

# Real Time Leak Detection - Integrating New Technologies into the Business

October 2017

## AMWA Executive Management Conference

David Price | CTO & AVP For Asset Management

BUILDING A WORLD OF DIFFERENCE®



# Thoughts to Consider

1. Some Principles to Guide Solution Strategy

3. A New Way to Approach Solution Implementation on Architecture

2. A Whistle Stop Tour of Solutions

What is “Real Time” Leak Detection 😊 ?

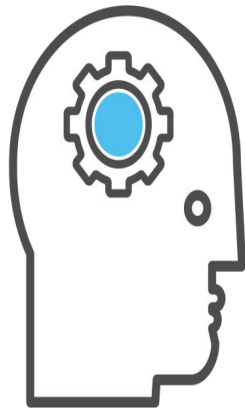
Whatever “it” is **cannot** be delivered or executed through a single solution

Therefore...

RT Leak Detection can be a catalyst for a wider change in perspective

Capabilities Approach Architecture

# Key Principles in an Improved Detection Blueprint



Thought Process

## Speed



- Detection to Action
  - Micro to Macro
- Accura



- Measurement Data
- Asset Data

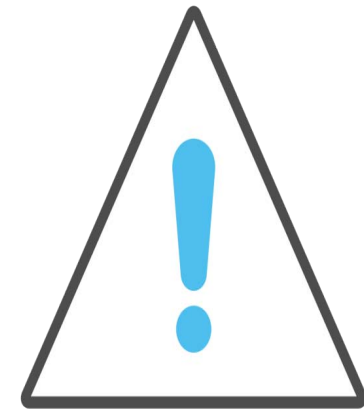
## Granula




- Logical Location
  - Physical Location
- Time



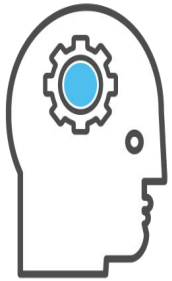
- Response Time Horizon



Risk

*However...with the proliferation of point solutions, it is very easy to get lost in the sheer number of contributing solutions.* <sup>3</sup> 

# Contributing Solutions (Current and Evolving)



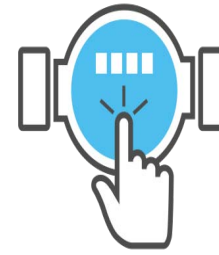
Thought Process



Asset Information Management



SCADA



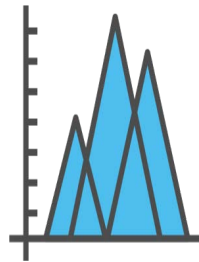
AMI



Billing



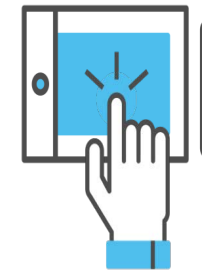
Pervasive Image Analysis



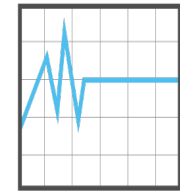
Next Generation Risk Analysis and Prioritization



Vehicle-Based Data Collection



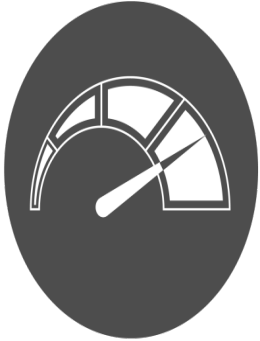
Next Generation Smart Field Data Collection



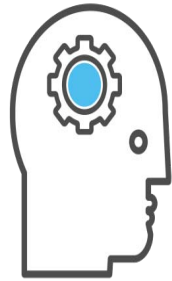
Next Generation System Monitoring

# Contributing Solutions

Speed



- Detection to Action
- Micro to Macro



Thought Process



SCADA



AMI



Pervasive Image Analysis



Workforce Management



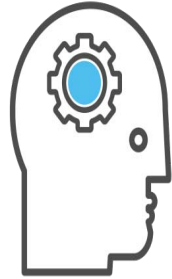
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# Contributing Solutions

Granula



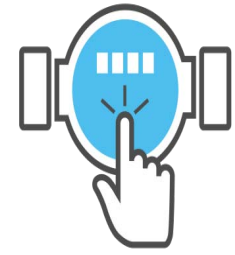
- Logical Location
- Physical Location



Thought Process



SCADA



AMI



Asset Information Management



Pervasive Image Analysis



Workforce Management



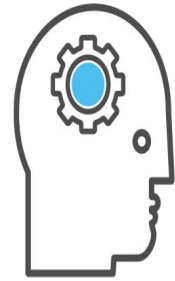
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# Contributing Solutions

Accura



- Measurement Data
- Asset Data



Thought Process



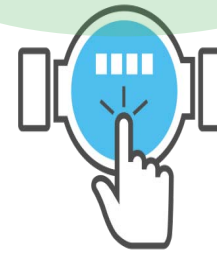
Pervasive Image Analysis



Billing



SCADA



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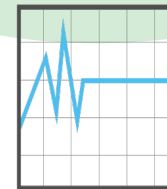
Asset Information Management



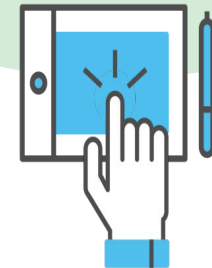
Vehicle-Based Data Collection



Workforce Management

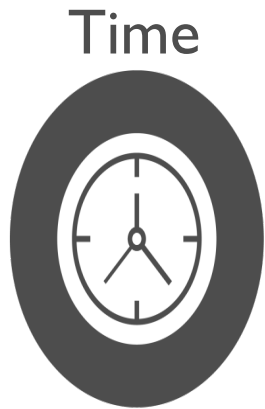


Next Generation System Monitoring

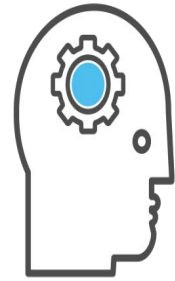


Next Generation Smart Field Data Collection

# Contributing Solutions



- Response Time Horizon



Thought Process



Pervasive Image Analysis



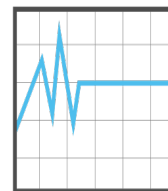
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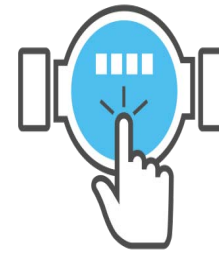
SCADA



Workforce Management



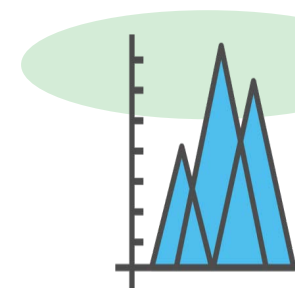
Next Generation System Monitoring



AMI



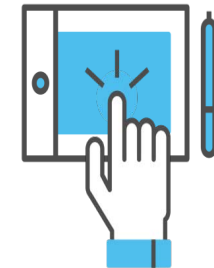
Vehicle-Based Data Collection



Next Generation Risk Analysis and Prioritization



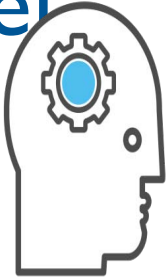
Asset Information Management



Next Generation Smart Field Data Collection

# Needed Mindset

To fully exploit these technological advancements, a different architectural mindset is needed – We must move from Structural to Evolutionary Solution Strategy and Architecture



Thought Process



SCADA



AMI



Asset Information Management



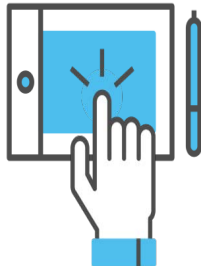
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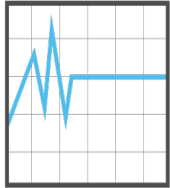
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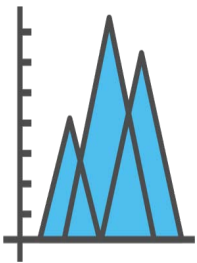
Next Generation Smart Field Data Collection



Billing



Next Generation System Monitoring

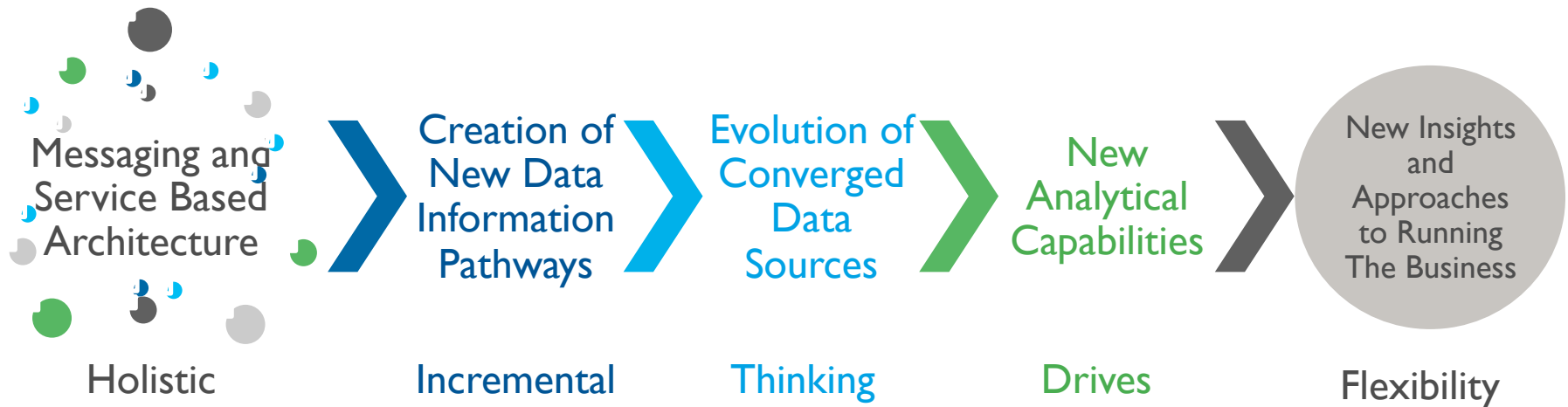


Next Generation Risk Analysis and Prioritization

# Some Aspects of Traditional Approaches To Applications and Data Solutions



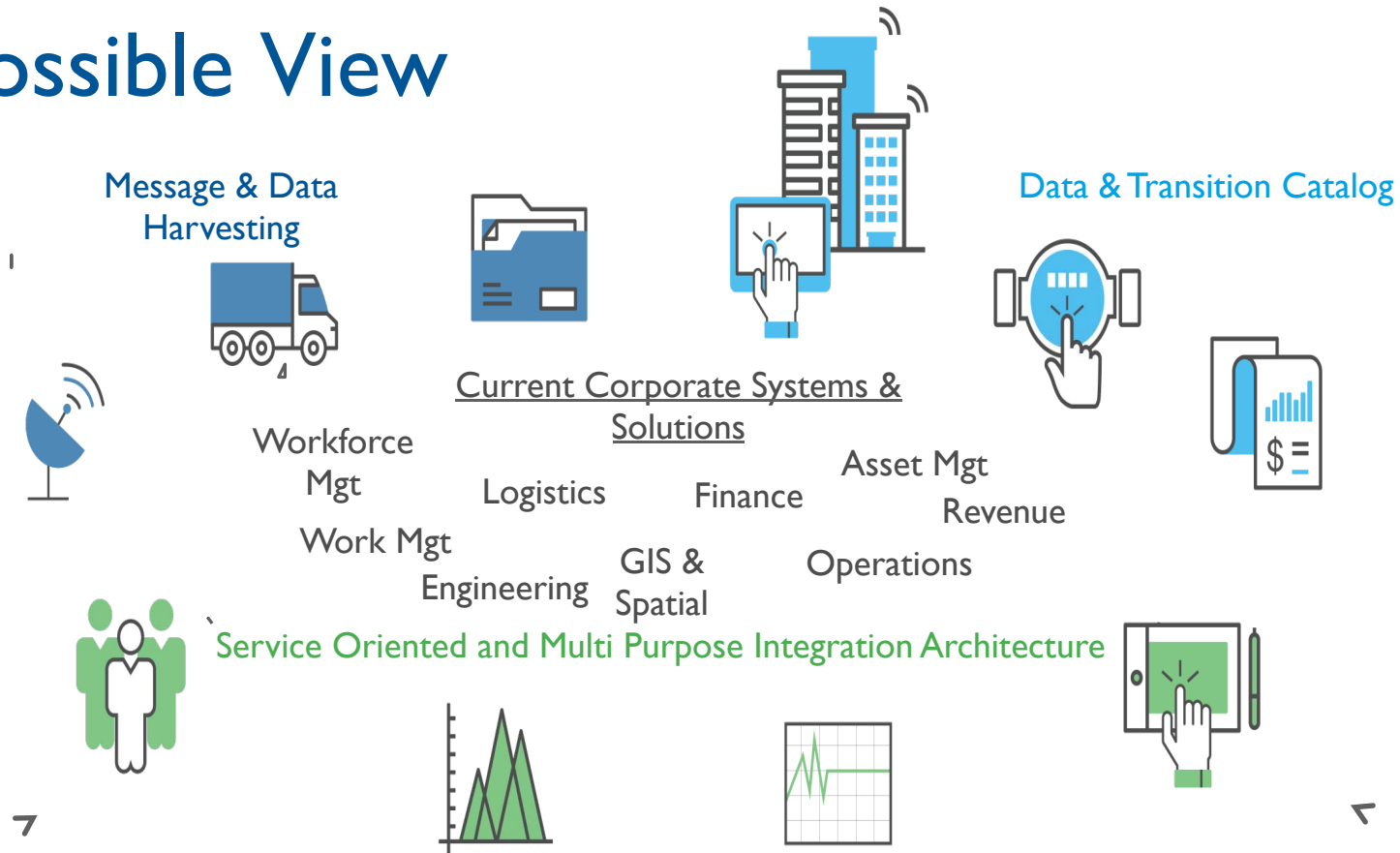
# Evolutionary Solution Strategy



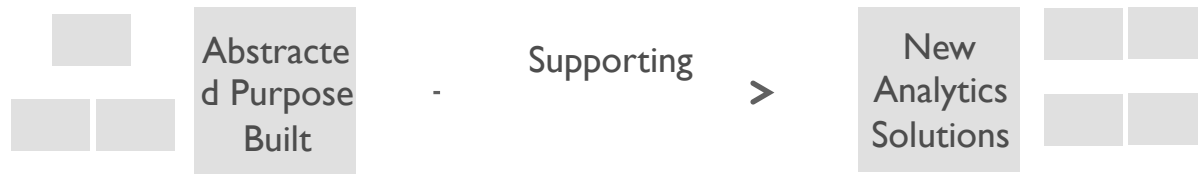
## Requires:

- A business led Solution Design Authority with the right blend of business and technological knowledge
- Universal definition of critical operational and asset data
- Repeatable and global process for integrating new capabilities

# A Possible View



New Converged Data Sources supporting New Analytical Capabilities, leading to New Insights and Options to, not only Improve Loss Detection but to Run the Business more effectively



# Some Final Thoughts



**85% of the spend on an asset is incurred in its operational phase ....  
However ... the best time to deploy operational intelligence is  
during construction**

# Thank You



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