AGSI

Empower the Enterprise

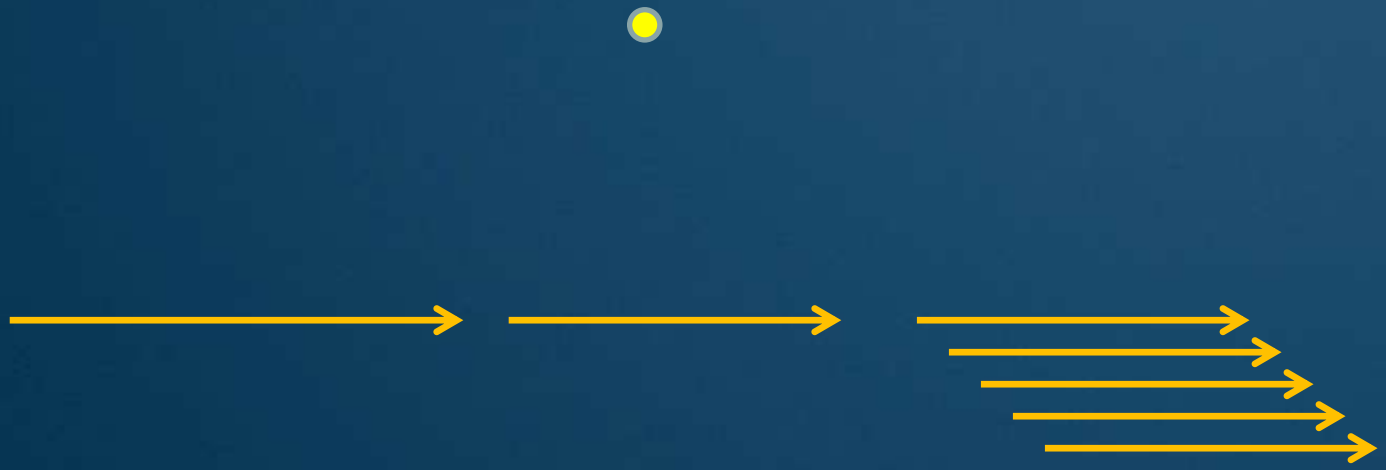
GIS Evolution

GeoBuiz
August 11, 2015
Dan Shannon
Executive Director – Go360
Angus GeoSolutions Inc.

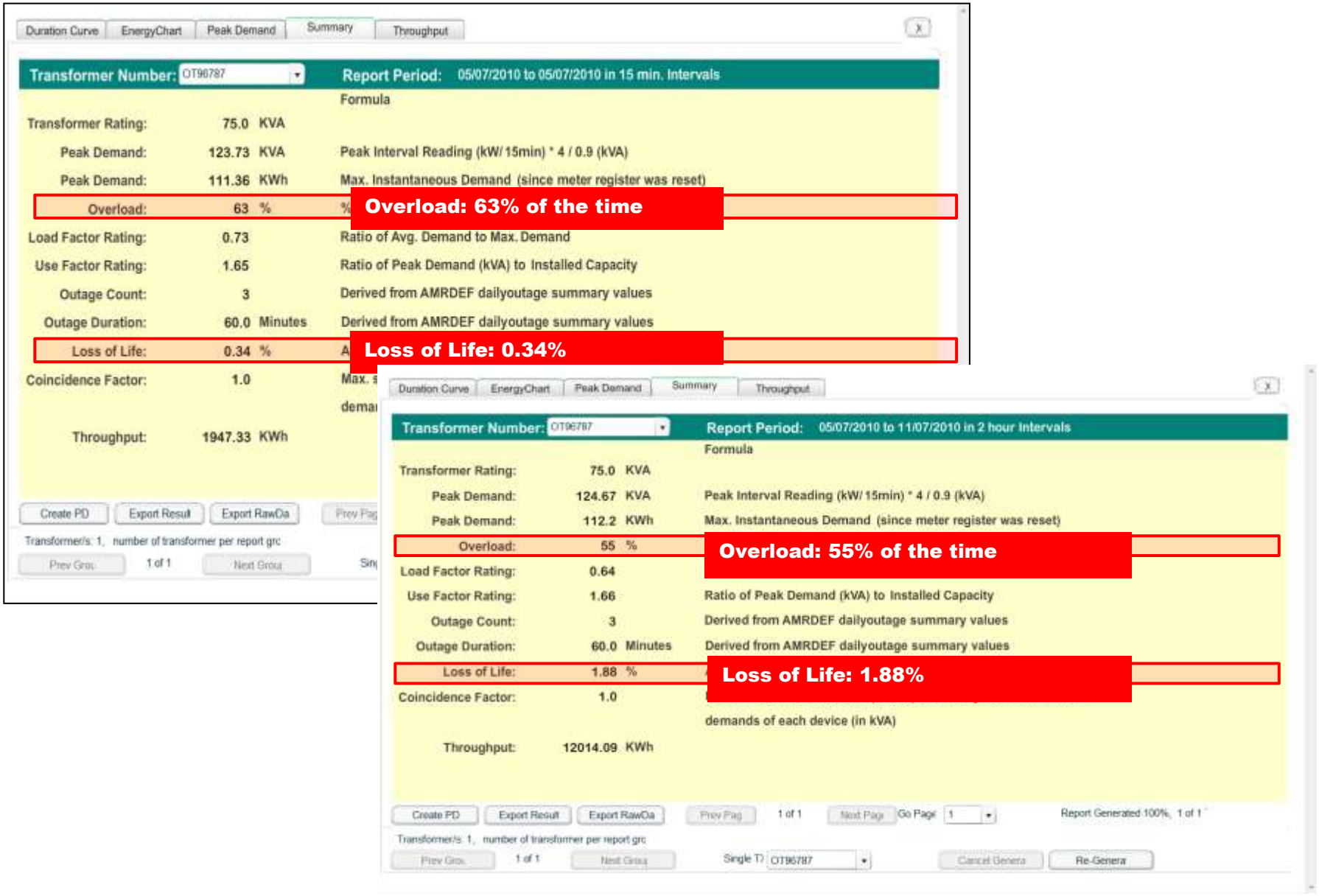
Where is your GIS?

- The Evolution Challenge
  - ✓How did we get here?
  - ✓Where are you going?
  - ✓What do you need to do to get there?

The Challenge

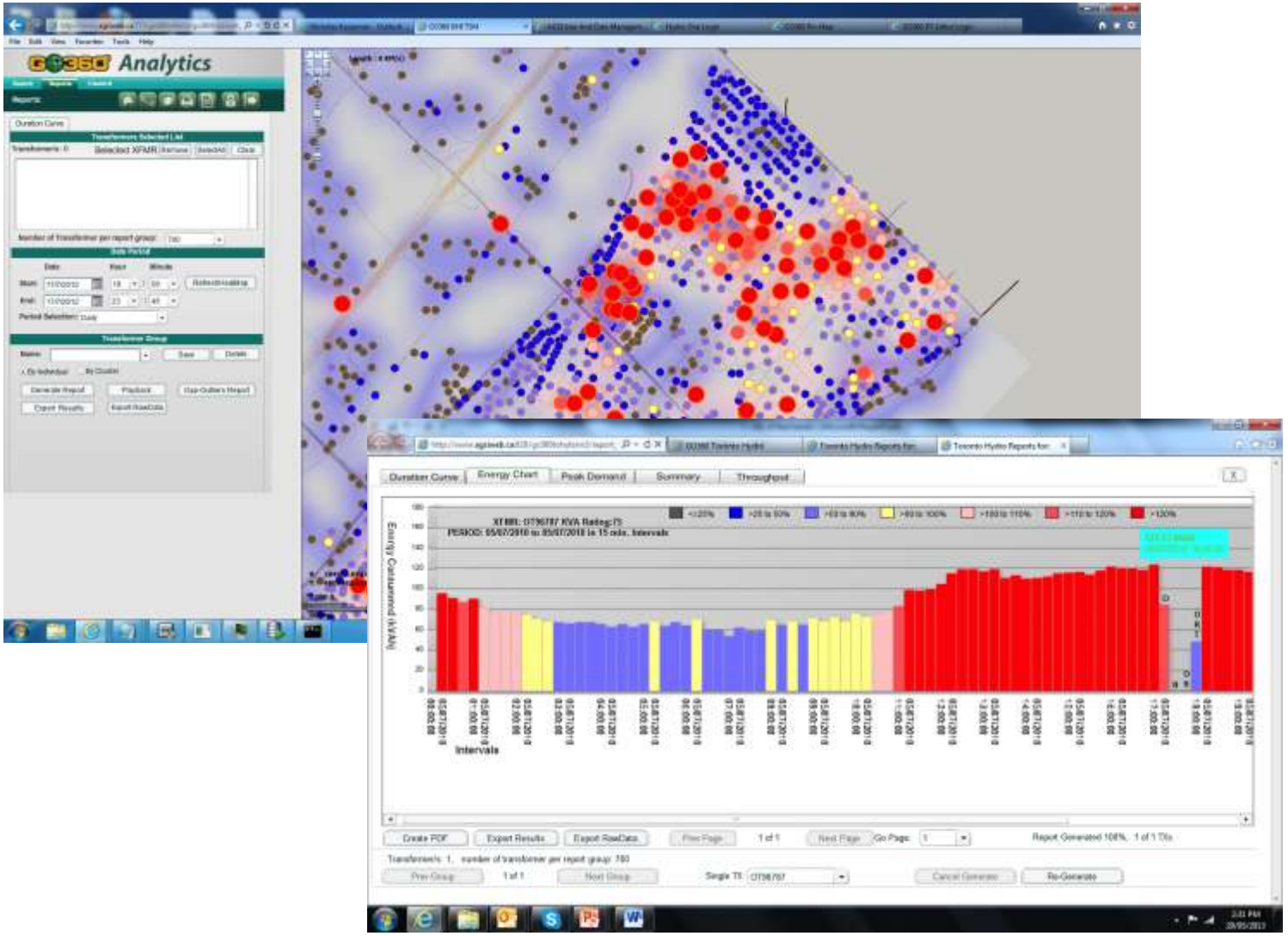


What Happened

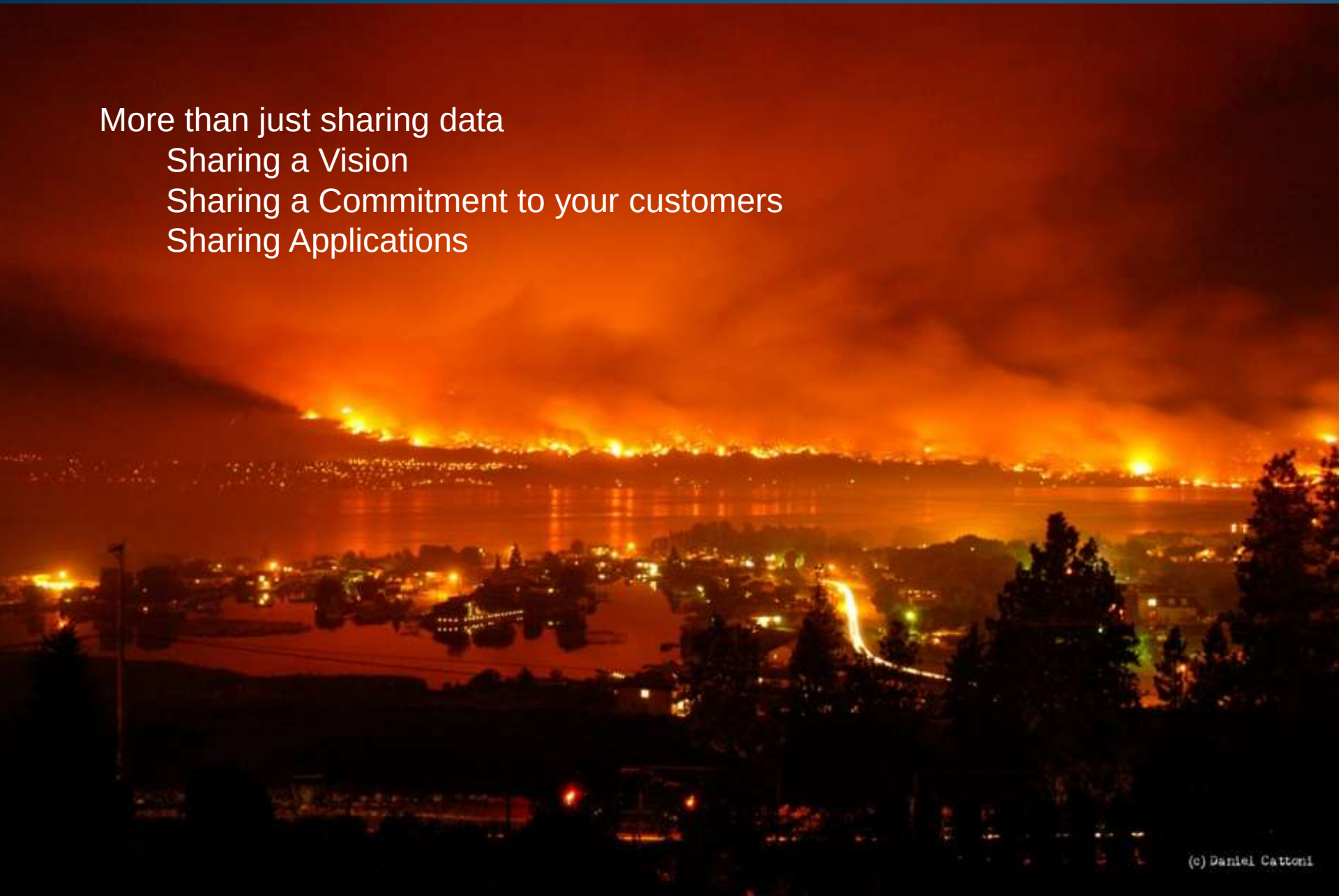


What Is Happening

What Will Happen



Collaboration



More than just sharing data

- Sharing a Vision
- Sharing a Commitment to your customers
- Sharing Applications

Gartner's view

- **Computing Everywhere**
- **"Advanced, Pervasive and Invisible Analytics"**
  - ✓ "reach the right people based on the real places they visit every day."
    - Xad.com
- **Context-Rich Systems**

Built in the Image of its Creator

- Most Utilities' GIS do exactly what we've designed them to do
  - ✓Engineering / Design Centric
  - ✓Who edits your GIS data?
  - ✓Who cares about your GIS data?

So What?

- Update Cycles are measured in weeks if not months.
- Workflows move information from domain experts through to GIS team.
  - ✓Opportunity for delay
  - ✓Opportunity for error
  - ✓Does not maximise parties at either end of the equation.

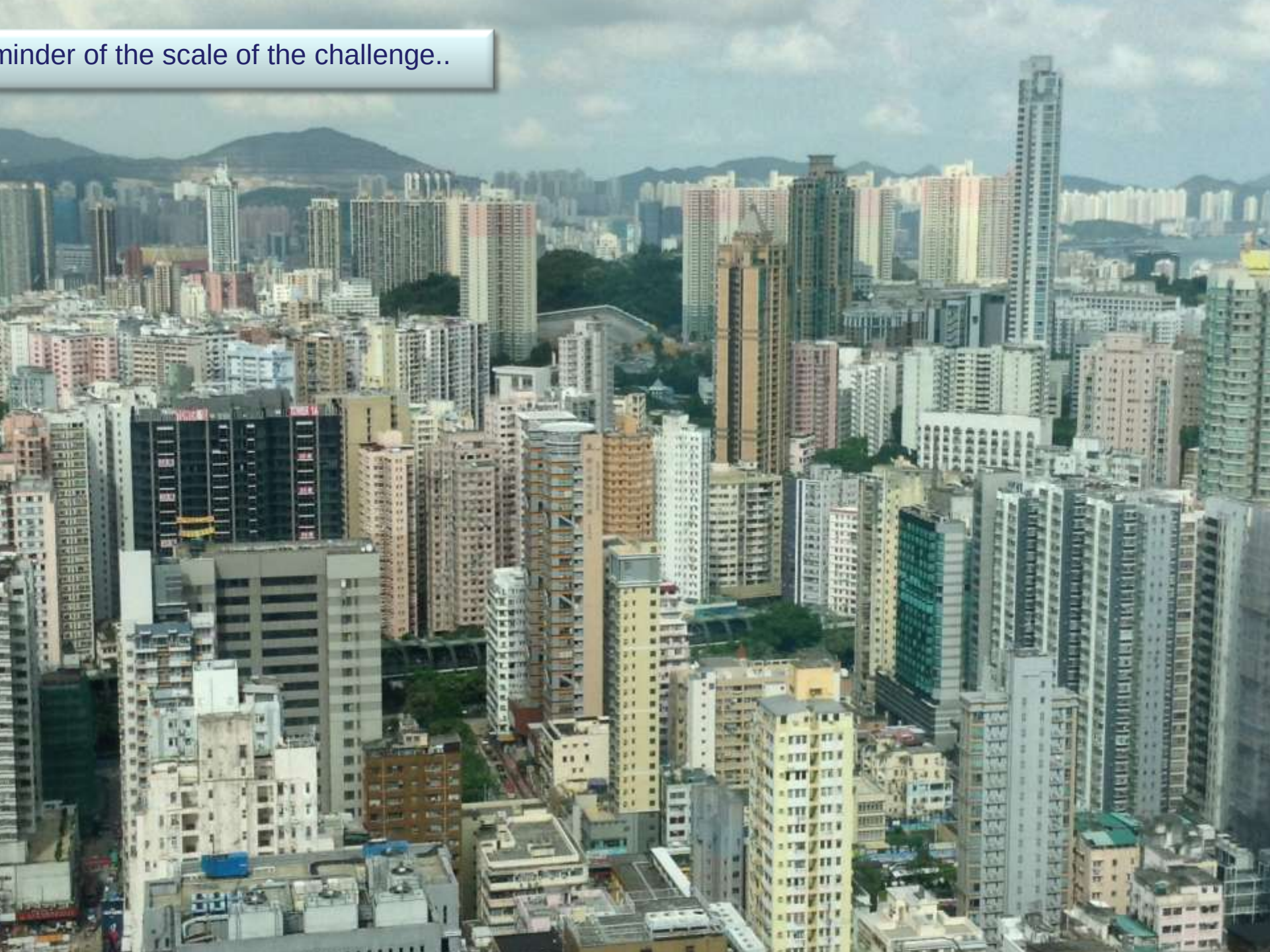
Where we're going

- The Geospatial Landscape has changed
  - ✓Technology
  - ✓Skills
  - ✓Culture

Two Kinds of Big Data

- Both are characterised by density.
- Lidar for example, is geographically dense.
  - ✓ Data points per meter often exceed data elements per kilometer of traditional GIS
- Sensor networks such as Smart Grid is temporally dense.
  - ✓ Many readings over time, new data in days, hours, seconds, milliseconds
  - ✓ Traditional GIS data elements update frequency measured in months for the more ‘dynamic’ parts of the network.

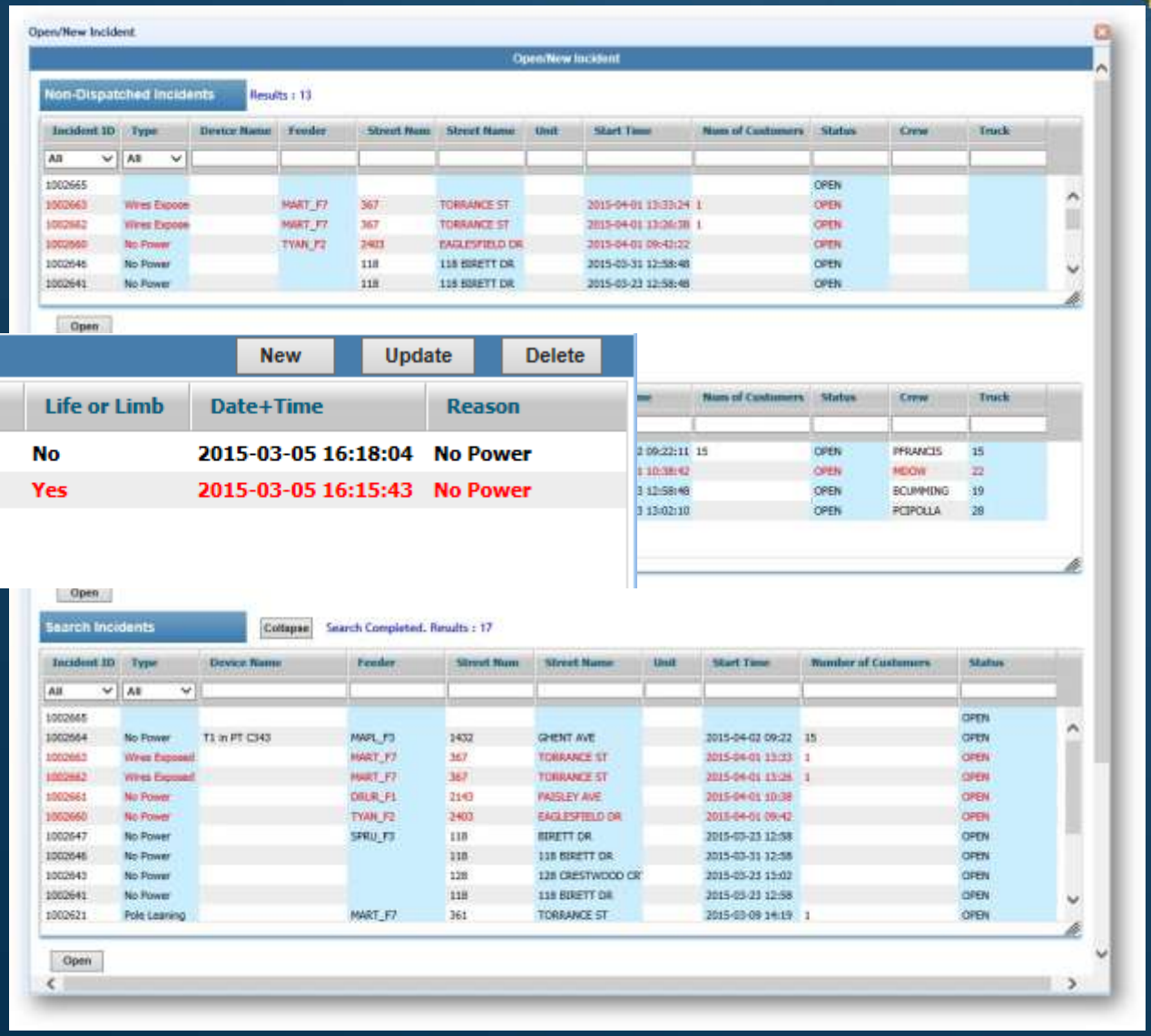
minder of the scale of the challenge..



Two Kinds of Fast Data

- Both are characterised by speed.
- Sensor data
  - ✓Sensor data waits for no one
- Closest to source updating
  - ✓No time to wait for a traditional workflow
  - ✓No appetite for cost of traditional workflow
  - ✓Engagement demands immediacy

Outage Summary and Incident Grouping Window (Life and Limb Priorities)



Report Log | New | Update | Delete

CCR Details	Life or Limb	Date+Time	Reason
	No	2015-03-05 16:18:04	No Power
TEST Comment	Yes	2015-03-05 16:15:43	No Power

Display driven by current status vs. set cartographic standards

LO

CC

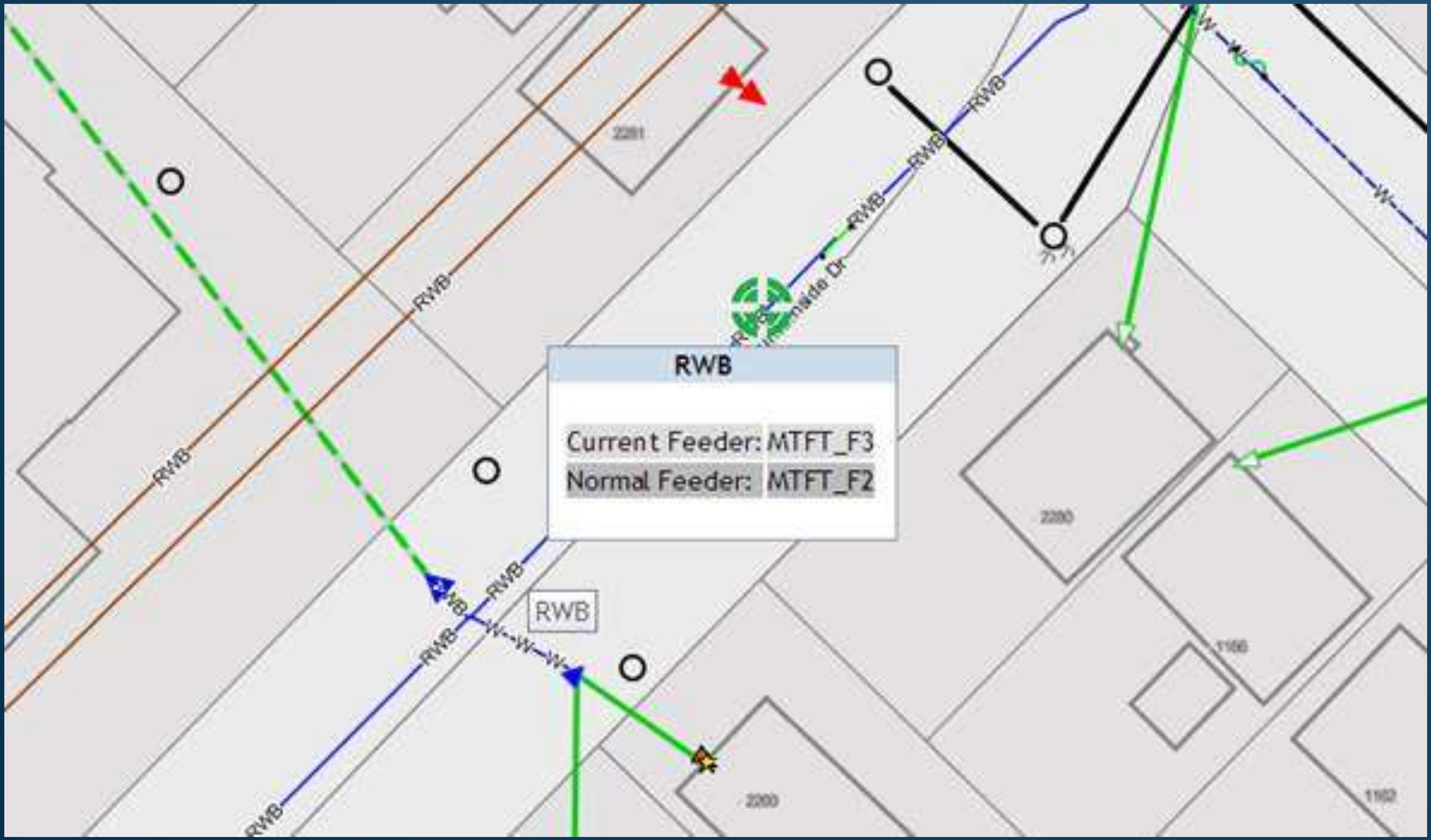
OM

MO

AA

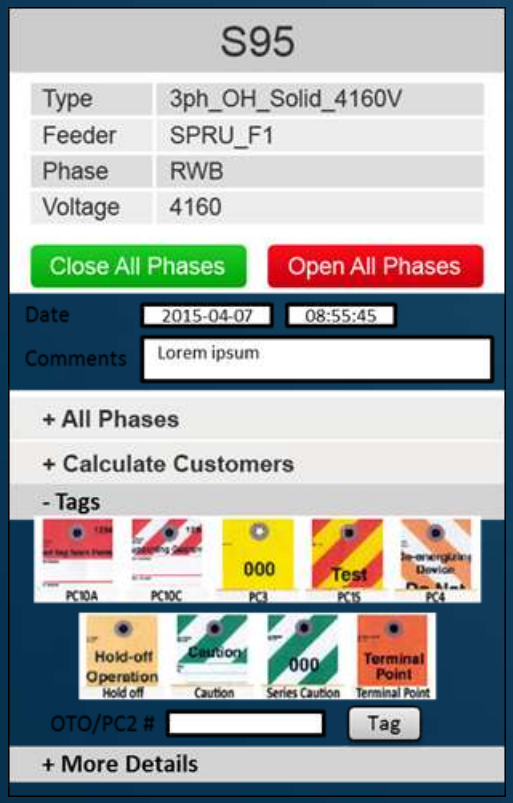
ED

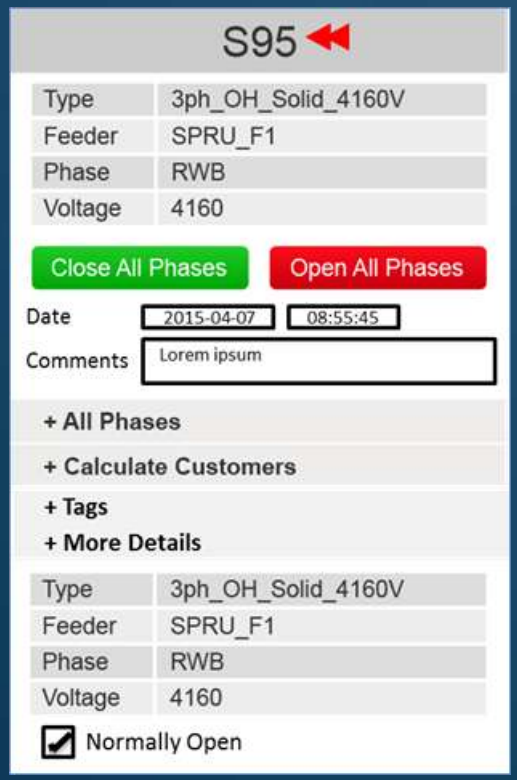
SM



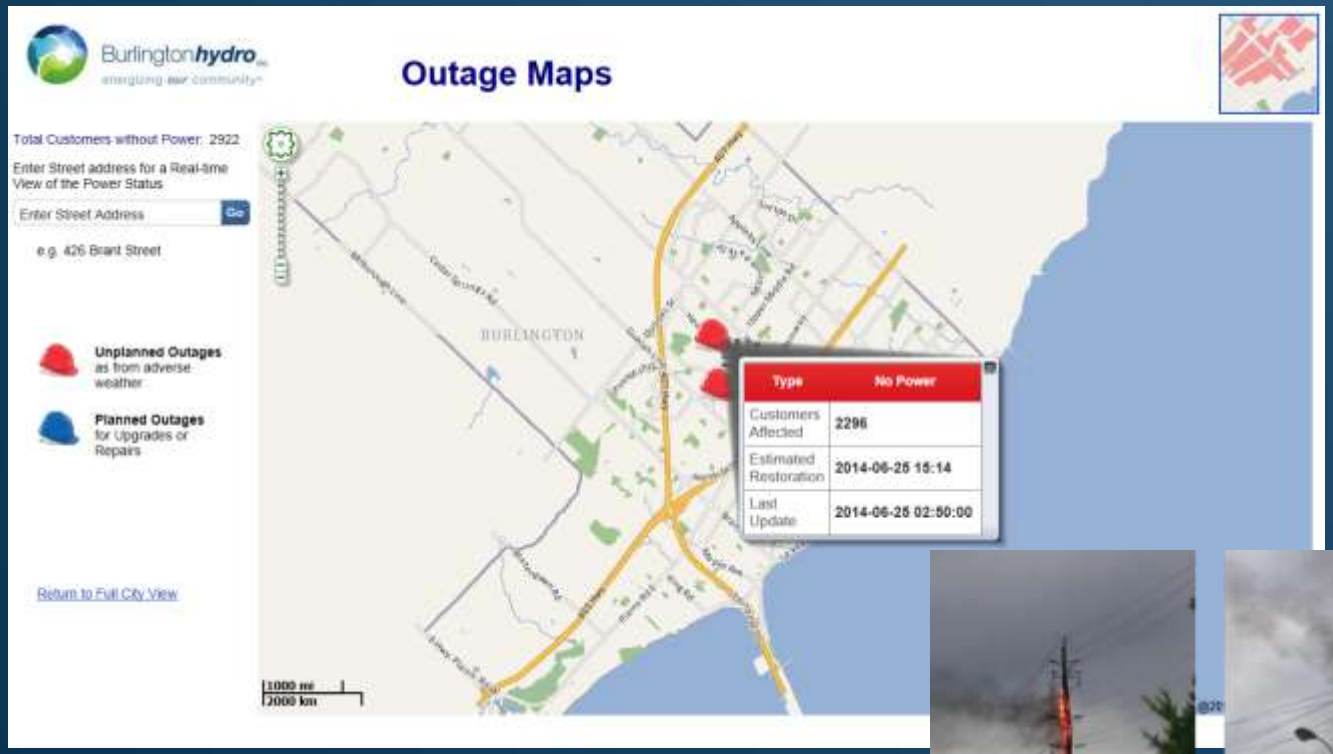
From a Record to a Control Application

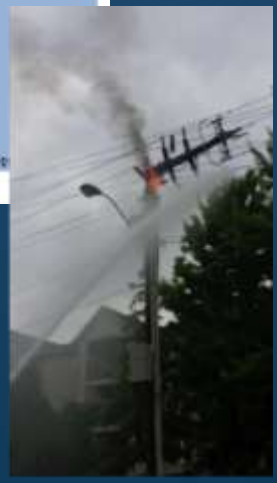
LO
CC
OM
MO
AA
ED
SM





Communicating bi-directionally





Mobile

LO
CC
OM
MO
AA
ED
SM

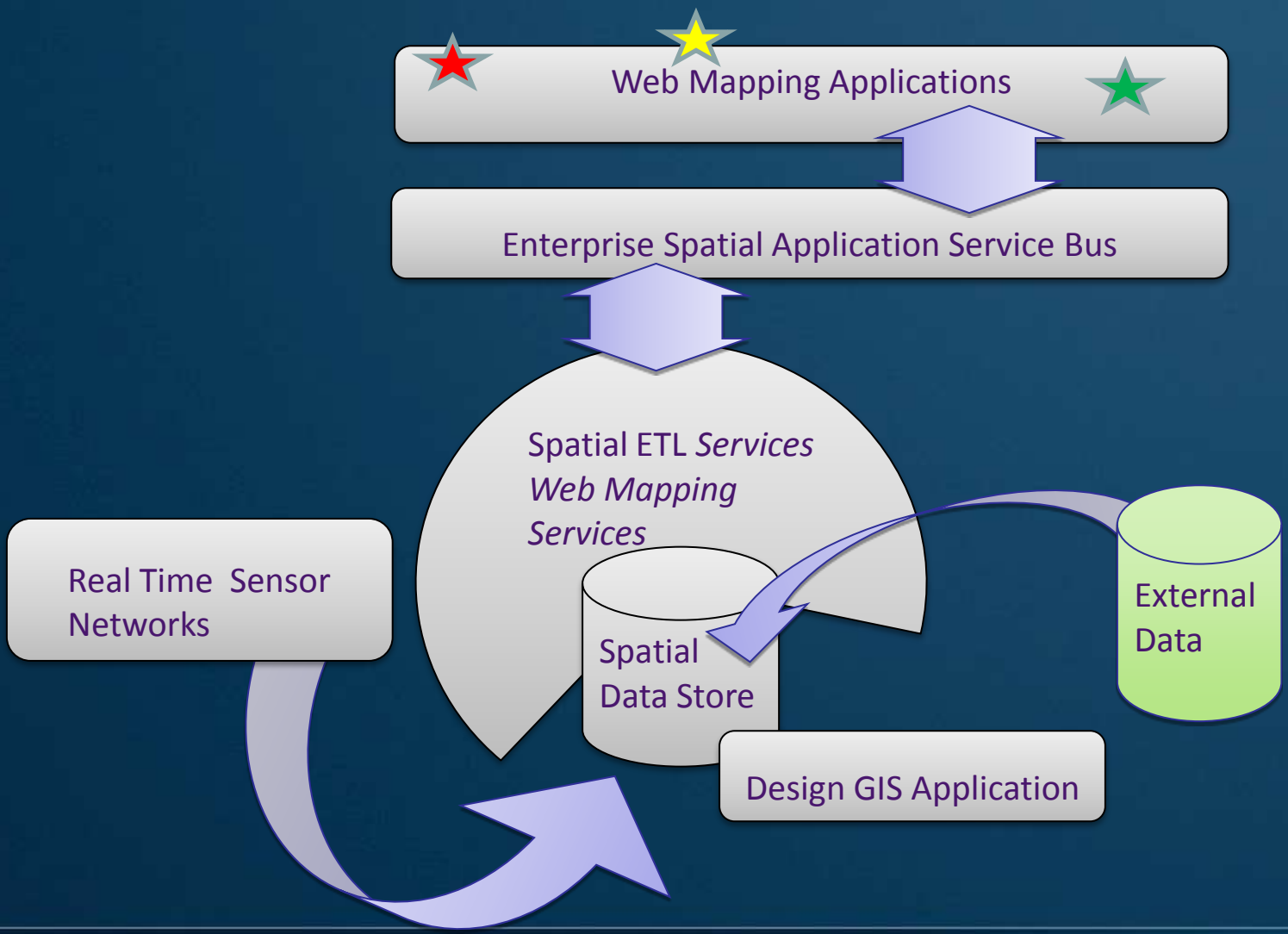
Utilities. *Now.*

AGSI

Comprehensive Integration of Social Media

LO CC OM MO AA ED SM

Architecture Overview



How We'll Get There

- Maturity Model for 'BIG Data Ready' GIS?
  - ✓ Data Base
    - Designed for Big Data
    - Big Data Structures
    - "Don't tune for performance – Design for performance"
  - ✓ Data
    - Leveraging standard data models: CIM, Pods
    - Application agnostic
  - ✓ Architecture
    - Business Centric Data Store
    - Enterprise wide availability of business rules
    - nTier Architectures
    - Continuous Improvement
  - ✓ Organisational
    - Inclusive – Issues Trust Dividend – across departments, across companies
    - Engaged – Everyone involved
    - Integrated – Spatial isn't Special?

Thank you!

dshannon@agsi.ca

www.go360.com