Intelligent Water Systems Research at WE&RF

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Asset Management & Intelligent Water Systems

WE&RF Intelligent Water Systems Research

Identify and evaluate the application experience of advanced sensing technologies and networks used for compliance strategies and improved efficiency of collection and treatment operations and sewershed management.

Develop and maximize the capacity to utilize the vast amount of data generated to support the transition to the utility of the future and to improve receiving water quality and ecosystem health.

1. Other industries can provide a wealth of knowledge that can be transferred to the water sector
2. The future workforce will rely on increased use of data, therefore, skills, positions, and organizational structure will be different.
3. Sewershed wide data networks will become more prevalent
4. Advances in “smart” linings for pipes

WE&RF Intelligent Water Systems Research

Online Compendium of Sensors and Monitors and their Use in the Global Water Industry

- Identified and documented information on types, costs, case studies, and deployment of commercially available on-line sensors
- Evaluated case studies to identify and document drivers, barriers, and issues encountered

Integrating Management of Sensor Data for a Real-time Decision Making and Response System

- Perform research on “best performing” sensor technologies currently available at pilot or field-scale
- Provide guidance and decision support tool for application and use of these sensor technologies at different size utilities

Leveraging Other Industries – Big Data Management

1. Identify best practices in water sector utilities and other industries for managing and processing large data sets
2. Analysis of business drivers (technology, regulations, international trends, industrial relations, culture, leadership needs); internal and external influences and their interaction etc.

Survey (conducted by SWAN)

- Utilities
- Water industry organizations
- Other industries that use big data analytics (telecom, electrical, financial, retail)
- Large IOT firms

Phase 2 – will use survey results to prepare a road map for the Sewershed Sensor Network project

Designing Sensor Networks and Locations on an Urban Sewershed Scale

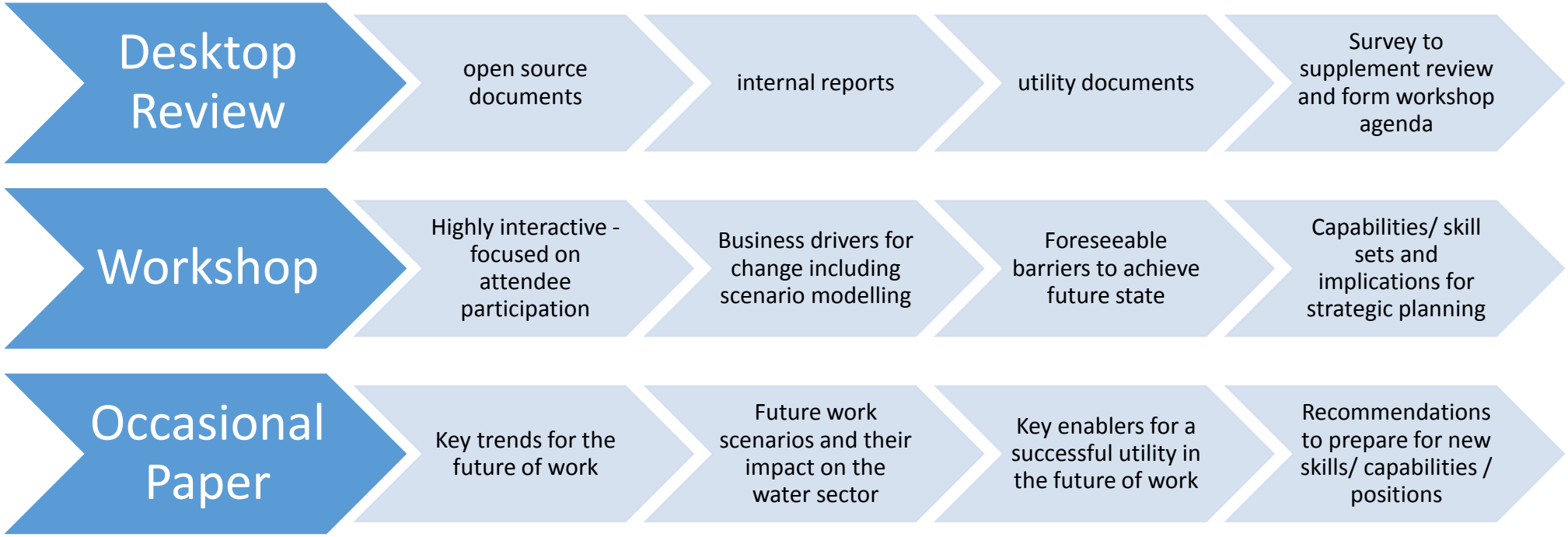
The project is designed to identify

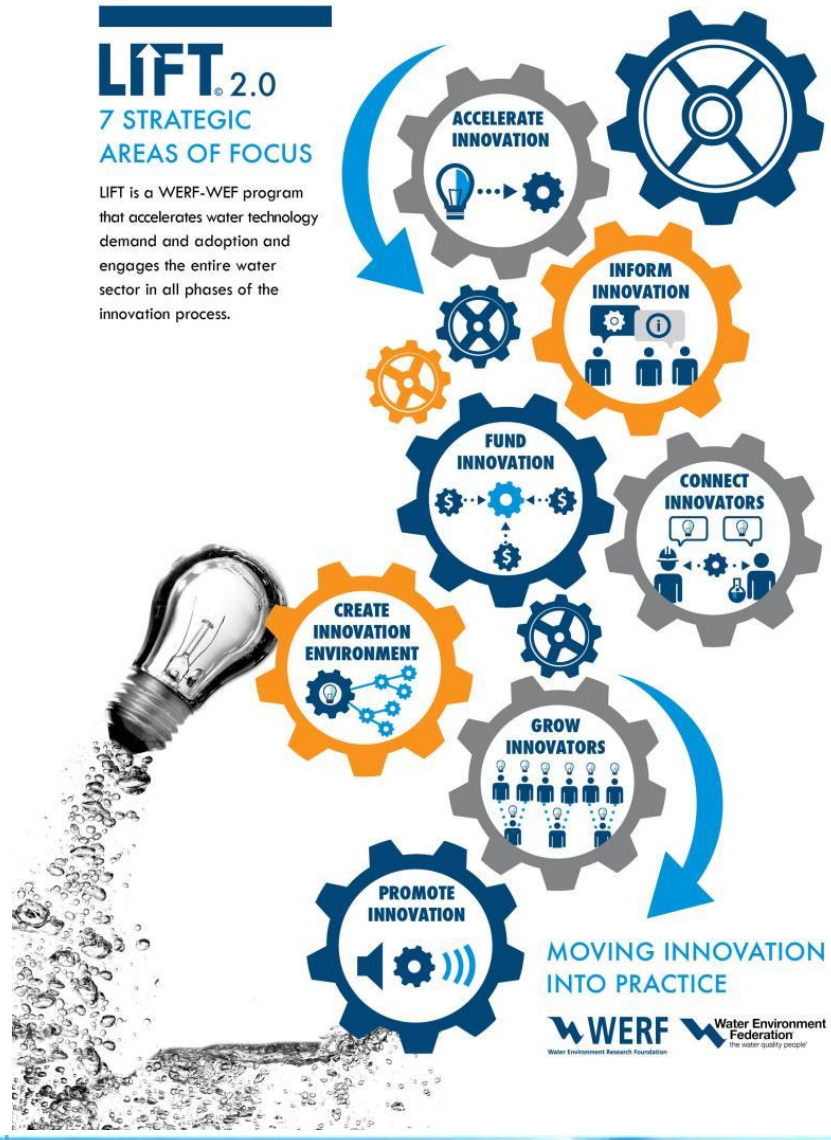
- reliable advanced sensing technologies and networks within sewersheds.
- network implementation issues to allow utilities to understand costs and benefits associated with using sensing technologies.
- opportunities to implement real-time sensor networks to guide decision-making for system operation and capital planning.

Phase 2 will be combined with the results derived from the Big Data/ Data analytics project

Workforce Skills of the Future

Key workforce trends and future skills required in the water sector over a long-term horizon (20+ years) by identifying key global drivers for change and success, customer trends and future of work





LIFT
Leaders Innovation Forum for Technology

Program Components

1. Technology Evaluation Program
2. People and Policy
3. Communication
4. 12 Utility Focus Groups (>400 members)

Thank You

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