



Learning Alliance Briefing Note 12: Strategy Development (draft)

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Introduction and overview

In the context of integrated urban water management (IUWM), the main aims of strategy development¹ based on visioning² and scenario building³ are to:

- Develop a robust adaptable strategy that has the potential to achieve a shared vision under a whole range of different scenarios (i.e. different futures);
- Encourage stakeholders to take the leading role in an IUWM strategy development process.

Figure 1 provides a schematic overview of the concept of strategy development based on visioning and scenario building. At its simplest, the approach involves three phases. First, stakeholders develop a shared vision of the water services and environment that they would like to achieve at some specified time in the future. Second, stakeholders develop a set of plausible (although not necessarily equally likely) scenarios that describe different futures. Third, an overall strategy is developed that integrates various components so that it has the potential to achieve the shared vision regardless of which scenario, over time, turns out to be closest to reality. This overall strategy may, in practice, be simple or very complicated depending on the context and the time horizon of the vision. Each of these phases is described in more detail in this briefing note.

The advantages of this approach compared to more standard approaches to strategy development are many and varied. The use of visioning and scenario building stimulates social and organisational learning and provide a process for enhancing stakeholders' understanding of how to prepare for and manage change, risk and uncertainty. Equally important, the approach helps stakeholders think creatively about important and uncertain factors over which they have no or very limited control. The net result should be that

stakeholders are less likely to fear or ignore these factors and are more likely to consider how they could thrive in a range of future settings. Some of these may be strikingly different to anything that they have ever experienced.

Active stakeholder participation in strategy development, if facilitated well, has the potential to improve both the utility and ownership of the resulting strategy. Activity participation also ensures that stakeholders gain an understanding of their own roles and responsibilities and the potential benefits of working constructively with other stakeholders within an IUWM framework.

An important strength of the overall approach is that strategy development is not based on unique forecasts of future conditions that might influence the environment and both supply and demand for water services. In contrast, the approach acknowledges that, even with the best forecasting methodologies, the future is unknowable and that, in most cases, robust adaptable strategies are needed that recognises this fact. In simple terms, this strength is achieved by making stakeholder dialogue, visioning and scenario building core elements of the strategy development process rather than a useful accessories.

Although strategy development based on visioning and scenario building is not in common use in the water sector, it is far from being new and unproven. It is an approach that has been used by other sectors (e.g. government, business and the military) for 40 years or more. It should also be stressed that visioning and scenario building are frequently used in the water sector but usually as stand-alone techniques rather than as part of a concerted and mainstream approach to improving the processes of strategy development.

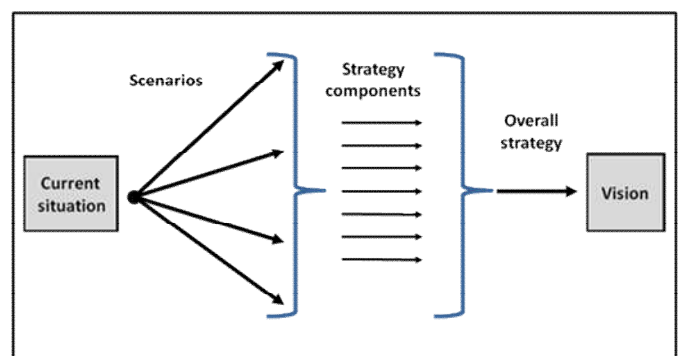


Figure 1. Strategy development based on visioning and scenario building

The high-level of attention that strategy development based on visioning and scenario building gives to uncertainty, risk and change makes it entirely consistent with principles of adaptive management. Adaptive management is based on the recognition that in a complex and rapidly changing situation there can never be sufficient information to reach a settled "optimum" decision. Hence, the emphasis should be on flexible planning backed by strong monitoring and information management systems that allow constant adaptation and the upgrading of plans and activities.

¹ A *strategy* is a medium to long-term planning framework within which specific activities are described and plans implemented. Over time, and effective strategy should lead to a vision being achieved.

² A *vision* is a concise description of a desired future state. *Visioning* is the process of developing a vision.

³ A *scenario* is a plausible and internally-consistent description of a possible future situation, a story about the way an area or domain of interest might turn out at some specified time in the future. *Scenario building or development* is the process of developing scenarios.

Strategy development based on visioning and scenario building is also consistent with a project cycle management (PCM)⁴ approach to IUWM and, more specifically, to the emphasis that PCM puts on social and institutional learning.

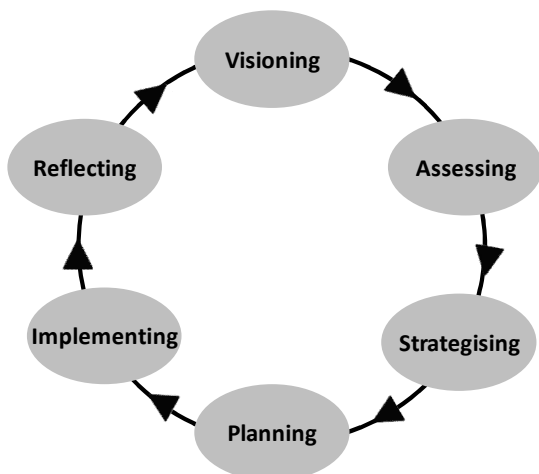


Figure 2. An example of an IUWM project management cycle

Getting started

Visioning, scenario building and a water resource assessment are pre-requisites. Strategy development based on visioning and scenario building should only start once initial visioning, scenario building and a water resource assessment (e.g. using a RIDA framework⁵) have been completed. Ideally, these activities will also have included the establishment of the stakeholder platform⁶ or learning alliance⁷ that will take a central role in strategy development.

Facilitation. The approach to strategy development described here requires the active support of a facilitator or a facilitation team over a period of many months. Ideally, facilitators will have a good knowledge of the water sector and training and experience in the use of a whole range of facilitation techniques.

Specialist interdisciplinary support is usually needed to prepare materials for strategy development meetings and workshops. These materials should include reviews, descriptions and rigorous assessments of potential strategy options and opportunities. Rather than taking responsibility strategy development, the role of specialists is to

⁴ *Project cycle management* is based on the concept that a project or programme proceeds through evolutionary stages that should be managed as a process rather than a series of one-off events.

⁵ The Resources, Infrastructure, Demand/Access (RIDA) is used to structure analysis and discussion relating to both the supply and demand sides of a water services delivery system.

⁶ A *stakeholder platform* provides is a forum for stakeholder dialogue, conflict resolution and integrated planning. In a practical sense, a stakeholder platform usually takes the form of a committee that meets routinely.

⁷ A *learning alliance* is a group of individuals or organisations with a shared interest in innovation and the scaling-up of innovation, in a topic of mutual interest

Box 1. Lodz vision 2038

The city's resources management is based on an efficient and integrated system ensuring access to information for all. Investors and authorities respect ecological properties of land and waters. Infrastructure serves the functions and requirements of an environmentally secure city, is reliable, meets the needs of all the city's population and assures good status of aquatic ecosystems. Green areas - river valleys along open corridors – provide space for recreation and are the 'green lungs' of Lodz. The application of ecological biotechnologies and the population's common and in-depth ecological awareness contributes to exceptional quality of life. Our city is a leading centre for innovation, education and implementation in Poland.

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support stakeholder dialogue and, more specifically, to help stakeholders understand the potential implications and tradeoffs associated with different strategy options..

High-level support. Ideally, to have credibility and legitimacy, a strategy development process should involve and/or have the active support of democratically-elected representatives.

Marginalised groups. Similar to above, to have credibility and legitimacy, the learning alliance or stakeholder platform should be gender aware and proactive in involving or representing marginalised social groups.

Table 1. Lodz scenario external factors for 2038⁸

More important, more uncertain external factors	Lower and upper States
Macro-economic status	A. Current GDP (Euro 4,800)
	B. GDP that is the same or above the EU average (Euro 22,860)
Macro water governance framework	C. Current fragmented approach. Low-level political support for IUW governance
	D. IUW governance that has political support at all levels and leads to effective implementation of the WFD

Methodology

The following set of generic steps can be used to develop an overall strategy that is based on visioning and scenario building. The exact sequence of steps, number of iterations and the time that might be needed will depend on the context. If the process is to produce a robust and adaptable strategy, it is crucial that each step involves stakeholder dialogue that is

⁸ The Lodz outline scenarios are the combinations of the lower and upper states of the external factors (e.g. I = AC, II = AD, III = BC and IV = BD)

structured around achievement of the common vision under the whole range of scenarios.

Step 1: Identify components of an overall strategy: As preparation for and/or during a learning alliance meeting, brainstorm and list practical options and opportunities that could become components of an overall strategy that has potential to achieve the common vision. Suggestions for these strategy components are likely to originate from many sources. Some will be based on existing practices others might be entirely new to the stakeholders in the area of interest.

Step 2: Evaluate each strategy component: Assess the social, technical, political, economic and environmental viability and acceptability of each strategy component especially those that are new to the stakeholders. This assessment is likely to be carried out by specialists working with stakeholders who may have a particular interest in some or all of the strategy components. The assessment should use a range of techniques (including modeling) but, regardless of the technique, specific consideration should be given to whether the strategy component is well matched to the challenges and context of the area of interest. By the end of this step, a range of strategy components should have been rigorously assessed and either rejected or adapted to the specific context of the area of interest.

Step 3: Identify specific risks and constraints: For each strategy component selected and adapted in Step 2, identify the risks or constraints that could influence whether or not the strategy component has the potential to achieve the vision (or parts of the vision). In most cases, these factors will already have been identified and ranked as one step of the scenario building process. If so, this "scenario building" list of factors can be used as a starting point for carrying out this step. Finally, check whether there are risks that certain strategy components, if implemented, will impact negatively on the viability of other strategy components or on water users or the environment outside the area of interest. At the same time, attention should also be given to identifying whether particular synergies could result from implementing certain sets of strategy components as part of an overall strategy. By the end of this step, additional strategy components will have been rejected, synergies between some strategy components will have been identified and the potential impacts of strategy components outside the area of interest will have been elaborated.

Step 4: Link strategy components to relevant parts of the vision. Using a disaggregated form of the vision as a starting point, link and group strategy components to relevant parts of the vision. Table 2 is an example of such a table.

Step 5: Evaluate the utility of strategy components against the disaggregated vision under all scenarios. For each of part of the disaggregated vision, assess whether the linked group of strategy components has the potential to achieve this part of the vision under all the scenarios. Modelling and other analytical techniques can support this process. The result of this

analysis, which may take some time, should be a summary table similar Table 2.

Step 6: Refine strategy components. If analysis indicates that groups of strategy components are not able to achieve parts of the vision under all scenarios, try refining the group of strategy components or possibly adding strategy that are linked specifically to achieving the part of the vision under certain scenarios. If this fails, there are two possible courses of action. First, to revise the part of the vision to a form that can be achieved. Second, to proceed in full knowledge that the vision or parts of the vision will not be achieved if some scenarios pan out to be good descriptions of the future. This second "gamblers" option is not recommended.

Step 7: Combine strategy elements to produce versions of an overall strategy. By combining different combinations of strategy elements, create a number of overall strategies. Continuously check that these overall strategies have the potential to achieve the vision or revised vision. Particular attention should be given in this step to the financial and other resources that will be needed and whether effective implementation of an overall strategy will necessitate major changes in institutional arrangements and governance systems. Particular attention should also be given to identifying and, where possible quantifying, whether a strategy is pro-poor and at the very least gender neutral. By the end of this step a number of different overall strategies will have been outlined and the relative costs, benefits, merits and tradeoffs of the strategies will have been tabulated.

Step 8: Select and refine an overall strategy: Selection of the overall strategy should be based on stakeholder dialogue and, if appropriate, a wider consultative process. During this step, the details of the overall strategy need to be elaborated and particular attention needs to be given to issues related to environmental, institutional and social sustainability and whether life-cycle costs have covered adequately. Finally, particular attention should be given to an integrity assessment aimed at ensuring that the strategy includes measures aimed at ensuring good value for money and minimising the risks of benefits being captured by elites or other social groups.

Step 9: Start the planning process. As the planning progress progresses, new people and organisations will become involved sometimes as part of a tendering process. As a result, new ideas may develop and flaws may be identified in the overall strategy. This may result in a requirement for some steps of the strategy development process to be repeated.

Challenges and tensions

A successful strategy development process builds consensus amongst stakeholders, develops a robust and adaptable strategy and secures the support of politicians, the media and civil society. Although the concept of strategy development based on visioning and scenario building is simple, a number of challenges and tensions often arise when using the technique. These include:

Vision elements	Strategy components	Scenarios			
		I	II	III	IV
The city's water resources management is based on an efficient and integrated planning system.....	<ul style="list-style-type: none"> - Alignment of plans across different sectors (within context of an overall spatial development plan) - Institutional collaboration strengthened - IUWM planning processes and management systems adopted - Emphasis on managing demand (and thereby improving efficiency) 	x	√	X	√
.....ensuring access to information for all.	<ul style="list-style-type: none"> - Policy of free and open access to information adopted - Common information is set and a team to manage, update and quality control is established with a secure line of funding - Information made available in a form that can be understood by non-specialists 	x	√	?	√
Investors and authorities respect ecological properties of land and waters	<ul style="list-style-type: none"> - Environment impact assessments included in the IUWM planning process - Investment plans evaluated and approved against environmental criteria - Best management practices are encouraged as an integral part of planning and implementation processes 	x	√	?	√
Infrastructure serves the functions and requirements of an environmentally secure city.....	<ul style="list-style-type: none"> - Existing infrastructure upgraded to meet current and future demands - Sustainable use of available water resources by protecting sources (quantity and quality), developing alternative sources, managing demand etc - Adoption of polluter pays principles - Challenges linked to peak oil, climate change, etc considered in IUWM strategy - Alignment of with urban plans that reduce urban sprawl (and therefore demand for urban transport other than walking and biking), increase potential of urban gardening etc. 	x	√	?	√
.....is reliable	<ul style="list-style-type: none"> - O&M systems that are well resourced - Peoples' awareness built to reduce pollution, vandalism etc - Infrastructure that can perform even during extreme events (floods) 	?	√	√	√
.....meets the needs of all the city's population.....	<ul style="list-style-type: none"> - Planning takes account of social inclusion issues of the poor, the old, the infirmed etc - Targeting of services or subsidies - Adequate representation within fora and mechanisms to hear complaints and failures - Monitoring of impacts of projects and programmes on marginalized - IUWM strategy aligned where appropriate to unemployment (groundwork) initiatives 	x	√	X	√
..... and assures good status of aquatic eco-systems.	<ul style="list-style-type: none"> - Mainstreaming ecological principles into decision-making - Managing ecological flows and groundwater levels (maximizing infiltration) - Managing quality and enforcing regulations - Separating stormwater and sewage flows (ensure treatment) 	x	√	X	√
Green areas - river valleys along open corridors – provide space for recreation.....	<ul style="list-style-type: none"> - Protection within land use plans, including identification of what recreation is permissible - Promoting novel partnerships including appropriate Community (schools, youth etc) private and public management. Urban Landcare partnerships. 	?	√	√	√
.... and are the "green lungs" of Lodz.	<ul style="list-style-type: none"> - Air quality monitoring system linked to IUWM monitoring systems - Alignment of corridor policy with traffic policy, policy relating to industrial emissions etc. 	x	√	X	√
The application of ecological biotechnologies and in-depth ecological awareness contributes to exceptional quality of life	<ul style="list-style-type: none"> - Carefully-targeted environmental awareness campaigns - Adult education programmes - Education in schools - Establishment of and support for urban "landcare" groups, wildlife societies etc 	?	√	?	√
Our city is a leading centre for innovation, education and implementation in Poland	<ul style="list-style-type: none"> - Economic policy (including fiscal incentives) that is aligned with IUWM strategy and vice versa - Ensure cross-party support so that long-term policies are created and supported - Aim to create a virtuous circle by identifying and supporting early and high-profile successes (i.e.using "low-hanging fruit" principle) 	x	√	X	√

Table 2. Provisional assessment of Lodz strategy components (April 2008)

Lack of information. In most cases, there is insufficient good-quality information to rigorously assess all the components of an overall strategy. Collecting additional information takes time and money that is rarely available. Use of adaptive management principles can help overcome this problem but even so judgements will still have to be made on the basis of expert opinion. Hence there is often a tension between those who propose more studies and those who want to move ahead quickly.

Evidence-based decision-making. Strategy development in the water sector is often based on accepted wisdom, myths or folklore. The challenge in such situations is to encourage stakeholders to put their faith in evidence rather than intuition.

Internalising external factors. Regardless of the approach to strategy development, important and uncertain factors outside the immediate control of stakeholders always have a high potential to derail strategies. The challenge is therefore for stakeholders, as part of the overall strategy, to seek to increase their level of influence or control over these factors.

Spatial and temporal scales. It is rare for a strategy in the water sector to have no negative tradeoffs at all. Or put another way, any changes in the way water is allocated or managed tends to result in winners and losers particularly if a holistic multi-scalar approach is taken to considering supply and demand. The challenge is to identify and minimise these tradeoffs.

Acceptable levels of risk. The methodology described here ensures that risk and uncertainty are considered during the strategy development process. However, this does not mean that the resulting strategies are devoid of risk. Many of the decisions that have to be taken during the strategy development process involve decisions on acceptable levels of risk. These decisions are invariably political in nature and, as such, the challenge is to make sure that a democratic process is followed in reaching decisions.

Special interest groups. The method described encourages the active involvement of special interest groups. However, the involvement of these groups can lead to tensions because they have a habit of disrupting IUWM processes especially if they feel that their topic of interest is not being given sufficient attention.

The Lodz Example

Provisional outputs from the ongoing SWITCH-supported Lodz strategy development process are presented as examples in this briefing note. The vision that was produced by the Lodz learning alliance is presented in Box 1 and the main elements of the Lodz scenarios are presented in Table 1. Table 2 summarises a provisional assessment of strategy components against a disaggregated form of the vision. This indicates that the strategy components as currently listed do not have the potential to achieve the vision or even parts of the vision under the four scenarios. The overall challenge facing the Lodz learning alliance is therefore to identify additional strategy components

or to revise the common vision. A particular challenge highlighted by this process is the fact that adoption of IUWM is considered to be an important part of the vision but the macro water governance framework is seen as one of the most important and most uncertain factors external factors over which the learning alliance has no control. This indicates clearly that the Lodz learning alliance cannot produce a robust adaptable strategy that will introduce IUWM successfully to Lodz under all scenarios unless the city increases its influence over or reduces the importance of macro water governance factors.

Tips and tricks

- For assessment of groups of strategy components against parts of the vision to be rigorous, it is important that the vision contains specific numerical targets or acceptable limits for relevant measurable parameters.
- The dividing line between strategy development and planning can be rather fuzzy. It is important in strategy development not to get drawn into the level of detail that is required in planning.
- Simple flexible modelling systems (e.g Bayesian Networks) can improve the quality of the assessment of strategy components.
- It is usually best to avoid including strategy components in a vision (e.g. the vision is to introduce IUWM by 2038). Ideally, a vision should focus on outcomes and strategy components on achievement of these outcomes. This reduces the risk of circular arguments.
- It is absolutely crucial that some scepticism is used when assessing strategy components. The approach to strategy development described here is the antithesis of a “one size fits all” approach that is preferred by many organisations. As such, the initial view taken by assessors should be that strategy components will not work in every technical and societal setting unless proven otherwise.
- Finally, it usually takes some time for potential users to appreciate the relative benefits of the approach described. Resistance to change from more traditional methodologies can be expected.

References and websites

www.project.empowers.info/page/120

The Empowers project adapted and evaluated an approach to strategy development based on visioning and scenario building. Guidelines for using this methodology can be found here.

For more information please contact: John Butterworth, IRC International Water and Sanitation Centre (butterworth@irc.nl) who coordinates the learning alliance workpackage for SWITCH, or Charles Batchelor (batchelor@irc.nl) and Patrick Moriarty (moriarty@irc.nl) who adapted this visioning and scenario-based planning methodology.

SWITCH (Sustainable Water Management Improves Tomorrow's Cities' Health) is a research partnership supported by the European Community (Framework 6 Programme) and its partners www.switchurbanwater.eu/learningalliances

