



## Asset and Maintenance Management Smart Green Govt.

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# Agenda

- Intro
- Portfolio
- Major Biz Issues in Local Govt.
- Implementation Philosophy
- Asset Management Strategies
- Major Gains
- Demo

# Portfolio



- 85% + Govt. customers including State, City, County, District, Ports, PUDs etc.
- Big corporate private clients
- Asset Management product, Document Management product, IT services
- Data & applications, web, mobile, cloud
- Extensive ESRI and Open Source knowledge
- Trusted Systems Integrator
- Extensive Core Expertise in GIS and IT
- Scalable Operations

# Service Verticals



## Systems Integration

- Platform Agnostic, services, API etc.
- Application, Platform, Databases
- IT Security – assessment, monitor, stop penetration



## Enterprise GIS

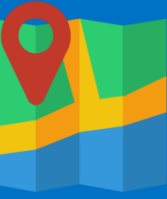
- Anything geospatial
- GIS systems, web, mobile, desktop
- Legacy data, CAD
- Decision support, Location based



## Mobile and Cloud

- Apps, SaaS, hosted, installed onsite
- Asset Management, Document Management
- Connected, Disconnected, mobile GIS based

# We have a DREAM!



Every



Local Govt.

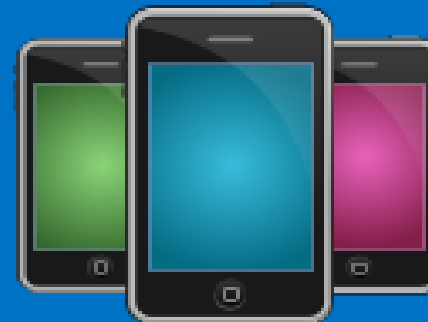
must



GO



MOBILE



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shaping your ideas

# Introduce Yourself

- Who are you?
- What's your dream on asset management?
- What is an asset?
- What does asset management mean to you or your org?
- Why are you here?

# Major Biz Issues in Local Govt.

- Duplication of Effort – Enter info in multiple systems.
- No system of truth, all silos - Track, monitor, search
- Information access – field and office
- Need to be proficient in multiple systems
- Complex System Security/Permissions
- No Mobile GIS
- Lack of Executive Dashboard Reporting/Monitoring
- No “Bring Your Own Device” Strategy
- Go Cloud?
- No Disconnected Mode of Working

# What Keeps You Up?

## Management

- I have a \$Billion CIP but lack tools to quantify, prioritize, defend ROI
- **Pipes break and leak, pumps fail, we lose water**, and I lack the tools to monitor, analyze, and coordinate any given event
- I have to increase customer **billing rates** to keep up



## Engineering

- We need \$Billions to fund **infrastructure and compliance**
- ...and we over-spend \$Millions on **energy**,
- ...and we're **losing millions of gallons** of unbillable water



## Operations

- We spend \$Millions in **energy** without knowing it
- We are **fined \$Millions** for non-compliant water quality samples, and don't know when or where they will occur
- ...and operate without knowing **customer or quality** impacts



## Maintenance

- We **break pipes, then guess** at which valves to close
- When we work, we are **disconnected** from the office



## Customer Service

- I lack tools to **communicate with field crews** to fix customer issues
- I lack the information to **inform customers** of system issues/status



# Basic Concepts

- Assets are Liabilities
- Value realization of an asset depends on controlling or minimization of liabilities
- Involve trade-offs between interests and priorities
- Satisfy potential competing expectations with available funding and constraints



# Common Themes

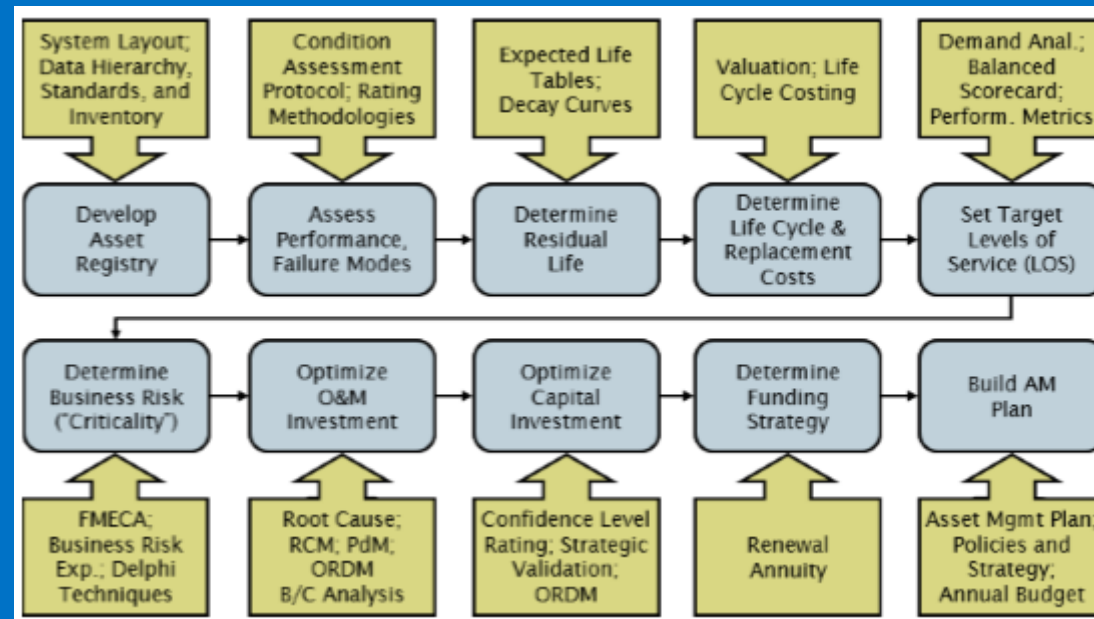


# Advanced Concepts

- Inventory
- Operations Support
- Maintenance Management
- Lifecycle Analysis and Optimization
- Asset Health Check
- Risk Management and Mitigation
- Business and Engineering Practices
- Enterprise Wide – No Silos
- Balance Costs vs. Risks vs. Performance
- Strategic

# Key Questions

- Current State of Assets
- Required Level of Service
- Critical Assets to Sustain Services and Performance
- Best O&M and CIP Investment Strategies
- Long Term Funding Strategy

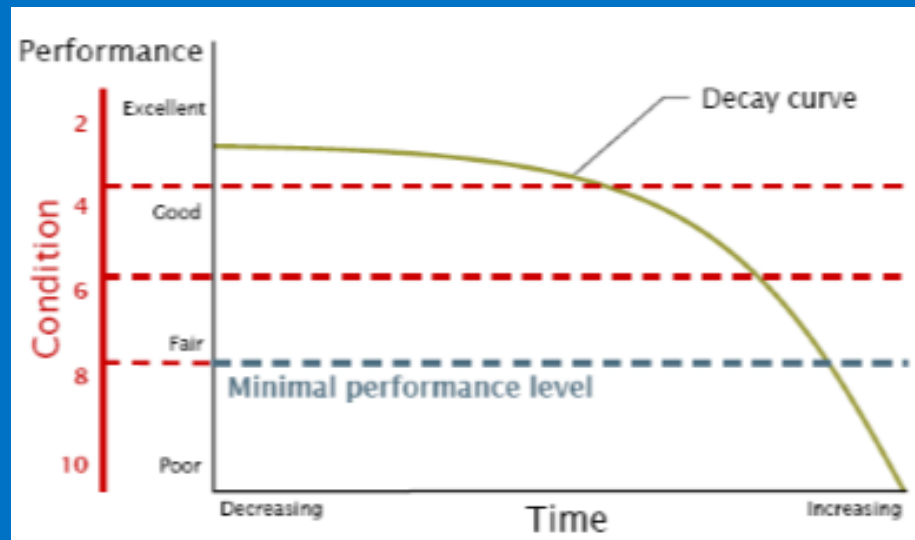
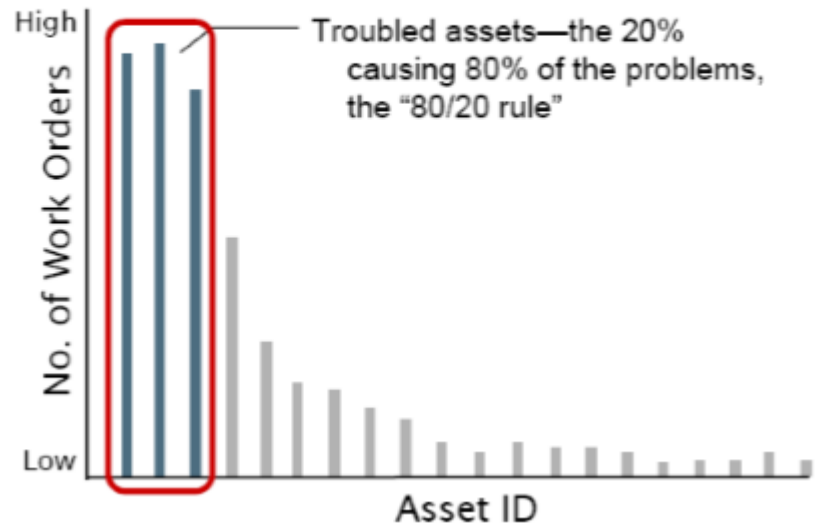


# Asset Lifecycle

- Modify
- Repair
- Rehabilitate
- Replace
- Recycle

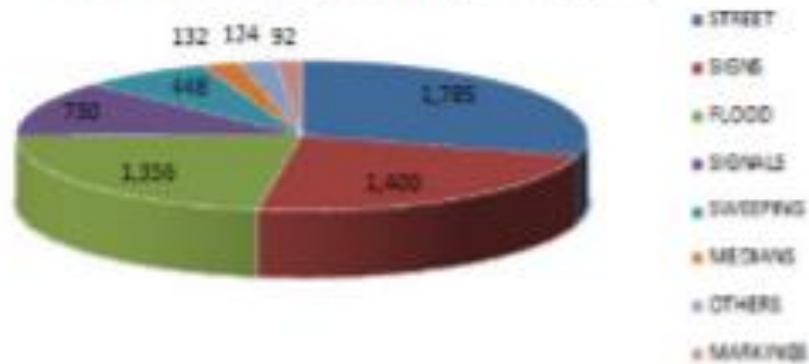
# Planning & Analysis

Do we know which are our problem assets?

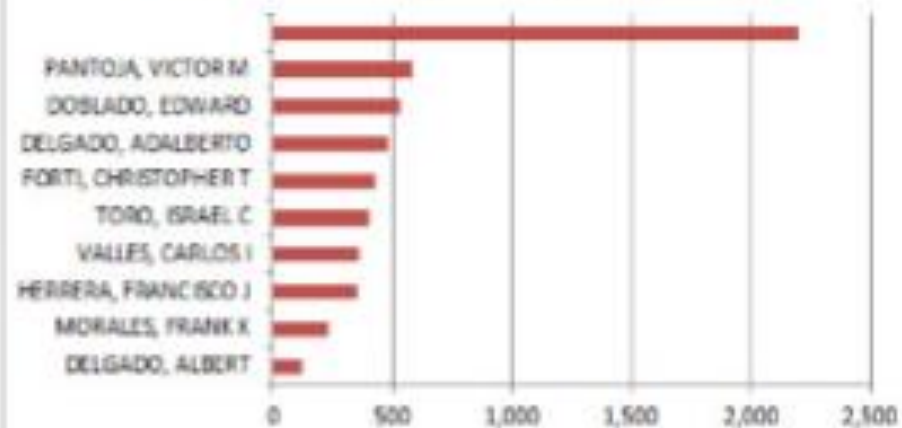


# Dashboard and KPIs

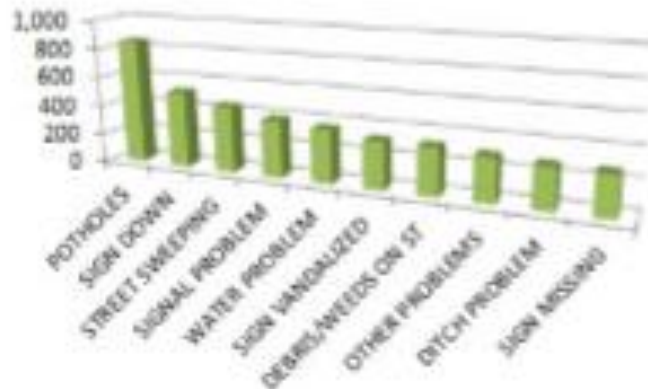
### Number of Requests by Category



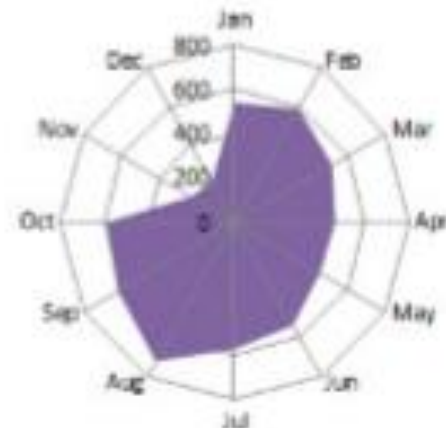
### Requests Completed by Employee



### Top 10 Problem Codes



### Requests Closed by Month



# Key Strategies



- Authenticated Access – One Login, AD, Separate User/ Pass encryption
- Features and Functions exposed based on role based authentication
- Flex Price Strategy
- Use both ESRI or Open Source GIS - Plug n Play
- One click Dashboards, Reports, KPIs
- Workflow modules e.g. time card,, GIS, citizen incident report (mobile, web), ERP, pavement management, financial, accounting AR/AP, backflow, SCADA, CCTV runs etc
- IT light, easy to rollout, user friendly, quick time to market



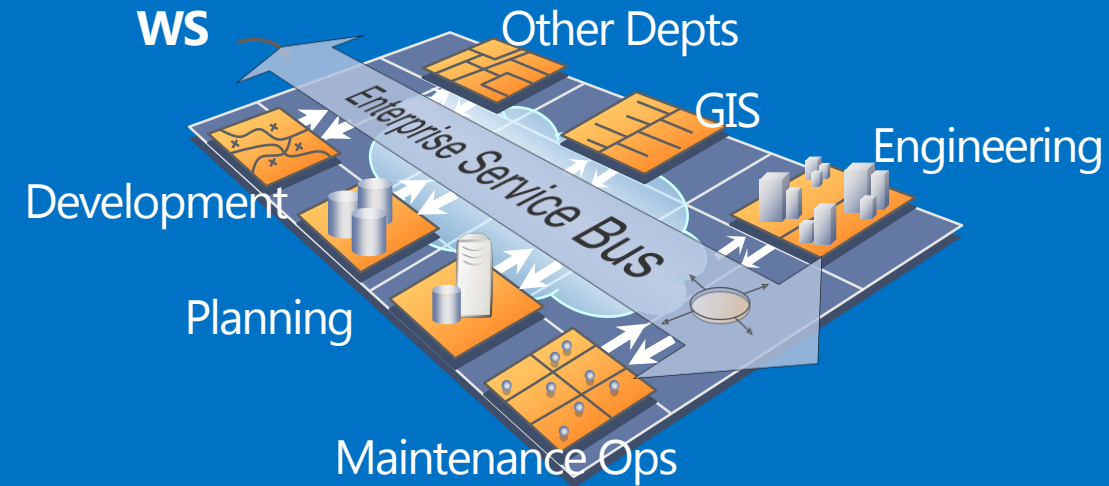
# Key Strategies



- Roll up and track costs, budget, time, labor, materials, equipments, rental etc.
- Feed CIP plan, Federal grants, emergency funds, comprehensive plans based on justifiable numbers, not gut feeling
- Connected vs. Disconnected
- Asset health check – repair vs. replace – asset condition analysis
- Improved customer perception and service
- Lawsuits and litigations, legal enforcements
- Migration of legacy data – scripts, crawlers

# Federated and Scalable

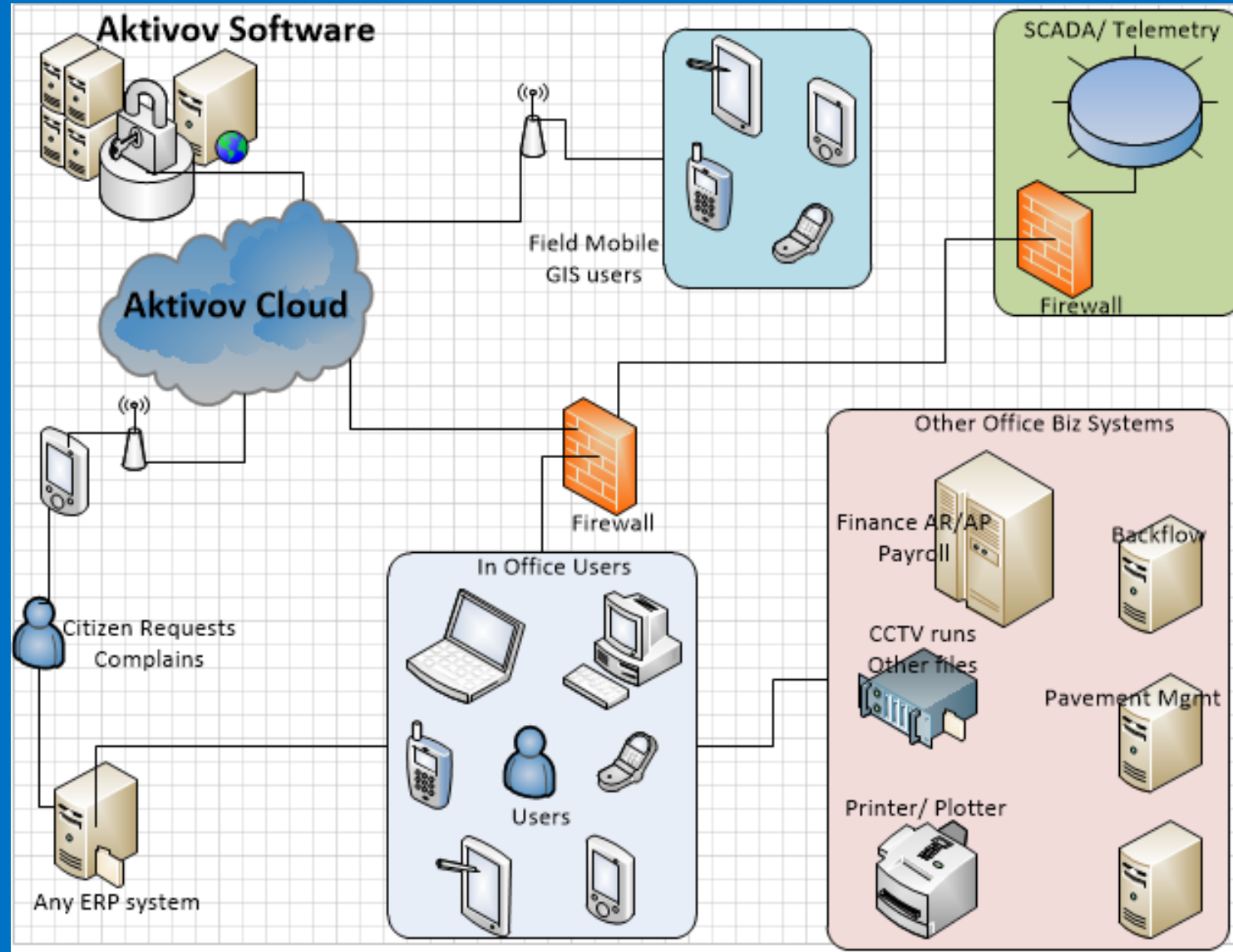
- Replicated databases
- Periodically Updated
- Administration Tools
- History/Archiving
- Faster
- Multi Processors
- Loosely Coupled
- Connected



- Integration
- Security
- Lean IT Initiatives

• ...Federated Intelligence via Web Services

# Integration Architecture



# Major Gains



- Better, more accessible data
- Track and monitor - click on map and find any data
- Automatic data collection - GPS/ RTK locations
- Queries and Reports – simple and transparent
- Legacy data migration - paper to database manual/ automatic
- Staff productivity increases, enter data day forward
- Cut redundancy
- Reuse existing frameworks – reduce costs
- Total cost of ownership over time decreases
- Device and platform (OS) independency
- Enterprise security - on premises or cloud
- Finite projects timeline and scope – phased approach
- Increases efficiency/ productivity – saves \$\$\$ over time
- Integrated Systems across the board
- Singular Dashboard Interface

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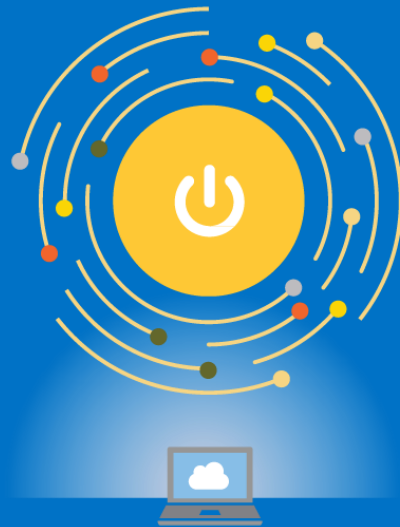
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# Next Steps



Demo