

# Cityworks<sup>®</sup>

*Empowering GIS for Asset Management, Permitting, Licensing™*

## Getting Started with Asset Management

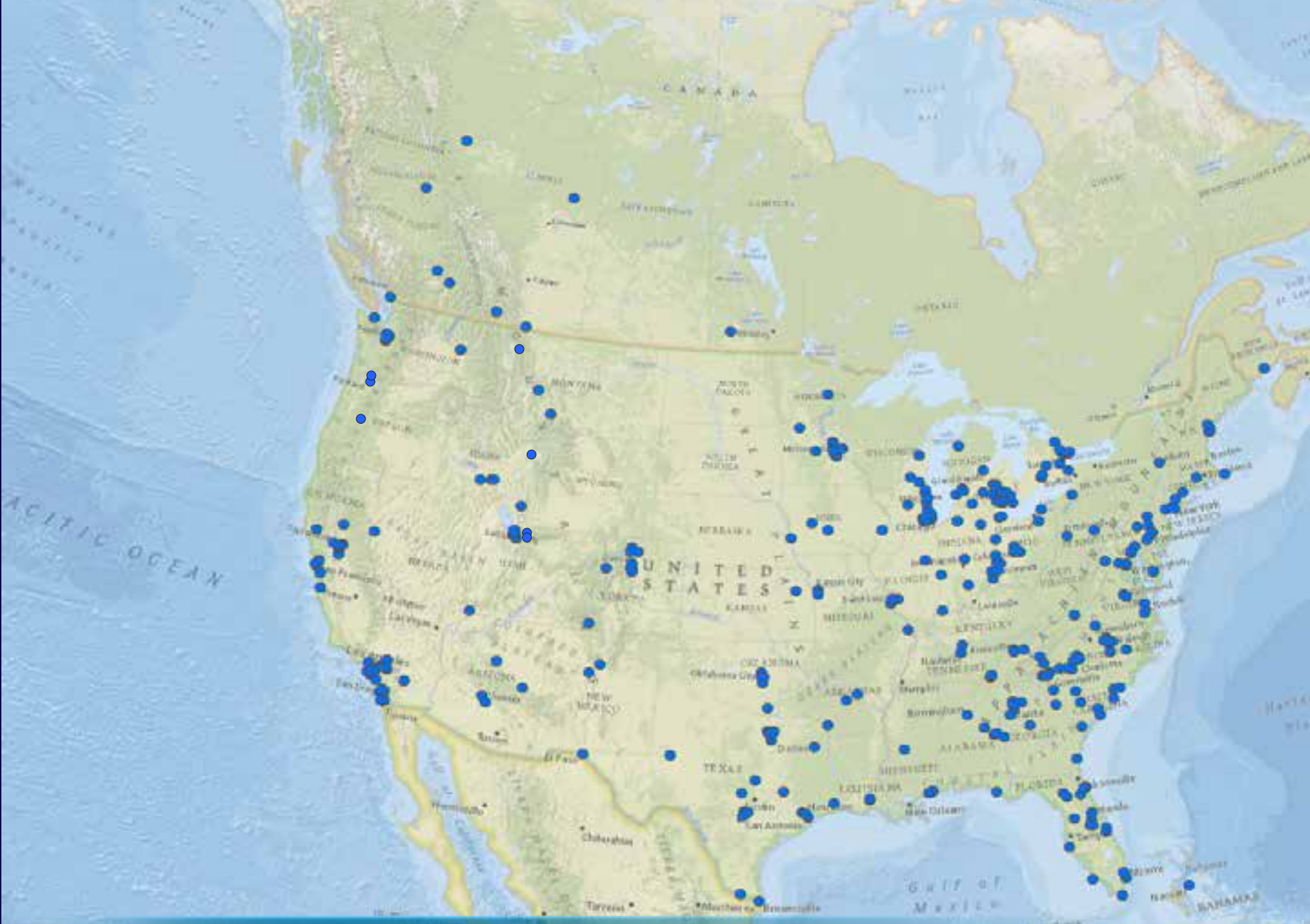
Matt Harman  
Account Manager  
Cityworks | Azteca Systems, Inc.



# Azteca Systems, Inc.

- Software Firm Founded in 1986
  - Headquartered in Sandy, Utah
  - 90 Employees
  - Average annual growth ~10% since 2000
  - Zero Debt — **NO VENTURE CAPITAL**
  - Esri Platinum Partner
- Why Cityworks?
  - Proven to simplify operations and reduce costs
  - Leverages investment in Esri GIS in an unmatched way
  - Can be scaled throughout the organization w/out additional "modules"
  - Running at over 500 organizations
    - US, Canada, Europe, Middle East, Australia
  - From pop. 3500 to 4 million

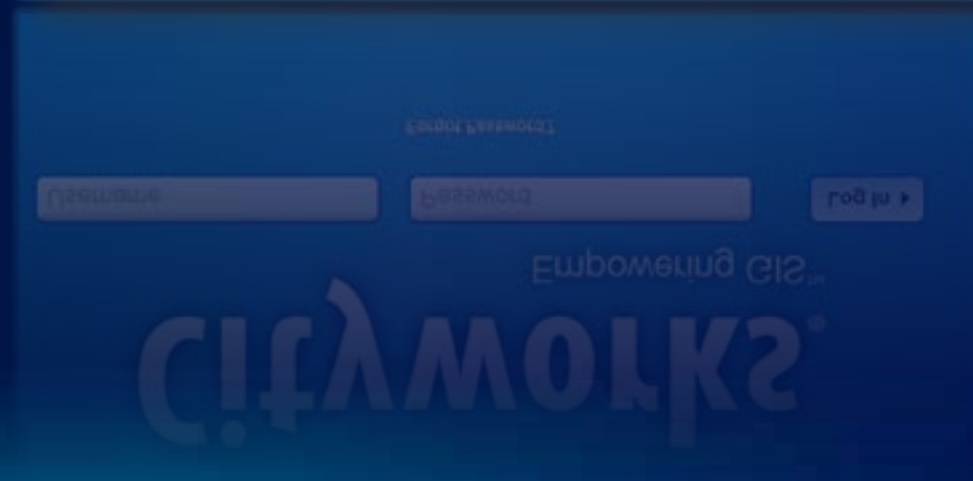




**Join 500 Organizations and ~15,000 End Users**

# What does Cityworks do?

- Service Requests and Inspections
- Work Order Management
- Resource Management
- Inventory Management
- Equipment Management
- Permits, Applications, Enforcement
- Reporting



# What is Asset Management?

- Asset Management incorporates the management of all things that are of value to a jurisdiction, its mission and purpose, and citizen's expectations.

# Basic Scenario – Pothole Complaint



# Questions of Asset Management

- What is the current state of public assets?
- What is the required level of service (LOS) for asset groups?
- Which assets are critical?
- What are the best O&M and CIP strategies?
- What is the best long-term funding strategy?

# Cityworks Asset Management

- Cityworks asset management provides software tools for local governments to manage public assets.





# What does your organization use?



What does your organization use?



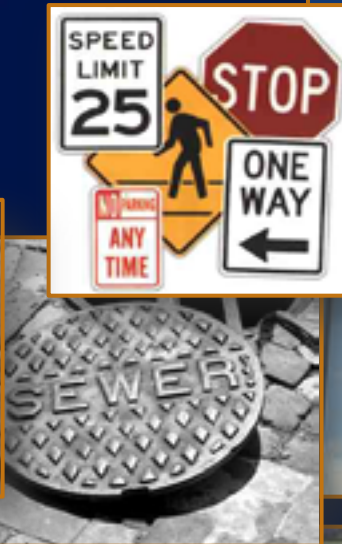
# What does your organization use?



# Building an Asset Management System

## - Asset Inventory

- What do we own?
- Where is it located?
- GIS database
- Challenges?



# Building an Asset Management System

## - Asset Condition

- What is the condition of our assets?
- Which assets are critical?
  - [Painted Hydrant - West Valley City, UT](#)
- Challenges?



# Common Workflows of Asset Management

## React

- Citizen complaints
- Emergencies

## Prevent

- Cyclical maintenance
- Inspections

## Decide

- Asset analytics
- Capital planning
- Control costs
- Control risk

# Asset Management Roles

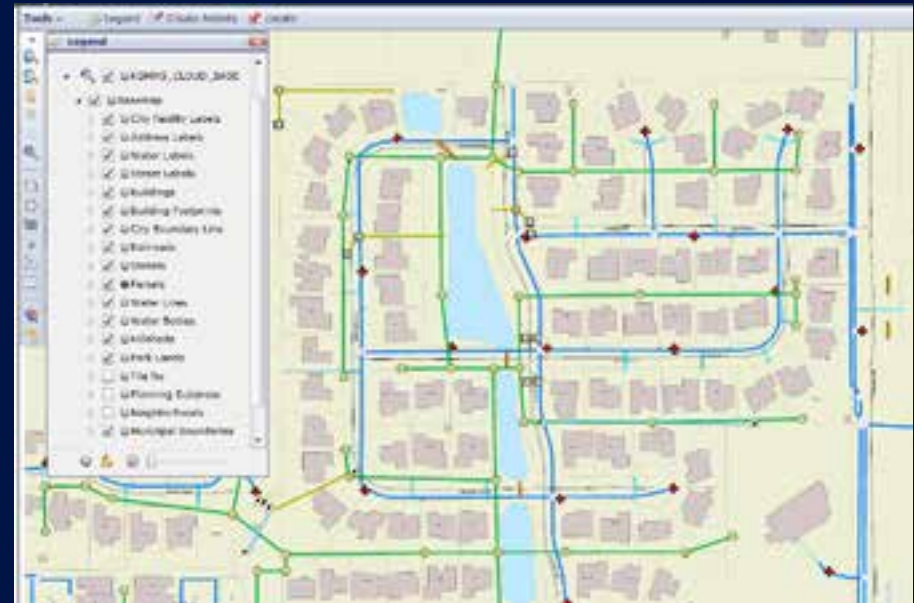
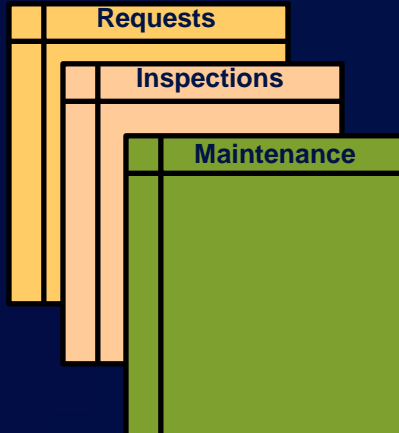


- A good asset management program will provide role specific tools to each end user throughout the organization
- In other words, it will be intelligent enough to help management make decisions but easy enough for field crews to use

# Cityworks Basics

## Cityworks<sup>®</sup>

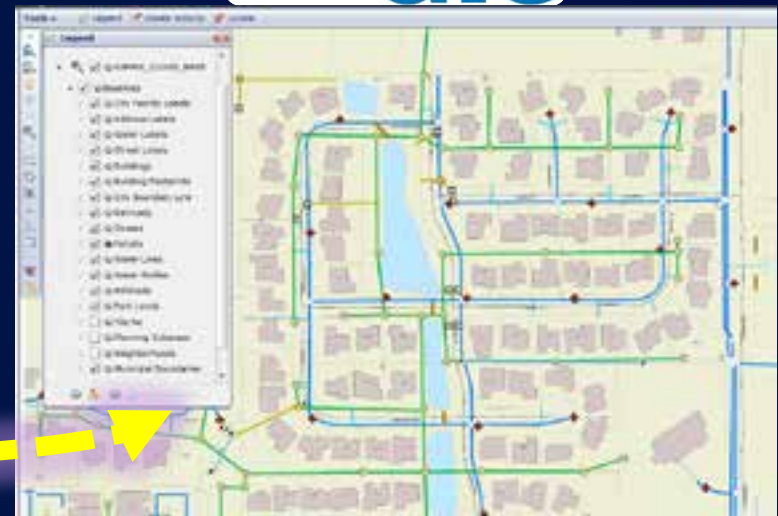
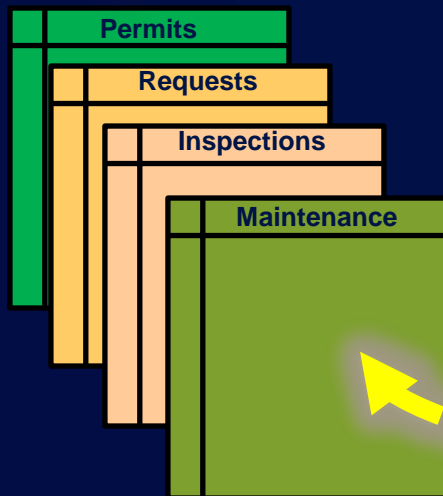
- Template driven
  - Service Requests
  - Work Orders
  - Inspections





# GIS-centric Asset Management

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Link Only

- **Esri geodatabase IS the Asset Registry**
  - No syncing, no redundant attribute storage, no middleware
  - Tightly integrated
  - GIS is the one and only asset database – no redundant data
  - Assets maintained in GIS environment
  - Flexible, non-proprietary, simple
  - Edits occur through ArcObjects

## GIS-centric – How does it work?

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- Requirements to maintain it?
- Cost to maintain it?
  - Labor, material, equipment
- Work management
- Budget
- Planning
- Analysis



- What is it?
  - Attributes
- Where is it?
- The most authoritative and current repository for asset data

# GIS-centric and Modules

## 1. GIS-centric allows:

- Non-redundant asset / feature data storage with no reliance on views, links, data mapping, or database triggers.
  - User-definable asset / feature data model that is customizable without vendor support.
  - Non-proprietary asset / feature data structures for field names, types, tables, relationships, and other data design elements.
- Put it in GIS, GIS-centric can manage it

## Example – Fire Hydrant

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- Work Activities
  - Repair Hydrant
  - Flush Hydrant
  - Replace Hydrant
  - Paint Hydrant
  - Winter Prep – Dewater Hydrant
  - Install Hydrant
- Inspections
  - Hydrant Inspection
  - Flow Test
- Attributes and Spatial Data
  - Hydrant Id
  - Location
  - Diameter
  - Date Installed
  - Manufacturer
  - Condition
  - Contractor
  - Warranty Date
  - Criticality

# Example – Fire Hydrant

# Cityworks®



Cityworks Inbox Requests Work Orders Inspections Asset Search Manager AMS Reports

Create Flood Entities

### Select Template

Entity Group: WATER Category: [v]

Feature Object Other

- Fire Hydrant Feature
- Fire Hydrant Line Feature
- Pipe Fitting Feature
- Pump Node Feature
- Raw Water Pipe Feature
- Service Lateral Feature
- Service Lateral for Fire Protection
- Tand Feature
- Valve Feature
- Vault Feature
- Water Main Feature
- Well Feature

- Fire Hydrant Maintenance
- Fire Hydrant Repair
- GPS Hydrant
- Hydrant Flushing
- Hydrant Install
- Hydrant Remove
- Hydrant Replace
- Install Hydrant Meter
- Paint Hydrant
- Winter Prep - Dewater

### General

Status: [v] Priority: Medium

Requested By: [v] Supervisor: COTTER, MIKE

Submit To: BOYCE, DARRIN Projected Start: [v]

Stage: [v] Expense Type: [v]

Comments:

Instructions: Note future maintenance recommendations.

### Selected Assets

Create a work order for: ALL selected entities

Entity Type	Entity Uid	Legacy Id	Location	Feature Type	Feat
<input checked="" type="checkbox"/>	WP303-HYD	8368	1700 Paces Rd	WP303-HYD	8368

### Results

Water Hydrants (1)

DIAMETER	WA_FITTING	FEATURE_ID	PRESSURE_SYSTEM	CONTRACTOR
8.6	N/A	9600		

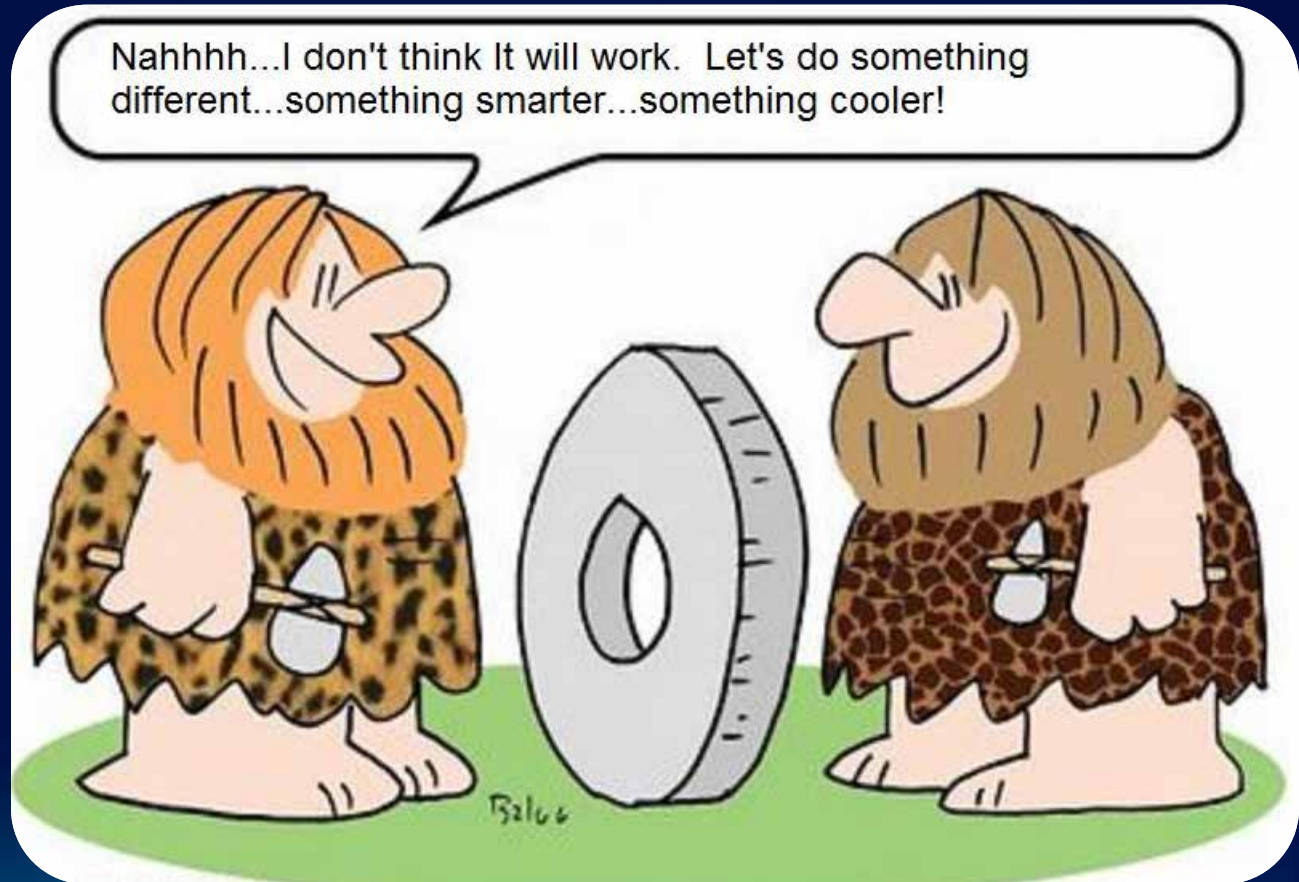
### Map

# Commonality – What can we gain?



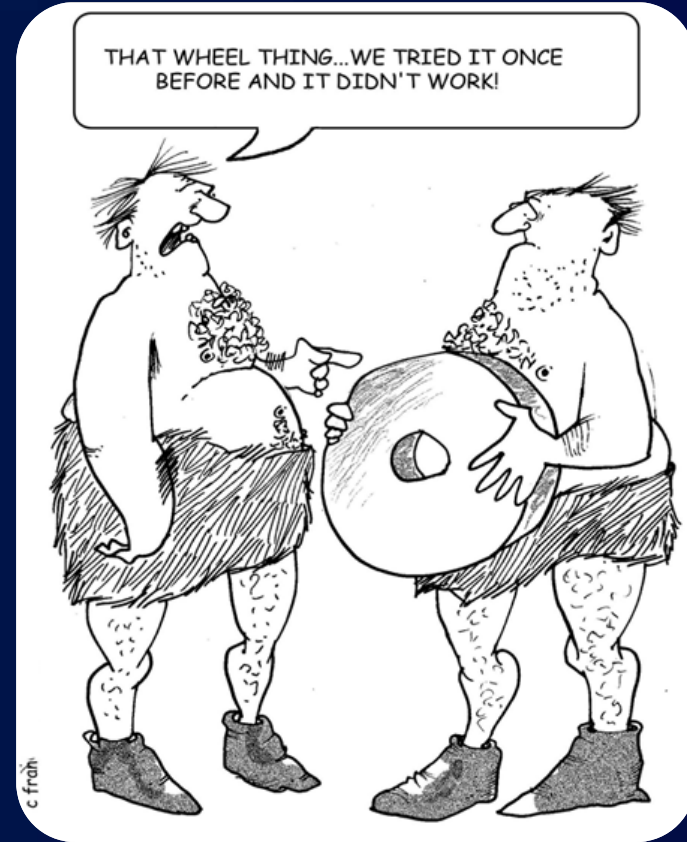
## Reinvent the wheel

1. To waste time trying to develop products or systems that you think are original when in fact they have already been done before
2. To do something again, from the beginning, especially in a needless or inefficient effort



# Cityworks LGT?

- **Preconfigured database for Cityworks**
  - Out-of-the-Box Templates
    - Service Requests
    - Work Orders
    - Standard & Custom Inspection
- **Over 1000 activities for multiple asset types**
  - Public Works
    - Streets, forestry, parks
  - Utilities
    - Water, sewer, storm, electric
- **Esri Local Government Information Model**
  - Supports any Esri GIS data model
- **Free to any Cityworks licensed organization**

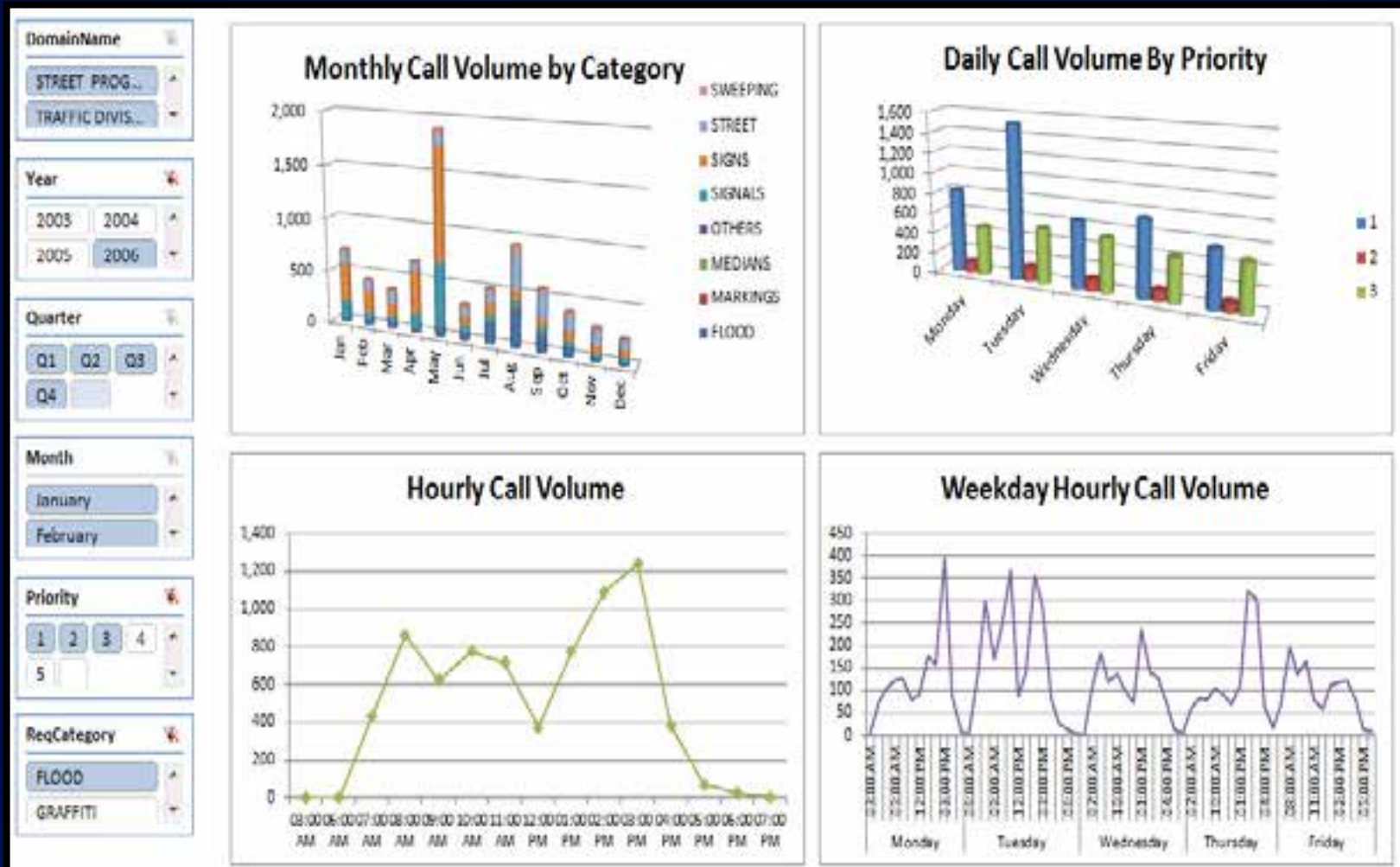




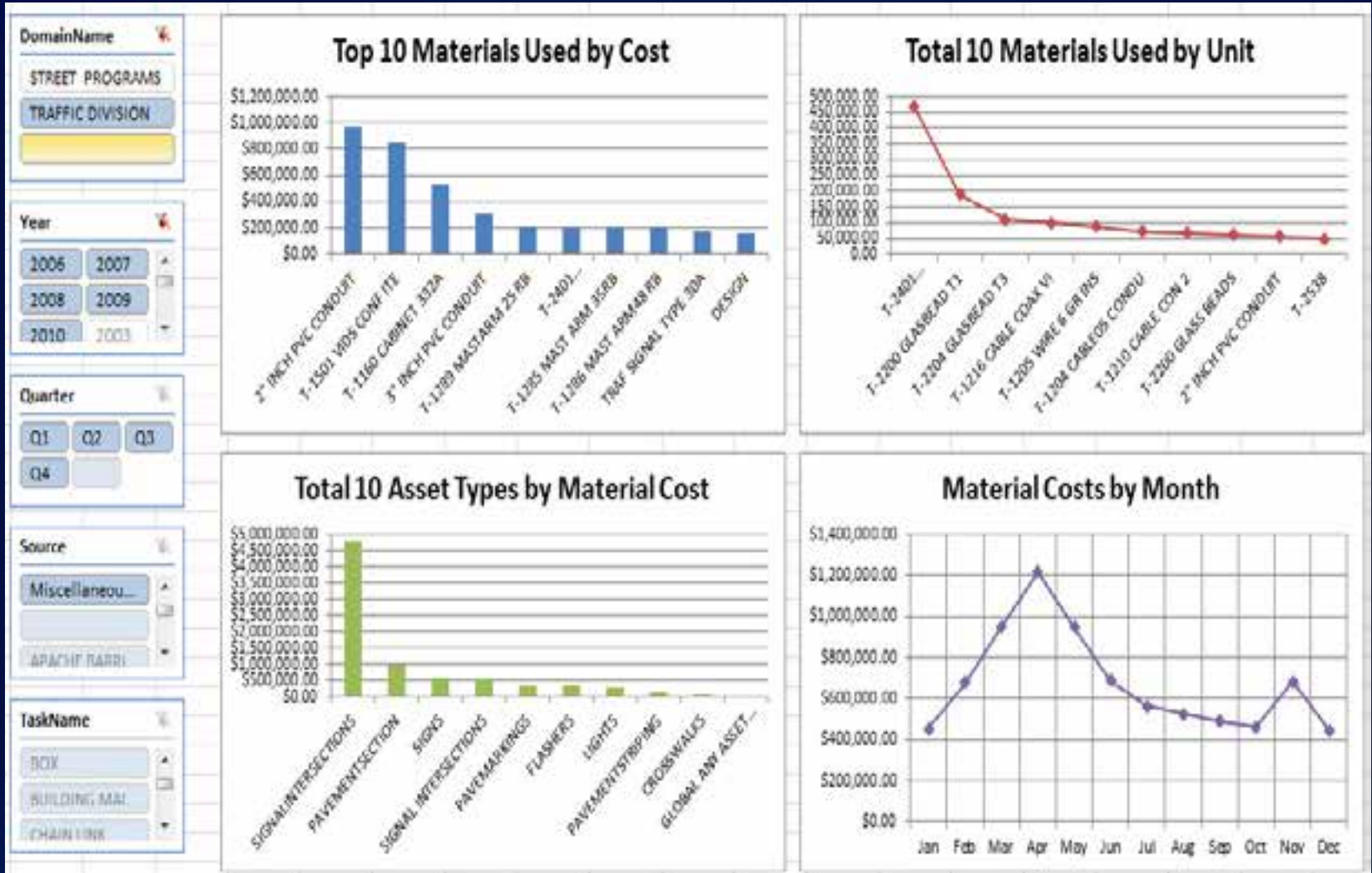
# Value gained from Asset Management?



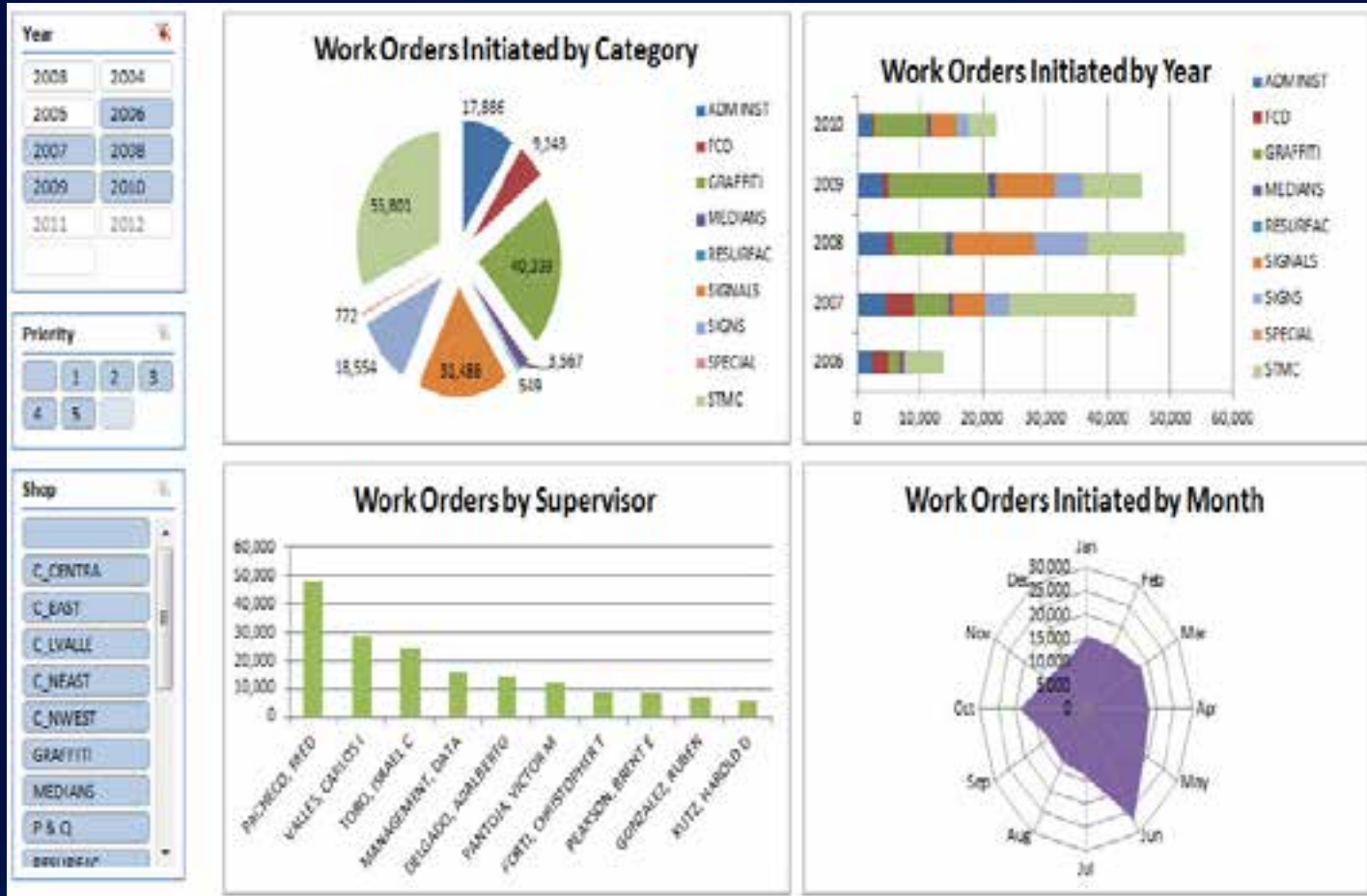
# What is the busiest hour of the day for phone calls?



# What is the most expensive month for materials?



# Work order create by year, month, supervisor?



# Costs

- Two costs to consider:
  - 1. Software Licensing (Number of Users, Population)
  - 2. Professional Services
- Low End - \$20,000 - \$30,000
- High End - \$250,000 - \$500,000


**Cityworks is an investment for now and the future.**

# How do I get Started?

- Asset Inventory
  - Esri Local Government Model - <http://www.arcgis.com>

The screenshot shows the ArcGIS for Local Government group page. At the top, there is a navigation bar with 'ArcGIS', 'GALLERY', 'MAP', 'GROUPS', and 'MY CONTENT'. A search bar on the right contains the text 'Find maps, applications and more...'. Below the navigation bar is the group logo, a globe with buildings, and the title 'ArcGIS for Local Government'. To the right of the title are 'Share', 'Facebook', and 'Twitter' buttons. A welcome message reads: 'Welcome to the ArcGIS for Local Government Group on ArcGIS.com. It provides useful maps, apps and best practices that will help you successfully implement GIS in your organization.' Below this is a 'Group Content' section with a table of items. The table has columns for 'Title', 'Owner', 'Rating', 'Views', and 'Date'. Two items are listed: 'Public Safety Damage Assessment (ArcGIS 10.1)' and 'Local Government Maps and Apps Gallery'. To the right of the content is a 'Group Details' section showing the group name 'ArcGISTeamLocalGov', status 'public', and tags including 'Local Government, City, County, Village, Township, Municipal, Basemaps, Land Records, Infrastructure, Elections, Planning, Public Safety'. Below the details is a '1 Member' section listing 'ArcGISTeamLocalGov'.

ArcGIS GALLERY MAP GROUPS MY CONTENT Find maps, applications and more... Q


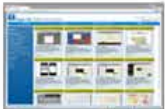
 ArcGIS for Local Government

Share Facebook Twitter

Welcome to the ArcGIS for Local Government Group on ArcGIS.com. It provides useful maps, apps and best practices that will help you successfully implement GIS in your organization. ▼

Group Content

All Results  
Maps  
Applications  
Tools

Title	Owner	Rating	Views	Date
 Details	ArcGISTeamLocalGov	☆☆☆☆☆ (0 ratings, 0 comments, 1 view)		September 20, 2012
 Open ▾ Details	ArcGISTeamLocalGov	★★★★☆ (13 ratings, 25 comments, 12,801 views)	12,801	July 19, 2012

Group Details

ArcGISTeamLocalGov  
Status: public  
Tags: Local Government, City, County, Village, Township, Municipal, Basemaps, Land Records, Infrastructure, Elections, Planning, Public Safety

1 Member

ArcGISTeamLocalGov

# How do I get Started?

- Asset Management System
  - [www.cityworks.com](http://www.cityworks.com)

## Cityworks®

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### Learn how Cityworks can help you use your GIS in new ways

Geographic information system (GIS) mapping software has grown to pervasive, organization-wide technology for analysis and decision making. This evolutionary process will grow and be accelerated by modern GIS web development frameworks such as Esri® ArcGIS Server. Local governments have traditionally used GIS to produce and analyze maps, but now this important technology investment can be applied to managing public assets. GIS is the perfect platform for local governments to create an integrated GIS-centric public asset management system using spatial relationships as a way to manage all public assets and work activities. [Read more...](#)



Questions?

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mharman@cityworks.com