



2nd IWA Leading-Edge Conference & Exhibition on **Strategic Asset Management**

Research Needs for (Strategic) Asset Management

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LESAM 2007 – Lisbon 17-19 October 2007



Why these 7 Authors?

- K. Rohrhofer, Operation Management, R&D, Austria
- E. Cabrera, R&D, University Valencia, Spain
- F. Cate, Consultant, R&D, Austria
- Th. Derntl, Consultant, Germany
- P. Gortan, Operation and Management, R&D, Austria
- A. Jovani, Regulator, Albania
- M. Olšínská, Operator and Management, Slovakia

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Why these 7 Authors?

Experts from different institutions / institutes / companies:

- Operators & Managers of small and large Water and Wastewater Systems, Regulators, Research & Technology Transfer Organisations, Consultants
- Many involved in development of national, European, international guidelines / rules / standards for the Management & Services of Water and Wastewater Utilities

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Scope of Asset Management

- In this paper: AM/ SAM only in the field of Water and Wastewater
- What are ASSETS, only buildings, equipment, tools , pipes, machinery?
- Or: also natural resources, human resources, financial resources?
- If considering all these subjects ⇒

Asset Management = Utility Management

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Asset Management reality

- All Water & Wastewater utilities manage their assets to some extent.
- Many don't realize that they are practicing Asset Management
- E.g.: they have no written guidelines about their Asset Management (e.g. common in continental Europe)

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What is Asset Management?

**E.g. according to the EPA Handbook
(2003):**

- Asset Management is a planning process
 - to get most volume from each asset
 - to have financial resources to maintain / rehabilitate sustainably assets
- Planning to reduce costs while increasing efficiency and reliability of assets

But several other definitions are used!

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State of the Art of (S)AM:

H. Allegre (2006):

Hundreds of definitions, some of which are:

- AM is a business process and decision-support framework
- AM is a planning process
- AM is an information based process
- Asset Management = Utility Management

(Sources: see paper)

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State of the Art of (S)AM:

References on Asset Management (examples):

- Australia (Young, Vincent, 2006)
- Canada (Vanier, Rahman, 2004)
- New Zealand (IIMM, 2006)
- USA (Haskins, 2006)

In ISO Water and Wastewater Service Standards (ISO 24510 + 24511 + 24512), regarding SAM only few hints are given in this ISO series)

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Starting Point for Common Understanding

- Several different understandings and definitions of AM/SAM
- Serious discussion/research/development of guidelines need answers to these questions:
 - **Who knows what is AM/SAM?**
 - Those who talk about it?
 - Those, who do it and know it, but don't talk about it?
 - Those, who do it, but are not aware that they do it?
 - Those that do it and talk about it?

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Work in the field

- Input from all groups is necessary
- Go into the field, to the:
 - operators
 - managers
 - owners
 - funding organisations (governments, donors, investors) –
 - and very important
 - users who pay for the services

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Taxonomy of Asset Management

- Gather existing information, documents
- Find common contents
- Put some kind of order in AM/SAM
⇒ „Taxonomy“ of Asset Management
(orders, families and species of Asset Management)
⇒ Survey/“Questionnaire”

For Survey: Questions to Utilities

- What are your assets / is their value?
- What management practices are in place?
- What kind of Asset Management (AM) is in place?
- What does AM mean to you?
- What are the benefits of AM?
- What could be the benefits of AM?
- What are the costs of AM?
- What is the alternative to AM?

Scope of Survey / Research



- Adapted to understanding of those being surveyed – tailored to each group, e.g.
 - large utilities – small utilities
 - „rich“ and „non-rich“ countries
- World-wide Projects (ideally)
- Regional Projects (probably)
- Who: Team of Experts in (S)AM from Utilities / Operators, Research Institutes, Universities, Consultants
- With involvement of financial players + regional associations (e.g. EWA, AWWA)

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Common „Philosophy“

- Diverse situations of utilities
⇒ tailor made guideline
for AM / SAM for each utility
- Worldwide / continent-wide
General Guideline / Standard only as a base
for tailor made guideline for each utility
- Different approaches must have a place
within a common understanding of AM/SAM
⇒ „Global Manifest on AM/SAM“

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Explanatory Documentation

- These new, “global” documents (Manifest, Glossary) have to be seen in the light of the many existing documents, standards, guidelines, etc.
 - The relationship between these “global” documents and the existing, regional or national documents should be made transparent
- ⇒ **SAM Explanatory Documentation.**

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Common Terminology / Glossary

- Common terminology,
limited to important terms
- At least: “translation guide” for those using
different words for the same thing
- SAM International Glossary

however

- Definitions cannot be a goal for their own
sake but rather instruments for the
implementation of AM/SAM

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Results of this Research Strategy

- Common AS/SAM understanding and terminology
 - can be used to
- formulate policies on AS/SAM
- formulate and implement AS/SAM strategies
- develop standards and guidelines
- support education and training
-

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Guidance and Standards



- enormous increase of interest and development of methodologies is evident
- increasing need for guidance and standards
- a result of the intended research works: identify the necessary contents and depth of detail for such guidance documents
- consideration about the level on which such documents should be developed: national, regional (e.g. CEN, EWA, AWWA) or international (e.g. ISO, IWA).
- role of SAM in regulation of utilities will probably increase
- SAM may be included both in voluntary and in legal regulations
- SAM may be required by important donor organizations such as the World Bank, Regional Development Banks / Institutions, but also by national funding agencies.

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Conclusions

Research needed

(Rohrhofer, et al. 2007)

General Guidelines /Standards needed

(Rohrhofer, et al. 2007)

Tailor-made solutions for utilities needed

(Alegre, et al. 2006; Rohrhofer 2006)

Step by step implementation in the utilities needed,

assisted by national associations / consultants

(Rohrhofer, et al. 2007)



General Water Consult Corp.

GWCC

Member of austrianwater



International
Water Association

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Research focal point

- The authors of this paper are willing to form a nucleus for the research needed
- Interested persons / organizations may contact us by email:

assetmanagement@gwcc.at

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Thank you for your attention....



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