

Building leadership capacity to drive change: Lessons from a new program

Dr André Taylor¹ and Dr Brian McIntosh²

¹ Leadership Specialist, International WaterCentre, a.taylor@watercentre.org; and Director, André Taylor Consulting, andre@andretaylor.com.au

² Senior Lecturer, Integrated Water Management, International WaterCentre, b.mcintosh@watercentre.org

Abstract

This paper provides guidance on how to customise a leadership development initiative for a particular context and target audience (e.g. a leadership development program). It begins by explaining the importance of leadership capacity to sustainability practitioners, and the need to customise tools to build this capacity. The paper outlines a six-step process for building customised tools. It then uses a new leadership development program (i.e. the International WaterCentre's Water Leadership Program) as a case study. This program targets emerging, non-executive water leaders at a project to middle management level. It aims to help them to be more effective at exercising influence, driving change and advancing more integrated and sustainable forms of water management. The design, research basis, content and preliminary evaluation results from this program are discussed. Finally, the paper shares some lessons learnt from designing and delivering this program.

Introduction

People and organisations who seek to promote more sustainable practices as 'agents of change' typically face considerable challenges. They need to be able to initiate and drive change often in the face of considerable resistance from those who favour the status quo. They need to be able to address technical as well as adaptive challenges (also known as wicked problems or complex challenges). They need to work in concert with other leaders in networks that typically cross boundaries relating to organisational responsibility, professional expertise and management levels. In short, they need to have advanced *leadership abilities* to do their job well.

Drawing on definitions from the Center for Creative Leadership (Drath *et al.*, 2008; Ernst and Chrobot-Mason, 2011), we define 'leadership' as a process of influence that involves three elements. The first is setting a direction or shared vision, whether it be for a project, team or organisation. The second is aligning resources to that direction. Resources may include people, projects, tasks or funds. The third element is building commitment amongst a group of people to achieving the vision, which usually involves motivating and inspiring others.

Whilst in the 20th century the need for leadership capacity was seen as something that was relevant to people occupying formal and senior 'leadership positions (e.g. executives and politicians), this is no longer the case. In the 21st century and especially in rapidly changing, turbulent work environments, leadership skills are needed throughout organisations as professionals need to drive change, influence others, adapt to rapidly changing circumstances, and lead cross-boundary project teams. This trend has been referred to as the 'southerly migration of leadership'; meaning that leadership is no longer just a competency for executives. The research findings relating to sustainability leaders support this contemporary view (see Gordon and Berry, 2006; Taylor, 2010a) as does our experience. It is also common for networks or groups of sustainability leaders share a vision and work together to drive more sustainable practices. These networks typically include executive and non-executive leaders, and change agents (see Benn *et al.*, 2006a, 2006b; Brown and Clarke, 2007; Dunphy *et al.*, 2007).

There is also a strong evidence to indicate that some types of sustainability leader are particularly important as catalysts for change, and these leaders can operate at the project, executive or political level. Such leaders have been variously described as champions (Andersson and Bateman 2000; Taylor, 2010a), policy entrepreneurs (Brouwer *et al.*, 2009; Meijerink and Huitema, 2010) and change

agents (Benn *et al.*, 2006a; Dunphy *et al.*, 2007). Identifying and assisting these leaders to ‘learn their craft’ is an obvious strategy to accelerate the adoption of sustainable policies and practices.

At the International WaterCentre (IWC), we have two conceptual models which help to describe the abilities of ‘effective water leaders’. We suggest these conceptual models are also broadly relevant to sustainability practitioners who work in other aspects of natural resource management. The first model is a ‘conceptual model of effective water leaders’ and is shown in Figure 1. This model helps to illustrate a number of important points. First, it highlights the significance of a leader’s context and collaborating with others. As discussed later in this paper, leadership is acutely sensitive to context (Bryman *et al.*, 1996) and is usually a ‘team sport’. Second, it illustrates that effective water leaders typically have a combination of technical, management and leadership abilities. For example, a water leader may graduate as a civil engineer with strong technical skills. As their career progresses, they may build the ability to organise and manage their work (e.g. they may develop strong project and time management skills). In addition, they may gradually strengthen their ability to influence others, lead diverse teams and drive change.

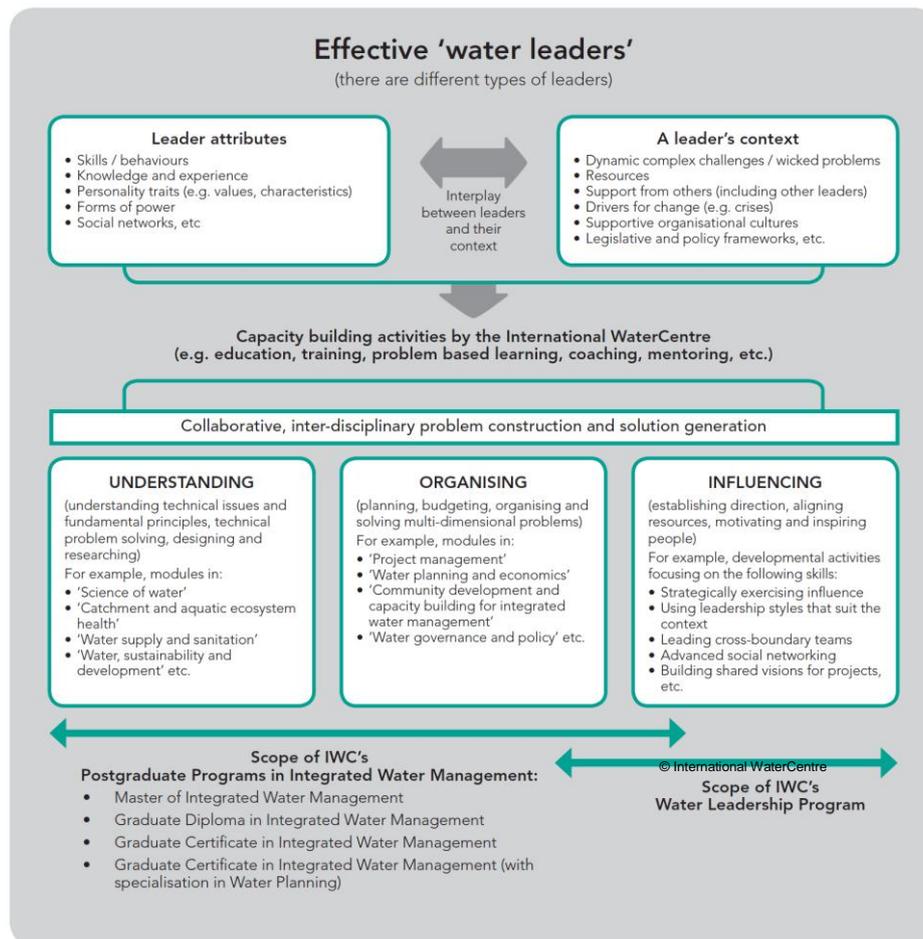


Figure 1: A Conceptual Model of ‘Effective Water Leaders’

The second model is shown in Figure 2. This helps to communicate the concept of ‘T-shaped water professionals’. The model highlights how the knowledge and skills of effective water practitioners needs to broaden as their careers progress in order to address challenges such as those associated with ‘integrated water management’. This broadening process involves learning more about other aspects of water management. For example, our civil engineer may choose to learn more about ecology, planning, hydrology and policy as their career progresses, perhaps through postgraduate education. They may also choose to build new skills in management and leadership. This development occurs within a context that includes the leader’s personal values, ethical frameworks and surrounding work environment.

T-Shaped Water Professionals

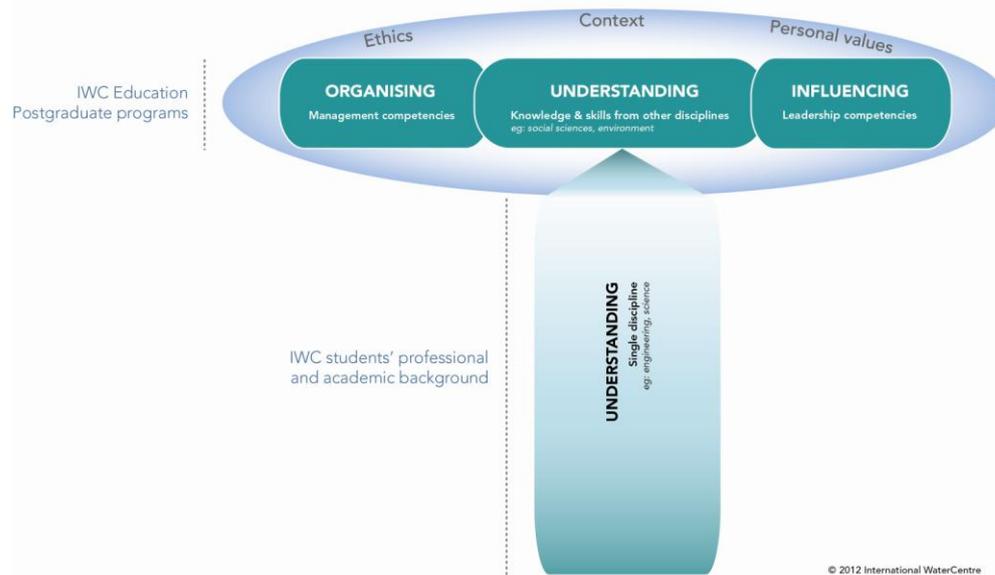


Figure 2: A Conceptual Model of ‘T-shaped water Professionals’

This paper focuses on the practical challenge of how to design and deliver a leadership development initiative that is *customised* for a particular context and target leader. As such, it builds on two previous papers on leadership development that have been delivered at the Enviro2008 (Taylor, 2008) and Enviro2010 (Taylor, 2010c) conferences. These previous papers explained the importance of building leadership capacity to sustainability practitioners, relevant theories, what we know about sustainability leaders in general, and provided tips to practitioners on strategies to develop leadership capacity. In this paper we provide guidance on how to build a customised leadership development initiative, specifically a ‘feedback-intensive leadership development program’ (Guthrie and King, 2004), by describing a case study. The case study involves a new initiative developed by the IWC called the IWC Water Leadership Program (www.watercentre.org/leadership).

We begin by explaining why leadership development initiatives need to be customised for a particular context and target leader. We then present a six-step model that can be used for building customised initiatives for sustainability practitioners. Next, we use the IWC Water Leadership Program as a case study to describe the steps to develop the program, the research basis for this initiative, its design features, its content (e.g. topics addressed during training activities) and some preliminary evaluation results. These results are preliminary as the nine-month program finishes next month (August 2012). We conclude by discussing some lessons learnt from designing and delivering this program.

Why customise leadership development initiatives?

The respected leadership researcher and author Professor Bruce Avolio (2005) suggested that “leadership development is by far one of the most complex human processes in that it involves leaders, followers, dynamic contexts, timing, resources, technology, history, luck and a few things we have not thought of yet (p. 4).” Part of this complexity reflects that *many* factors contribute to a successful leadership outcome (Yukl, 1989) and leadership strategies that work in one context do not necessarily work in another; that is, it is a phenomenon that is strongly affected by context (Bryman *et al.*, 1996). To help leaders become more effective, we need to provide them with knowledge of strategies that work in particular contexts, and focus on those contexts that are most relevant to their work. This requires knowledge of their work environment and the factors that contribute to successful leaders working in this environment.

Consequently, leadership development initiatives need to draw on a reliable knowledge-base that has three dimensions. First it contains information on the target leaders (e.g. their key traits and skills, the leadership roles they play, the types of power they have access to, etc.). Second, it contains data on the leadership processes they help to drive (e.g. their role in these processes, the phases of such processes, and the key leadership behaviours they use in different phases). Third, it provides information on the nature of the target leaders' work context (e.g. the types of challenges they face, the windows of opportunity they use, etc.). This information helps to select an appropriate design for a leadership development intervention, and choose relevant content for the intervention (e.g. the types of knowledge, skills and networks to help strengthen).

Let us consider two examples that highlight why it is important to tailor leadership development initiatives. The first relates to *models of organisational change*. If we were building a sustainability-focused leadership development intervention for senior leaders within organisations (e.g. CEOs), we could assume they have high levels of position power (see Northouse, 2010) and the potential to influence the organisation's dominant culture. We may choose to use Professor John Kotter's (1995) well-known model titled '8 steps to transforming your organisation' to provide guidance on how to lead transformative change within an organisation in order to inculcate a culture, systems and processes to support more sustainable practices. Such a model, however, would be inappropriate if we were targeting less senior, 'emerging' leaders who need to drive change from lower levels of the organisation with little position power. For this audience, we may choose to use a framework such as Hamel's (2000) seven strategies "to start an insurrection". Or if we were fortunate enough to have access to localised research, we could use a highly customised framework. An example of the latter is Taylor *et al.*'s (2011) model of project champion-driven leadership that was developed through research by Monash University in the Australian water industry involving leaders who were instrumental in advancing 'water sensitive urban design'.

The second example relates to *team leadership*. Fortunately, we have easy access to some excellent research and guidance on successful team leadership and teams (e.g. Kogler-Hill, 2010; Larson and LaFasto, 1989). Such guidance would be useful to people leading teams anywhere. However, particular team leaders may have special needs. For example, people who lead *virtual teams* need to be aware of additional leadership strategies that are helpful when engaging in this challenging form of leadership (e.g. O'Neill *et al.*, 2008). Another example is that people who lead teams that need to be highly creative should be aware of some unusual elements of this leadership role. These elements include leaders of highly creative teams usually having very high levels of technical expertise and knowledge so they can evaluate new ideas from their team members and provide direction on how to progress these ideas (Mumford *et al.*, 2002). They also need to have 'champion of innovation'-type leadership skills (see Howell and Higgins, 1990) to garner support from other parts of their organisation to adopt innovations from their team.

A process for building customised leadership development tools

Taylor *et al.* (2012) recently published a six-step process for building customised leadership development tools for sustainability leaders (e.g. champions). This process is summarised in Figure 3, and is being used in relation to the IWC Water Leadership Program.

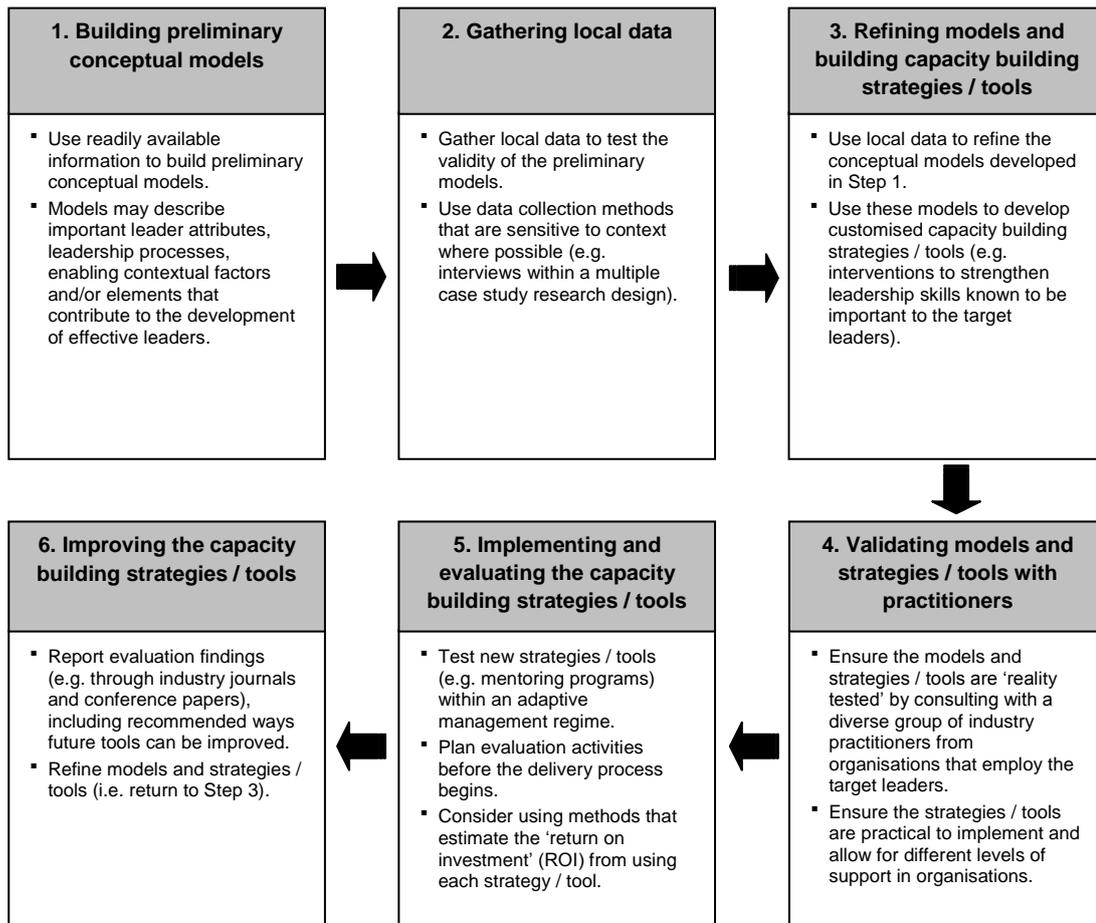


Figure 3: Six steps to develop customised capacity building tools for sustainability leaders (modified from Taylor *et al.*, 2012)

The six-step process begins by building some preliminary conceptual models of the target leaders (e.g. their key skills), the leadership processes they drive, the context they work in, and/or the design of effective leadership development tools. The second step is to gather some local data to test the validity of these models. For example, gathering information on the key leadership behaviours the target leaders use. The third step involves refining the models and using this information to start building customised capacity building tools (e.g. focused short-course training programs, guidelines, mentoring programs, leadership development programs, etc.). The fourth step involves consulting with practitioners to ensure the tools are practical and meet the needs of the target audience. This audience is not just the target leaders themselves but also their organisations. The validated capacity building tools are implemented and evaluated in the fifth step. The tools are improved during the sixth step based on the findings of the evaluation.

Case study: The IWC Water Leadership Program (2011-12)

Overview of the program

The primary aim of this nine-month, 'feedback-intensive' leadership development program is to help emerging water leaders to be more effective at exerting influence and driving change to advance more sustainable and integrated forms of water management. As shown in Figure 1, this leadership development initiative primarily aims to strengthen the 'influencing' abilities of effective water

practitioners, in contrast to the IWC's Masters of Integrated Water Management degree which focuses on building 'understanding' and 'organising' abilities.

The target audience is emerging water leaders at the project to middle management level (i.e. not executives) from all parts of the water industry (e.g. three tiers of government, publicly-managed water agencies, consulting firms and capacity building organisations). In 2011-12, most of the participants worked at the team leader level. The program takes approximately 20 participants each year. More detail on the program is available at: www.watercentre.org/leadership.

The program also aims to:

- Help participants to build self-awareness as a pre-requisite for effective leadership (Avolio, 2005).
- Identify specific leadership development needs for each participant (e.g. strengths to build on and weaknesses to overcome).
- Develop personalised leadership development plans for each participant, which include activities to be conducted in the workplace (e.g. specific leadership behaviours to use more frequently).
- Strengthen leadership skills known to be associated with effective water leaders and organisational leaders *per se*, as well as skills needed in the water industry to cope with current and future challenges.
- Help participants to continue to develop as leaders over their careers and in doing so, support other nascent leaders. The program does this by developing the participants' ability to establish mentoring relationships, deeply reflect on and learn from experience, and use individual leadership developmental plans. It also fosters the ability to apply leadership theories, models and frameworks to help solve problems, and to continue learning about new approaches to leadership.
- Assist participants to build 'social capital' in their work environment to drive integrated water management projects and policies (e.g. build social networks and strengthen the leadership ability of key teams).
- Facilitate a range of developmental experiences that involve new knowledge, diverse perspectives (i.e. from presenters and participants), self-assessments and reflection, discussion, the application of knowledge to one's own work environment, practising new leadership behaviours, feedback on leadership behaviours from one's colleagues, and the provision of support (e.g. from peers, coaches and mentors).
- Provide an entry point to relevant leadership literature to assist further independent learning.
- Generate a positive 'return on investment' (Phillips, 2007) to the participants and their organisations.

The developmental process

The design and delivery of this leadership initiative is following the six-step process shown in Figure 3, albeit with some slight variations.

Step 1: building preliminary conceptual models / frameworks

At this early stage of the design process, a review was done of the literature to identify relevant conceptual models of individual leaders and leadership processes that were relevant to the target audience. As a result of this work, three key 'leadership roles' were identified that were potentially relevant to the target audience. These were the project champion, enabling leader and team / project leader roles. Preliminary role descriptions were developed that included key leadership behaviours. This provided us with a conceptual framework to gather more specific information on the nature of these roles and the leaders performing these roles (e.g. their key leadership behaviours and skills). A description of these roles is given in Table 1.

Table 1: Three key leadership roles for non-executive water leaders

Roles	Role description
<p>1. The project champion leadership role</p>	<ul style="list-style-type: none"> • People who initiate and strongly drive processes of change, as well as new integrated water management projects and policies. They are highly motivated, stand out early in processes of change and excel at exerting influence. They drive projects on a day-to-day level, unlike more senior 'executive champions'. They often promote innovations, question the status quo, and communicate clear and compelling visions for projects. They also commonly play the 'project / team leader' role, and work closely with other leaders to deliver projects (e.g. more senior 'enabling leaders'). The extent to which a project champion can fulfil this role is often limited by their local context (e.g. available support from senior management, available resources, directions from a client, etc.). • Example: <i>Project champions who work with others to initiate and strongly drive pilot projects that showcase innovative examples of integrated water management.</i>
<p>2. The enabling water leader role</p>	<ul style="list-style-type: none"> • People who enable others to find solutions to complex challenges involving integrated water management. They create environments where people (e.g. often less senior people) from across organisational boundaries can interact, collaborate, experiment, take risks and learn together. Senior enabling leaders may also help leaders at the project level by gathering political and executive support for initiatives, providing resources, sharing risks, and fostering supportive organisational cultures. They may also mentor or work in tandem with less senior leaders. They commonly work across organisational boundaries and often link people / projects within an organisation to external people / projects (e.g. linking industry practitioners with researchers). They can be innovative in the way they approach problem solving and help to foster innovations at a technical level. They are often more senior in organisations than 'project champions' or 'team / project leaders' (e.g. typically at the middle management to executive level). Their seniority often provides them with more freedom to network, collaborate and search for innovative ideas. They are adept at seeing "the bigger picture" and the systemic way in which projects and policies interact both within and outside the water sector. Although enabling leaders often 'champion' integrated water management projects, this leadership role is often less visible and more subtle than the 'project champion' role. • Example: <i>Enabling leaders who facilitate forums for stakeholders to come together to work on challenging water issues (e.g. 'communities of practice' or action learning projects).</i>
<p>3. The team / project leader role</p>	<ul style="list-style-type: none"> • People who are formally responsible for delivering outcomes from teams working on integrated water management projects. Their role includes building, managing and monitoring the performance of teams. They also build and communicate shared visions for projects, clarify objectives and roles, and manage conflict. They also manage resources and information, and may engage in coaching and mentoring behaviours. Members of the team may be the team leader's staff or may simply be a colleague. The need for advanced leadership skills increases when the team spans boundaries (e.g. multi-disciplinary teams that span organisational 'silos') and the leader needs to rely on his / her personal power to exercise influence rather than position power (i.e. their authority). This is a relatively common water leadership role that can be undertaken in combination with the 'project champion' or 'enabling leader' roles. For example, a 'project champion' may act as a change agent to initiate a new project, and then become the official 'project leader' to deliver it. • Example: <i>Project leaders responsible for preparing 'integrated water management plans' which require input from a variety of professionals located in different organisational units.</i>

We also identified several existing conceptual models and theories from the literature that were potentially relevant to the target water leaders and the design of the leadership development program. For example, those relating to 'sustainable urban water management project champions' by Taylor (2010a), 'water policy entrepreneurs' by Meijerink and Huitema (2010), and leader and leadership development by Van Velsor and McCauley (2004).

Table 2: Summary of the program's key conceptual models / frameworks

Topic	Key frameworks / models (not exhaustive)
<p>Water leaders and leadership</p>	<ul style="list-style-type: none"> • Individual water leaders: Yukl's (1989) 'integrating conceptual framework' of leadership effectiveness, combined with specific research findings relating to attributes of effective water leaders and enabling contextual factors. For an example of such a model for project champions in the water sector, see Taylor (2009, 2010a). • Champion-driven leadership processes: Taylor <i>et al.</i>'s (2011) model of champion-driven leadership that was developed based on research in the Australian water sector. • The relationship between organisational context and the 'champion phenomenon': Taylor's (2010a) conceptual model that was developed through research in Australian water agencies.

Topic	Key frameworks / models (not exhaustive)
Organisational leadership	<ul style="list-style-type: none"> • Transformational Leadership Theory (sometimes called the 'Full Range Leadership Theory / Model'; Bass & Riggio, 2006): Models from Avolio (2005) and Avolio and Bass (2004). • Key organisational leadership behaviours (closely aligned with Transformational Leadership Theory): Kouzes and Posner's (2007) 'five practices and 10 commitments of leadership'. • Complexity Leadership Theory: Uhl-Bien <i>et al.</i>'s (2007) description of the three different forms of leadership that are needed in organisations to successfully address complex challenges. • Functional team leadership: Models by Burke <i>et al.</i> (2006), Morgeson <i>et al.</i>, (2010) and Zaccaro <i>et al.</i> (2001). • Distributed / shared leadership in teams: Material by Day <i>et al.</i> (2004), Gibb (1954) and Gronn (2002). • Team effectiveness: Descriptions by Kanaga and Browning (2003), Kanaga and Kossler (2001), Larson and LaFasto (1989), and Zaccaro <i>et al.</i> (2001). • Boundary spanning leadership: The model and research findings reported by Ernst and Chrobot-Mason (2011).
Leader and leadership development	<ul style="list-style-type: none"> • Models of leader and leadership development: Conceptual models by Day <i>et al.</i> (2009), Murphy and Johnson (2011), and Van Velsor and McCauley (2004).

Step 2: gathering local data to help inform the design of the program

During this stage, we consulted with key water industry practitioners across Australia on the three preliminary role descriptions to test their relevance and validity to different organisational types (e.g. consulting firms, publicly-managed water agencies, local government agencies, etc.). We then refined these descriptions.

We also identified the attributes associated with leaders performing each role (e.g. personal characteristics, types of knowledge, social networking characteristics and key leadership behaviours) based on available literature. Many of these individual leader attributes involved working with other leaders on group-based processes of leadership.

Step 3: refining conceptual frameworks and designing the program

We then ran a national, online survey in June 2011 to:

- further examine the relevance of the three water leadership roles to a range of organisational types (i.e. further test their validity with a broader range of people);
- examine the relevance of the leader attributes thought to be associated with each role (e.g. key leadership behaviours) and identify additional attributes; and
- examine the differences between the attributes of leaders occupying similar roles in different organisational types (e.g. differences between 'enabling' water leaders who work in consulting firms at those who work in local government agencies).

The intent of this work was to identify attributes of effective water leaders in different non-executive leadership roles and in different contexts, so that the program could focus on assessing and building competencies that are aligned with these attributes. Such attributes include important types of knowledge, social networking strategies and specific leadership behaviours / skills.

At this stage of the development process we had enough information to start selecting suitable *content* for the program. For example, research had highlighted the importance of leading multi-disciplinary teams and advanced forms of social networking (e.g. strategic networking), so elements of the program needed to focus on building skills in these areas.

We also used findings from a literature review reported by Taylor (2010a) to identify the most effective *design* for the program. Research by Taylor (2010a, 2010b) had also designed, delivered and evaluated a pilot leadership development program for water leaders, so the IWC Water Leadership Program could build on that experience. Consequently, a nine-month 'feedback-intensive' leadership development program (see Guthrie and King, 2004) design was chosen. The design features and content are summarised later in this paper.

Step 4: validating the design and content of the program with specialists and practitioners

Two mechanisms were used during this phase of the development process. First, a detailed 'design document' was prepared in 2011 that set out the program's aims, target audience, research basis, theoretical basis, proposed design, and proposed content. This document was peer-reviewed by Professor David Day the Winthrop Professor and the Woodside Chair in Leadership and Management at the University of Western Australia's Business School. Professor Day is a highly-regarded specialist in leadership development having published widely on the subject including many influential contributions to the literature (e.g. Day, 2000). This peer review process helped to refine the program's design, content and evaluation framework.

Second, a virtual 'Industry Leaders Reference Group' was established comprising senior representatives from relevant industry associations, State government agencies, local government agencies, water agencies and capacity building organisations. This group also provided feedback on the design and content of the program to ensure that it was relevant to industry needs and did not evolve to become "too academic".

Step 5: implementing and evaluating the program

The implementation of the first round of the program commenced in December 2011 and will conclude shortly in August 2012. Details of the design elements and content are provided later in this paper.

The aims of the program's evaluation framework are to: assess the overall impact of the program; determine whether the program met its primary objectives; and identify opportunities to improve the program in the future. Elements of the evaluation plan include:

- The use of questionnaires following each of the seven training days to gather feedback on the strengths and weaknesses of each training module, including opportunities for improvement.
- The use of a set of individually customised multi-rater questionnaires late in the program to gather information from the participants' supervisors and peers. These questionnaires illuminate the extent to which the participants' colleagues have observed changes in key leadership behaviours the participants are seeking to change.
- The use of a questionnaire at the end of the program to gather additional feedback from participants (e.g. on ways to improve the program in future). This questionnaire will also be used to gather information in order to estimate the program's average 'return on investment' to each participant (see Phillips, 2007; Taylor, 2010a, 210b).
- Reports from the participants late in the program on the extent to which they have implemented actions in their Individual leadership development plans.
- Reports from the participants at the completion of the program which prompt them to reflect on the outcomes and lessons learnt from implementing their individual leadership development plans and leadership projects.

Preliminary evaluation results are reported later in this paper.

Step 6: progressively improving the program

Although the program's evaluation has not yet been completed, several opportunities have been identified to improve the program in future years and these have been used to modify the proposed design of the 2012-13 round of the program. These include:

- Providing more flexibility in terms of online delivery of training modules to minimise the necessity for participants to travel twice to Brisbane and therefore reduce the overall cost of the program.
- Modifying the order that some training modules are delivered to assist participants earlier in the program (e.g. deliver modules on self-leadership and time management earlier in the program).

- Include an additional accountability mechanism to ensure that participants have drafted that their individual leadership development plans within one month of the initial training.
- Building an online self-assessment tool to help potential participants to determine whether they are developmentally ready to join the program and fully commit to it. This 'readiness assessment tool' has been developed and can be accessed at: www.watercentre.org/education/leadership.

Design features

The main elements of the program are summarised in Table 3. These represent a package of interventions that collectively aim to meet the program objectives as a 'feedback-intensive leadership development program'. They also collectively provide the elements of challenge, assessment and support which are needed for effective leadership development (McCauley and Van Velsor, 2004).

Table 3: The major program elements and links to challenge, assessment and support.

The major program elements	Challenge (C), assessment (A) and/or support (S)?
1. Selection of participants.	C, S: The selection process identifies participants who are prepared for a challenge and also have organisational support.
2. Pre-training exercises and reading.	A: Includes self-assessment exercises.
3. Customised 360-degree feedback tool.	A: A major assessment element.
4. Face-to-face training (includes group mentoring) – Two sessions (February and July 2012).	C, A, S: Some of the exercises are challenging (e.g. reviewing the results of the 360-degree feedback process). Exercises include many self-assessment tasks. Group mentors, the program coordinator (coach / mentor) and fellow participants provide support.
5. Individual leadership development plans.	C, A, S: The design of the plans ensure that each of these elements (C, A and S) have been incorporated.
6. Leadership projects (part of the individual leadership development plans).	C, A, S: The design of each project also ensure that each of these elements (C, A and S) have been incorporated.
7. One-to-one coaching sessions (3).	S: This is a focussed form of support.
8. Mentoring arrangements.	S: This is also a focussed form of support.
9. Monthly on-line discussion forums (4).	A, S: These modules and forums provide opportunities for self-assessment, and are also a form of peer-based support.

1. Selection of participants

Two sets of criteria are used to screen and select participants. For *scholarship* applicants, a broad range of criteria are used to identify people who are most likely to benefit from the program. These criteria reflect findings from the leadership development literature, and can be reviewed by using the IWC's freely available on-line 'readiness assessment tool'. The scholarship assessment process also seeks to assist people from organisations without the resources to send staff to the program as full fee-paying participants.

Participants who *directly apply* to join the program are encouraged to do an on-line self-assessment to determine whether they are ready to fully commit to the program in order to enjoy its benefits. They are also required to meet a set of mandatory criteria, including:

- At least three years of experience working in the water industry / sector.
- The ability to communicate clearly in English.
- Their organisation and supervisor supports their application.
- They can attend the first five day face-to-face training and mentoring session in Brisbane.

2. Pre-training exercises and reading

Participants undertake a number of exercises and readings before the first training session in February. This element of the program aims to:

- Introduce the participants to fundamental leadership concepts that will be explored further during the program.
- Help the participants to clarify their goals and expectations, assess their level of motivation to commit fully to the program and understand their current and future leadership context.
- Highlight some of the 'keys to success' when participating in a leadership development program.

3. Customised 360-degree feedback tool

At the start of the program, participants complete a customised, on-line questionnaire that gathers information on the extent to which they use key leadership behaviours associated with effective:

- water leaders in three important non-executive leadership roles (see Table 1); and
- leaders within organisations *per se* (e.g. team leaders).

Each of the participants complete this questionnaire, along with their supervisors, at least five of their peers, and at least five of their staff (if relevant). This element of the program is a good example of how detailed knowledge of the nature of the target audience (in this case non-executive water leaders performing three different roles) and their work environment can be used to *customise* the program and provide developing leaders with specific and relevant feedback on their leadership strengths, weaknesses and opportunities for improvement.

This tool also helps to highlight the extent to which participants are self-aware, as self-aware leaders typically have a high level of agreement between self-assessed ratings and ratings from others (see Atwater and Yammarino, 1997). During subsequent training, participants use the results from the 360-degree questionnaire to help identify specific actions to improve their leadership ability. These actions are documented in an individual leadership development plan.

4. Face-to-face training (including group mentoring)

The program includes seven days of face-to-face training. The first five days occurs in February, and a two day follow-up training session is held in July. The training involves 27 modules / units and 15 trainers, guest speakers and 'group mentors' (i.e. experienced executives from the water industry). It is interactive, with most sessions including a mix of individual, small group and large group exercises, a short presentation by an experienced leadership researcher or practitioner, and opportunities for participants to convert new knowledge into action through their individual leadership development plans.

5. Individual leadership development plans

During the initial training session in February, participants are given guidance on building an individual leadership development plan, a plan template, and a model plan as an example. During each training module they review relevant feedback from their 360-degree feedback report, consider the relevance of new information, reflect on the outcomes from various exercises, then identify actions to include in their plan. For example, following a training session on social networking, a participant may identify the need to prepare a simple 'networking plan' (see Grayson and Baldwin, 2007) to guide their activities and place a greater emphasis on 'strategic networking' (see Ibarra and Hunter, 2007).

6. Leadership projects

As leadership is sensitive to context and the bulk of the development process is thought to occur in the workplace (Lombardo and Eichinger, 2000), leadership projects are used as 'challenging job assignments'. Each participant has an opportunity to scope a project as they build their individual leadership development plans. These plans provide 'practise fields' where participants can concentrate on using specific leadership behaviours and strategies with guidance, support and feedback. Ideal projects have the following characteristics:

- They represent a significant project or policy associated with sustainable water management which has the support of the participant's supervisor and organisation.
- The project involves working with a group of people across boundaries. Such boundaries may relate to functional units within and across organisations, geography, management levels or professional disciplines.
- Developmental objectives relate to individual elements of leadership (e.g. specific behaviours the participant is seeking to use more effectively) as well as group-based elements of leadership (e.g. outcomes that the group needs to deliver such as a clear, shared vision for the project).
- They include building social networks and leadership capacity within groups of people who frequently work together on sustainable water management issues.

7. One-to-one coaching / mentoring sessions

Participants receive feedback and guidance from a leadership coach as they finalise and implement their individual leadership development plans. These sessions include a mix of coaching and mentoring. Three sessions are conducted via Skype (on-line teleconferencing) or telephone. They occur approximately six weeks apart and last for approximately one hour.

Each coaching discussion reviews the participant's progress and focuses on one or two elements in their developmental plan. The coach also provides follow-up support to participants where required, such as identifying and supplying suitable guidance on topics that arise during these sessions.

8. Mentoring arrangements

Four experienced executives from the water industry (i.e. current or former CEOs) spend time with the participants at the face-to-face training sessions. They share their views and experiences on 'water leadership', and directly address leadership challenges that the participants are experiencing. These mentors also assist participants to build and revise their individual leadership development plans.

In addition, participants are provided with information, guidance and practise on how to establish productive relationships with mentors when they return to work. This element of the program reflects the view that for many participants, relationships with mentors who know their local work environment are particularly valuable. Most of the participants in the program have established at least one new mentoring relationship during the program. Some of these relationships are formally structured, whilst others are in more informal.

9. Monthly on-line discussion forums

Between the face-to-face training sessions, there are four monthly online discussion forums. For each of these, participants are sent a training module on a particular topic (e.g. self-leadership). This module includes readings, exercises, and in some cases popular films that are used as case studies. Participants read the module, do the exercises and then respond to a set of discussion questions by

participating in a password-protected on-line forum. This forum provides the opportunity for participants to share their views with their colleagues. At the end of each session, a summary of the discussion is provided to participants by the program's coordinator. This summary is an opportunity to address any misunderstanding that may have occurred and to emphasise key points.

Program content

Table 4 lists the various topics that are currently addressed in the program's training modules and online discussion forums. Participants also engage in other activities through their individual leadership development plans and leadership projects. For example, in 2011-12 one participant chose to learn more about *virtual* team leadership to assist their leadership project.

Table 4: The main topics addressed through the program.

Program element	Topics
Initial training	<ul style="list-style-type: none"> ▪ Introduction to leadership, leadership development and the program. ▪ What we know about water leaders: The project champion role. ▪ What we know about water leaders: The team leader role. ▪ What we know about water leaders: The enabling leader role. ▪ Case study: Water champions helping to drive the transition to water sensitive urban design in Melbourne. ▪ Case study: Water leadership in a Western Australian local government agency - an example of the three non-executive roles. ▪ Case study: The leadership dimensions of the South East Queensland Healthy Waterways. ▪ Active listening, giving and receiving feedback. ▪ Personal values and leadership. ▪ Personality characteristics and leadership. ▪ Leadership behaviours: Transformational leadership. ▪ Leadership behaviours: Kouzes and Posner's (2007) 5 practices and 10 commitments of leadership. ▪ Ethics and authentic leadership. ▪ Team leadership. ▪ Influence tactics and principles of persuasion. ▪ Social networking. ▪ Introduction to systems thinking. ▪ Principles and strategies of leadership development to help guide one's career. ▪ Mentoring. ▪ Building individual leadership development plans, including scoping leadership projects.
Online discussion forums	<ul style="list-style-type: none"> ▪ Self-leadership and common self-leadership pitfalls. ▪ Leadership pitfalls (when leading others) and the correct execution of strategy. ▪ Film case study to explore: team leadership; the feature of 'high performing teams'; team development phases; transformational leadership; leadership in crises; and leadership to solve complicated technical problems. ▪ Film case study to explore: how people can emerge as leaders in groups and exercise influence without authority; different types of power that can be used to exercise influence; influence principles and tactics that leaders may use; transformational leadership; and conflict management.
Follow-up training	<ul style="list-style-type: none"> ▪ Building resilience, adaptability and managing stress. ▪ Fostering innovation and creativity within teams. ▪ Key communication skills for leaders and managers. ▪ Tools for strategic planning and thinking. ▪ Time management. ▪ Techniques for systems thinking – practical application of tools. ▪ Guidance on revising individual leadership development plans for the next 12 months with the help of group mentors.

Preliminary evaluation results (2011-12)

The *preliminary* evaluation results have been positive. For example, the feedback from the initial training was strongly positive. The average ratings that were anonymously provided by participants for all of the training modules were:

- Quality of the content = 88%.
- Quality of the presentation = 86%.
- Quality of the materials = 87%.

Evaluation data also indicates a moderate level of behavioural change has occurred during the program. The peers of participants were anonymously surveyed three months after the initial training to assess if they had noticed any change in particular leadership behaviours that the participants were seeking to use more effectively or frequently (e.g. active listening, building shared visions, providing constructive feedback to colleagues, etc.). The peers of the participants were asked to provide ratings for each leadership behaviour on the following 0-10 scale:

Some of the behaviours the person you are rating has been trying to improve	Some deterioration in this behaviour (0)	No change in this behaviour (1)	Level of improvement								
			Very low (2)	(3)	Low (4)	(5)	Moderate (6)	(7)	High (8)	(9)	Very high (10)
Leadership behaviour XYZ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Fourteen (14) participants volunteered for this element of the program. The number of surveyed peers for each participant ranged from 1 to 6. The number of leadership behaviours included in each survey ranged from 3 to 15. The average behaviour change ratings for each participant ranged from 4.5/10 (45%) to 8.0/10 (80%) using the rating system described above. The overall average behaviour change rating for all of the participants who volunteered for this element of the program was 6.5/10 or 65% (i.e. in the “moderate to “high” range of the scale).

Although preliminary, these results are positive and consistent with evaluation results from a pilot leadership development program for water leaders which was conducted in 2008-9 (see Taylor, 2010a, 2010b). The evaluation of this pilot program was more comprehensive; it used a seven-tier assessment framework that examined different dimensions of the program’s performance using source and methodological triangulation. The evaluation generated a range of positive outcomes, such as desired behavioural change and generating a positive return on investment (ROI) estimate. Specifically, the program’s ROI was conservatively estimated to be 190% after one year.

Practical implications

We suggest there are five key implications of this work for practitioners seeking to build leadership capacity building tools for sustainability professionals. First, the six-step model in Figure 1 provides broad guidance on the process needed to gather reliable information, validate this information, build the tool, refine it in consultation with specialists and practitioners, deliver it, and continually improve it. More information on this process has been provided by Taylor *et al.* (2012).

Second, the case study involving the IWC Water Leadership Program highlighted the importance of establishing a reliable knowledge base as a foundation on which an effective capacity building tool can be built. This knowledge base can draw from existing research findings reported in the literature, as well as from new, targeted research. In general, the knowledge base needs to characterise: the nature of the target leaders (e.g. their key leadership behaviours, types of power, types of knowledge, types of social networks, traits, etc.); the nature of group-based leadership processes that involve the target leaders and others (as leadership is usually a ‘team sport’); contextual factors that help or hinder the leaders to initiate and drive change; and the design of effective leadership development interventions.

Third, this knowledge base should be used to choose a leadership development intervention that is appropriate for the target audience. There are a number of methods to choose from as reported in Day (2000) and Taylor (2011). This knowledge base should also be used to select appropriate content (e.g. the focus of various training modules).

Fourth, consultation with experienced industry practitioners and leadership development specialist greatly helps to refine capacity building tools. It also helps to ensure the intervention meets the needs of the target audience and their organisations.

Fifth, we believe it is important to be transparent in the design, delivery and evaluation of leadership development initiatives. By this we mean sharing the rationale for the design, the design elements, the content of the program, and evaluation results with industry practitioners. Leadership development is a challenging activity and there will always be lessons learned from trying new capacity building tools. If we openly share these lessons then we can all improve at a faster rate, which leads to greater leadership capacity in our industries and more sustainable outcomes.

Conclusions

This paper has provided guidance on how to customise a leadership development intervention for a particular target audience and context. We have provided a six-step conceptual model and a case study (i.e. the first round of the IWC Water Leadership Program) to help illustrate the approach we would recommend based on our experience.

Increasingly, sustainability practitioners are recognising that leadership skills are needed to overcome resistance and drive change from traditional to more sustainable practices. Such skills are needed across industry sectors and managerial levels – from a 20-year-old project manager to a 60-year-old CEO. This is particularly the case in work environments that are characterised by rapid and turbulent change, uncertainty and the existence of wicked problems.

A consequence of this recognition is that we need to improve our ability to design leadership capacity interventions for different types of leaders. Unfortunately, building leadership capacity is not easy. It involves understanding the important elements of leadership development and building a reliable knowledge base of the target leaders and their work environment. It also requires using this knowledge to design appropriate capacity building tools, refining these tools in consultation with experienced industry practitioners and leadership specialists, delivering these interventions and continually improving them through sound and transparent evaluation mechanisms. Whilst not being easy, our experience is that the objectives and results are worth the effort.

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