

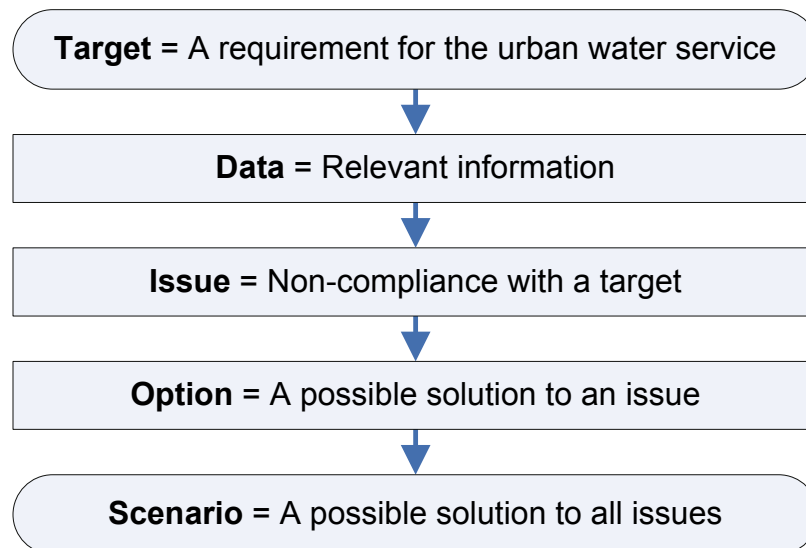


December 2008

Information sheet 3

Identifying Integrated Water Cycle Management issues and developing solutions

The main components



What is an IWCM issue?

The Integrated Water Cycle Management (IWCM) process is about identifying solutions to urban water service problems. In this process, problems are referred to as IWCM 'issues'. Similarly, solutions are referred to as 'options' when single IWCM issues are being considered. When several 'options' are bundled together to address all the IWCM identified 'issues', this is referred to as a 'scenario'.

Urban water service issues are defined as a non-compliance with any urban water service target. These include licences and agreed levels of service, either now or likely to arise during the next 30 years. Available information is used to identify these non-compliances. Identifying appropriate options and developing workable scenarios, relies on the clear definition and understanding of issues.



Formal urban water service targets

A local water utility's targets may be standards, legislation, legal contracts, accepted best practice business planning or agreed levels of service. Some examples of targets are:

- water extraction licence conditions
- waste discharge licence conditions
- Occupational Health and Safety conditions
- user pays pricing
- third party contracts (trade waste agreements)
- Best Practice Management requirements
- asset management planning
- performance monitoring requirements
- frequency of service disruption
- product quality and public safety.

Urban water service providers and their communities should carefully consider which urban water service targets (including levels of service) are relevant, as non-compliances determine the IWCM issues which need to be addressed under this process.

How to progress from IWCM issues to scenarios

The IWCM process steps are:

- define urban water service targets
- use available information and data to confirm compliance
- use non-compliances to define IWCM issues
- remove issues which will be addressed by present and committed urban water service actions by developing the 'business as usual' scenario
- refer non urban water service issues to relevant authorities
- agree and list remaining issues not addressed by the 'business as usual' scenario
- list all the technically feasible options that could address the remaining issues
- use the Project Reference Group (PRG) to shortlist all these options by removing options which are demonstrably non competitive
- combine sufficient short-listed options into scenarios to address the remaining issues
- evaluate these scenarios using social, environmental and economic criteria to determine which provides the best value for money (refer to Information Sheet 6)

If all the IWCM issues are addressed by the 'business as usual' scenario, no further scenarios are required. Any unaddressed issues may be dealt with by a 'simplified' scenario, if no significant capital works are required within the next 10 years. Full scenarios referred to as 'traditional' or 'integrated' must be developed if significant capital works are required within 10 years.

Moving from issues to scenarios:

Step 1. Determine IWCM issues

Use existing data and information to confirm compliance of the urban water service with its targets. If data is not available to do this, the issue becomes one of inadequate data. This issue should be addressed by improving future data collection. Once the required data is collected, it is used to assess compliance with the targets when the next IWCM is undertaken.

Step 2. Remove issues that will be addressed by existing or committed actions, or are the responsibility of other agencies

Although several issues may exist at the time of the IWCM evaluation, the utility may already have actions or formally adopted procedures in place to address them. The IWCM process acknowledges these procedures through development of the 'business as usual' scenario (previously known as the 'Base Case' or 'Do Nothing New'). Additionally, some issues may be clearly the responsibility of others and should be referred to the relevant authorities.

Step 3. Identify solution scenarios

The remaining issues are addressed by developing scenarios.

- a. When no significant capital works are required within 10 years an option is to develop a scenario known as a 'simplified' scenario, which results in a Simplified Strategy for the utility.
- b. When significant capital works are required within 10 years then issues can be addressed by looking for commonality across issues by developing 'integrated' scenarios or independently by developing a 'traditional' scenario. The 'traditional' scenario is optional. Both scenario types result in a Detailed Strategy for the utility.

To be valid IWCM scenarios, all issues must be recognised and solutions provided. A Detailed Strategy must have at least two 'integrated' scenarios.

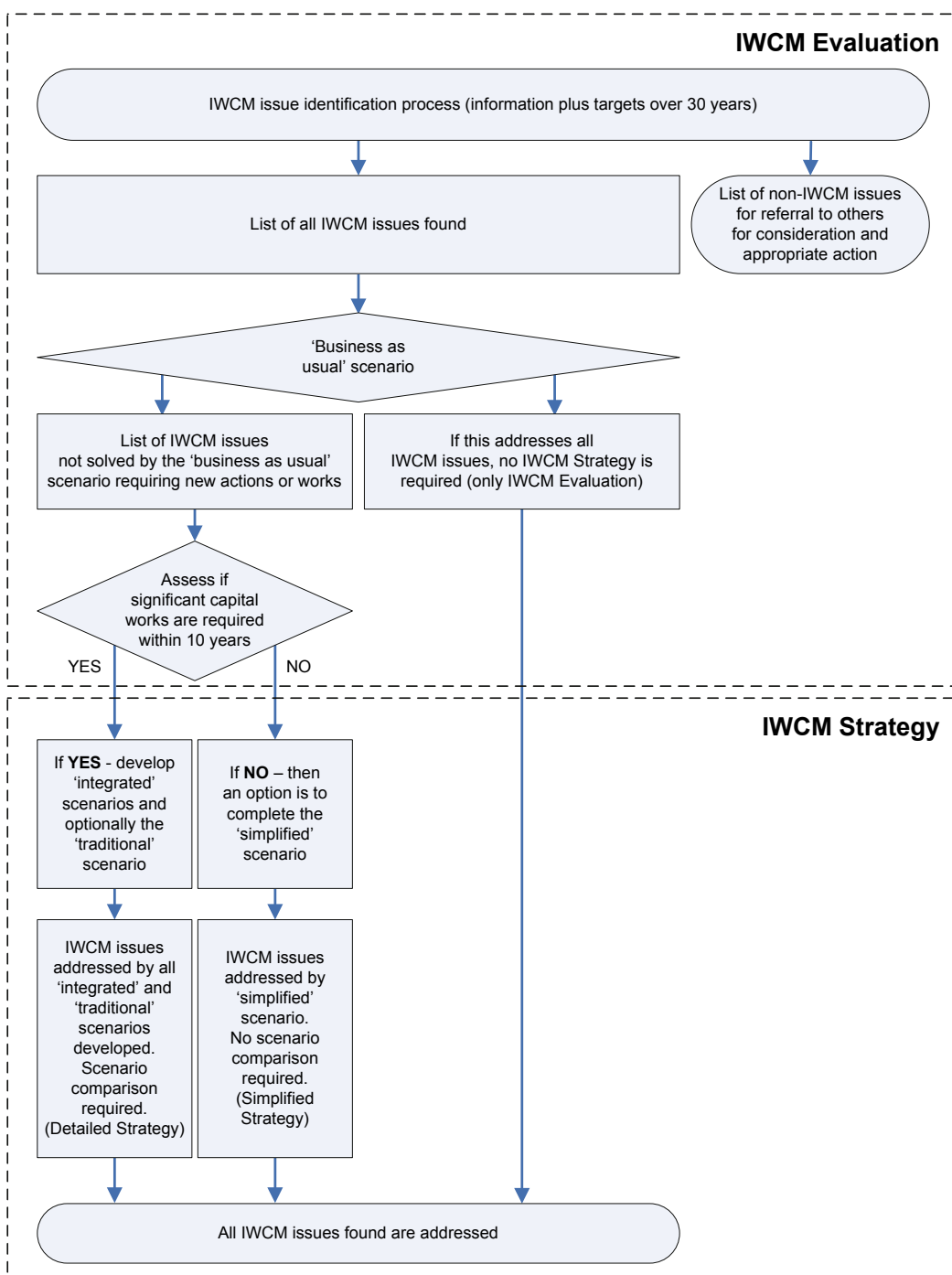
Step 4. Evaluation and comparison of scenarios

A Triple Bottom Line (TBL) evaluation of each scenario developed is required to determine the IWCM scenario which provides the 'best value for money' solution. The evaluation process is outlined on Information Sheet 6 and involves comparing the scenarios on the basis of their social, environmental and economic impacts. The resulting indirect benefits from a scenario could include improved employment, recreational amenity and community pride.

New opportunities to define the urban water service

The IWCM process is about cost-effectively addressing urban water service issues, as defined by non-compliance against targets. This provides an opportunity for the community to redefine what it expects of its urban water service and modify some of these targets, including agreed levels of service and the associated cost of providing the water services. Any assessment of targets should be considered at the beginning of the IWCM process, when targets and issues are initially discussed. Reassessment of targets can be undertaken during the IWCM process, especially if expected costs are considered to be too high.

Issue identification and solution development



Further information

For further information, or to discuss any aspect of the Integrated Water Cycle Management process, please contact your nearest regional Water Utility Officer of the Department of Water and Energy. Contact details can be found on the 'Contact Us' page of www.dwe.nsw.gov.au. For more general IWCM inquiries or information email watercycle@dwe.nsw.gov.au.

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