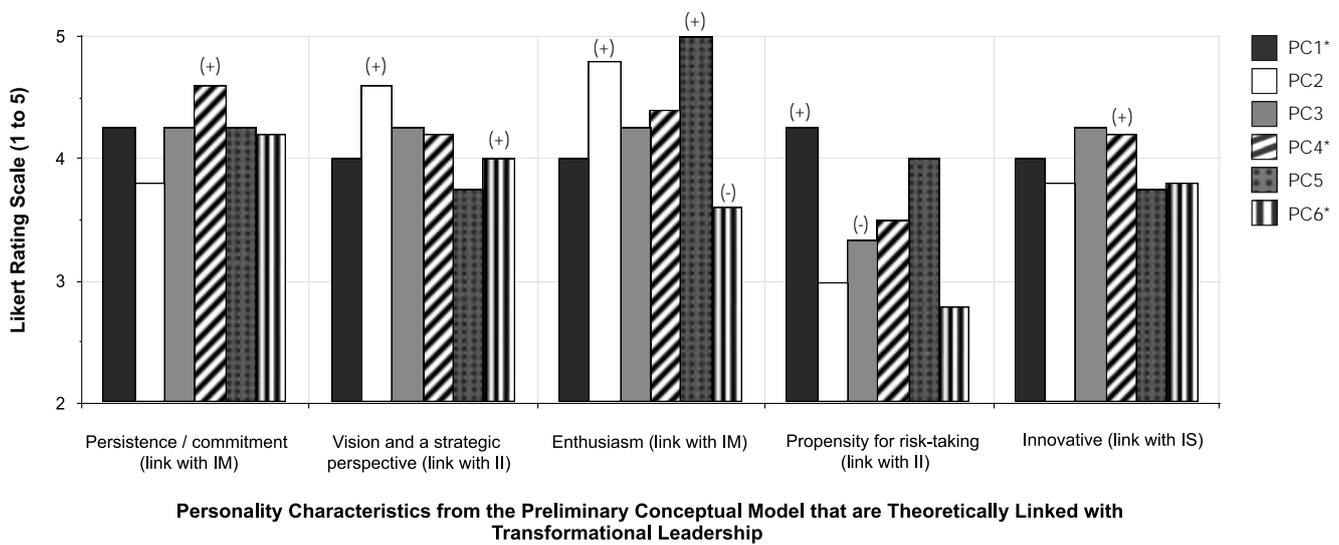
Figure 27 – Relevance of transformational leadership-related personality characteristics to SUWM project champions (peer-ratings)

NOTES:

- The 360 degree questionnaire asked peers to rate the extent to which specific personality characteristics were relevant, based on single Likert scales. Key for the scale: 1 = none; 2 = low; 3 = moderate; 4 = high; and 5 = very high.

- II = idealised influence / charisma; IM = inspirational motivation; and IS = intellectual stimulation. For descriptions of these elements, see Table 4 (Section 5.4). * = the three most effective project champions (PCs). (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

Figure 28 displays data from the customised portion of the 360 degree questionnaire that relate to transformational leadership behaviours. These data indicate that behaviours relating to 'articulating a vision', 'providing inspiration and motivation', 'questioning the status quo', 'expressing enthusiasm and confidence', and 'persisting under adversity' were generally seen by peers as being "highly" relevant to the champions, and were often distinguishing attributes. Of these five behaviours, four relate to the 'inspirational motivation' element of transformational leadership.
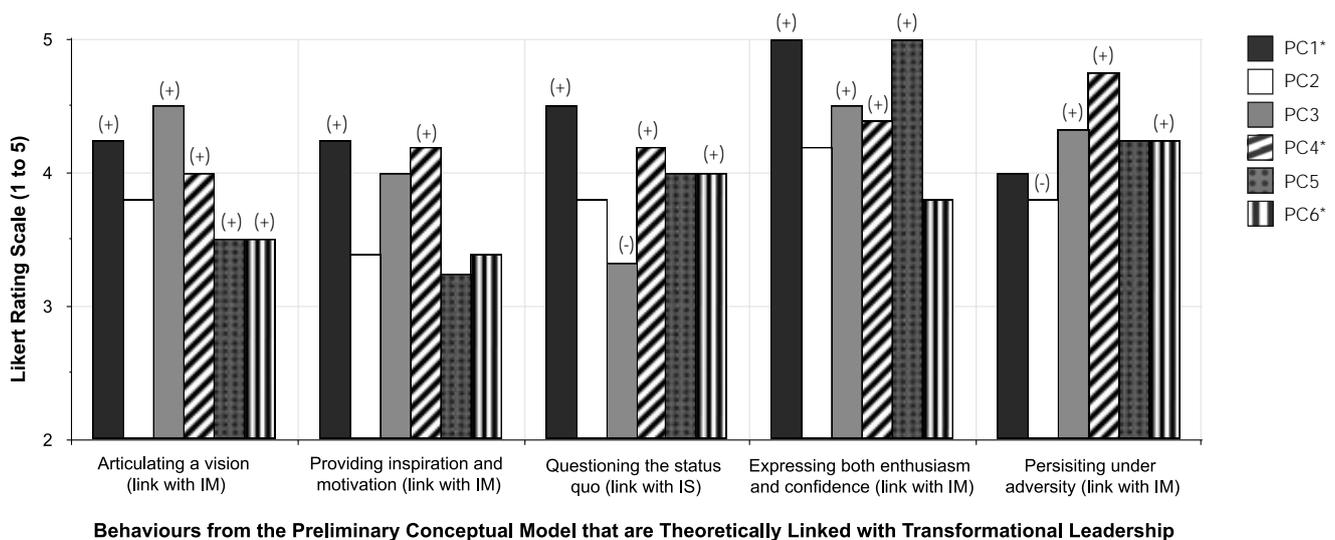
Figure 28 – Relevance of transformational leadership-related behaviours of SUWM project champions (peer-ratings)

NOTES:

- The 360 degree questionnaire asked peers to rate the extent to which specific behaviours were relevant, based on single Likert scales. Key for the scale: 1 = none; 2 = low; 3 = moderate; 4 = high; and 5 = very high.

- IM = inspirational motivation; and IS = intellectual stimulation. For descriptions of these elements, see Table 4 (Section 5.4). * = the three most effective project champions (PCs). (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

Overall, the data from the customised portion of the 360 degree questionnaire, like those from the individual interviews and MLQ, indicate the project champions were transformational leaders, with 'inspirational motivation' being the strongest element. In addition, the transformational leadership behaviours of 'articulating a vision', 'questioning the status quo', 'expressing both enthusiasm and confidence', and 'persisting under adversity' were commonly distinguishing attributes.

6.1.4. TRANSFORMATIONAL LEADERSHIP AND CHAMPION EFFECTIVENESS

The data shown in Figures 24 to 28 allow comparisons to be made between the most effective champions (i.e. PC4, PC6 and PC1) and the least effective. Figure 24 indicates that the most effective champion (i.e. PC4) was also the strongest transformational leader.

The MLQ data in Figure 25 indicate that the two most effective project champions (i.e. PC4 and PC6) were stronger transformational leaders than less effective champions. For example, PC4 received high (i.e. at least three on the 0-4 Likert scale) average peer ratings for three of the five transformational leadership elements. In contrast, PC2 (the least effective project champion) received no high ratings.

The data in Figure 27 shows little difference between the transformational leadership-related personality characteristics of the most and least effective champions. Several of the transformational leadership behaviours in Figure 28, however, were more commonly distinguishing attributes amongst the more effective champions. In particular, only the three most effective champions received high and distinguishing peer ratings for 'questioning the status quo'.

Overall, the data suggest a positive correlation between transformational leadership behaviours and SUWM project champion effectiveness. This association is consistent with Transformational Leadership Theory (see Avolio & Bass, 2004) and empirical research reported in the literature (see DeGroot *et al.*, 2000; Lowe *et al.*, 1996; and Patterson *et al.*, 1995).

6.1.5. TRANSFORMATIONAL LEADERSHIP AND THE TYPE OF SUWM PROJECT CHAMPION

Data from individual interviews (Figure 24) suggest that the diplomat project champions had levels of transformational leadership that were greater than, or equal to, the maverick champions. This finding is supported by data from the MLQ that indicate the two project champions with the highest levels of transformational leadership ability (i.e. PC4 and PC6) were both of the diplomat variety (see Figure 25). In addition, the data in Figure 25 suggest the transformational leadership element of 'individual consideration' is stronger for diplomat champions. This element includes behaviours such as coaching and mentoring. The data from the customised 360 degree questionnaire also indicates that the diplomat champions had ratings that were equal to, or higher than, the maverick champions for the transformational leadership behaviour of 'persisting under adversity'. Overall, these data suggest that the diplomat champions were generally stronger transformational leaders.

6.1.6. SUMMARY

The six SUWM project champions engaged in transformational leadership. As a group, their transformational leadership ability was equal to, or stronger than, typical 'non-champion' SUWM leaders within their organisations. Only two champions, however, were substantially stronger transformational leaders than typical 'non-champion' SUWM leaders. Behaviours and personality characteristics relating to the 'inspirational motivation' element of transformational leadership (see Table 4) were typically most relevant and were often distinguishing attributes. In general, the most effective champions were also the strongest transformational leaders. This association is consistent with Transformational Leadership Theory (Bass & Avolio, 2004), published empirical research (Lowe *et al.*, 1996), and the preliminary conceptual model of SUWM project championship (Appendix 2). The data also support a positive correlation between transformational leadership and diplomat champions.

The 'implicit leadership models' (see Lord & Maher, 1991) that were held by group interviewees in relation to SUWM champions appeared to place an exaggerated emphasis on the transformational leadership ability of these leaders. This may be a result of Australia's individualistic national culture (Ashkanasy *et al.*, 2002; House *et al.*, 2002) and the Romance of Leadership Phenomenon (Meindl *et al.*, 1985) encouraging people to develop beliefs about leaders that over-emphasise the significance of individual leadership attributes and under-emphasise group-based leadership attributes.

6. RELEVANCE OF TRANSFORMATIONAL AND DISTRIBUTED LEADERSHIP THEORIES

6.2. RELEVANCE OF DISTRIBUTED LEADERSHIP THEORY

6.2.1. INTRODUCTION

The literature review (Appendix 1) found that SUWM project champions are likely to engage in distributed leadership. Proponents of Distributed Leadership Theory (Gibb, 1954; Gronn, 2000) view leadership as a process of influence that occurs in groups and involves more than one leader. They acknowledge, however, that leadership is a phenomenon that can occur anywhere along a spectrum from 'focused' leadership (where the process is driven by one leader) to 'distributed' leadership involving many leaders (Carson *et al.*, 2007; Gronn, 2002). This section explores the extent to which the project champions were part of group-based processes of leadership to promote SUWM in their organisations and regions.

6.2.2. INDUSTRY BELIEFS REGARDING DISTRIBUTED LEADERSHIP AND SUWM CHAMPIONS

To investigate the extent of distributed leadership within typical SUWM leadership processes, the author asked group interviewees to describe the activities that occurred within their organisations and regions to promote SUWM. Responses lead to the development of a three-phase process model of SUWM leadership that describes how SUWM initiatives (e.g. projects and policies) were typically generated, endorsed and implemented in the case study agencies. This model is shown in Figure 9 (Section 4.2).

The process model indicates that during the I*nitiation Phase*, the bulk of SUWM initiatives usually originate from project champions at a middle management level. To illustrate, a peer of one of the studied champions stated: "Any practices related to urban water management that come from this organisation are directly related to [the champion's name], as [their name] makes a lot of this happen". During this phase, project champions are catalysts for change, highly visible, and engage in focused forms of leadership (Gibb, 1954). Little group-based or distributed leadership occurs during this phase.

During the subsequent *Endorsement Phase*, project champions operate individually or build coalitions of support to gain formal endorsement from more senior leaders in their organisations to proceed with the initiative. They also commonly work in tandem with executive champions. Thus, project champions engage in focused or distributed forms of leadership during this phase, although the former is more common. Executive leaders undertake 'instrumental' leadership (Bryman *et al.*, 1996b) during this phase. Instrumental leadership involves giving directions and providing resources. During this phase, the context is critical, as 'windows of opportunity' (e.g. drought) can strongly influence whether an initiative receives endorsement.

During the final *Implementation Phase*, SUWM initiatives are usually delivered by a multi-disciplinary team of leaders and their collaborators from across organisational boundaries. During this phase, distributed leadership is common. Project champions often focus on exercising influence across organisational boundaries at a middle management level, and may play a role in coordinating distributed leadership (e.g. ensuring leaders share a common vision for the initiative). Context is also critical during this phase. For example, distributed leadership can be strongly influenced by contextual factors such as organisational culture, the existence of cooperative colleagues and organisational size (see Chapter 7).

The implications of this model are significant. In particular, it suggests that the more effective project champions would be able to operate during all three phases, even though these phases involve substantially different leadership skills and behaviours. Few of the project champions had this ability. For example, one maverick champion (PC1) operated very effectively in the first two phases, when he / she could use focused forms of leadership combined with his / her ability to influence executives and politicians, but was not as effective during the third phase when high levels of collaboration were needed. In contrast, PC4 was a diplomat project champion who was able to operate effectively during all three phases. Project champion 4 also worked in a more supportive organisational environment that greatly assisted his / her innate tendency to collaborate.

Following a presentation on Distributed Leadership Theory by the author, group interviewees in all case study agencies felt the theory was relevant to SUWM in their organisations. This level of support was commonly strong to very strong, and even stronger than equivalent support for transformational leadership theory. Interviewees commonly felt that such leadership was essential given the multi-disciplinary nature of SUWM and the need to involve people from many stakeholder groups.

'Bridging organisations' (see Brown & Clarke, 2007), such as regional SUWM capacity building programs, cooperative research groups and progressive water corporations were commonly cited as playing an important regional role in coordinating SUWM-related distributed leadership. Within organisations, interviewees referred to several mechanisms by which distributed leadership was coordinated, such as strategic plans, multi-disciplinary project teams and regular discussion forums in local government agencies involving councillors, executives and technical staff.

Group interviewees in one case study agency felt that project champions were typically stronger at focused / individual forms of leadership than distributed leadership. That is, they were more effective during the first two phases of the process model shown in Figure 9. Interviewees in

another group felt that their SUWM executive champion played a critical role in creating an environment that allowed distributed leadership to thrive. This agency had a dominant organisational culture that fostered collaboration, supported SUWM, and attracted emergent leaders. It also placed an emphasis on building leadership capacity throughout the agency.

When asked to describe the features of the most effective SUWM project champions in agencies such as theirs, group interviewees in four of the case study agencies cited elements of distributed leadership. Figure 23 (Section 6.1.2) shows the number of references made in each interview to this leadership style. These data highlight that interviewees generally felt distributed leadership was used, but was not a strong feature of effective project champions. Also, in five of the case study agencies, the transformational leadership style was much more strongly emphasised than the distributed leadership style. These data indicate that 'implicit leadership models' (Lord & Maher, 1991) of SUWM project champions that were held by group interviewees typically emphasised focused rather than distributed forms of leadership. While Australia's individualistic national culture (see Ashkanasy *et al.*, 2002; House *et al.*, 2002) and the Romance of Leadership Phenomenon (Meindl *et al.*, 1985) may partly explain this finding, it may also be a consequence of project champions being most visible and valuable at the Initiation Phase of the SUWM leadership process, when focused forms of leadership dominate (see Figure 9).

6.2.3. DISTRIBUTED LEADERSHIP BY THE SUWM PROJECT CHAMPIONS

Individual interviews

Content analysis of individual interviews with champions and people occupying 'non-champion' leadership roles (see Appendix 4) provides an indication of the relative extent to which each leader used distributed leadership. The data in Figure 29 highlight that in five of the case study agencies, the project champions referred to elements of distributed leadership when they described the behaviours they typically used to promote SUWM. In these organisations, the project champions mentioned elements of distributed leadership more frequently than typical 'non-champion' leaders. Thus, distributed leadership was particularly relevant to all but one of the project champions. This finding supports the preliminary conceptual model of SUWM project championship.
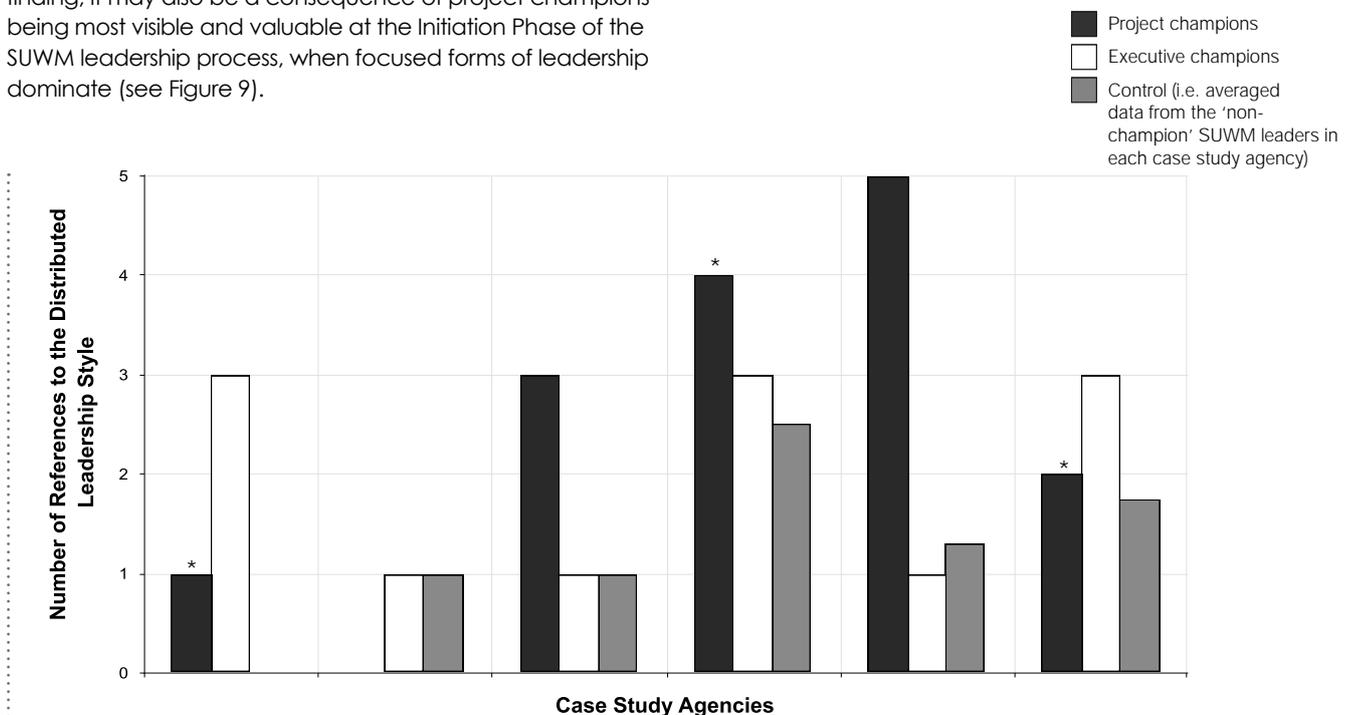
Figure 29 – Number of references to the distributed leadership style when leaders described the behaviours they typically used to promote SUWM

NOTES:

• This leadership style is described in Table 4 (Section 5.4).

• * = the three most effective project champions. PC4 was the most effective. PC2 was the least effective.

Customised portion of the 360 degree questionnaire

Figure 30 presents data from the customised component of the 360 degree questionnaire relating to the relevance of four distributed leadership behaviours (i.e. 'building and sustaining social networks', 'gathering political and managerial support', 'coordinating distributed leadership within and outside the organisation', and 'getting the right people involved'). The data indicate that all four behaviours typically had a "high" degree of relevance to the project champions. Only one of these behaviours ('gathering political and managerial support') was often a distinguishing attribute. This finding indicates that members of the control group (i.e. people occupying four 'non-champion' SUWM leadership roles) were *also* using distributed leadership behaviours, as predicted by the process model of SUWM leadership in Figure 9.

The Tandem Model of Championship (Witte, 1977), where project and more senior champions work together to advance innovations, is a form of distributed leadership. The data presented in Figure 31 highlight that all six of the project champions were assisted by champions at the senior management, executive and/or political level to some extent. Four of these champions agreed "moderately" or "strongly" that they relied on such assistance, and this was a distinguishing attribute.
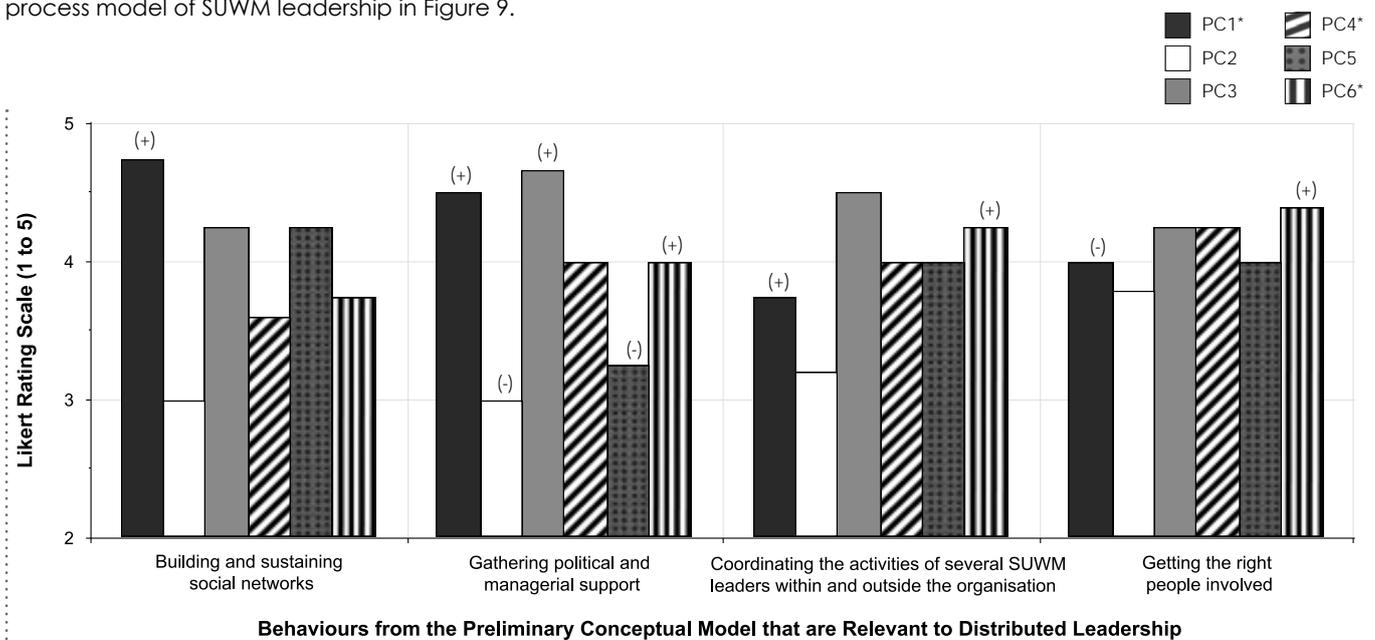
Figure 30 – Relevance of four distributed leadership-related behaviours to SUWM project champions (peer-ratings)

NOTES:

• The 360 degree questionnaire asked peers to rate the extent to which these behaviours were relevant, based on single Likert scales. Key for the scale: 1 = none; 2 = low; 3 = moderate; 4 = high; and 5 = very high.

• PC = project champion. * = the three most effective project champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.
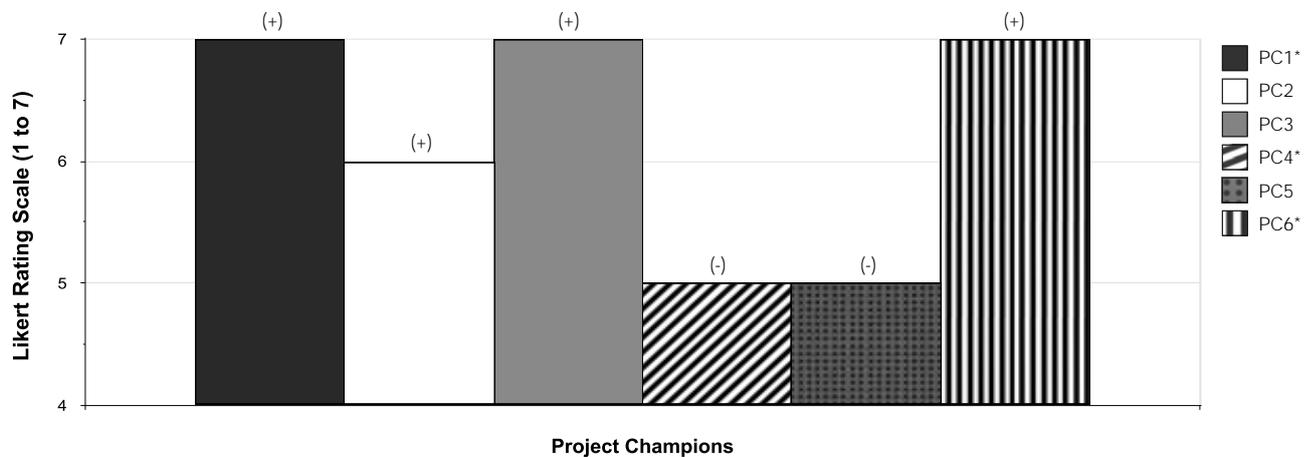
Figure 31 – Extent to which SUWM project champions relied on assistance from more senior champions (self-assessed)

NOTES:

• The 360 degree questionnaire asked project champions to rate the extent to which they agreed or disagreed with the statement: "My ability to influence others in this context often relies on assistance from champions (i.e. emergent leaders) at the senior management, executive and/or political level". Key for the scale: 1 = disagree strongly; 2 = disagree moderately; 3 = disagree a little; 4 = neither agree nor disagree; 5 = agree a little; 6 = agree moderately; and 7 = agree strongly.

• PC = project champion. * = the three most effective project champions. (+) = ratings that are at least 10% higher on the scale than the local control group (i.e. averaged equivalent data from the surveyed 'non-champion' SUWM leaders in the same case study agency). (-) = ratings that are at least 10% lower on the scale than the local control group.

Taken together, these data suggest that distributed leadership is a style that was highly relevant to most of the project champions. Distributed leadership was, however, less strongly emphasised than transformational leadership during individual interviews. Two distributed leadership behaviours that were often distinguishing attributes of these champions were: working in tandem with more senior champions; and gathering political and managerial support. These behaviours have most value to project champions during Phase 2 of the process model of SUWM leadership (see Figure 9), when project champions are seeking endorsement from more senior leaders for a project or policy.

6.2.4. DISTRIBUTED LEADERSHIP AND CHAMPION EFFECTIVENESS

The data presented in Figure 29 suggest that organisations with relatively high levels of distributed leadership amongst project champions, executive champions and 'non-champion' SUWM leaders host the most effective project champions (i.e. PC4 and PC6). In addition, organisations with executive champions who engage in relatively high levels of distributed leadership also host the most effective project champions (i.e. PC4, PC6 and PC1).

The most effective project champion (PC4) used high levels of distributed leadership, in addition to being the strongest transformational leader. Being competent in both of these styles of leadership would be an advantage during the *Initiation, Endorsement* and *Implementation* phases of typical SUWM leadership processes (see Figure 9). In contrast, the least effective project champion (PC2) was relatively weak at both of these styles of leadership.

The data displayed in Figure 30 suggest that 'gathering political and managerial support' is a distributed leadership behaviour that was highly relevant to, and a distinguishing feature of, the three most effective project champions. In contrast, for two of the three least effective project champions, the relevance of this behaviour was rated at unusually low levels. This finding suggests that some project champions are highly effective during the *Endorsement* phase of the SUWM leadership process, while others struggle during this phase.

The data relating to the extent to which project champions relied on support from more senior champions (Figure 31) does not show a clear relationship between the level of this support and project champion effectiveness. The individual case study analyses indicate the nature of the relationships between project and executive champions varied greatly and were affected by several contextual factors. For example, amongst the three most effective project champions, PC1 and PC6 benefited from strong relationships with executive champions, while PC4 was becoming an executive champion in a highly supportive organisational environment where there was less need to access the position power of more senior leaders.

Overall, these data indicate that the most effective project champions worked in organisations where distributed leadership was common amongst both types of champion and 'non-champion' leaders involved with the SUWM leadership process. These project champions tended to be strong at both transformational and distributed leadership, and excelled at using some distributed leadership behaviours (e.g. 'gathering political and managerial support'). Strong transformational and distributed leadership ability allowed them to operate effectively during all three phases of a typical SUWM leadership process.

6. RELEVANCE OF TRANSFORMATIONAL AND DISTRIBUTED LEADERSHIP THEORIES

6.2.5. DISTRIBUTED LEADERSHIP AND THE TYPE OF SUWM PROJECT CHAMPION

Data from individual interviews (Figure 29) indicate that the diplomat champions generally used distributed leadership behaviours more commonly than maverick champions, as expected given their highly collaborative nature. Data from the 360 degree questionnaire (Figure 30) support this view, indicating that several distributed leadership behaviours were generally more relevant to diplomat champions (i.e. 'gathering political and managerial support', 'coordinating the activities of several SUWM leaders within and outside the organisation' and 'getting the right people involved'). Overall, the data suggest that the diplomat champions were generally stronger at this style of leadership.

6.2.6. SUMMARY

Group interviewees in the case study agencies felt strongly that Distributed Leadership Theory (Gibb, 1954; Gronn, 2000) was highly relevant to the promotion of SUWM in their organisations by project champions and other leaders. The author developed a three-phase process model of SUWM leadership (see Figure 9) to describe the key leadership behaviours that typically occurred in the six case study agencies to promote SUWM policies and projects. Distributed leadership is a strong feature of this model, both overall and especially in the final *Implementation* phase. This is consistent with literature on sustainability-related change that highlights the importance of collaboration amongst a group of leaders to effect change (see Benn *et al.*, 2006). This group typically includes change agents / champions, executive leaders and a "network of committed leaders at all levels" (Benn *et al.*, 2006, p. 163).

The coordination of distributed leadership was also important, both within the organisation and region. 'Bridging organisations' (see Brown & Clarke, 2007), like regional SUWM capacity building programs, typically play a valuable coordination role. This finding is consistent with published empirical research that has demonstrated distributed leadership in teams is only advantageous when leadership activities are coordinated (see Mehra *et al.*, 2006).

Despite the relevance and importance of this form of leadership, group interviewees generally emphasised individual / focused rather than distributed leadership behaviours when describing the most effective project champions. The 'implicit leadership models' of these interviewees that related to project champions may have been influenced by the tendency of project champions to stand out as individual leaders only during the *Initiation* phase of typical SUWM leadership processes (see Figure 9). This observation is consistent with Ottaway's (1983) description of "key change agents".

Data relating to project champions in each case study agency support the view that distributed leadership is highly relevant to these leaders as well as 'non-champion'

leaders involved with the SUWM leadership process. These data also suggest that the most effective project champions: worked in organisations where distributed leadership was common amongst executive champions, project champions and 'non-champion' leaders; were typically strong at both distributed and transformational leadership; and were unusually proficient at some distributed leadership behaviours, such as 'gathering political and managerial support'. In addition, the diplomat champions were generally stronger at distributed leadership than the maverick champions.

A consequence of the three-phase process model of SUWM leadership is that project champions who have the ability to use focused (e.g. transformational leadership) and distributed styles of leadership should have a better chance of being effective leaders during all three phases of the process. This was the case for PC4 (the most effective champion), while PC2 (the least effective champion) was relatively weak at both transformational and distributed leadership.

The research findings for distributed leadership also provides empirical support for an emerging theory called Complexity Leadership Theory (Uhl-Bien *et al.*, 2007) which builds on distributed leadership theory. In short, this new theory argues that three types of leadership are needed in organisations to address 'complex challenges' (see Section 2.5). These types are 'administrative leadership' (i.e. managerial actions by senior staff in roles with high levels of position power), 'enabling leadership' (i.e. actions by emerging leaders to create an environment where many agents can interact, resolve conflict and innovate) and 'adaptive leadership' (i.e. the adaptive, creative and learning actions that occur as stakeholders interact to solve common problems). Using these descriptions, the research presented in this report indicates that SUWM executive champions engage in enabling leadership, while SUWM project champions are critical in initiating and driving processes that involve adaptive leadership.

7. INFLUENTIAL CONTEXTUAL FACTORS

7.1. INTRODUCTION TO THE CHAPTER

This chapter highlights the most influential contextual factors that helped and hindered leadership activities of the SUWM project champions, and flags relevant management implications. It draws on data from document analysis, group interviews, individual interviews with leaders nominated for the six SUWM leadership positions (see Appendix 4) and 'context interviews'. Context interviews only gathered data on contextual factors that affected each project champion's organisation with a focus on their 'branch' (typically the unit that was led by a level three manager)[22].

The executive champions and senior project champions were acutely aware of their leadership context and the need to tailor and synchronise their influence attempts with favourable contextual circumstances. This awareness is reflected in the following quote from a senior project champion:

> I think context is everything … You can have the best ideas, things that you know are going to happen - have to happen at some stage, but they're just not going to happen now because the context isn't right.

Some executive champions also actively managed their leadership context (e.g. organisational culture) to promote more favourable conditions for SUWM initiatives and distributed leadership. Several project champions also moved positions in their organisation or to new organisations to be in contexts that enabled them to be more influential SUWM leaders. These observations indicate that developing champions should be acutely aware of their leadership context, manage some elements, and work within others. This appears to be an advanced skill that takes time to develop.

7.2. INFLUENTIAL CONTEXTUAL FACTORS WITHIN WATER AGENCIES

7.2.1. ORGANISATIONAL CULTURE

At the branch level, all of the case study agencies had organisational sub-cultures that had an 'adaptive orientation' rather than an 'efficiency orientation'. That is, they were characterised by innovation and support, rather than being rule and goal orientated (Pawar & Eastman, 1997; Shamir & Howell, 1999). In some organisations, however, this sub-culture was not congruent with the dominant organisational culture. For example, one case study agency had a sub-culture at the branch level that was adaptive and included sustainability values, while at the organisational level the culture was strongly focused on being more efficient in the delivery of core services.

Three case study agencies had similar organisational cultures. These agencies were actively managing their cultures through corporate programs driven by executives. These programs were being run in combination with leadership development programs, and promoted behaviours that were consistent with building leadership capacity throughout the organisation (i.e. distributed leadership). The cultures supported learning, innovation, responsible risk-taking and collaboration. As such, they were highly supportive of SUWM and the leaders who promoted it. In these organisations, cultures that existed at the branch level were congruent with the dominant organisational culture.

There was an association between the more effective project champions and the more supportive organisational cultures. Specifically, the two most effective project champions worked in organisations that had 'adaptive' dominant organisational cultures, while the two least effective project champions worked in organisations whose dominant culture had an 'efficiency orientation'.

All of the diplomat champions existed in organisations that had 'adaptive' dominant organisational cultures, while the maverick champions existed in organisations where the dominant culture was less supportive. One of the maverick champions who focused on strategic networking and exercising influence with executives and politicians was relatively effective in an organisation that had a dominant culture that did not strongly support sustainability. In this agency, executives saw sustainability as a strategic issue that did not get "due time and consideration", because it was outside of "core business". This case study agency highlights that in environments that are *relatively* hostile to SUWM, the maverick style of emergent leadership can be a effective way to make progress.

Management implications (organisational culture):

- Executives should ensure that the organisation's dominant culture is actively managed to inculcate values relating to learning, innovation, responsible risk-taking, collaboration and sustainability. Complementary corporate programs to manage organisational culture and build leadership capacity are recommended. These need to be driven at the highest level of management and operate across the organisation. Executive champions can play a key role in this activity.

- Project champions who are working in organisations with dominant cultures that are relatively hostile towards SUWM may need to adopt some maverick-style leadership strategies to make progress. These include focusing on strategic networking and exercising influence with key executives and politicians.

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[22] In one agency, the project champion was a level two manager, so the author examined the leadership context within the organisational unit that this champion managed.

7.2.2. SUPPORT FROM COLLEAGUES

Project champions in all case study agencies relied on the support of colleagues to exercise influence, albeit in different forms. For example, some champions worked in tandem with executive champions, while some receive most of their support from other middle managers from across their organisations. This finding emphasises that typical SUWM leadership processes in publicly-managed water agencies (see Figure 9) are group-based processes of influence.

The following quotes from a relatively effective project champion highlight the importance of support from executives and colleagues across the organisation:

> … my direct [second tier] manager has been very supportive and in some cases there's been difficult situations arise with certain projects and certain councillors involved where she's actually gone out of her way to come and actually help me at that level. I have very rarely experienced that before - where a director would come down and actually say, "Look, I'll do this for you, leave it with me …"

> … they're all quite cooperative and I think … a lot of the people that came to your initial session [the group interview] … are representing different units across council and different disciplines. They really are like a virtual team that I want to have more association with and keep that ball rolling, because those influences are taking the organisation ahead.

The most effective project champions typically received the strongest support from executives and politicians. They also received the greatest support from cooperative staff across the organisation. In addition, the diplomat project champions generally had higher levels of executive and/or political support than the maverick champions.

Management implications (support from colleagues):

• Developing project champions should seek to build strong relationships with colleagues that should be involved in typical SUWM leadership processes (see Figure 9), including executives and politicians. Consequently, leadership development programs for these champions should aim to build advanced networking and inter-personal skills.

• Build leadership capacity across the organisation to complement tailored leadership development programs that focus on project champions. Recognise that the most effective project champions tend to operate in agencies with high levels of distributed leadership (see Section 6.2.6).

7.2.3. RESOURCES

Staff in all of the case study agencies generally felt they were well resourced compared to other water agencies in their geographic region. Here, 'resources' refers to funding for SUWM projects and human resources. Typically, project and executive champions were involved with establishing ways to fund SUWM initiatives; examples included

attracting State government funding and establishing special rate levies. These champions were also involved in managing human resources, such as using external SUWM champions to boost creativity and motivation within SUWM project teams, and engaging in succession planning to ensure that the internal SUWM project champion role did not become vacant. For example, in one case study agency, there had been a succession of three highly regarded SUWM project champions. This ensured that the organisation's commitment to SUWM did not falter when influential leaders left the organisation. This succession process was proactive, assisted by flexible recruitment procedures, and facilitated by the executive champion.

The author found no association between the level of available resources in each agency and project champion effectiveness. Similarly, there was no evidence of an association between the level of resources and the types of project champions that worked within each agency.

Management implications (resources):

• Establish a stable and substantial funding base for SUWM initiatives to help with attracting and keeping SUWM project champions.

• Plan for the succession of all critical leaders involved in the SUWM leadership process (see Figure 9). This includes building in-house talent through leadership development initiatives, and proactive recruitment.

7.2.4. ORGANISATIONAL TASK SYSTEM

Within the branches where the project champions worked, all organisational task systems were predominantly 'boundary spanning units'. Such units frequently interact with the organisation's external environment to detect opportunities and threats, unlike 'technical core units' that use technology to process inputs and produce outputs (Pawar & Eastman, 1997). In the case study agencies, these boundary spanning units typically undertook policy and strategic planning activities.

Boundary spanning units are usually characterised by flexibility, few rules and procedures, a focus on developing relationships with external stakeholders, a high degree of discretion in decision-making and are thought to be more receptive to transformational leadership (Egri & Herman, 2000; Pawar & Eastman, 1997). One of the project champions moved from a technical core unit to a boundary spanning unit specifically to be in an environment that would be receptive to emergent leadership. This behaviour is a form of "venue shopping" (Huitema & Meijerink, 2008) where leaders seek out the most conducive environment to affect change.

The data support no relationship between the nature of the organisational task system and project champion effectiveness. Similarly, there was no evidence of an association between this contextual factor and the type of project champion.

Management implications (organisational task system):

• During recruitment activities, executives should be aware that SUWM project champions are more likely to be attracted to, or emerge in, 'boundary spanning units' (e.g. units involved with policy and strategic planning).

• Build the transformational leadership abilities of SUWM champions in boundary spanning units. These units are usually receptive to this style of leadership, and there was an association between the most effective SUWM project champions and relatively strong transformational leadership (see Chapter 6).

7.2.5. NATURE OF CORE TASKS

Interviews explored the extent to which the core tasks within the branches where the project champions worked were characterised by complexity, need for creativity and the need for personal effort or sacrifice. These characteristics were found to be highly relevant to the majority of case study agencies. This finding reflects the rapidly changing environment that the champions were working within (see Section 2.5). This change was typically characterised by crises (e.g. droughts), rapid population growth, major reforms of water governance, council amalgamations, and the existence of new technology, legislation and scientific knowledge.

The author found no substantial relationships between the nature of core tasks and the effectiveness of project champions. This was also the case for champion type.

7.2.6. ORGANISATIONAL SIZE

While the size of the case study agencies varied from approximately 540 to 7,000 staff, five of these agencies had approximately 540 to 1,200 staff. The data support the view that these 'medium' sized water agencies had some advantages. These agencies were big enough to have in-house expertise in critical positions (e.g. SUWM project champions), but small enough to enable such leaders to efficiently network and collaborate with key staff across the organisation, executives and also local government councillors, where relevant. This issue is emphasised by the following quote from a project champion who worked in one of these medium-sized agencies:

> I often describe to people [that] in my view it's the ideal sized Council. … it's large enough to sustain some specific technical and professional staff - specialist staff like myself, but also not so large that you can't change the course of the ship over a relatively short period of time.

While there was no association between project champion effectiveness and organisational size, there was some evidence that large organisations may favour maverick champions. All of the maverick champions and none of the diplomat champions worked in organisations with more than 1,000 staff. As organisations get larger, more people are involved in the SUWM leadership process and project champions have greater difficulty collaborating[23] and accessing executives and politicians. In such organisations,

maverick champions who focus on exercising 'upwards influence' and developing strategic networks with key executives and politicians may be able to operate more efficiently than diplomat champions who would need to invest large amounts of time to develop and maintain relatively large social networks with many 'strong ties' (see Granovetter, 1973).

Management implications (organisational size):

• Project and executive champions in large water agencies (e.g. over 1,000 staff) should establish mechanisms that help leaders involved with the SUWM process across the organisation to efficiently collaborate. For example, the key leaders that contribute to typical SUWM leadership processes (see Figure 9 and Appendix 4) should meet regularly to collectively work on policy and strategic plans, design new projects, debrief after projects and share knowledge. Building strong relationships between these leaders allows diplomat project champions to operate more efficiently in large organisations. This 'cross-boundary team' should place an emphasis on establishing relationships with executive and political leaders (e.g. by regularly including them in special team meetings to discuss important strategic issues). This initiative is similar to a concept that was a successful feature of one case study agency, where technical staff and middle managers had regular opportunities to speak informally with executives and councillors about strategic water issues. In the process, these staff were able to build their social networks, knowledge and personal power.

7.2.7. STRENGTH OF THE SUWM POLICY FRAMEWORK

Four of the case study agencies had a strong to very strong policy framework for SUWM, which was regarded by champions as a helpful contextual factor. For example, in one case study agency, an influential strategic document committed the organisation to the sustainability philosophy and set out the principles, goals, values and key priority areas for the organisation. This document provided the framework within which the organisation's corporate plan and lower level operating plans were developed. This policy framework clearly made SUWM "core business" for the organisation, and greatly assisted leaders within the organisation to promote SUWM projects and policies.

While the author found no association between strong policy frameworks for SUWM and effective project champions, there was evidence to suggest that the maverick champions were more common in organisations with weaker policy frameworks. Specifically, the two case study agencies that had a relatively weak SUWM policy framework both hosted maverick champions. Like unsupportive organisational cultures, weak policy frameworks played a role in creating environments that were relatively hostile to SUWM. The case study data suggest that the maverick champions tended to emerge in these environments.

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[23] Similar observations have been reported in the environmental leadership literature (e.g. Henderson *et al.*, 2008).

> **Management implications (policy frameworks):**
> - As part of the process of creating a supportive environment for SUWM, executives should ensure that their organisation has a policy framework that commits the organisation to the philosophy of sustainability, and clearly communicates to staff that SUWM is now "core business" for the organisation. Such a policy framework should influence the content of supporting plans (e.g. corporate and operational plans).

7.3. INFLUENTIAL CONTEXTUAL FACTORS OUTSIDE WATER AGENCIES

7.3.1. THE PACE AND EXTENT OF CHANGE

All case study agencies were experiencing high levels of change which was occurring at a rapid pace. Aspects of change included rapid population growth, reform to water governance arrangements, council amalgamations and severe drought. These aspects were generally seen as positive influences on efforts to promote SUWM. For example, in relation to SUWM, one executive champion stated: "The drought is an opportunity to push a number of agendas".

The author found no associations between any of the major external contextual factors discussed in this report and project champion effectiveness or type. Experienced project champions, however, appeared to be more aware of their leadership context and had a number of SUWM initiatives either ready to go or already running so that they could benefit when 'windows of opportunity' opened. For example, one experienced project champion was comfortable letting a wide range of initiatives evolve, and patiently waiting to see which ones became effective as the surrounding context changed. He stated that:

> It's about having the bases covered. … context is so important … you've got to be ready to go when the opportunities arise, you've got to grasp the opportunities.

> **Management implications (pace and extent of change):**
> - As very few of these external factors can be managed, project champions should develop an awareness of their leadership environment, identify 'windows of opportunity' for promoting SUWM and have several initiatives ready when contextual conditions become favourable. Experienced mentors and executive champions can help project champions to develop this awareness.
> - Project champions should also seek to have a number of SUWM initiatives running in parallel when the surrounding environment is turbulent, to maximise the chances that some of these will rapidly advance as conditions change.

7.3.2. CRISES AND ASSOCIATED POLITICAL AND COMMUNITY CONCERN

All of the case study agencies had experienced at least one water-related crisis in recent years. These included severe droughts and substantial declines in waterway health. These crises helped to build community and political support for SUWM, which resulted in increased funding, stronger policy and better managerial support in water agencies. In some case study agencies, independent waterway health monitoring programs with public reporting played a major role in gathering political support for improved water management, including SUWM.

There was an awareness, particularly amongst executive champions and more experienced project champions, that when political and executive support for action on SUWM was strong, this circumstance presented a 'window of opportunity' that would not last long. In one case study agency that was experiencing a period of very strong political and executive support, a project champion stated:

> I think if you went back more years it wasn't like that at all. … Now, we often talk about the 'stars being in alignment' at the moment, and this is the once in a lifetime opportunity. … [We've] probably got a four to five year window here.

> **Management implications (crises and associated community and political support):**
> - Project champions should encourage the establishment of independent scientific monitoring and public reporting mechanisms, such as the Ecological Health Monitoring Program in Queensland (www.ehmp.org). These mechanisms can be highly effective at converting waterway health-related crises into community and political support for action, including support for SUWM.

7.3.3. THE LOCAL PHYSICAL ENVIRONMENT, WATERWAY HISTORY AND COMMUNITY OWNERSHIP

All of the case study agencies were involved in managing or protecting the health of local waterways that had three common features. These waterways were all highly valued but under threat. They had a history of poor waterway health. They also had strong links with the community. These contextual factors collectively provided support for SUWM. In two case study locations, the link between the community and waterways was particularly strong. These locations were coastal, had strong waterway-related tourism industries, and had communities that strongly valued the many recreational opportunities that existed in and around local waterways. The relevant case study agencies were both local government organisations that had mayors and a number of councillors who were strongly supportive of sustainability and SUWM.

> **Management implications (community ownership):**
> - Provide improved opportunities for residents to recreate in and around local waterways as well as learn about their value and health. This action helps to build community and political support for SUWM in the long-term, thereby assisting SUWM champions.

8. REVISED CONCEPTUAL MODEL OF LEADERSHIP BY SUWM PROJECT CHAMPIONS

8.1. INTRODUCTION

This chapter brings together the research findings highlighted in previous chapters to revise the preliminary conceptual model of leadership by SUWM project champions (Appendix 4). In addition to this revised model, this research project has generated a closely-related conceptual model - specifically, a three phase process model of SUWM leadership in publicly-managed water agencies which is shown in Figure 9 (Section 4.3). The conceptual model of leadership by SUWM project champions focuses on the nature of the individual leaders and their context, while the process model focuses on the process of leadership that involves many leaders. They offer different, but complementary perspectives of the 'champion phenomenon'.

The process model helps to explain how a SUWM initiative moves from being an idea to an implemented project. SUWM project champions are one type of leader who typically contribute to this process. They are highly visible during the Initiation phase, when they strongly drive innovations often with little assistance from others. During the Endorsement phase, they typically work closely with executive leaders, including executive SUWM champions, to get initiatives approved and funded. During the Implementation phase, they work cooperatively with other leaders across organisational boundaries to implement SUWM projects. As this process develops, the leadership style of project champions evolves from being individualistic / focussed to group-based / distributed (see Gibb, 1954; Gronn, 2002). This model makes it clear that SUWM project champions are usually an important element in the process of promoting SUWM in publicly-managed water agencies, but the leadership process also relies on input from many other leaders, and is also strongly affected by context.

8.2. REVISED MODEL OF LEADERSHIP BY SUWM PROJECT CHAMPIONS

Figure 32 presents the revised conceptual model of SUWM leadership by project champions. This model's structure is based on Yukl's (1989) Integrating Conceptual Framework for Leadership Effectiveness. The factors in the model that have been highlighted by an asterisk (*) represent attributes of project champions or contextual factors that were associated with the most effective project champions. The factors in the model that have been highlighted by a cross (†) represent attributes that were unusually strong compared to the attributes of typical 'non-champion' SUWM leaders in each champion's organisation (i.e. 'distinguishing attributes').

Figure 33 supplements Figure 32 by highlighting the main differences between the diplomat and maverick project champions. The realisation that there were two types of project champions occurred very early in the process of conducting research in the field. Initially, the author recognised differences in the areas of extroversion / introversion, emotional stability, risk-taking, persistence, preference for working individually or as part of a team, and propensity to consult with others. The six project champions were categorised using these attributes, then subsequent data analysis revealed additional differences (see Figure 33).

A significant question that arises from this research is: can one type of project champion adopt behaviours associated with the other type as their leadership context changes? For example, a maverick champion may operate in an organisation that is progressively becoming more receptive to SUWM. As their leadership context changes, such champions would be wise to become more collaborative and use leadership behaviours typically associated with diplomat project champions (see Chapter 11). The author believes this is possible, but difficult for some types of behaviour. The Greek playwright Aristophanes once stated that "you cannot teach a crab to walk straight", meaning that it is hard to work against people's innate tendencies. For example, maverick project champions would find it challenging to temper their tendency to take risks, work individually and express their emotions. Champions wishing to adopt a new leadership style would need to have relatively high levels of self-awareness (see Avolio, 2005), commitment to change, and have access to highly tailored leadership development interventions (e.g. coaching).

8. REVISED CONCEPTUAL MODEL OF LEADERSHIP BY SUWM PROJECT CHAMPIONS

Supportive Contextual Factors (Internal)

Organisational culture (OC):
- 'Adaptive orientation' at the branch level (e.g. third tier).[1]
- Supportive of emergent leaders at the branch level.
- Strong to very strong environmental values at the branch level.
- Often a highly supportive dominant OC, characterised by support for learning, innovation, risk-taking, collaboration and sustainability.*

OC change management and leadership development (LD) programs:
- Organisation-wide and complementary OC change management and LD programs that encourage distributed leadership.*

Support from colleagues:
- Strong support from colleagues across the organisation.
- Often support is lateral (from peers) and vertical (from executives and politicians) in the organisation.*

Resources (funds and skills):
- Well resourced organisations.
- Existence of several funding strategies for SUWM.
- Proactive succession planning and recruitment of project champions.

Organisational task system:
- Predominantly 'boundary spanning units' at the branch level.[2]

Nature of core tasks:
- Typically complex and require a high level of creativity and personal effort / sacrifice.

Organisational size:
- Commonly medium-sized (540 to 1,200 staff).

Strength of SUWM policy framework:
- Commonly strong to very strong.

Personal Characteristics

Personality traits:
- Personality characteristics:
  - Extroversion†: Borderline introvert / extrovert* to strong extrovert.
  - Confidence†: High to very high* levels.
  - Openness to experience†: High to very high levels.
  - Persistence and commitment: High levels.
  - Agreeableness†: Low to very low levels.
  - Motivation and determination†: High levels.
  - Vision and a strategic perspective: High levels.
  - Enthusiasm: High* to very high levels.
  - Propensity to focus on communication†: High to very high levels.
  - Energy: Medium to high levels.
  - Regulatory focus†: Strong 'promotion focus'.[3]
- Personal values:
  - Strength of agreement between personal values and the SUWM philosophy: Moderate* to strong.
  - Strength of personal commitment to environmental sustainability: Moderate to strong.

Behaviours

Leadership style:	• Use transformational leadership, especially the inspirational motivation element.†*
	• Use distributed leadership, with a preference for some behaviours (see below).†*
Core behaviours:	• Questioning the status quo; and gathering political and managerial support: Both high to very high levels.†*
	• Articulating a vision for SUWM; 'scanning behaviours'[4]; establishing pilot projects; expressing enthusiasm and confidence; and persisting under adversity: All high to very high levels.†
	• Communicating clearly and frequently; coordinating leadership; and getting the right people involved: All high to very high levels.
Influence tactics:	• Frequent use of numerous influence tactics.†
	• Rational persuasion used "fairly often" to "frequently".
	• Ingratiation used "fairly often" to "frequently".†
	• Inspirational appeals, consultation and personal appeals: All used at least "fairly often".†
	• Exchange and coalition tactics: Both used at least "sometimes".†

Outcomes influence future behaviour.

Outcomes
Individual performance at SUWM leadership:
Team performance at SUWM leadership within the organisation:
Organisational performance at delivering SUWM on-the-ground:

Figure 32 – The revised conceptual model of leadership by SUWM project champions

Demographics:

• Generation:	Currently Generation X (born: 1961 - 1980) and Baby Boomers* (born: 1944 - 1960).
• Seniority in organisation:	Level 2 (senior manager) to 4 (team leader). More commonly level 4.
• Tenure in organisation:	≥ 5 years.
• Experience working in the SUWM field†:	≥ 3 years.
• Professional mobility†:	High level*.
• Nature of tertiary education:	Highly varied, but commonly non-engineering.
• Life experiences (childhood):	Often experienced periods of hardship and/or took on high levels of responsibility.
• Life experiences (adulthood):	Influential mentors*; periods of extensive travel; and/or a highly diverse work history†.

Knowledge:

• General knowledge re SUWM: Moderate to high* levels.
• Strategic and normative knowledge: Both moderate to high levels.
• Relational knowledge: Moderate to very high levels.
• Knowledge of local and/or State government politics: Low to very high*.

Supportive Contextual Factors (External)

Pace and extent of change:

• The local environment is subject to rapid and substantial change.

Crises and associated community and political concern:

• Water and waterway-related crises are driving change through community and political concern.

The local physical environment, waterway history and community ownership of waterways:

• Local waterways are highly valued but are under threat.

• The region has a history of local waterway-related problems.

• There is a strong connection between the community and local waterways.

Power

Types:
• Relative use†: Personal > position power.
• Level of personal power†: High.
• Level of position power: Low to moderate*.
• Level of expert power: High.
• Level of referent power: Low to moderate*.

Tactics:
• Networking type: Operational > personal > strategic.
• Strategic networking†: Very weak to very strong*.
• Strong and valuable relationships with more senior champions†.
• Preference for the 'strong tie strategy' of social networking.*5

Outcomes help to build knowledge and experience.

NOTES

* = Often associated with the most effective champions.

† = Often a distinguishing attribute for SUWM project champions when compared to 'non-champion' SUWM leaders from the same agencies.

For a description of highlighted terms, see:

1. Pawar & Eastman (1997) and Shamir & Howell (1999).

2. Pawar & Eastman (1997).

3. Higgins (1998).

4. Andersson & Bateman (2000).

5. Granovetter (1973).

Outcomes help to build or reduce power.

• Highly varied: Multi criteria analysis ratings ranged from 51% to 94%.
• Little variation: moderate to high levels.
• Little variation: moderate to high levels.

Personal Characteristics

Personality traits:
- Personality characteristics:
  - Extroversion: Diplomats = borderline introversion / extroversion. Mavericks = moderate to strong extroversion.
  - Agreeableness: Diplomats = moderate to low levels. Mavericks = low to very low levels.
  - Emotional stability: Diplomats = moderate to high levels. Mavericks = low to very low levels.
  - Risk taking: Diplomats = moderate levels. Mavericks = moderate to high levels.
  - Task / relationship orientation: Diplomats = relationship ≥ task orientation. Mavericks = task > relationship orientation.
  - Preference for working individually or in a team: Diplomats = team ≥ individual preference. Mavericks = individual ≥ team preference.
  - Self awareness: Diplomats > Mavericks.
  - Enthusiasm: Diplomats = high levels. Mavericks = high to extremely high levels.
  - Propensity to focus on communication: Diplomats = extremely high levels. Mavericks = high levels.

Knowledge:
  - General knowledge re SUWM: Diplomats > Mavericks.

Demographics:
- Generation:
  - Diplomats = Baby Boomers (born: 1944 - 1960). Mavericks = Generation X (born: 1961 - 1980).
- Seniority in organisation:
  - Diplomats (level 2 - 4) ≥ Mavericks (level 4).
- Tenure in organisation:
  - Diplomats > Mavericks.
- Experience in SUWM:
  - Diplomats > Mavericks.
- Life experiences:
  - Taking on high levels of responsibility as a child: Mavericks > Diplomats.

Behaviours

Core behaviours:
- Preferred direction of networking and influence: Diplomats = vertical and and lateral. Mavericks = preference for one direction (vertical or lateral).
- Focus on one-to-one communication and active listening: Diplomats > Mavericks.
- Gathering political and managerial support: Diplomats > Mavericks.
- Coordinating distributed leadership: Diplomats > Mavericks.
- Expressing enthusiasm and confidence: Mavericks > Diplomats.
- Persisting under adversity: Diplomats > Mavericks.
- Getting the right people involved: Diplomats > Mavericks.
- Frequency that rational persuasion is used: Diplomats > Mavericks.
- Frequency that consultation is used: Diplomats > Mavericks.

Leadership style:
- Use of transformational leadership: Diplomats > Mavericks.
- Use of distributed leadership: Diplomats > Mavericks.

Outcomes influence future behaviour.

Figure 33 – Typical differences between the maverick and diplomat SUWM project champions

Influential Contextual Factors

Organisational culture:

• Diplomats more strongly associated with dominant organisational cultures that support learning, innovation, risk taking and sustainability.

• Diplomats more strongly associated with organisations that run complementary programs to manage organisational culture and build leadership capacity across the organisation.

Support from colleagues:

• Diplomats associated with stronger political and managerial support.

Strength of SUWM policy within the organisation:

• Diplomats associated with organisations that have stronger policy frameworks for SUWM.

Organisational size:

• Diplomats associated with medium sized organisations (e.g. 540 to 600 staff). Mavericks associated with larger organisations (e.g. ≥1,000 staff).

Power

Types:
• Expert power: Diplomats > Mavericks.

• Power from strategic networks: Diplomats > Mavericks.

Outcomes help to build knowledge and experience.

Outcomes help to build or reduce power.

Outcomes

Individual performance at SUWM leadership:
• Diplomats more strongly associated with higher levels of leadership effectiveness, but this is strongly affected by context. Mavericks can be highly effective in organisational environments that are relatively hostile towards SUWM.

Organisational and team performance at delivering SUWM:
• Diplomats more strongly associated with higher performing teams and organisations.

Organisational development for SUWM (see Brown, 2008):
• Diplomats better suited to the *Integrated* phase and earlier phases if there is strong support for SUWM (e.g. organisations in the *Insider* phase with a supportive dominant culture and policy framework).

• Mavericks better suited to the *Project, Outsider, Growth* or *Insider* phases if there is little support for SUWM (e.g. organisations with a dominant culture that is relatively hostile towards SUWM).

9. SUWM EXECUTIVE CHAMPIONS

9.1. OVERVIEW OF THE CHAPTER

While the focus of the research presented in this report was on project champions, the multiple case study found that executive champions can play a very important role in the leadership process associated with SUWM initiatives (see Figure 9 in Section 4.2). Consequently, this chapter highlights the nature of the SUWM executive champion role, their strongest attributes, and differences between two types of executive champions (i.e. 'transformational' and 'enabling' types). The chapter concludes by highlighting some management implications of the research findings.

9.2. THE ROLE OF SUWM EXECUTIVE CHAMPIONS

Data from the group and individual interviews, as well as the 360 degree questionnaire indicate that while executive champions were often critical during the second *(Endorsement)* phase of the SUWM leadership process shown in Figure 9, they also played other important roles. For example, some were instrumental in attracting and actively recruiting effective project champions, as well as encouraging and directing their development as leaders. As indicated in Figure 31 (Section 6.2.3), four of the project champions relied on assistance from more senior champions to a least a "moderate" degree.

Where executive champions worked in tandem with project champions, they typically developed trust in the project champions, were comfortable delegating tasks to them, and provided a high degree of freedom for the project champions to operate across organisational boundaries and take reasonable risks. This is illustrated in the following quote from an executive champion who indicated that in relation to delegating to the organisation's project champions, he / she was:

> … certainly comfortable once I've got that trust. … I think if you've got the right people in those jobs then it's the only way to go, quite frankly, because hovering around and second guessing is not what promotes enthusiasm or confidence or innovation or risk taking. You have to give a certain amount of delegation to allow risks to take place and the stuff that [the project champion] has been doing in terms of water sensitive urban design is full of risks.

Executive champions also provided support for project champions in many forms. These included the provision of resources, sharing the risks associated with new projects, the acquisition of managerial and political support, and providing project champions with referent power. Some executive champions also played a mediating role between enthusiastic project champions that were driving change and staff who resisted this change. Some executive champions also helped project champions to build their knowledge of local politics and how to tailor and time attempts at influence to suit their leadership context.

Finally, some of the executive champions played a crucial role in creating an environment that attracted project champions and allowed them to innovate and take risks. The most senior executive champions did this by actively managing the organisation's dominant culture to promote learning, innovation, risk-taking, collaboration and sustainability. Some less senior executive champions created a 'safe haven' within a relatively hostile dominant organisational culture. This difference in approach is explored further in Section 9.4.

The role of SUWM executive champions is broadly consistent with the 'enabling leadership' role that has recently been defined under Complexity Leadership Theory (Uhl-Bien *et al.*, 2007). Under this theory, enabling leaders emerge in contexts where complex or adaptive challenges exist. They foster 'adaptive leadership' in areas where innovation is needed (i.e. interactive, group-based leadership), manage the entanglement between adaptive leadership and 'administrative leadership' (i.e. actions of staff in executive positions), and manage the flow of new knowledge and innovations from the adaptive leadership process into the organisation's administrative leadership process. From this perspective, the SUWM project champions engaged in 'adaptive leadership', along with other SUWM leaders (as described in Figure 9), and greatly benefited from the enabling leadership role of executive champions.

9.3. ATTRIBUTES OF SUWM EXECUTIVE CHAMPIONS

Overall, the attributes of the executive champions had many similarities to the diplomat project champions (see Figure 33 in Chapter 8), but shared few similarities with the maverick project champions. This helps to explain why the two project champions who were becoming executive champions, as indicated through the anonymous peer nomination process, were both diplomat champions.

In relation to personality characteristics, data from the 360 degree questionnaire indicate that the executive champions generally had high levels of emotional stability[24] and agreeableness, and these levels were typically higher than the project champions. The openness to experience characteristic was typically moderate and slightly lower than the project champions, while 'conscientiousness' was typically very high and higher than the project champions.

In terms of leadership style, all but one of the executive champions used moderate levels of transformational leadership. Two of these leaders, however, had strongly developed personality characteristics and frequently used behaviours that were both part of the 'inspirational motivation' element of the transformational leadership style (see Table 4 in Section 5.4). These leaders were identified by their peers as being "transformational leaders" during group interviews, had moderate ratings of transformational leadership following the coding of responses from individual interviews (see Figure 24 in Section 6.1.3), and had very high levels of the inspirational motivation element of transformational leadership as measured through the Multifactor Leadership Questionnaire[25]. In relation to the distributed leadership style, half the executive champions had moderate levels, while the other half had low levels (see Figure 29 in Section 6.2.3).

Distinguishing behaviours of the executive champions included working in tandem with project champions, gathering political and managerial support, getting the right people involved with projects, 'framing behaviours' (i.e. behaviours to get the attention of more senior leader-managers, such as highlighting an issue's urgency), using a variety of influence tactics, strategic networking (often involving other executives and politicians), and bringing people together in teams. They were also good at fostering innovation (e.g. by bringing in experts), creating a supportive environment for project champions to innovate and take risks, and building strong relationships (often by favouring one-to-one communication). Sometimes these leaders also used external project champions to drive change, as illustrated in the following quote from an executive champion who explained how he / she sometimes used a consultant to drive change in the Initiation phase of the SUWM leadership process:

> So for me, I've got to have a champion. In this case we probably didn't have the best champion [in-house], but I needed to get someone in there that was the 'arms and legs'. Then you let the process start and let some of the issues come out, and then get the players together, sit around the table and resolve it and have their say - bring the issues out and keep it task-orientated.

The executive champions had high levels of position power and relatively low levels of personal power compared to the project champions. Personal power was mostly derived from strong strategic networks, credibility that was built over time, high levels of referent power and some expert power. Their social networks enabled them to access information and knowledge quickly, and often featured relationships with powerful individuals outside the organisation.

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[24] For definitions of these characteristics, see Section 5.2.1.

[25] This MLQ dataset was self-assessed, due to the acquisition of limited peer-assessed data for the executive champions.

9.4. TYPES OF SUWM EXECUTIVE CHAMPION

The data from group and individual interviews, as well as the 360 degree questionnaire suggests there were two types of SUWM executive champion within the six case study agencies. This section describes the differences between the two.

'Transformational' executive champions were relatively rare with only two being identified and group interviewees stressing this point. They tended to be more senior, being located within the first two tiers of their organisations, in comparison to the 'enabling' type who were located within the third tier. The nature of their leadership more closely matched the description of executive champions from the literature. Specifically, during the anonymous peer nomination process in each case study agency, the transformational executive champions were rated the highest in terms of the strength of the match between the leader and description of an executive champion derived from the literature (see Appendix 4). This 'match strength' was around 90% for the two transformational executive champions compared to 70% to 80% for the enabling champions (see Figure 7 in Section 4.2.1).

The transformational executive champions had very high levels of the inspirational motivation element of transformational leadership (e.g. they aroused team spirit, displayed enthusiasm, confidence, persistence and optimism, and/or clearly communicated visions)[26]. To illustrate, Figure 34 presents data from the 360 degree questionnaire on behaviours relating to the inspirational motivation element of transformational leadership. All of these behaviours were rated as being more relevant to EC5 (a transformational champion) than to EC1, EC4 or EC6 (enabling champions).
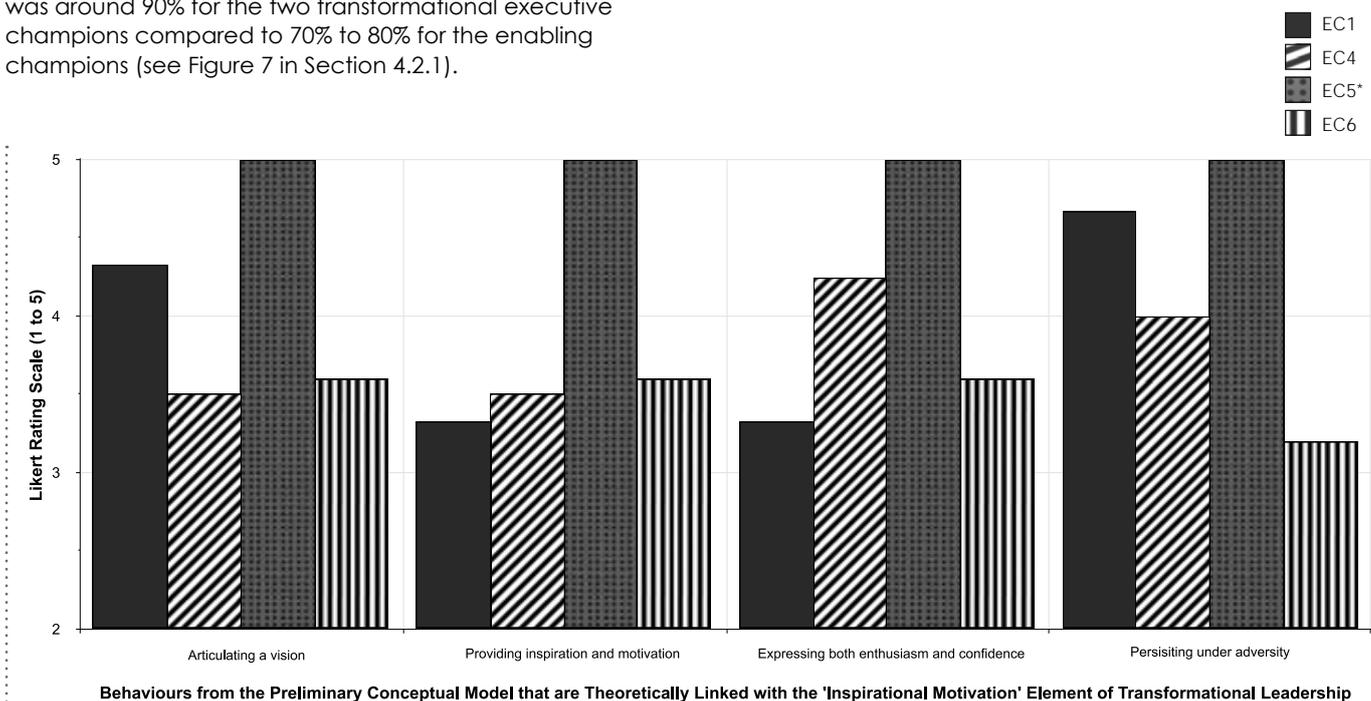
Figure 34 – The relevance of four 'inspirational motivation' leadership behaviours to SUWM executive champions (peer-assessed)

NOTES:

- The 360 degree questionnaire asked peers to rate the extent to which these behaviours were relevant. Key for the scale: 1 = none; 2 = low; 3 = moderate; 4 = high; and 5 = very high.
- EC = executive champion. * = a transformational type of EC. No peer-assessed data from the 360 degree questionnaire was available for EC2 or EC3.

[26] For more information on this element, see Table 4 in Section 5.4.

Personality characteristics that were more strongly developed among the transformational executive champions included enthusiasm, energy, risk-taking and innovation. These leaders also tended to have stronger personal values relating to sustainability. To illustrate, the following quote originates from a transformational executive champion who responded to a question about whether their personal commitment to sustainability was a strong motivating factor for their leadership in SUWM:

> Yes, it is. In fact I was actually sought as the person for this job because [the organisation's recruitment body] wanted to go … down the sustainability / more sustainable outcomes path, and so I was very happy to take the job.

The transformational executive champions were more focused on managing the organisation's culture to foster innovation, learning, risk-taking and collaboration. This is consistent with the organisational leadership literature which suggests that transformational leaders are more adept at actively managing organisational culture (see Avolio & Bass, 1995; Bass & Avolio, 1993a; Yukl, 1989). The enabling champions were more focused on managing structure, processes and tasks. In agencies with dominant organisation cultures that were relatively hostile towards SUWM, some enabling executive champions felt the need to hide innovative activities from more senior managers and politicians, as illustrated in the following quote:

> I try to keep some of the things that are a bit difficult to people that are like the politicians who are focused on today not tomorrow - I try to keep some of the tomorrow stuff under the radar a bit.

The transformational executive champions were very strong communicators and comfortable being in high-profile roles. The enabling champions generally preferred to work behind the scenes, and support others in more high profile roles (e.g. internal or external project champions). The transformational champions also showed a stronger preference for the 'strong tie strategy' of social networking (Granovetter, 1973), indicating the ability to form strong, mutually beneficial relationships.

Finally, there is evidence, albeit weak, to suggest an association between the transformational executive champions and SUWM-related organisational effectiveness. Specifically, the transformational executive champions (EC3 and EC5) worked in organisations that were the most effective and third most effective, respectively, at "facilitating widespread, on-the-ground delivery of SUWM projects" (see Figure 22 in Section 5.5.2). This tentative finding is consistent with published empirical research that has demonstrated a positive correlation between transformational leadership and desired organisational outcomes (see DeGroot *et al.*, 2000; Lowe *et al.*, 1996; and Patterson *et al.*, 1995).

Management implications (executive champions):

- Chief executive officers, board members and councillors should be made aware of the important role that executive champions can play in leadership processes to promote SUWM.

- Encourage executive champions in the top three tiers of the organisation to emerge by creating opportunities for them to volunteer for assignments that involve promoting SUWM (e.g. leading major projects).

- When recruiting executives in water-related portfolios, recruitment panels should look for the personality characteristics and values associated with executive champions, especially the transformational type (e.g. strong sustainability values and enthusiasm).

- When developing SUWM executive champions, supervisors should ensure that leadership development programs build skills that underlie the core behaviours associated with the role (e.g. ability to gather political and managerial support, and the ability to develop strong one-to-one relationships). In addition, an emphasis should be placed on building skills associated with the transformational executive champions (e.g. strong communication skills and the ability to actively manage organisational culture). These programs should also assess and build the transformational leadership abilities of executive champions, with a focus on the 'inspirational motivation' element of this style. There is strong evidence that these behaviours can be taught (see Kelloway & Barling, 2000; Parry & Sinha, 2005).

- Arguably the most important role of SUWM executive champions is to actively create an environment where project champions and their collaborators can safely innovate, take reasonable risks and learn when promoting SUWM. Case study agencies that had corporate programs for changing organisational culture and building leadership capacity that were driven by leader-managers within the top two tiers of the organisation were making the most progress in this regard. In organisations that had a dominant culture that was more hostile towards SUWM, the culture stifled the SUWM leadership process at numerous points.

10. MANAGEMENT STRATEGIES

10.1. INTRODUCTION TO THE CHAPTER

This chapter includes a suite of recommended management strategies that flow from the research findings presented in Chapters 4 to 9 and the international literature review (see Appendix 1). These strategies are most relevant to middle and executive leader-managers in publicly-managed Australian urban water agencies. They should be interpreted as being <u>part</u> of the broader suite of initiatives that are needed to build 'institutional capacity' to make SUWM a mainstream practice (see Brown *et al.*, 2006a).

There are four groups of strategies. The first group includes strategies to create a supportive leadership *context* for SUWM. These strategies are relevant to all three phases of the process model of SUWM leadership (Figure 9 in Section 4.3), as well as the contextual component of the conceptual model of leadership by SUWM project champions (Figure 32 in Chapter 8). The second group of strategies aim to foster effective SUWM *executive champions* who can play an important role in supporting project champions and the SUWM leadership process (see Chapter 9). These strategies are relevant to all three phases of the process model of SUWM leadership as well as the contextual component of the conceptual model of leadership by SUWM project champions. The third group of strategies collectively aim to *attract, recruit, supervise and develop* effective SUWM project champions. These strategies are relevant to all three phases of the process model of SUWM leadership and the non-contextual elements of the conceptual model of leadership by SUWM project champions. The final group of strategies encourage *distributed leadership* in water agencies to advance SUWM. These strategies are most relevant to the third phase of the process model of SUWM leadership and the contextual component of the conceptual model of leadership by SUWM project champions. All of these strategies are summarised at the end of the chapter in the form of a 'revised conceptual model of strategies to enhance leadership by SUWM project champions and the SUWM leadership process' (see Figure 35).

The chapter concludes by providing a *process* that water managers can follow to help identify which management strategies are most relevant to their workplace, and therefore should be implemented. This process addresses the issue of whether diplomat or maverick project champions should be encouraged.

10.2. STRATEGIES TO CREATE A SUPPORTIVE LEADERSHIP CONTEXT FOR SUWM

This research project found that several contextual factors strongly affected the SUWM leadership process, as well as the emergence and effectiveness of SUWM project champions (see Chapter 7). Some of these factors can be managed. The following strategies provide guidance on how this can be done.

Manage the organisation's culture

1-1. Actively manage the organisation's dominant culture to foster innovation, learning, responsible risk taking, collaboration and sustainable practices. Given the close relationship between leadership and organisational culture (see Bass & Avolio, 1994c; Sarros *et al.*, 2002), agencies should deliver programs that build a supportive organisational culture and foster complementary leadership behaviours at all organisational levels. These programs should involve the whole organisation and be driven by the most senior executive.

1-2. When managing the organisation's culture and assembling SUWM project teams, seek alignment between the personal values of team members (including project champions), the values underlying the SUWM philosophy, and the values embedded in the organisational culture.

Encourage the support of colleagues

1-3. Encourage developing project champions to build strong social networks with peers across organisational boundaries (i.e. laterally) as well as with key executives and politicians (i.e. vertically). Mechanisms include: training in advanced forms of social networking as part of leadership development programs (LDPs); managing the organisation's dominant culture to foster collaboration and distributed leadership; and providing opportunities for project champions to build these networks (e.g. job assignments, 'cross-boundary teams', job rotations and regular forums for networking).

1-4. Encourage project champions to establish and chair 'cross-boundary SUWM leadership teams' with key leaders from across the organisation (e.g. people who occupy the leadership roles described in Appendix 4). Only one of these teams would exist within a single water agency. These teams should: be coached by an executive (e.g. a SUWM executive champion); interact with politicians (especially in local government); share a vision for promoting SUWM in the region; jointly scope and steer key SUWM projects; focus on building strong interpersonal relationships; focus on being able to influence executives and politicians in the organisation; actively build the leadership capacity of the team; and recognise the value of distributed leadership in the SUWM leadership process.

Build a strong resource base for SUWM

1-5. Build a stable and substantial funding base for SUWM initiatives to attract and keep proficient project champions. In local government, a recommended strategy is the use of long term 'special rate levies'.

Manage the 'organisational task system'

1-6. When trying to identify potential project champions with transformational leadership abilities (see Section 6.1) and managing their development, recognise they are most likely to emerge in, be attracted to, and be most effective in 'boundary spanning units' within water agencies. Such units frequently interact with the organisation's external environment to detect opportunities and threats (Pawar & Eastman, 1997), and usually have a policy and strategic planning function in water agencies (e.g. policy units)[27]. Emerging champions with transformational leadership abilities could be rotated into roles in these units to help realise their leadership potential.

Overcome barriers to collaboration in large organisations

1-7. In large water agencies (e.g. those with more than 1,000 staff), place an emphasis on establishing formal mechanisms to encourage efficient cross-organisational networking and collaboration between key leaders involved with the SUWM leadership process. Mechanisms include: 'cross-boundary SUWM leadership teams' (see Strategy 1-4); strategic job rotations; and regular strategic SUWM discussion forums that involve key staff, executives, politicians (in local government) and external stakeholders who can be used to boost creativity.

Establish a strong SUWM policy framework

1-8. Ensure a policy framework is in place that commits the organisation to sustainability principles, and clearly communicates to staff that SUWM is now "core business". This framework should be consistent with the dominant organisational culture (see Strategy 1-1) and supporting plans (e.g. strategic, corporate and operational plans). For maximum effect, the corporate plan should be secondary to the policy that commits the organisation to the principles of sustainability.

Prepare for future opportunities to advance SUWM

1-9. To maximise the value of contextual factors that can create valuable opportunities for change (e.g. drought), executive champions should help project champions to: develop a heightened awareness of their leadership context and anticipate future opportunities to effect change; become comfortable with running several initiatives at once to maximise the chance that some will thrive as the context changes; and have more ambitious initiatives prepared to launch when circumstances become favourable.

Convert instances of waterway degradation into public and political support for SUWM

1-10. Foster the establishment and maintenance of credible, independent, ongoing, scientific monitoring and public reporting mechanisms to raise awareness of local waterway degradation and communicate the need for management, including the value of SUWM initiatives. Such mechanisms help to build community, political and managerial support for SUWM. These mechanisms should also highlight and acknowledge those actions of stakeholders that are helping to protect waterway health.

Build community ownership of local waterways to generate support for SUWM

1-11. Foster greater interaction between local waterways and the community to communicate the value of waterways and the need for improved management. In particular, provide programs and infrastructure to allow residents to recreate in and around waterways and to learn about their value, health and management. In the long term, this also helps to generate community, political and managerial support for SUWM initiatives.

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[27] For more information on 'boundary spanning units', see Section 7.2.4.

10.3. STRATEGIES TO FOSTER EFFECTIVE SUWM EXECUTIVE CHAMPIONS

The research found that SUWM executive champions can play a crucial role in the SUWM leadership process, especially the less common transformational type and where they worked in tandem with project champions (see Chapter 9). The following strategies provide guidance on how to maximise the value of SUWM executive champions.

Encourage the emergence of executive champions

2-1. Encourage executive champions to emerge by providing opportunities for them to voluntarily take on responsibilities relating to SUWM[28]. These opportunities should be available to executives in the first three tiers of management (i.e. 'Branch Manager' upwards).

Recruit and select leaders with potential to be executive champions

2-2. When recruiting and selecting executives with SUWM responsibilities, use the information provided in Chapter 9 to identify potential executive champions. In particular, recruitment and selection processes should seek to identify leaders with the personality traits and behaviours associated with the transformational type of executive champion, given they typically have a greater ability to manage the dominant organisational culture so that it supports SUWM, and are associated with better organisational performance at delivering SUWM on-the-ground (see Chapter 9).

Develop the leadership ability of executive champions

2-3. When developing the leadership abilities of executive champions, ensure that leadership development initiatives build skills that underlie the core behaviours associated with the role (see Chapter 9). In addition, an emphasis should be placed on encouraging behaviours associated with the transformational executive champions (see Chapter 9) for the reasons given in Strategy 2-2.

Encourage executive champions to create a supportive environment for SUWM

2-4. Encourage executive champions to actively create an environment where project champions, in concert with other leaders, can safely innovate, take reasonable risks and learn when promoting SUWM. Ways to do this are recommended in Section 10.2 as well as in Snowden & Boone (2007) and Uhl-Bien *et al.* (2007).

Undertake succession planning and proactive recruitment

2-5. Encourage executive champions to plan for succession in the executive and project champion roles, and engage in proactive, targeted recruitment of project champions when necessary. Note that in agencies that are supportive of SUWM, attracting and developing project champions of the diplomat variety (see Figure 33) will increase the likelihood that these leaders will become executive champions as their careers progress.

Identify and guide the development of project champions

2-6. Identify emerging project champions, direct these leaders to a best practice LDP[29], and assist their development using the strategies in Section 10.4. Executive champions, champion supervisors and champion mentors can all help with this task.

Play an active role in SUWM-related leadership development programs

2-7. Encourage executive champions to play an active role in designing and delivering customised leadership development initiatives for project champions (see Section 10.4) as well as initiatives for other SUWM leaders (see Section 10.5).

Encourage the 'Tandem Model of Championship' (Witte, 1977)

2-8. Encourage executive champions to develop strong relationships with emerging SUWM project champions in the organisation, support their leadership activities, and build their leadership capacity. A structured mentor-mentee relationship is recommended (see McCauley & Douglas, 2004) if the executive champion is not the project champion's supervisor. Executive champions should be informed that some project champions, especially the maverick type, will be reluctant to seek out mentors. Executive champions should also be encouraged to check that project champions are implementing an up-to-date individual leadership development plan, and assist them to build strategic networks (see Ibarra & Hunter, 2007), self-awareness, and a heightened awareness of their leadership context.

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[28] As major SUWM projects are typically multi-disciplinary and cross many organisational boundaries, it is possible for executives from different 'functional silos' in a water agency to become SUWM executive champions (e.g. senior planners, engineers or policy staff). Chief executive officers need to create opportunities for these leaders to emerge (e.g. volunteer to lead a new SUWM project) and then continue to encourage this role.

[29] Such programs are described in Strategy 3-10.

10.4. STRATEGIES TO ATTRACT, RECRUIT, SUPERVISE AND DEVELOP SUWM PROJECT CHAMPIONS

10.4.1. STRATEGIES TO ATTRACT AND RECRUIT PROJECT CHAMPIONS

3-1. Attract in preference to recruit. For example, a water agency with senior transformational SUWM leaders could strategically use these leaders at forums like conferences to publicly demonstrate that its organisation's culture strongly values sustainability, learning, innovation, collaboration and distributed leadership. This is likely to attract emerging SUWM project champions to this agency. In addition, such a strategy would help to attract potential project champions with transformational leadership abilities, as leaders tend to attract leaders with similar styles (Strelecky, 2004). The research found these project champions were the most effective (see Section 6.1.4), as predicted by Transformational Leadership Theory and published empirical research (see Avolio & Bass, 2004; Lowe *et al.*, 1996).

3-2. When recruiting potential project champions, use the revised conceptual model of leadership by SUWM project champions in Figure 32 to identify people with relevant attributes. In particular, look for relevant personality characteristics, personal values and demographics. Figure 33 (Chapter 8) can also be used to help identify potential diplomat or maverick project champions. Basic methods include interviews and referee checks. Advanced and more reliable methods include the use of psychometric instruments[30] with the assistance of qualified organisational psychologists (see Appendix 1).

3-3. When attracting, recruiting and supervising potential project champions, appeal to their strong 'promotion regulatory focus' (Higgins, 1998). This term means they are typically motivated by opportunities for advancement, growth and accomplishment, rather than occupying stable and secure positions in organisations. For example, supervisors can help to create an environment where developing project champions can *focus* on delivering some clearly defined SUWM initiatives.

3-4. Provide opportunities for staff across the organisation to emerge as project champions by volunteering for challenging SUWM-related assignments. For example, senior managers could use a new SUWM project (e.g. a demonstration project) as an opportunity for professional staff from across the organisation to volunteer to lead the project. Once a potential project champion has emerged, the 'job assignment' should be managed as a leadership development intervention. This means the assignment should include elements of challenge, assessment and support (see Appendix 1).

10.4.2. STRATEGIES FOR SUPERVISING PROJECT CHAMPIONS

3-5. Place promising emergent leaders in positions in the organisation where they can access moderate levels of position power (e.g. at or above the 'team leader' level of management) to complement high levels of personal power. The SUWM project champions who had a combination of these two sources of power were generally more effective.

3-6. Encourage project champions to develop social networks and exercise influence both laterally and vertically in their organisations to improve their effectiveness. This includes allowing trustworthy champions to develop working relationships with executives and politicians (in local government)[31]. Freedom to communicate directly across organisational boundaries and levels is essential for effective project champions.

3-7. Ensure that potential project champions are quickly identified and given the opportunity to participate in a best practice LDP (see Strategy 3-10). Project champions with the greatest potential to benefit from a LDP would: have the personal characteristics shown in Figure 32; be at the start of their professional career, but still have several years of relevant work experience (see Adair, 2005); and have a strong commitment to learning and personal development, a desire to lead, a high need for achievement, persuasive and inspirational communication skills, strategic thinking ability, pragmatism, a high general mental ability, confidence and be self-motivated (Avolio, 2007; Doh, 2002).

3-8. Once project champions have begun a LDP and developed an individual leadership development plan, ensure this plan is linked with their corporate 'performance plan', implemented and regularly revised. Supervisors and mentors (e.g. executive champions) should be involved with this process and help to facilitate the initiatives in the project champion's leadership development plan (e.g. provide challenging job assignments and allow staff rotation). In addition, the performance plans of supervisors and managers should be used to ensure that a process exists to develop the leadership potential of their professional staff such as project champions.

3-9. Be aware that a project champion may strongly emerge as a SUWM leader, but this does not automatically mean that they will be operating at their full potential (see Section 5.5.1). This is particularly the case for maverick project champions and highlights the need for the early use of well-designed leadership development initiatives.

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[30] Tools (e.g. questionnaires) that measure aspects of personality, like the existence or absence of particular traits.

[31] Providing project champions with direct access to executives and politicians can be a sensitive issue in some local government authorities. Effective project champions will seek to build these social networks over time. Supervisors need to recognise that this is a key to project champion effectiveness and the freedom to do this should be earned as trust is built between supervisors and developing project champions.

10.4.3. STRATEGIES TO DEVELOP THE LEADERSHIP ABILITY OF PROJECT CHAMPIONS

3-10. Ensure project champions have access to a best practice LDP. Such a LDP would typically:

- be grounded in leadership theory and published empirical research;

- have been validated as being applicable to SUWM project champions;

- include relevant models of SUWM leadership (e.g. Figures 9 and 32);

- be on-going, as leadership development is a life-long process (Avolio, 2005);

- include elements of assessment (e.g. pre- and post-program 360 degree feedback), challenge (e.g. job assignments) and support (e.g. mentoring);

- be strongly supported by executives;

- be aligned with the organisation's strategic direction and culture; and

- be aligned with the organisation's human resource processes (e.g. links exist with staff performance plans) (Avolio, 2005, McCauley & Van Velsor, 2004).

3-11. Ensure that the best practice LDP (see Strategy 3-10) includes the regular delivery of customised 'feedback intensive programs' (Guthrie & King, 2004). These programs are leadership development 'short courses' which may be delivered every few years (depending on the need), and typically take 3 to 6 months to complete. They include a 360 degree feedback component and training to produce ongoing, individual leadership development plans. For project champions, these plans are likely to include tasks relating to mentoring, coaching, networking, regular 360 degree feedback and/or job assignment. These plans also need to reflect the '70:20:10 rule' of leadership development (Lombardo & Eichinger, 2000). Namely, 70% of leadership development comes from on-the-job experience, 20% comes from receiving feedback from others (including mentoring and coaching), and only 10% comes from structured training.

3-12. Specific leadership development initiatives that are likely to be needed for project champions include:

- *Mentoring* arrangements to help project champions build knowledge (e.g. of local politics), strategic networks, referent power and awareness of their leadership context. This initiative is particularly important for maverick project champions.

- Anonymous, *360 degree feedback* mechanisms to identify leadership strengths and weaknesses, as well as the degree of self-rater agreement (an indicator of self-awareness). Regularly monitoring self-rater agreement can help raise self-awareness, which is positively correlated with leadership effectiveness (see Chapter 5 and Atwater & Yammarino, 1997). Other strategies to improve self-awareness include routine post-project debriefings and mentoring.

- *Training* that assists project champions to become proficient at using the leadership styles, core behaviours, influence tactics and power building tactics listed in Figure 32. Such training would place a priority on those behaviours associated with the most effective champions, which are also highlighted in Figure 32. This would be included in a customised 'feedback intensive program' (see Strategy 3-11).

- Specialist *training* on advanced forms of social *networking*. Such training would:
  - build their capacity to undertake operational, personal and strategic networking (see Ibarra & Hunter, 2007);
  - draw on relevant social networking research and theory (see Appendix 1);
  - outline evidence-based networking strategies that can be used for gathering information, building power and exercising influence; and
  - focus on the 'strong tie strategy' of social networking (Granovetter, 1973) given champions generally prefer this tactic.

- Challenging *job assignments* to help project champions build personal power (e.g. expert and referent forms) as well as new social networks and knowledge. Such assignments should be linked with the champions' individual leadership development plans.

10.5. STRATEGIES TO ENCOURAGE DISTRIBUTED LEADERSHIP FOR SUWM

The strategies in Section 10.1 that relate to managing the organisational culture, using 'cross-boundary SUWM leadership teams', delivering corporate LDPs, providing networking opportunities, and implementing formal mechanisms to foster efficient collaboration across organisational boundaries help to encourage distributed leadership in water agencies. Additional strategies are provided in this section.

Encourage the use of behaviours favoured by diplomat project champions

4-1. When developing the leadership ability of project champions, encourage behaviours associated with effective diplomat champions (see Figure 33) to help facilitate greater collaboration and distributed forms of SUWM leadership across the organisation.

Look for innate leadership attributes as part of standard recruiting procedures

4-2. When recruiting professionals in water agencies, routinely look for candidates with leadership potential as part of ongoing recruitment processes in addition to job-specific competencies. Basic methods include interviews and referee checks. Advanced and more reliable methods include the use of psychometric instruments with the assistance of qualified organisational psychologists (see Appendix 1). For guidance on personality traits associated with effective organisational leaders, see Appendix 1.

Train, coach and use procedures to improve distributed leadership in SUWM project teams

To foster distributed leadership within cross-boundary, multi-disciplinary SUWM project teams:

4-3. Encourage team members to view leadership as having 'focused' and 'distributed' components (Gibb, 1954). Focused leadership refers to the conventional emphasis on a single designated team leader. Distributed leadership allows for several team members to contribute to the leadership process at different times. Also highlight the importance of *coordinating* distributed leadership in teams to improve the effectiveness of distributed leadership (see Mehra *et al.*, 2006).

4-4. Ensure all team members have access to corporate LDPs that help to build behaviours related to the transformational and distributed leadership styles (see Chapter 6; Bass, 1999; Barry, 1991).

4-5. Use 'team leadership coaches' to help SUWM teams use major projects as individual and group leadership development opportunities. The coach would: be cognisant of the team members' individual leadership development plans; ensure leadership-related goals and tasks were established at the start of the project; monitor and advise on appropriate leadership behaviours to match the context, type of project and stage of the team's development; and facilitate a post-project debriefing session (see Avolio, 2005) to allow reflection and learning at an individual and team level.[32]

4-6. Use a 'team charter process' (Carson *et al.*, 2007) for new SUWM teams. This proactive performance management process establishes team goals, priorities, roles and responsibilities, norms and dispute mechanisms. The process is both people and task-orientated.

4-7. Ensure organisational performance incentives (e.g. salary increases, promotions and career development opportunities) value the achievement of team goals, especially those that cross organisational boundaries.

10.6. REVISED CONCEPTUAL MODEL OF STRATEGIES TO ENHANCE LEADERSHIP BY SUWM PROJECT CHAMPIONS AND THE SUWM LEADERSHIP PROCESS

The conceptual model in Figure 35 summarises the recommended management strategies in this chapter to enhance both leadership by SUWM project champions in publicly-managed water agencies (see Figure 32 in Chapter 8) and the overall SUWM leadership process in these agencies (see Figure 9 in Chapter 4).

[32] This is an advanced initiative that is most suited to well resourced teams that are managing large SUWM projects.

Strategies to Create a Supportive Leadership Context for SUWM

• Foster a supportive dominant organisational culture (e.g. that values learning and collaboration).

• Seek to align values (i.e. values in the organisational culture, personal values of SUWM leaders, and sustainability values).

• Encourage project champions (PCs) to build strong social networks (laterally and vertically).

• Use 'cross-boundary SUWM leadership teams' to build collegial support for PCs.

• Develop a stable and substantial funding base for SUWM initiatives.

• Match PCs with transformational leadership abilities with 'boundary spanning units'[1] in the organisation (e.g. strategic planning and policy units).

Strategies to Attract and Recruit SUWM Project Champions

• Attract in preference to recruit (e.g. use public appearances of transformational executive champions to attract transformational PCs to the organisation).

• Use knowledge of PC attributes (e.g. personality characteristics, personal values and demographics) as shown in Figure 32 (Chapter 8) to help identify potential PCs when recruiting staff.

• Use knowledge of the strong 'promotion regulatory focus'[2] of PCs (i.e. their need for personal growth and achievement) to attract them to a project or role.

• Provide opportunities across the organisation for PCs to emerge by volunteering to lead new SUWM projects.

Strategies for Supervising SUWM Project Champions

• Provide promising PCs with at least a 'moderate' level of position power (e.g. a position at or above the 'team leader' level of management).

• Encourage champions to develop social networks and exercise influence *both* laterally and vertically in their organisations.

• Identify potential PCs early, and provide best practice leadership development opportunities.

• Use selection guidelines to maximise the organisation's return on investment from leadership development programs (LDPs). These include: the personal characteristics shown in Figure 32; age (i.e. early career professionals); a strong commitment to learning and personal development; a desire to lead; a high need for achievement; persuasive and inspirational communication skills; strategic thinking ability; pragmatism; a high general mental ability; confidence; and a propensity to be self-motivated.

• Implement and regularly revise individual leadership development plans for PCs once they have begun a LDP.

• Be aware that PCs can emerge strongly as SUWM leaders but operate well below their potential as leaders.

Strategies to Develop the Leadership Ability of SUWM Project Champions

• Ensure PCs have access to a best practice LDP (see Chapter 10 and Appendix 1).

• As part of the LDP, regularly deliver customised 'feedback intensive programs' (i.e. leadership development 'short courses') for PCs. These usually run for 3 to 6 months, involve 360 degree feedback, intensive training and produce ongoing, individual leadership development plans. These plans should include a suite of actions to build leadership strengths and overcome weaknesses.

• As part of the LDP, PCs are likely to benefit most from:
  - Mentoring arrangements to help build knowledge, strategic networks, referent power and awareness of their leadership context.
  - Anonymous, 360 degree feedback mechanisms to identify leadership strengths and weaknesses, as well as build self-awareness.
  - Training that helps PCs to use the leadership styles, core behaviours and power building tactics listed in Figure 32.
  - Training on advanced strategies for social networking.
  - Challenging job assignments to build personal power (e.g. expert and referent forms) as well as new networks and knowledge.

Figure 35 – The revised conceptual model of strategies to enhance leadership by SUWM project champions and the SUWM leadership process

- Implement a strong policy framework for SUWM.
- Help PCs to prepare for future opportunities to advance SUWM.
- Implement mechanisms to encourage efficient collaboration in large organisations (e.g. regular strategic discussion forums).
- Foster greater connection between the local community and waterways to build support for SUWM.
- Use independent scientific monitoring and public reporting mechanisms to build community, political and managerial support for SUWM.

Strategies to Foster Effective SUWM Executive Champions

- Encourage the emergence of executive champions (ECs) by providing opportunities for executives to voluntarily lead major SUWM projects that cross 'functional silos' in an agency.
- Recruit and select ECs (especially the transformational type) using knowledge of their attributes (see Chapter 9).
- Develop leadership abilities of ECs using knowledge of their core behaviours (see Chapter 9).
- Encourage ECs to create a supportive environment for SUWM.
- Encourage ECs to plan for succession in the EC and PC roles, and proactively recruit PCs when required.
- Encourage ECs to identify potential PCs and guide their development.
- Encourage ECs to help design and deliver LDPs for other SUWM leaders.
- Encourage ECs to work in tandem with PCs and help to build their leadership capacity.

Strategies to Encourage Distributed Leadership for SUWM

In addition to strategies that encourage a supportive context for collaboration and distributed leadership:

- Encourage the use of behaviours associated with diplomat champions when developing the leadership ability of PCs (see Figure 33).
- Routinely look for candidates with leadership potential as part of ongoing recruitment processes in addition to job-specific competencies.
- Encourage members of cross-boundary, multi-disciplinary SUWM teams to view leadership as having both 'focused' and 'distributed' components, and emphasise the need for coordination of distributed leadership in teams.
- Provide all SUWM team members with access to LDPs that focus on distributed and transformational leadership behaviours.
- Use a 'team charter process' for new SUWM teams.
- Use 'team leadership coaches' for well resourced SUWM teams during major projects.
- Ensure organisational performance incentives value the achievement of team goals.

NOTES

For a description of highlighted terms, see:
1. Pawar & Eastman (1997) or Section 7.2.
2. Higgins (1998) or Section 5.2.

10.7. PROCESS TO HELP WATER MANAGERS APPLY THE STRATEGIES

The following sequential steps are recommended for water managers who are unsure about which management strategies should be implemented in their agency.

1. **Review strategies:** Review all of the management strategies in this chapter to understand their scope and intent.

2. **Assess the local context:** Assess the extent to which the leadership context within the agency is supportive of SUWM. The most supportive contexts are typically characterised by:

   • A dominant (i.e. organisation-wide) organisational culture that strongly supports learning, innovation, responsible risk-taking, collaboration and sustainable practices.

   • Executives who actively manage the organisation's culture and drive leadership development initiatives across the organisation.

   • SUWM executive champions in the top two tiers of the organisation.

   • Many leaders across organisational boundaries and managerial levels who collaborate and strongly support SUWM initiatives.

   • Substantial resources for SUWM projects compared to equivalent agencies in the region.

   • A strong policy framework for SUWM that affects day-to-day decisions.

   • SUWM is seen as 'core business' for the agency.

To assist this process, give the agency a context rating on a scale from 1 to 5, where 5 is an agency with *all* of the above characteristics and 1 is an agency with *none*.

3. **If the context rating is '5':** In this situation it is likely that the agency already has strong SUWM leadership capacity. Simply review the strategies in this chapter to look for opportunities to improve on *existing* initiatives. Recognise that this context is most suited to project champions of the diplomat variety and highly collaborative forms of distributed leadership.

4. **If the context rating is '3' or '4' (i.e. relatively supportive contexts):** In this situation use the strategies described in this chapter to:

   • Attract, recruit, supervise and develop the abilities of diplomat project champions.

   • Build leadership capacity across organisational boundaries and managerial levels to encourage distributed (group-based) leadership. Given these ratings, it is likely that some form of corporate leadership development program will be in place. If so, these should be reviewed to ensure that they involve all staff who are likely to participate in SUWM leadership processes.

   • Enhance the effectiveness of SUWM executive champions. It is likely that executive champions will already exist in this context, but some management strategies will still be relevant, like planning for their succession.

   • Create an even more supportive leadership context for SUWM (e.g. support 'cross-boundary SUWM leadership teams').

The primary aim in this context is to foster strong distributed leadership in the agency, the existence of diplomat project champions and senior executive champions to support typical SUWM leadership processes (see Figure 9).

5. **If the context rating is '1' or '2' (i.e. relatively unsupportive contexts):** In this situation use the strategies described in this chapter to:

• Focus on creating a more supportive leadership context for SUWM. This suite of strategies (see Section 10.2) should be a priority in this circumstance.

• Attract, recruit, supervise and develop the abilities of *maverick* project champions as an interim measure to make progress in implementing SUWM until the context becomes more supportive of SUWM. Leadership development activities for these champions should focus on those behaviours that are associated with the most effective maverick champions (e.g. the ability to strategically network and influence vertically as well as laterally in the organisation). In addition, maverick champions should be trained to adjust their leadership behaviours to become more collaborative as their leadership context becomes more supportive of SUWM (i.e. become more like diplomat champions). This will typically require maverick champions to build self-awareness, build awareness of their leadership context, and engage in behaviours that may seem unnatural to them (e.g. showing greater persistence and consulting more frequently).

• Build leadership capacity across organisational boundaries and managerial levels to encourage distributed leadership as a longer term strategy. Ideally, the most senior executives would drive corporate leadership development programs in conjunction with programs to actively manage the organisation's dominant culture so that it supports innovation, learning, responsible risk-taking, collaboration and sustainable practices.

• Enhance the effectiveness of executive champions. In this context, it is likely that there will be an absence of strong and senior SUWM executive champions. Consequently, all of the strategies relating to executive champions in this chapter are likely to be relevant.

The primary aim in this context is to gradually build a more supportive context for SUWM, use maverick project champions as an interim measure to make some progress in delivering SUWM until the leadership context becomes more supportive, encourage executive champions to emerge, gradually build distributed leadership throughout the agency, and encourage maverick champions to become more collaborative as their leadership context becomes more supportive.

6. **Develop and implement an action plan:** A 'SUWM leadership development plan' should include the leadership development strategies that have been identified as being relevant to the agency. This plan should be regularly reviewed and revised. Ideally, a SUWM project champion would develop the plan in consultation with other SUWM leaders and coordinate its implementation, while a SUWM executive champion would sponsor and oversee the plan. Such a plan should be part of the agency's overall strategy to build institutional capacity for SUWM (see Brown *et al.,* 2006a). Regular reviews of this plan also represent opportunities to bring SUWM leadership issues to the attention of the agency's most senior executive leaders.

11. CONCLUDING REMARKS

This research project has helped to better understand the 'champion phenomenon' (Commonwealth of Australia, 2002) in the context of promoting SUWM in Australian publicly-managed water agencies. It has clarified how industry practitioners perceive SUWM champions and the nature of typical SUWM leadership processes. It has identified the attributes and roles of both project and executive champions. It has discovered two types of project champion (the diplomat and maverick variety), as well as two types of executive champion (the transformational and enabling variety). It has also highlighted several contextual factors that can greatly affect the leadership activities of SUWM champions and the SUWM leadership process.

These findings are summarised in two conceptual models in this report. First, Figure 9 (Section 4.3) describes a three phase process model of SUWM leadership. This model explains how a variety of leaders, including champions, play important roles at different phases. It also highlights the importance of context and how focused, instrumental and distributed leadership styles are predominantly used in the *Initiation*, *Endorsement* and *Implementation* phases, respectively. Second, Figure 32 (Section 8.2) is a conceptual model of SUWM leadership by project champions. It describes the typical personal characteristics (e.g. personality characteristics, values and demographic attributes), key leadership behaviours (including leadership styles and influence tactics), types of power, tactics for building power and leadership outcomes of these champions. It also highlights contextual factors within and outside water agencies that strongly influence leadership activities by project champions.

These findings have been used, along with knowledge gained from an international literature review (Appendix 1), to develop a suite of management strategies to enhance leadership by SUWM project champions, as well as the overall SUWM leadership process in publicly-managed water agencies. This suite includes strategies to: create a supportive leadership context for SUWM; attract, recruit, supervise and develop the leadership ability of SUWM project champions; foster effective SUWM executive champions; and encourage distributed leadership for SUWM throughout water agencies. These strategies are summarised in a conceptual model in Figure 35 (Section 10.5).

This research project has generated five key messages for industry practitioners. First, as shown in Figure 9, typical SUWM leadership processes in water agencies do not solely rely on project champions. These processes have three phases (i.e. *Initiation*, *Endorsement* and *Implementation*), involve many leaders, and involve different styles of leadership at each phase. Project champions are often highly visible as emergent leaders at the *Initiation* phase, as they trigger new SUWM policies or projects. They are often catalysts for change and strongly drive the process during this phase. During the *Endorsement* phase, project champions receive assistance from more senior leaders, including executive champions, and often take advantage of 'windows of opportunity' that open as their leadership context changes.

During the *Implementation* phase, many leaders from across organisational boundaries collaborate to deliver the SUWM policy or project. The most effective project champions had attributes that enabled them to operate effectively during all three phases. For example, they were unusually strong transformational leaders, they often worked in tandem with executive champions, they had both position and personal power, they excelled at particular types of distributed leadership behaviours (e.g. gathering political and managerial support) and they were highly collaborative. Understanding this leadership process leads to the conclusion that strategies to enhance the leadership abilities of project champions should be accompanied by strategies to create a more supportive context for SUWM, build the leadership abilities of executive champions, and promote distributed leadership throughout the organisation. Such strategies are recommended in Chapter 10.

Second, although the focus of this research was on project champions at a middle management level, it found that executive champions also played a number of important roles in the SUWM leadership process (see Chapter 9). For example, they undertook an 'enabling' leadership role (Uhl-Bien *et al.*, 2007) which involved creating environments for project champions and other SUWM leaders to collaborate and innovate. This is consistent with Complexity Leadership Theory (Uhl-Bien *et al.*, 2007) which is an extension of Distributed Leadership Theory (Gibb, 1954; Gronn, 2000) and has been developed to better understand the type of leadership that is needed to address complex problems. Executive champions in the top two tiers of management who had transformational leadership abilities were found to be particularly effective at creating environments for project champions and other SUWM leaders to thrive. These champions had the greatest ability to change the dominant organisational culture so that it was highly supportive of SUWM and distributed leadership. Such cultures typically supported innovation, continuous learning, responsible risk-taking, collaboration and sustainable practices. Where executive leaders (including executive champions) were driving corporate programs to manage their agency's dominant organisational culture, they also delivered complementary leadership development programs to help foster desired behaviours and build distributed leadership.

Third, the research found that the studied SUWM project champions were emergent leaders with a large number of strongly developed attributes (see Figure 32), many of which were substantially different from typical 'non-champion' leaders who worked in the same organisation and contributed to the SUWM leadership process. For example, as predicted by the literature review (Appendix 1), they engaged in transformational leadership behaviours, and the most effective champions were unusually strong transformational leaders. This knowledge has been used to design strategies to attract, recruit, supervise and build the leadership abilities of these important leaders. In addition, knowledge of differences between maverick and diplomat project champions provides water agencies with an extra layer of information.[33]

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[33] See Figure 33 in Section 8.2 for a summary of these differences.

Fourth, the research found a high degree of consistency between the attributes of leaders that are thought to be needed to address 'complex problems' (see Bouwhuis, 2007; Commonwealth Australia, 2007; Snowden & Boone, 2007; Uhl-Bien *et al.*, 2007) and strongly developed attributes of SUWM champions. For example, executive champions engaged in 'enabling leadership' (Uhl-Bien *et al.*, 2007) to create environments where emergent leaders could collaborate and innovate, even in organisations where the dominant organisational culture was hostile towards SUWM. In addition, project champions (especially the diplomat variety) were highly persistent, undertook advanced forms of social networking, frequently questioned the status quo, excelled at working across organisational boundaries and coordinated group-based processes of leadership. This finding indicates that the complex challenge of making the transition to 'water sensitive cities' (Brown *et al.*, 2008) is a context that favours emergent leaders with a particular set of personality characteristics, skills and behaviours. The majority of these attributes can be consciously developed (e.g. the ability to question the status quo to encourage innovation).

Finally, the findings relating to distributed leadership and the types of project champion help to understand and use Brown's (2005a & 2008) model of organisational development for publicly-managed water agencies. As shown in Figure 36, Brown identified five phases of SUWM-related organisational development. As water agencies evolve from the *Project* to *Integrated* phase, the internal context typically becomes more supportive of SUWM and distributed leadership. For example, during the *Integrated* phase, the context is typically characterised by a highly supportive dominant organisational culture (that values sustainability, innovation, continuous learning and collaboration), supportive executives, a strong SUWM policy framework, and a relatively strong resource base for SUWM. This context is more suited to diplomat project champions, given their highly collaborative leadership style. Indeed, during the *Integrated* phase, diplomat project champions may no longer stand out as individual change agents, as they operate as one of *many* leaders working on SUWM leadership processes that have become 'core business' for their agencies. This was the case in one of the case study agencies.

Five Phases of Organisational Development for Adopting SUWM

Project
• SUWM driven by a technical officer.
• SUWM seen as a one-off project.
• Low performing agencies.

Outsider
• Driven by an environmental officer or group ('outsiders').
• Low budget and priority for SUWM.
• Poor inter-agency relationships.

Growth
• Driven by a team.
• Growing resources and commitment.
• Unclear roles and responsibilities.
• Maverick champions more common.

Insider
• Driven by a high profile SUWM champion (maverick and diplomat types).
• Strong networks between the champion and external groups.
• Stronger inter-agency relationships.

Integrated
• Driven by many leaders throughout the agency.
• SUWM is 'core business'.
• The culture values cooperation and learning.
• High performing agencies.

Context more suited to *maverick* project champions

Context more suited to *diplomat* project champions

• From the *Project* to *Integrated* phase, the context within water agencies typically becomes more suited to the emergence and effective operation of diplomat project champions. This changing context is likely to be characterised by a more supportive dominant organisational culture and SUWM policy framework, more supportive executives, a relatively strong resource base for SUWM, and greater levels of distributed and collaborative SUWM leadership.

• SUWM champions may be most visible during the *Insider* phase (see Brown, 2005a & 2008), where their power has grown so they become influential change agents who challenge traditional water management practices. At the *Integrated* phase, however, they may be less conspicuous, as they are just one of many leaders in their agency working on SUWM leadership processes. During the *Integrated* phase, diplomat project champions may be seen by their colleagues as "champions" *only* when they work outside the agency (i.e. in less supportive contexts).

Figure 36 – The relationship between project champion type, context and Brown's (2008) typology of SUWM-related organisational development

NOTES:

• The five phases in Brown's typology are not necessarily sequential as organisations may skip developmental phases. They may also move in either direction.

Given the model in Figure 36, agencies should consider how supportive their leadership context is when deciding which project champion type to recruit and develop in order to help drive the change process. Guidance on this matter has been provided in Chapter 10. While this research project has shown that, in general, the diplomat project champions were more effective than the maverick champions, some contexts were more suited to maverick champions. In particular, environments that were relatively hostile towards SUWM made some maverick behaviours highly effective. These environments were characterised by the dominant organisational cultures not seeing SUWM as 'core business', relatively weak SUWM policy frameworks, the existence of major impediments to cross-boundary collaboration (e.g. large organisational size or profound differences in the goals of organisational units) and/or many hierarchical levels between project champions and executive decision makers that were occupied by managers without a strong personal commitment to the SUWM philosophy. As illustrated by project champion 1 (PC1) in this report, in these environments, leadership behaviours such as taking some risks, forming strong relationships with executive and political decision makers and influencing them directly can be an effective method to initiate change. It is unlikely that a diplomat champion would have been as effective as PC1 in the same environment.

The model in Figure 36 also suggests that astute project champions should attempt to change their leadership style as their context evolves. For example, maverick champions in agencies that are evolving towards the *Integrated* phase should use more collaborative leadership behaviours. While possible in theory, this form of leadership development is likely to be challenging in practice given maverick champion attributes like their relatively low levels of self-awareness (see Figure 33 in Chapter 8).

There are many possibilities for future research in this area. Given that the SUWM leadership process includes many leaders (see Figure 9), there would be merit in conducting similar research that focuses on some of the 'non-champion' leaders. For example, in several of the case study agencies there were senior engineers in technical units that were unusually receptive to SUWM and acted as important 'ambassadors' between their engineering colleagues and project champions in policy areas. It would also be enlightening to investigate the 'champion phenomenon' within other parts of the urban water industry, such as the consulting industry. Similarly, future research could examine the transferability of the conceptual models of the SUWM leadership process and leadership by SUWM champions (i.e. Figures 9 and 32, respectively) to overseas water agencies. Given this research project has been grounded in the international literature, including relevant theory and empirical research, these models should be transferable, providing the context of leadership is similar. Finally, there would be value in evaluating the efficacy of interventions to enhance the leadership ability of project champions, as well as other leaders who contribute to the SUWM leadership process. The next phase of this research project will begin this process by designing, delivering and evaluating a customised 'feedback intensive' leadership development program (Guthrie & King, 2004) for SUWM project champions in Australian water agencies.

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APPENDIX 1

SUMMARY OF KEY FINDINGS FROM THE INTERNATIONAL LITERATURE REVIEW

AIMS AND STRUCTURE OF THE LITERATURE REVIEW

The literature review assisted the research project in four ways. First, it identified and summarised what is known and unknown about champions, leadership by champions and strategies for developing champions. Second, it identified contextual factors that are likely to help or hinder the emergence and effectiveness of champions. Third, it identified potentially relevant leadership theories that could be used to analyse and explain the 'champion phenomenon' (Commonwealth of Australia, 2002). Finally, it allowed the author to construct preliminary conceptual models of leadership by SUWM champions and strategies to enhance this leadership (see Appendices 2 and 3, respectively).

The review was structured to systematically address the issues of: personality traits (including characteristics and values) of champions; skills of champions and their areas of knowledge; demographics of champions; champion power and the use of social networks; behaviours and leadership styles of champions; relevant leadership theory; contextual influences on leadership; and leadership development. The summary sections from the full literature review are given below.

SUMMARY OF THE LITERATURE REVIEW'S FINDINGS ON THE PERSONALITY TRAITS OF CHAMPIONS

Personality traits include characteristics (e.g. persistence) and values (e.g. a strong commitment to environmental protection). These traits provide the potential for leadership emergence and effective leadership, but do not guarantee such outcomes (Kirkpatrick & Locke, 1991; Yukl, 1981). Personality characteristics potentially affect the types of behaviour a leader exhibits in a given situation, the types of power available to leaders and the acquisition of skills needed for specific leadership behaviours (Hogan & Kaiser, 2005; Yukl, 1989). Personal values potentially play a role in leader emergence, particularly for environmental leadership (Dunphy et al., 2003; Egri & Frost, 1994).

Personality traits are thought to play a more important role in the process of leadership in environments where there are high levels of complexity, uncertainty and change, but few rules, procedures and well-defined roles (House et al., 1996; Judge et al., 2002). It is the author's view that the context of SUWM currently fits this description (see Geldof, 2005; Geldof & Stahre, 2005; Van Beurden & Geldof, 2005).

Table 5 summarises the personality traits that have been strongly and/or repeatedly highlighted in relevant literature relating to champions who promote SUWM, environmental leaders, 'champions of innovation', organisational leaders and transformational leaders.

Table 5 (Appendix 1) – Summary of personality traits potentially associated with SUWM project champions

Body of Literature	Traits		Sources
'Sustainable urban water management champion'	• Persistence, determination, focus and patience.* • Propensity for risk-taking and tolerance of uncertainty.* • Commitment, drive and motivation.* • Vision (e.g. ability to engage in 'big picture' thinking).* • Innovative and adaptive.* • Strong environmental values.* • Passion, energy, enthusiasm, optimism and a positive attitude. • Extraversion. • Warmth and gregariousness.	• Credibility and honesty. • Openness to new ideas and approaches. • Propensity for extra-role behaviours. • Self-awareness. • Opportunistic. • Ability to analyse an issue from multiple perspectives. • Values supporting the public good, adoption of best practices, learning by doing and a cooperative approach to change.	Brown (2003), Brown & Clarke (2007), Commonwealth of Australia (2002), Mitchell (2004), Newton *et al.* (2006), Reynolds (2000), Sadler (1998), White (2006), and data collected during conversations held with 12 urban water managers around Australia as a precursor to this research.[1]
'Environmental sustainability and leadership'	• Personal resilience and persistence.* • Deep-seated personal values and commitment relating to environmental sustainability.* • Congruence between the issue being promoted and personal values.* • Ecocentric[2], openness to change and self-transcendence[3] personal values.* • Realistic self-esteem. • Self-direction and initiative. • Tolerance for ambiguity.	• Flexibility and adaptability. • Clear focus. • Enthusiasm and motivation. • Ability to inspire others. • Political awareness and sensitivity. • Empathy. • Sense of humour. • A 'helicopter view'. • Commitment to continuous learning.	Bansal (2003), Dunphy (2001), Dunphy *et al.* (2003), Egri & Frost, (1994), Egri & Herman (2000), Flannery & May (1994), Gladwin *et al.* (1995), Johnson (1998) and Shrivastava (1994 & 1995).
'Champions of innovation'	• Propensity for risk-taking and courage.* • Need for achievement.* • Innovative.* • Internal locus of control.[4] • Propensity for extra-role behaviours.	• Persistence. • Drive and commitment. • Enthusiasm, excitement, energy and passion. • Intuition. • Self-confidence.	Chakrabarti (1974), Cox (1976), Fischer *et al.* (1986), Howell & Higgins (1990a & 1990b), Howell & Shea (2001), Maidique (1980), Markham & Aiman-Smith (2001) and Schon (1963).
'Organisational leadership'	• Extraversion and conscientiousness (for leader emergence).* • Extraversion and openness to experience (for effective leadership).* • Drive (including motivation to lead and achieve*, energy*, tenacity and initiative*).	• Self-confidence.* • Emotional stability.* • Honesty and integrity. • Cognitive ability. • Stress tolerance. • Internal locus of control.	Kirkpatrick & Lock (1991) and Yukl (1989).
'Transformational leadership' (part of the broader organisational leadership literature)	• Emotional intelligence (i.e. the ability to perceive emotions accurately, use emotions to facilitate thought, understand emotion and manage emotion), especially in combination with extraversion.*	• Personal values relating to self-direction, achievement and benevolence.*	Barling *et al.* (2000), Daus & Harris (2003), Gardner & Stough, (2002), Mandell & Pherwani (2003), Palmer *et al.* (2001), Rubin *et al.* (2005) and Sarros & Santora (2001).

NOTES:

* = Traits most strongly emphasised within each body of literature. 1. It is acknowledged that these data are indicative only, but these data have more validity than the data sets used by authors referenced in this row of the table, except for Brown (2003) and Brown & Clarke (2007). 2. Placing ecological issues at the centre of one's organisational and management concerns (Harding, 1998; Shrivastava, 1994). 3. A desire to move beyond one's current limitations. 4. Believing that one has the ability to influence the nature of events in one's environment.

Those personality traits that featured most strongly in the literature relating to SUWM champions were: persistence and determination; risk-taking and tolerance of uncertainty; commitment and motivation; having vision; and being innovative and adaptive. This body of literature also indicates that these champions usually have a strong personal commitment to environmental values (Brown, 2003; Brown & Clarke, 2007).

The 'environmental sustainability and leadership' literature highlights the importance of deep-seated personal values[34], in particular, ecocentric, openness to change and self-transcendence values. An important aspect of champion emergence in this context appears to be congruence between these values (e.g. a commitment to environmental protection) and issues that need to be promoted (e.g. SUWM that aims to improve the health of urban waterways). In terms of other personality traits, the following traits were mentioned in both the 'environmental sustainability and leadership' and 'sustainable urban water management champion' literature: persistence; motivation and enthusiasm; tolerance of uncertainty; focus; and the ability to take a strategic ('big picture') perspective.

The personality characteristics highlighted in published research on 'champions of innovation' are similar to those thought to be associated with champions who promote SUWM. Traits highlighted in both bodies of literature include: risk-taking; persistence; adopting extra-role behaviours; motivation and commitment; enthusiasm and energy; and innovation.

The 'organisational leadership' literature has produced many long, inconsistent lists of traits associated with effective leaders in different contexts. This approach has been criticised for failing to provide a consistent set of universal traits associated with effective leaders (Conger & Kanungo, 1998; House & Aditya, 1997). However, empirical leadership research (e.g. Hogan & Hogan, 2002; Judge et al., 2002; Lord et al., 1986) that has used the widely accepted five-factor model of personality[35] (Norman, 1963; Tupes & Christal, 1961) to examine the importance of personality traits has been far more productive. For example, this research has used quantitative meta-analyses to highlight the importance of: extraversion and conscientiousness for the emergence of leaders; and extraversion and openness to experience for effective leadership (Judge et al., 2002).

Champions who promote SUWM are highly likely to be transformational leaders given that this leadership style has been found to be elevated amongst 'champions of innovations' (Howell & Higgins, 1990a; Howell et al., 2005), change agents (Ashkanasy & Tse, 2000; Bass & Avolio,

1994a; Schein, 1992) and environmental leaders (Danter et al., 2000; Egri & Herman, 2000; Portugal & Yukl, 1994; Smith & Sarros, 2004). In relation to traits and transformational leadership, research has found that: there is a positive correlation between extraversion and transformational leadership (Judge et al., 2002); extraverts who have high levels of emotional intelligence are more likely to exhibit transformational leadership behaviours (Rubin et al., 2005); and transformational leaders are likely to have personal values relating to self-direction, achievement and benevolence (Sarros & Santora, 2001).

SUMMARY OF THE LITERATURE REVIEW'S FINDINGS ON THE SKILLS OF CHAMPIONS AND THEIR AREAS OF KNOWLEDGE

Like personality traits, a review of the skills and areas of knowledge necessary for effective leadership by champions soon generates a long and unwieldy list of competencies. This is not surprising given the strong influence of context (Yukl, 1981 & 1989) and the many activities undertaken by leaders. However, there are some core skills that have been repeatedly highlighted in the different bodies of literature that were reviewed, indicating their importance in most contexts. These include the ability to: communicate; build relationships and social networks; execute a range of influence tactics; build coalitions of support; understand organisational politics; negotiate; analyse information; and see an issue from many perspectives (Brown, 2003 & 2005a; Danter et al., 2000; Doppelt, 2003; Dunphy et al., 2003; Hogan & Warrenfelz, 2003; Howell & Boies, 2004; Howell & Higgins, 1990c; Howell & Shea, 2001; Parker & Axtell, 2001; Portugal & Yukl, 1994; Shrivastava, 1994; White, 2006; Yukl, 1981 & 1989).

In addition to having these core skills, effective champions are likely to excel at reading their institutional landscape, identifying opportunities to advance their agenda, selecting the most appropriate set of influence tactics, choosing the most appropriate sequence of tactics and their timing, and then executing their strategy, usually with the assistance of others (Andersson & Bateman, 2000). Research on environmental leaders and 'champions of innovation' indicates they are also likely to have advanced transformational leadership skills (Danter et al., 2000; Egri & Herman, 2000; Howell & Higgins, 1990a, 1990b & 1990c; Howell et al., 2005; Portugal & Yukl, 1994; Smith & Sarros, 2004), such as the ability to inspire others through communication, and to consider and understand the needs of others[36]. These skills would be expected to augment their transactional leadership skills (Avolio & Bass, 2004; Bass, 1999; Bass et al., 2003), such as the ability to clarify roles and responsibilities, and manage resources.

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[34] See the footnotes to Table 5 for definitions of 'ecocentric' and 'self-transcendence' values.

[35] The dimensions of this model are conscientiousness, extraversion, openness to experience, agreeableness and emotional stability (sometimes called neuroticism). For more detail, see Judge et al. (2002).

[36] Based on descriptions of transformational leadership by Bass (1985), Bass et al. (2003), Bono & Judge (2004) and Egri & Herman (2000).

The skill sets thought to be needed for effective organisational leadership, such as leadership by SUWM champions in Australian water agencies, include: intrapersonal skills (closely associated with personality traits); interpersonal skills, which are likely to be particularly important for champions who rely on relationships as their main source of power; and work facilitation skills which include cognitive, conceptual, technical and traditional management skills (Hogan & Kaiser, 2005; Hogan & Warrenfelz, 2003). It is thought that these skills develop sequentially, in the order presented, and that the skills developed earliest (i.e. intrapersonal skills) are the hardest to consciously improve later in life (Goleman, 2000; Hogan & Kaiser, 2005). Effective leaders are likely to be competent in all of these skill sets, with the context influencing the relative importance of these skills (Yukl, 1981 & 1989). It has been suggested that interpersonal skills (also known as 'soft' or 'people' skills) are usually the most important skill set for leaders (Goleman, 1998), particularly those working in complex and rapidly changing environments (Fleenor, 2003), like those currently being experienced by urban water agencies in Australia (see Engineers Australia, 2006; Kaspura, 2006; Mitchell, 2004).

With respect to areas of knowledge, it is likely that effective champions who promote SUWM will have excellent strategic and relational knowledge of their work environment (Howell & Boies, 2004), a good general knowledge of sustainable methods of water management, and may have an area of technical expertise (although this does not appear to be essential)[37]. Given the breadth and depth of technical expertise currently needed to implement more sustainable forms of urban water management (see Engineers Australia, 2006), and a work environment that is becoming increasingly complex (Geldof, 2005; Geldof & Stahre, 2005), the findings of the literature review indicate that aspiring champions in this context would be better served by developing a strong general knowledge of the urban water sector and learning how to efficiently access and use technical information, rather than substantially building their own technical expertise.

SUMMARY OF THE LITERATURE REVIEW'S FINDINGS ON THE DEMOGRAPHICS OF CHAMPIONS

The literature on 'champions of innovation' indicates that age and seniority are not significant factors in predicting the emergence or behaviour of champions (Fischer et al., 1986; Howell & Higgins, 1990a; Markham & Aiman-Smith, 2001). There are, however, some organisational leadership researchers (e.g. Arsenault, 2004; Conger, 2001; Zemke et al., 2000) who argue that the four generations currently working in western organisations have distinct preferences in leadership style, which implies members of some generations may be more likely to emerge as champions. Caution is needed in the use of such stereotypes, as not all leadership researchers believe these generational differences are profound (e.g. Deal, 2006; DePinto, 2003), especially as contextual factors, such as culture, tend to moderate their effect (Yu & Miller, 2005). If the generational stereotypes outlined by Arsenault (2004) are relevant to a given organisation, the preferred leadership style of Generation X[38] currently best matches those thought to be associated with SUWM project champions.

Researchers have found only a few significant differences between males and females in terms of their leadership-related personality traits, skills, behaviours and effectiveness (Lipman-Bluman, 1996; Morrison & Von Glinow, 1995; Morrison et al., 1987; Schein, 1995). One of these differences is that females tend to exhibit transformational leadership behaviours to a greater extent than their male counterparts (AIM, 2002; Bass, 1999; Bass & Avolio, 1994b; Druskat, 1994; Gronn, 1995; Sarros et al., 2001). This finding could have significance to SUWM champions, given they are likely to be transformational leaders.

The 'champions of innovation' literature suggests that the degree of formal education is unlikely to be a factor that influences champion effectiveness (Howell & Higgins, 1990a). There is, however, evidence from several sources that indicates work experience is a critical factor (e.g. Archilladelis et al., 1971; Brown, 2005a; Fischer et al., 1986; Howell & Higgins, 1990c). In particular, it is thought that effective 'champions of innovation' typically have at least four to five years of relevant work experience within their organisation (Fischer et al., 1986), with tenures of 11 to 18 years being typical (Howell & Higgins, 1990b; Howell et al., 2005). Effective champions also appear to have a highly diverse form of work experience, which involves working in different functional areas, geographic locations and/or organisations while staying within their professional sector (Archilladelis et al., 1971; Howell & Higgins, 1990c). There is also some evidence to suggest that SUWM champions tend not to have extensive experience in traditional ways of managing water (Brown, 2000a).

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[37] There is no consensus in the literature on the value of technical knowledge and skills for effective leadership by champions. Some researchers stress their importance (e.g. Chakrabarti, 1974; Fischer et al., 1986; White, 2006), while others suggest such knowledge and skills can be obtained from other people involved in the championship process (e.g. Brown, 2003; Day, 1994).

[38] Born between 1961 and 1980 (Arsenault, 2004).

Finally, specific types of childhood and adult life experiences are often significant to the maturation of transformational leaders (Avolio, 1994; Avolio & Bass, 1994; Avolio & Gibbons, 1988; Bass, 1999; Gronn, 1995). These experiences include challenging leadership roles during childhood, leadership development programs during adulthood and opportunities for self-reflection during adulthood.

SUMMARY OF THE LITERATURE REVIEW'S FINDINGS ON CHAMPION POWER AND THEIR USE OF SOCIAL NETWORKS

Power is the potential to influence others (Hughes *et al.*, 1993b). Champions who promote SUWM appear to have well-developed, broad and diverse social networks (Brown, 2003, 2004 & 2005a; White, 2006) which they use as a form of personal power. Little is known about how they create and manage these networks to build social capital. While these champions use personal and position power to influence others, preliminary data from Australian urban water managers indicates they more commonly rely on personal forms of power, such as expert and referent power. It is unknown whether this is out of necessity or choice.

The literature on 'environmental sustainability and leadership', as well as 'champions of innovation' also emphasises the importance of networking as a core leadership skill and an effective way to build personal power (Dunphy *et al.*, 2003; Frost & Egri, 1991; Hartley *et al.*, 1997; Howell & Higgins, 1990c; Howell *et al.*, 2005; Portugal & Yukl, 1994). The social networks of these leaders play a critical role in gathering information, accessing diverse skills and expertise, building coalitions of support for innovations, building contextual knowledge to help formulate influence tactics, and helping the leader to create a shared understanding among collaborators of the need for change and a vision of the future (Dunphy *et al.*, 2003; Howell & Higgins, 1990c; Howell *et al.*, 2005; Portugal & Yukl, 1994).

Project champions who promote innovations typically use more personal than position power, occupy a central position in their social networks, and sometimes work in tandem with executive champions to access their position power (Day, 1994; Howell & Higgins, 1990c; Howell *et al.*, 2005; Maidique, 1980; Witte, 1977). Organisational leadership researchers have also found that effective leaders tend to use personal power more often than position power (Hughes *et al.*, 1993b; Yukl, 1989), even though these researchers typically focus on executive leaders with high levels of position power.

Transformational leaders are thought to develop large, diverse social networks. Within these networks they usually occupy central positions, and strategically use strong and weak relationships for different leadership activities (Bono & Anderson, 2005; Brass & Krackhardt, 1999; Tichy & Devanna, 1986).

Social network research provides a relatively new and potentially fruitful way of examining the power, behaviour and effectiveness of leaders, like champions (Balkundi & Kilduff, 2005). Early research indicates that effective leaders usually occupy central positions in their social networks, have the ability to accurately perceive social networks around them and adopt practical cognitive schemas to help read and use these networks (Balkundi & Kilduff, 2005; Brass, 1992). In addition, Balkundi & Kilduff have proposed that these leaders build power by using the 'strong tie strategy' (Granovetter, 1973) to strategically develop a small number of strong relationships with colleagues who have a high degree of centrality in other social networks. These researchers also suggested effective leaders build power by using the 'weak tie strategy' (Granovetter, 1973) to develop a large number of weak relationships with colleagues from a diverse range of areas. Such networking is a good way to efficiently gather information and build expert power. In addition, leaders can build power by brokering knowledge between colleagues that have no direct relationship. This is known as filling 'structural holes' (Burt, 1992).

SUMMARY OF THE LITERATURE REVIEW'S FINDINGS ON THE BEHAVIOURS AND LEADERSHIP STYLES OF CHAMPIONS

Three main points emerge from the literature reviewed in this section. First, as shown in Table 6, there is a great deal of similarity between the most significant behaviours highlighted by researchers examining SUWM champions, environmental leaders (including champions), 'champions of innovation' and organisational leaders. Second, the behaviours chosen by champions will depend heavily on contextual factors, such as their available power, the nature of their influence target, as well as the organisation's strategic goals, norms and internal relationships (Andersson & Bateman, 2000; Dutton *et al.*, 2001; Howell & Boies, 2004; Hughes *et al.*, 1995b). Third, the themes of leaders working within a change management process and adopting a transformational leadership style feature strongly, especially in the 'champions of innovation' and 'environmental sustainability and leadership' bodies of literature (e.g. Danter *et al.*, 2000; Doppelt, 2003; Dunphy *et al.*, 2003; Egri & Herman, 2000; Gladwin, 1993; Howell & Higgins, 1990a; Howell *et al.*, 2005; Portugal & Yukl, 1994; Smith & Sarros, 2004).

Table 6 (Appendix 1) – Summary of key behaviours potentially associated with SUWM champions

Body of Literature	Key Behaviours		Sources
'Sustainable urban water management champion'	• Using a wide variety of influence tactics to suit the context.* • Building and sustaining social networks.* • Articulating a compelling vision for the future.* • Communicating clearly and frequently (especially through verbal communication with active listening).* • Providing inspiration and motivation to colleagues.* • Communicating core values and beliefs that characterise a new organisational culture.* • Persevering despite opposition.*	• Questioning the status quo.* • Facilitating, negotiating and dealing effectively with conflict.* • Gathering political and managerial support.* • Knowledge brokering.* • Establishing pilot projects with external stakeholders.* • Taking a stance on important issues. • Accessing information from a wide range of sources.	Brown (2005a), White (2006) and data collected during conversations held with 12 urban water managers around Australia as a precursor to this research.
'Environmental sustainability and leadership'	• Identifying / scanning behaviours (e.g. networking within and outside the organisation).* • Framing behaviours (e.g. highlighting the issue's urgency).* • Selling behaviours / influence tactics (e.g. rational persuasion, coalition building, inspirational appeal, exchange and pressure tactics).* • Brokering information.* • Negotiating disputes and overcoming resistance.* • Counselling.* • Clarifying roles and establishing agreements between stakeholders.* • Building organisational commitment.*	• Working with executives to inculcate sustainability-related values in the organisation's culture.* • Running pilot projects.* • Using transformational leadership behaviours.* • Choosing the right time to sell an issue. • Selling issues up, down and across the organisation. • Facilitating training to support change processes.	Andersson & Bateman (2000), Ashford *et al.* (1991), Bansal (2003), Bansal & Penner (2002), Doppelt (2003), Dunphy *et al.* (2003), Dutton *et al.* (2001), Egri (1995), and Sharma *et al.* (1999).

Body of Literature	Key Behaviours		Sources
'Champions of innovation'	• Persisting under adversity.* • Recognising the efforts of others and developing the abilities of colleagues.* • Tailoring championship activities in response to changes in corporate strategy.* • Framing behaviours (e.g. stressing the congruence between the innovation and organisational values).* • Using a wide variety of selling behaviours / influence tactics, but preferring to use informal tactics (e.g. using their social networks).*	• Using transformational leadership behaviours.* • Expressing enthusiasm and confidence. • Getting the right people involved with the innovation. • Taking risks and pursuing unconventional strategies. • Gathering resources to support the innovation. • Frequently briefing executives.	Burgelman (1983), Howell & Higgins (1990a, 1990b & 1990c), Howell & Boies (2004), Howell *et al.* (2005), Maidique (1980), Markham & Aiman-Smith (2001) and Markham (1998).
'Organisational leadership'	• Articulating an inspiring vision of a future state with strategies and plans on how to get there.* • Aligning resources to match the vision, including building coalitions of support.* • Inspiring and motivating others to pursue the vision, often in the face of adversity.* • Challenging the organisation's conventional wisdom.* • Being persistent.* • Recognising the efforts of others.* • Using a range of behavioural styles to match the context.*	• Clarifying goals and roles for individuals.* • Building and using social networks.* • Using transformational leadership behaviours.* • Being in touch with their work environment. • Building a well-resourced team to promote change. • Celebrating achievements. • Using both relationship and task-oriented behaviours.	DeGroot *et al.* (2000), Dumdum *et al.* (2002), Feidler (1978), Fuller et al. (1996), Gaspar (1992), Goleman (2000), Hart & Quinn (1993), Hersey & Blanchard (1995), Kaiser & Kaplan (2001), Kanter (1999), Kaplan (1988), Kotter (2001), Lipman-Blumen *et al.* (1983), Lock & Latham (1984), Lowe *et al.* (1996), Mastrangelo *et al.* (2004), Patterson *et al.* (1995), Vroom & Yetton (1973), Yukl (1989) and Yukl et al. (1988).
'Transformational leadership'** (part of the broader organisational leadership literature)	• Idealised influence (charisma) and inspirational motivation behaviours, such as: envisaging and communicating an appealing vision of the future, setting out a plan on how it can be achieved, demonstrating self-confidence and determination, and setting high standards of performance.*	• Intellectual stimulation behaviours, such as: promoting creativity and innovation amongst colleagues. • Individual consideration behaviours, such as: understanding the personal needs of one's collaborators and engaging in coaching activities.*	Bass (1999).

Notes: * = Behaviours that have been emphasised in more than one body of relevant literature. ** Transformational leaders also engage in transactional leadership behaviours (e.g. clearly defining roles and monitoring performance). This list of behaviours is not exhaustive.

Although research on SUWM project champions is rare, available evidence from Brown (2005a) and White (2006), as well as data collected during conversations held with 12 urban water managers around Australia as a precursor to this research indicates that their key behaviours include: using a wide variety of influence tactics to suit the context; networking; developing and communicating a vision of the future; communicating clearly and frequently; providing inspiration and motivation to colleagues; communicating core values and beliefs associated with a new organisational culture; persevering despite opposition; questioning the status quo; managing conflict; gathering political and managerial support; knowledge brokering; and establishing pilot projects with stakeholders.

Behaviours frequently associated with environmental leaders (including champions) include: scanning behaviours, such as networking; framing behaviours, such as highlighting an issue's urgency; selling behaviours (influence tactics), such as using rational persuasion; brokering information; managing conflict; clarifying roles and agreements between stakeholders; building organisational commitment; working with executives to establish a new organisational culture; running pilot projects; and transformational leadership behaviours (Andersson & Bateman, 2000; Ashford *et al.,* 1991; Bansal, 2003; Bansal & Penner, 2002; Doppelt, 2003; Dunphy *et al.,* 2003; Dutton *et al.,* 2001; Egri, 1995; Sharma *et al.,* 1999). Effective environmental champions also use a wide range of influence tactics, with no single formula for successful influence attempts due to the effect of context (Andersson & Bateman, 2000). Andersson & Bateman found that these champions have the ability to accurately read their organisational environment and then choose which influence tactic (or combination of tactics) to use, as well as the most appropriate sequence and timing of tactics for their influence attempt.

Expressing enthusiasm and confidence, persisting under adversity and getting the right people involved appear to be the three core behaviours of 'champions of innovation' (Howell *et al.,* 2005). Other behaviours frequently mentioned include: transformational leadership behaviours, such as developing and communicating a vision; recognising the efforts of others and developing their potential; taking risks; gathering resources and management support for their innovations; and framing behaviours, such as highlighting how innovations align with organisational values (Burgelman, 1983; Howell & Higgins, 1990a, 1990b & 1990c; Howell & Boies, 2004; Howell *et al.,* 2005; Maidique, 1980; Markham & Aiman-Smith; 2001; Markham, 1998). These champions also use many influence tactics which they tailor to suit the circumstances of each influence attempt (Howell & Higgins, 1990c; Markham & Aiman-Smith; 2001). They prefer to use informal tactics, however, such as building support throughout their social networks (Howell & Boies, 2004; Markham & Aiman-Smith, 2001; Howell & Higgins, 1990c; Maidique, 1980; Markham, 1998).

The 'organisational leadership' literature has described many leadership styles over the last 60 years, but there is still no consensus on the best style for a given context. It is generally believed that effective leaders are able to use several different styles and are astute enough to match their style to the local context (Goleman, 2000; Hart & Quinn, 1993; Hersey & Blanchard, 1995; Kaiser & Kaplan, 2001). There is also a strong and growing body of evidence that the transformational leadership style is associated with a range of positive outcomes in most contexts (e.g. DeGroot *et al.,* 2000; Dumdum *et al.,* 2002; Fuller *et al.,* 1996; Gaspar, 1992; Lowe *et al.,* 1996; Patterson *et al.,* 1995). Regardless of the style, core organisational leadership behaviours are thought to include developing and communicating a compelling vision of the future with supporting strategies, aligning resources (especially people) to deliver the vision, as well as inspiring and motivating colleagues to help achieve the vision (Kotter, 2001).

Considerable research has been undertaken on the influence tactics used by effective organisational leaders, such as rational persuasion, inspirational appeals and coalitions (see Yukl *et al.,* 1993). Research in this area has resulted in the development of context-sensitive guidelines to help leaders choose the best influence tactic (or combination of tactics). Such guidelines are potentially applicable to SUWM project champions. While little is known about how any type of champion chooses such tactics, research has found that champions with high levels of contextual knowledge of their organisations and broader institutions are more likely to design and execute effective influence strategies (Dutton *et al.,* 2001).

SUMMARY OF THE LITERATURE REVIEW'S FINDINGS ON RELEVANT LEADERSHIP THEORY

Transformational leaders are able to use transformational and transactional leadership styles (Bass, 1999; Bass *et al.,* 2003). The transformational style involves the leader moving their colleagues "beyond immediate self-interests through idealized influence (charisma), inspiration, intellectual stimulation, or individualized consideration" (Bass, 1999, p. 11). In contrast, the transactional style involves an "exchange relationship between leader and follower to meet their own self-interests" (Bass, 1999, p. 10).

Transformational Leadership Theory (Bass, 1985) has been the dominant theory in the leadership literature since the late 1980s. Reasons for its popularity include: strong evidence that transformational leadership is associated with many types of positive performance outcomes across a wide range of organisational contexts (DeGroot *et al.,* 2000; Dumdum *et al.,* 2002; Fuller *et al.,* 1996; Gaspar, 1992; Lowe *et al.,* 1996; Patterson, *et al.,* 1995); evidence that people can be trained to enhance their transformational leadership abilities (Barling *et al.,* 1996; Dvir *et al.,* 2002; Kelloway *et al.,* 2000; Kelloway & Barling, 2000; Parry & Sinha, 2005); its suitability for processes

involving deep-seated cultural change within organisations (Avolio & Bass, 1995; Bass & Avolio, 1993a & 1994c); its tendency to emerge in turbulent organisational environments, which appear to be increasingly common in western workplaces (Ashkanasy & Tse, 2000; Bass, 1999; Bass et al., 2003; Drucker, 2000); and the existence of the Multifactor Leadership Questionnaire (Avolio & Bass, 2004) which is widely used to simply measure the extent to which leaders use transformational and transactional leadership behaviours.

The theory does however have weaknesses, which include: inclusion of a limited range of leadership behaviours (Yukl, 1999); weak justification for some of these behaviours (Yukl, 1989 & 1999); limited understanding of how transformational leadership behaviours operate to influence others (Yukl, 1999); over-reliance on one method of measurement (Gronn, 1995; Hunt 1991; Yukl, 1989 & 1999); limited understanding of how context affects transformational leadership emergence and effectiveness; too great an emphasis on the leader-follower dyad, rather than the context of leadership within groups (Yukl, 1999); and exaggerated emphasis on individuals in the process of leadership (Gronn, 1995; Yukl, 1999). The exaggerated emphasis on individuals may be a reflection of the 'Romance of Leadership Phenomenon' (Meindl et al., 1985).

Distributed Leadership Theory (Gibb, 1954; Gronn, 2000) conceptualises leadership as a process of influence that occurs in groups and involves more than one leader. While focused leadership theories (like Transformational Leadership Theory) emphasise the human capital of individual leaders, Distributed Leadership Theory highlights the importance of social capital, such as the connections between people and groups (Day et al., 2004). The theory is over 50 years old, but in recent years it has been slowly gaining popularity amongst researchers (Day et al., 2004; Gronn, 2002; Mehra et al., 2006; O'Conner & Quinn, 2004; Yukl, 1989) and its receptiveness amongst practitioners also appears to be growing (Martin, 2005).

Reasons why Distributed Leadership Theory is attractive include: its suitability for addressing complex and uncertain organisational challenges (Drath, 2003b; Hiller et al., 2006; O'Conner & Quinn, 2004); its realism, given processes of leadership in modern organisations typically need to involve more than one leader (O'Conner & Quinn, 2004); reduced potential for leader elitism (Gronn, 2002 & 2004); and empirical evidence that it can be more effective than focused leadership within teams, particularly if leaders coordinate their roles (Carson et al., 2007; Hiller et al., 2006; Mehra et al., 2006). Weaknesses of this theory include limited development and testing of the theory in a variety of contexts (Chappelow, 2003; Day et al., 2004 & 2006; Mehra et al., 2006; Van Velsor & McCauley, 2004b), risk of organisational paralysis and reduced accountability (Drath, 2003a), as well as the difficulty and inconsistency of measurement (Carson et al., 2007; Hiller et al., 2006).

The literature indicates that transformational and distributed leadership theories of leadership are both potentially relevant to SUWM champions within Australian water agencies. Available evidence, albeit sparse, suggests champions in this context are emergent leaders who primarily use personal forms of power and strong social networks to drive group-based leadership processes that potentially involve many leaders (distributed leadership). In addition, six lines of evidence have been presented in the full literature review to support the hypothesis that these champions are transformational leaders. It is hypothesised that these champions may play a key role in facilitating distributed leadership by using transformational leadership behaviours and informally coordinating the activities of several leaders involved with the process of promoting SUWM within their organisations and broader institutions.

SUMMARY OF THE LITERATURE REVIEW'S FINDINGS ON CONTEXTUAL INFLUENCES ON LEADERSHIP

Leadership is a complex process of influence that is highly sensitive to context (Bryman et al., 1996b; Pettigrew & Whipp, 1991). Despite this sensitivity, the effect of context has been understudied (Lowe & Gardner, 2000; Yukl, 1999). In particular, more context-sensitive forms of research are needed to help understand the circumstances under which different leadership styles are most likely to emerge and be effective (Bryman et al., 1996b; Conger, 1998; Den Hartog et al., 1996; Lowe & Gardner, 2000; Pettigrew, 1987).

Table 7 summarises the main contextual factors that are likely to influence the emergence and effectiveness of SUWM champions, based on research involving transformational leadership and champions who promote innovations. This table also tentatively describes the potential relevance of these contextual factors to typical Australian urban water agencies. It is acknowledged, however, that the majority of the relationships between contextual factors and leadership in this table have been derived from untested theory.

Focus on transformational leadership is a consequence of the likelihood that SUWM champions are emergent transformational leaders, and the lack of equivalent information for distributed leadership. The focus on leadership by champions who promote innovations is a consequence of the belief that the new paradigm of SUWM within agencies is equivalent to an 'innovation' as broadly defined in the 'champions of innovation' literature (see Howell et al., 2005; Shane et al., 1995).

Table 7 (Appendix 1) – Summary of contextual factors with the potential to influence leadership by SUWM champions

Contextual Factors	Potentially Favourable Circumstances for Leadership by SUWM Champions	Suggested Relevance to Australian Urban Water Agencies[1]
Conditions around and within the organisation.	Conditions are characterised by crises, stress, rapid change, ambiguous roles and goals, and there is a need for new strategies, technology, products and markets. Sources: Bass (1990), Burns (1978) and Shamir & Howell (1999).	Highly relevant given substantial national reforms to the urban water industry, pressures such as severe drought, and the nature of the transition from traditional water management to a new, more sustainable paradigm.
Organisational tasks.	Tasks are complex, challenging and require significant effort, personal sacrifice and creativity. They also have ambiguous performance goals and it is difficult to link an individual's performance on these tasks to tangible rewards. Sources: Klein & House (1995) and Shamir & Howell (1999).	The aspects of complexity, challenge, effort and creativity are relevant to attempts to promote the rapid and widespread adoption of the SUWM paradigm.
Organisational task system.	Systems are dominated by 'boundary spanning units' rather than 'technical core units'. Sources: Egri & Herman (2000) and Pawar & Eastman (1997).	Highly relevant to strategic planning, policy and research units in water agencies (i.e. 'boundary spanning units'). Little relevance to operational units that specialise in development assessment, design, construction, operation and maintenance (i.e. 'technical core units').
Congruence between social values and an organisation's goals and tasks.	There is a high level of congruence between the prevailing social values and the organisation's goals and tasks. In addition, these goals and tasks provide an opportunity for moral involvement by champions and their colleagues. Sources: Bass & Avolio (1994c), Klein & House (1995), Pawar & Eastman (1997) and Shamir & Howell (1999).	Highly relevant given the SUWM paradigm aims to deliver water services that meet contemporary social values and protect the environment.
Organisational technology.	Technology is complex and difficult to analyse. Source: Shamir & Howell (1999).	Highly relevant as agencies seek to develop new technologies to manage water, as well as develop and use a new generation of computer modelling tools and decision support systems. Attempts to increase the level of integration between the stormwater, wastewater and water supply dimensions of urban water management have also increased the level of complexity and difficulty of analysis.
Organisational structure.	Structures are 'organic' rather than 'mechanistic'. For example, 'network', 'simple' or 'adhocracy' structures exist rather than 'machine bureaucracies', 'professional bureaucracies' or 'divisional structures'. Sources: Egri & Herman (2000), Pawar & Eastman (1997) and Shamir & Howell (1999).	May be relevant to some units within water agencies. For example, a strategic planning and policy unit may adopt a flat network structure that uses temporary teams to deliver services (i.e. an 'organic structure'). This unit would, however, typically exist within a water agency's professional bureaucracy or divisional structure (i.e. a 'mechanistic' structure).
Mode of governance.	The organisation (or unit) uses a 'clan' mode of governance rather than a 'bureaucratic' or 'market' mode. Sources: Pawar & Eastman (1997) and Shamir & Howell (1999).	Unlikely to be relevant. These water agencies would usually have a 'bureaucratic' mode of governance.
National and organisational cultures.	Cultures support: performance orientation, informal and transformational leadership behaviours, and freedom to work outside rules and procedures; as well as acceptance of uncertainty and power-sharing. Sources: Sarros et al. (2002), Shane et al. (1995) and Smith & Sarros (2004).	Descriptions of Australia's national culture and typical organisational cultures in Australian businesses by Ashkanasy et al. (2002) and Sarros et al. (2002), respectively, indicate these cultures are likely to support transformational leadership and championship. In comparison to average business organisations, however, most water agencies would probably have less favourable organisational cultures, as a result of decades operating under relatively stable conditions that represent 'strong psychological situations' (Mischel, 1977). Such situations are likely to favour management over leadership (Kerr & Jemier, 1978) and transactional over transformational leadership styles (Baliga & Hunt, 1988; Shamir & Howell, 1999).

Contextual Factors	Potentially Favourable Circumstances for Leadership by SUWM Champions	Suggested Relevance to Australian Urban Water Agencies[1]
	The organisational culture (or sub-culture) is characterised by an 'adaptive orientation' (e.g. an innovative or supportive culture), rather than an 'efficiency orientation'. Sources: Pawar & Eastman (1997) and Shamir & Howell (1999).	May be relevant to some water agencies or subcultures within these agencies. It is likely, however, that many water agencies would have an 'efficiency orientation' to their culture (e.g. be rule or goal-orientated).
Person-organisational fit.	There is a moderate to high degree of 'person-organisational fit' with respect to the champion's personal values and those that exist within the organisation's culture. Sources: Hypothesised using research by Chapman (1989), O'Reilly *et al.* (1991), Shane (1995), Schon (1963), Howell & Higgins (1990a) and Chakrabarti (1974).	Likely to be relevant for effective champions. Champions with a low degree of fit are likely to resign. Champions with a very high degree of fit are not likely to engage in innovative extra-role behaviours and work with persistence and energy to overcome institutional inertia as they will probably be content to work within the water agency's rules, procedures and behavioural norms.
Organisational change management programs.	The change program involves redefining aspects of the organisational culture (e.g. deep-seated values and norms). Transformational leadership is used at all levels in the organisation to effect this change, including significant input from executive leaders. Sources: Bass (1999), Bass & Avolio (1993a & 1994c), Danter *et al.* (2000), De Witte & Van Muijen (1999), Pascale *et al.* (1997), Pawar & Eastman (1997) and Sashkin (1988).	Highly relevant. The adoption of the SUWM paradigm represents a deep-seated cultural change in most water agencies. As most of these agencies have experienced decades delivering traditional water services in relatively stable conditions best suited to transactional leadership, strongly transformational leaders are likely to be rare within existing staff, particularly at executive levels.
Organisational life cycle stage and history.	The organisation (or unit) is in the early or late stages of its life cycle. Also, the organisation (or unit) has a history of success using transformational leadership styles to cope with periods of change. Sources: Baliga & Hunt (1988), Shamir & Howell (1999) and Sull (1999).	Relevant to those water agencies (or units within agencies) that have recently undergone major restructures and those that have reached a point of crisis due to their inability to move from traditional to more sustainable forms of water management. Also relevant to agencies / units that have enjoyed recent success involving transformational leaders.
Organisational level.	Champions occupy relatively senior organisational positions. Sources: Bass & Avolio (1993b) and Shamir & Howell (1999).	Relevant to some water agencies with senior project champions and/or executive champions. It is suspected, however, that such champions are currently rare in Australian water agencies.
Formality of the champion role.	Champions are encouraged to informally emerge and engage in extra-role activities, rather than being formally assigned the role of "champions". Sources: Howell & Boies (2004) and Howell & Shea (2001).	Relevant, as water agencies seek to manage the 'champion phenomenon'. For example, at least one water agency in Australia has attempted to create a formal equivalent of the project champion role (see Edwards *et al.*, 2005).
Cooperation of colleagues.	Champions enjoy the cooperation of colleagues including other champions and antagonists. Sources: Markham & Aiman-Smith (2001), Markham *et al.* (1991) and Yukl (1989).	Relevant. Cooperation from other champions is more likely in larger agencies, as the probability of the emergence of champions with similar values is increased. Antagonists are likely to be constructive where project champions have strong support from their managers and/or executive champions.
Nature of colleagues.	The colleagues of champions are highly educated and innovative. Source: Bass (1985).	Likely to be relevant in some organisational units within water agencies, but not all.

NOTES:

1. Suggested relevance is based on: descriptions of the urban water sector in Australia by Brown *et al.* (2006b), Commonwealth of Australia (2002), Engineers Australia (2006), Kaspura (2006), Mitchell (2004) and Queensland Government (2005); descriptions of major urban water reforms by COAG (2004) and the Department of the Environment and Heritage (1994); descriptions of the challenges associated with implementing SUWM by Geldof (2005) and Geldof & Stahre (2005); and the author's own experience working in the industry for 12 years.

SUMMARY OF THE LITERATURE REVIEW'S FINDINGS ON LEADERSHIP DEVELOPMENT

Recent and significant changes to the nature of western workplaces have resulted in calls for more leadership within organisations and more contemporary forms of leadership (Arsenault, 2003; Conger, 1993; Drath, 2003a; Lowe *et al.*, 1996; Van Velsor & McCauley, 2004a). In addition, there has been an increased focus on leadership development as a source of organisational excellence (Day, 2000; Hirst *et al.*, 2004; Kotter, 1988; Lowe & Gardner, 2000; Parry & Sinha, 2005).

Aspects of leadership can be taught and learnt (Adair, 2005; Avolio, 2005; Doh, 2002; Hashem, 1997; Zimmerman-Oster & Burkhardt, 1999), although some people have greater potential for leadership than others due to their innate personality traits (Doh, 2002, Yukl, 1981). Leadership-related attraction, recruitment and internal selection processes within organisations therefore aim to identify people with the greatest leadership potential. Leadership development programs seek to realise this potential through methods that collectively provide assessment, challenge and support (Van Velsor & McCauley, 2004a).

In general, informal strategies to attract champions to organisations are preferable to formal recruitment strategies (Strelecky, 2004). An example of an attraction strategy is using senior leaders (especially transformational leaders) to publicly demonstrate that their organisational cultures are supportive of SUWM, innovation, learning, responsible risk-taking, collaboration and distributed leadership.

There appears to be a significant gap between the most effective recruitment and selection methods to identify potential leaders and those that are commonly used in western organisations, like Australian water agencies. For example, leadership researchers strongly promote the use of psychometric instruments within assessment centres that are administered by qualified psychologists to identify the presence and absence of specific personality characteristics and behaviours during recruitment of potential leaders (e.g. Hogan & Kaiser, 2005; Howell & Higgins, 1990a & 1990b; Lowe *et al.*, 1996). Organisations, however, typically use far less effective methods such as interviews, resumes and references (Campbell *et al.*, 1995).

Leadership development programs need to be ongoing (Arsenault, 2003; Kotter, 1996 & 1988; Popper, 2005; Van Velsor & McCauley, 2004a; Zenger & Folkman, 2003), be supported by executive management and the organisation's culture (Arsenault, 2003; Conner, 2000; Guthrie & King, 2004; Kotter, 1996; Lowe & Gardner, 2000; Ruvolo *et al.*, 2004; Van Velsor & McCauley, 2004a), be carefully planned (Adair, 2005; Kotter, 1988), use an integrated suite of methods (Conner, 2000; Popper, 2005), be aligned with organisational strategies (Arsenault, 2003;

Fulmer & Goldsmith, 2000; Hartley & Hinksman, 2003; Wick & Flanagan, 2005) and be grounded in theory, including the organisation's model of leadership (Ruvolo *et al.*, 2004; Vance, 2005; Zenger & Folkman, 2003). They should also be integrated with the organisation's human resource management processes (Arsenault, 2003; Vance, 2005), and deliver regularly reviewed individual leadership development plans (Boyatzis, 1996; Conner, 2000).

'Feedback intensive programs' (Guthrie & King, 2004), 360 degree feedback, coaching, mentoring, networking and action learning (including job assignments) appear to have the greatest potential as methods for enhancing the leadership abilities of SUWM champions in Australian water agencies[39]. In particular, customised feedback intensive programs that use 360 degree feedback as an initial assessment and follow-up mechanism, and run for three to six months are a good way of initiating an ongoing leadership development process for champions and producing the first version of individual leadership development plans. Mentoring, networking and job assignments would probably feature strongly in such plans for most SUWM champions.

Several groups of management strategies have been tentatively proposed to enhance leadership by SUWM champions based primarily on relevant research findings from the 'champions of innovation', 'transformational leadership' and 'leadership development' literature (e.g. Day, 2000; Howell, 2005; Howell & Higgins, 1990a & 1990b; Howell & Boies, 2004; Markham & Aiman-Smith, 2001; McCauley & Van Velsor, 2004; Pawar & Eastman, 1997; Shamir & Howell, 1999). These strategies are summarised in Appendix 3, and include: attraction, recruitment and selection methods (e.g. seeking a high degree of fit between the personal values of potential champions and organisational values); tactics to directly supervise champions (e.g. directing their behaviour by explaining how it helps to achieve the organisation's strategic vision); a variety of supporting behaviours for senior management (e.g. managing antagonists); tailored and on-going leadership development programs; and strategies to manage the risk of champion turnover (e.g. using internal job assignments). In addition, several strategies involve the leadership context. These include strategies to: identify nascent champions by recognising organisational environments where they are most likely to emerge and be effective (e.g. 'boundary spanning units' experiencing rapid change); match champions with optimal work environments within the organisation (e.g. job assignments that are complex, challenging and require significant effort, personal sacrifice and creativity in organisational units with executive champions); and change the organisational environment to enhance champion emergence and effectiveness (e.g. reforming organisational units where champions are needed to create more 'organic' structures[40] and organisational cultures with an 'adaptive orientation'[41]).

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[39] For details of these methods, see Day (2000) and McCauley & Van Velsor (2004).

[40] 'Organic' structures are flexible, informal, not highly specialised and involve little standardisation (Shamir & Howell, 1999).

[41] 'Adaptive' organisational cultures are characterised by innovation and support (Pawar & Eastman, 1997; Shamir & Howell, 1999).

APPENDIX 2

PRELIMINARY CONCEPTUAL MODEL OF LEADERSHIP BY SUWM CHAMPIONS

(Note: The *revised* version of this model is given in Figure 32)

CONTEXT

Contextual Factors Within the Champion's Organisation

Conditions within the organisation:
• Characterised by crises, stress, rapid change, ambiguous roles and goals, and the need for new strategies, technology, products and markets.

Organisational tasks:
• Complex, challenging and require significant effort, personal sacrifice and creativity.
• Ambiguous performance goals and difficult to link a champion's performance to tangible rewards.

Organisational task system:
• Dominated by boundary spanning units.[1]

Value congruence:
• Prevailing social values are congruent with the organisation's goals and tasks.
• Organisational goals and tasks provide an opportunity for moral involvement by the champion.

Organisational technology:
• Complex and difficult to analyse.

Organisational structure:
• Organic (e.g. network, simple or adhocracy structures).[2]

Organisational culture(s):
• Cultures support: performance orientation.[3]
• Cultures have an adaptive orientation (e.g. are innovative or supportive).[4]

Person-organisational fit (values):
• Moderate to high degree of fit between personal values and those in the organisation's culture.

Change programs:
• Involves redefining aspects of the organisational culture and transformational leadership.

Organisational life cycle stage and history:
• Unit is in the early or late stages of its life cycle.
• A history of success using transformational leadership styles to cope with periods of change.

Organisational level:
• Champion occupies a relatively senior role in the organisation.

Formality of the champion role:
• Champions volunteer for extra-role behaviours.

Nature of the champion's colleagues:
• Cooperation from colleagues including other champions and potential antagonists.
• Educated and innovative colleagues.

Personal Characteristics

Personality traits:
• Personality characteristics:
    • Persistence, commitment and focus.
    • Risk-taking and tolerance to uncertainty.
    • Motivation and determination.
    • Propensity to engage in extra-role behaviours.
    • Vision and a strategic perspective.
    • Innovative.
    • Enthusiasm and energy.
    • Extraversion > conscientiousness and openness to experience.
• Values:
    • Strong environmental values.
    • Congruence between personal values and championship issue.
• Emotional intelligence:
    • Ability to recognise, understand and manage emotion in oneself and others.

Knowledge:
• Excellent strategic and relational contextual knowledge of the institutional environment.
• Good general knowledge of SUWM methods.

Behaviours

Core behaviours:
• Articulating an inspiring vision for the future.
• Aligning resources with this vision.
• Providing inspiration and motivation to colleagues.
• Using scanning and framing behaviours.
• Using a wide variety of influence tactics to suit the context.
• Building and sustaining social networks.
• Communicating clearly and frequently.
• Communicating core values and beliefs associated with a new organisational culture.
• Persevering despite opposition.
• Questioning the status quo.
• Facilitating, negotiating and resolving conflict.
• Gathering political and managerial support.
• Brokering knowledge.
• Establishing pilot projects.
• Coordinating distributed leadership within groups.

Style:
• Using transformational leadership behaviours.

Outcomes influence future behaviour.

Outcomes
Successful influence attempts:

Demographics:

- Generation:
  - More likely to be from Generation X at present (born: 1961-1980).
- Gender:
  - Females more commonly use some champion-related behaviours (i.e. transformational leadership behaviours).
- Work experience:
  - At least four years of work experience within their organisation.
  - Highly diverse and relevant work experience.
  - Little experience in traditional urban water management.
- Life experience:
  - Significant leadership-related developmental experiences in childhood and/or adulthood.

Core skills:

- Communication.
- Negotiation.
- Strong interpersonal skills.
- Transformational leadership skills.
- Seeing an issue from many perspectives.
- Building networks and coalitions of support.
- Accurately reading institutional landscapes (including politics and social networks).
- Selecting the most appropriate set, sequence and timing of influence tactics to suit the context.
- Analysing information.
- Identifying influence opportunities.

CONTEXT

Contextual Factors Outside the Champion's Organisation

Conditions around the organisation:

- Characterised by crises, stress, rapid change, ambiguous roles, and the need for new strategies, technology, products and markets.

Value congruence:

- Prevailing social values are congruent with the organisation's goals and tasks.

National culture:

- Culture supports: performance orientation, individualism, informal and transformational leadership behaviours, and freedom to work outside rules and procedures; as well as acceptance of uncertainty and power-sharing.

Power

- Types:
  - Personal > position power.
  - Major source: Broad, diverse and strategically developed social networks.

- Tactics:
  - Works in tandem with executive champion(s).
  - Central network position.[5]
  - Weak ties with a diverse range of stakeholders and fills 'structural holes' in the network.[6]
  - Strong ties with a few stakeholders who are central in other networks.[7]

Outcomes help to build skills, knowledge and experience.

Outcomes help to build or reduce power.

- Adoption of the SUWM paradigm by key stakeholders.
- Delivery of SUWM projects.

NOTES

For a description of highlighted terms, see:

1. Pawar & Eastman (1997).
2. Shamir & Howell (1999) and Egri & Herman (2000).
3. Sarros *et al.* (2002).
4. Pawar & Eastman (1997) and Shamir & Howell (1999).
5. Balkundi & Kilduff (2005).
6. Granovetter (1973) and Burt (1992).
7. Granovetter (1973).

Source: Taylor (2007).

3. **APPENDIX**

APPENDIX 3

PRELIMINARY CONCEPTUAL MODEL OF
STRATEGIES TO ENHANCE LEADERSHIP BY
SUWM PROJECT CHAMPIONS

(Note: The *revised* version of this model is given in Figure 35)

Attraction and Recruitment Activities

Aim:
- To identify leadership potential (especially people with particular personality characteristics and values).

Strategies:
- Attract in preference to recruit (e.g. use senior, transformational leaders to publicly demonstrate leadership excellence is part of the organisational culture).
- Use ongoing recruitment processes to routinely look for leadership potential, as well as job-specific competencies.
- For positions where a champion is being specifically sought, use psychometric instruments within assessment centres.
- Seek congruence between personal values, values within the organisational culture, and values underlying SUWM.

Supervision of Potential and Actual Champions

Aim:
- To help champions to be more effective, build their leadership abilities and stay in the organisation.

Strategies:
- Provide opportunities for champions to emerge through volunteering for extra-role activities and challenging job assignments.
- Provide direction by linking their behaviour to strategic organisational visions and objectives.
- Help establish and use ongoing leadership development programs for champions.
- Raise the organisational profile of nascent champions.
- Reward and recognise champion achievements.
- Use failures of champions as learning opportunities.
- Encourage champions to network and have mentors.
- Work with mentors and senior management to protect champions from political infighting and roadblocks.
- If antagonists emerge, train and manage antagonists to play a constructive Devil's Advocate role to assist champions.
- Encourage champions to gain diverse in-house experience (e.g. from challenging job assignments).

Selection of Champions for Leadership Development Activities

Aim:
- To identify individuals with the most potential to develop their leadership abilities and become effective champions.

Strategies:
- Identify individuals with: a commitment to learning; a desire to lead; persuasive and inspirational communication skills; a high need for achievement; and pragmatism in addition to the personality traits listed in the model in Appendix 2.

Ongoing Leadership Development Activities

Aim:
- To enhance the leadership abilities of potential or actual champions in a way that adds the greatest value to the organisation.

Strategies:
- Provide an ongoing, carefully planned, multi-faceted leadership development program which is aligned with organisational strategies, grounded in theory and integrated with human resource management processes.
- To initiate the process, use a 3-6 month feedback intensive program with a 360 degree feedback component to produce ongoing, individual leadership development plans that incorporate elements of assessment, challenge and support (plans are likely to include mentoring, networking and job assignments).
- Ensure leadership development plans are implemented and regularly reviewed as part of the organisation's formal performance review processes.

Indirect Champion Management Activities

Aim: • To use contextual factors within an organisation to help identify champions as well as encourage their emergence and long-term effectiveness.

Strategies: • Provide a supportive culture and strong executive support for leadership at all levels (including championship) and leadership development.

• Identify nascent champions by recognising environments where they are most likely to emerge and be effective (e.g. 'boundary spanning units' experiencing rapid change).

• Match champions with optimal work environments within the organisation (e.g. job assignments that are complex, challenging and require significant effort, personal sacrifice and creativity in organisational units with executive champions).

• Manipulate the contextual factors shown in see the model in Appendix 2 to encourage champion emergence and effective championship (e.g. in organisational units where champions are needed, create organic structures and cultures with an adaptive orientation).

More Effective Champions

Aim: • To improve championship outcomes (see the model in Appendix 2) and reduce champion turnover.

APPENDIX 4

KEY ROLES ASSOCIATED WITH THE
PROMOTION OF SUWM IN AUSTRALIAN
WATER AGENCIES

Role Title	Description of the Role	Source
1. Project champion	A person who acts as a change agent to promote SUWM on a daily basis within an organisation or broader institution, particularly early in the process of change. They have a strong personal commitment to the issue, as well as confidence, enthusiasm and persistence. They are adept at exercising influence, usually using informal sources of power. They also adopt specific behaviours (e.g. identifying, packaging and selling issues as well as building coalitions of support) many of which occur outside of their official role description.	Synthesis from the literature review. The term is also used by 'champions of innovation' researchers such as Howell & Higgins (1990a).
2. Executive champion	A very senior / executive staff member who has direct or indirect influence over organisational resources that are needed to promote SUWM. They use this power to prioritise and channel resources to SUWM projects, thereby absorbing some of the risk. They visibly support SUWM initiatives and key staff through their actions and communications. They do not, however, work on these projects on a day-to-day basis.	Adapted from Maidique (1980) and Esteves & Pastor (2002).
3. Technical innovator	A person who makes a major contribution to the technical aspects of SUWM. They are normally involved with: monitoring and evaluation; research; development and use of modelling tools; design work; developing new construction processes and maintenance regimes; developing guidelines; and/or training. In water agencies, these people may be located inside or outside the organisation.	Adapted from Maidique (1980). The term has also been used by Howell & Higgins (1990a).
4. Project manager / team leader	An individual who is officially responsible for the overall progress of attempts to promote SUWM in the organisation, including the delivery of key projects that are on time and within budget. In water agencies, these individuals may or may not be personally committed to the principles of SUWM.	Adapted from Maidique (1980) and Esteves & Pastor (2002). The former used the term 'business innovator'. The latter used the term 'project manager'.
5. Maintainer / implementer	A practical individual who is focused on implementing new forms of SUWM. These individuals may be heavily involved in working with development assessment areas, asset management and/or maintenance staff to formulate ways to practically implement new innovations relating to SUWM.	Created for this project, following consultation with industry practitioners.
6. Other / team member	An individual who does not fulfil the above roles, but nonetheless plays an important part in the day-to-day activities that are needed to influence others to adopt more sustainable forms of urban water management. In particular, they provide support to other team members.	As above.

NOTES:

• Antagonists were not included, as the research focused on people contributing to the leadership process, not blocking it.

• This typology was developed from a review of the literature (principally the 'champions of innovation' literature) and subsequent consultation with practitioners from the Australian urban water industry.

APPENDIX 5

OVERVIEW OF HOW THE RELATIVE LEADERSHIP EFFECTIVENESS OF CHAMPIONS WAS ASSESSED

INTRODUCTION

The research design included comparing the attributes of the most effective project champions with the least effective, to highlight behaviours that could potentially be developed in emerging leaders (see Figure 5 in Chapter 3). This appendix provides an overview of the data that were collected on leadership effectiveness and how it was used to evaluate the relative effectiveness of the six project champions. It should be read in conjunction with Section 5.5 of this report.

THE DATA

The author collected three groups of performance data. The first related to the *individual* effectiveness of all the surveyed leaders, including project champions. The Multifactor Leadership Questionnaire (MLQ; Avolio & Bass, 2004)[42] included a three item scale for individual leadership effectiveness. An example of an item from the MLQ is: "The person I am rating is effective at meeting organisational requirements". To gather more specific data relating to SUWM leadership effectiveness, the customised portion of the 360 degree questionnaire included the following item: "The person I am rating is effective at influencing people within my organisation and broader institutions to adopt the sustainable urban water management philosophy and/or practices". Supervisors and up to five peers of each leader provided the data by completing the 360 degree questionnaire. As such, this data set represents the *perceptions* of people who work closely with each leader, rather than any measurable organisational output. This approach is common in leadership research (see Barling *et al.*, 1996; Howell *et al.*, 2005; Kelloway *et al.*, 2000; Parry *et al.*, 2005), given the difficulty of finding an organisational output that can be directly related to an individual's leadership performance and is also relevant to a range of organisations.

The second group of data related to the performance of the *group* of people in each of the six case study agencies organisation who worked together to promote SUWM. A five item scale was used in the customised portion of the 360 degree questionnaire that was modified from Keller (1986). An example of one of these items is: "The group of people in this organisation who work together to promote the sustainable urban water management philosophy and/or practices deliver a high overall level of group performance". Data from the supervisors of all surveyed leaders were used for this scale to generate an average rating for each agency.

The final group of data related to the *organisation's* performance in delivering SUWM outcomes. The customised portion of the 360 degree questionnaire included the following item on this aspect: "The organisation that employs the person I am rating is effective at facilitating widespread, on-the-ground delivery of sustainable water management projects (e.g. developments with water sensitive urban design features)". Data from the supervisors of all surveyed leaders were also used for this scale to generate an average rating for each agency.

As explained in Section 5.5, only data relating to *individual* leadership effectiveness was used to rank the relative effectiveness of the studied project champions. Data on group and organisational leadership effectiveness were not a reliable indicator of any one leader's contribution to the leadership process. These data were, however, useful in understanding the impact of distributed leadership within the case study agencies (see Section 5.5.2).

HOW THE DATA WERE USED TO ASSESS THE INDIVIDUAL EFFECTIVENESS OF PROJECT CHAMPIONS

The author conducted a multi criteria analysis (MCA) using the Simple Multiple Attribute Rating Technique (SMART; Ashley *et al.*, 2004) to convert the raw data from the 360 degree questionnaire to a ranking of relative leadership effectiveness. This MCA used eight assessment criteria. These criteria, the weights placed on them, and indicators of effective leadership are described in Table 8.

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[42] The MLQ was part of the project's 360 degree questionnaire.

5. APPENDIX

<p style="text-align:center">Table 8 (Appendix 5) – Criteria, weights and indicators used in the multi criteria analysis</p>

Individual Leadership Effectiveness Criteria	Weight on Criteria (preferred weighting scenario)	Indicators of Effective Individual Leadership
1. Generic leadership effectiveness. From the MLQ using supervisor ratings.	High (10/10).	Want a high score for this criterion. It is a measure of effectiveness from the perspective of the PC's supervisor. In leadership research more weight is typically placed on supervisor ratings for effectiveness (see Eichinger & Lombardo, 2004; Howell et al., 2005).
2. SUWM-related leadership effectiveness. From the customised portion of the 360 degree questionnaire using supervisor ratings.	High (10/10).	As above.
3. Peer assessment version of criteria 1. Ratings from peers were averaged.	Medium (8/10).	Want a high score. It is a measure of effectiveness from the perspective of the PC's peers. It represents how well the PC leads across organisational boundaries.
4. Peer assessment version of criteria 2. Ratings from peers were averaged.	Medium (8/10).	As above.
5. Difference between supervisor ratings for generic leadership effectiveness and the equivalent ratings from the relevant control group (i.e. the 'non-champion' leaders in the same organisation).	Low (2/10).	Want the PC's rating to be at least equal to the relevant control rating. It is a measure of how much the PC 'stands out' as an effective leader in his / her organisation.
6. Difference between supervisor ratings for SUWM leadership effectiveness and the equivalent ratings from the relevant control group.	Low (2/10).	As above.
7. Peer assessment version of criteria 5.	Very low (1/10).	As above.
8. Peer assessment version of criteria 6.	Very low (1/10).	As above.

NOTES:
PC = project champion. MLQ = multifactor leadership questionnaire (Avolio & Bass, 2004).

A sensitivity analysis was performed as part of the MCA that examined four scenarios. These were a preferred scenario (see Table 8), an alternative but plausible weighting scenario, one where all weights were the same, and an intuitive ranking by the author. In all these scenarios the ranking of relative effectiveness changed very little, indicating a robust analysis. For example, the order of the four most effective project champions did not change. In addition, the three most effective and the three least effective champions remained in these two categories. The MCA's rankings for the preferred scenario are provided in Table 9.

<p style="text-align:center">Table 9 (Appendix 5) – Ranking of relative individual leadership effectiveness from the multi criteria analysis</p>

Project Champion	Ranking (preferred weighting scenario)
PC1	3
PC2	6 (least effective of the six project champions)
PC3	4
PC4	1 (most effective of the six project champions)
PC5	5
PC6	2

NOTES:
PC = project champion. PC3, PC4 and PC6 were diplomat champions and PC1, PC2 and PC5 were maverick champions. Note that all six PCs were respected and valued in their regions and organisations as being influential leaders for SUWM.

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