

Leading-Edge Asset Management

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

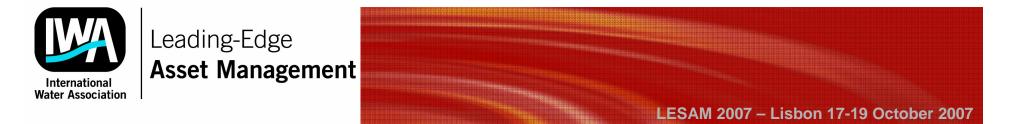
#### Urban water networks, what is at stake? (engineering challenges)

Paul Conroy, Sveinung Sægrov, Dana Vanier et al

### Context

Asset Management and Engineering Developments

- Context
  - People
  - Processes
  - Systems
  - Avoid other Workshop topics
- Gaps
  - Institutional Building
  - Legal
  - Technical \*
  - Relationship to Environmental Bodies \*
  - Life Cycle Economics \*



#### \*\*\*\* Life Cycle Costs of Maintenance and Repairs

- Benefit cost analysis
- Alternative methods and procedures
- Proactive reactive
- How much and when
- CAPex or Opex?
- When spent and how?

### Opportunities

- Research
- Collaboration
- International Water Association
- Clearinghouse of shared data

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- \*\*\*\* Blockages
  - Where
  - Why
  - Random?
  - AWWARF
  - Patterns

### Opportunities

- Research
- Collaboration
- Clearinghouse of shared data



- \*\*\* Water and Wastewater system Performance modelling
  - Performance
  - Monitoring
  - Condition
  - W modelling easier
  - WW More difficult
  - W asset poorer data
  - WW assets richer
- Opportunities
  - Research



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#### \*\*\* Water is Sexy

- Lack of marketing
- \$3000 a cubic meter
- Pay for cell phone

### Opportunities

- Marketing
- Education
- Promotion to youth
- Promotion to citizens



#### \*\*\* Data Clearinghouse

- No case studies
- No good data

### Opportunities

- Collaboration
- LESAM SC



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#### \*\*\* Deterioration modelling

- W asset poorer data
- WW assets richer
- WW Not repeatable

### Opportunities

- Research
- Collaboration
- Clearinghouse of shared data



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#### \*\*\* Modelling for Small and Medium Utilities

- Poor Useage of data
- Lack of Data

### Opportunities

- Research
  - Scaleable models
  - Guidelines
  - Leadership



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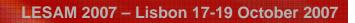
#### \*\* Grease Traps

- Not research
- Not sexy
- Many municipalities around world

### Opportunities

- Research
- Collaboration
- Clearinghouse of shared data





#### \*\*\* State of Asset Management

- No National reports or not consistent
- Many municipalities around world

### Opportunities

- Collaboration
- Clearinghouse of shared data



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#### \*\* Flushing

- Benefit cost analysis
- Alternative methods and procedures
- Proactive reactive
- How much and when
- Study of Biofilms

### Opportunities

- Collaboration
- Clearinghouse of shared data



#### \*\* Biofilms

- Good
- Bad
- Stable
- Deposits Versus Biofilms (coliforms)

### Opportunities

- Research



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### \*\* Robotic imaging

- \*\*\*Water large trunk (boat?)
- \*\* Wastewater large trunk (boat?)
- \* Wastewater domestic connections

### Opportunities

- Research
- Development
- Innovation



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- \*\* Global collaboration
  - Islands of technology

### Opportunities

- Collaboration
- LESAM
- Global Water network...



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### \* Comparisons to Oil and Gas Industry

- Technologies
- Techniques

### Opportunities

- Research
- Collaboration
- Techniques useable



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