Cityworks Work & Asset Management

System Integration

&

Agenda

Work Management Systems

Road Map for Cityworks

Components of Cityworks

Integration – What and Why?

Integration Points – Lucky 13!
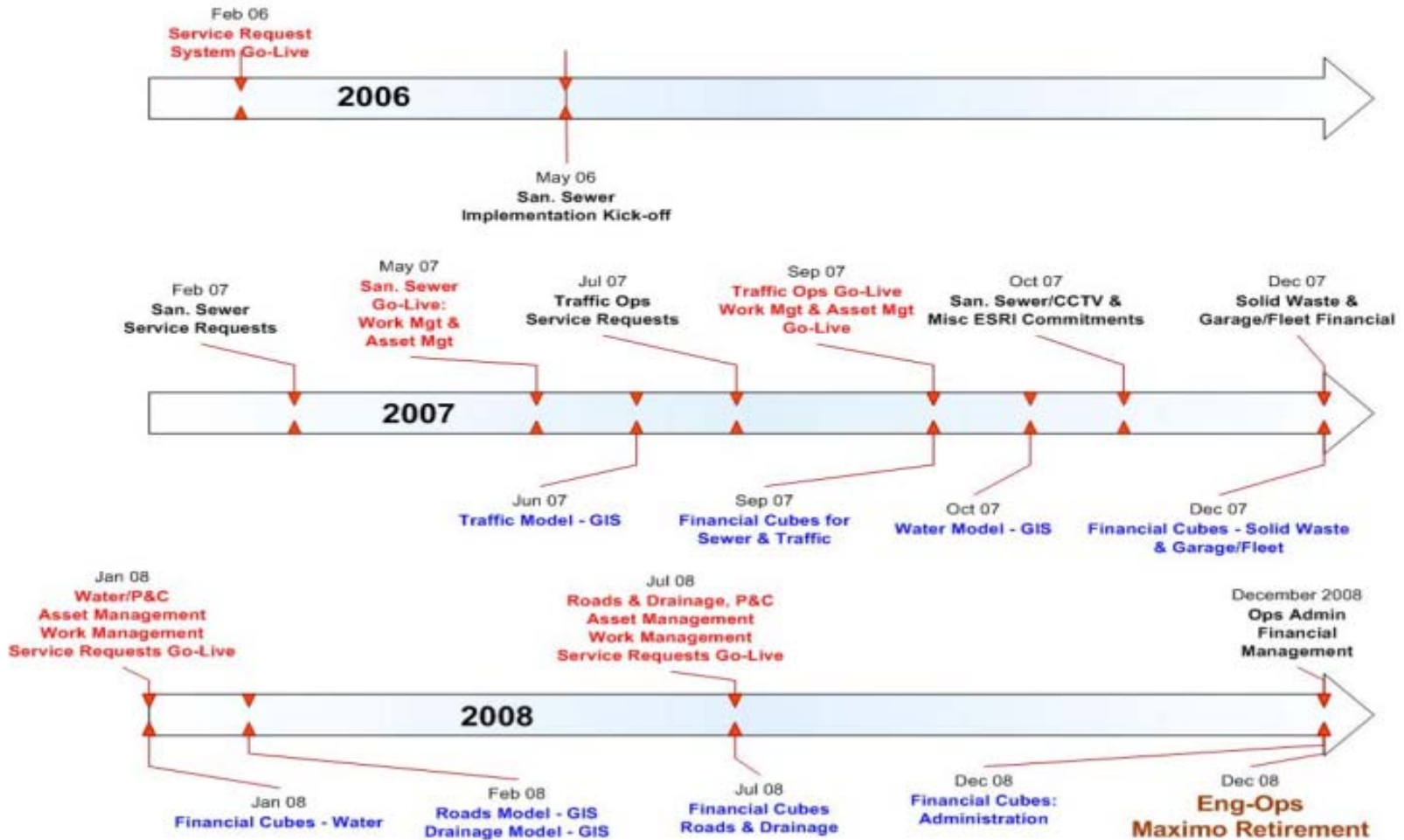
Integration Methods

Q&A

Work Management Systems

- Cityworks
  - ➢ All Engineering Ops Service Requests
  - ➢ Engineering Ops Sanitary Sewer Work Orders
- Maximo
  - ➢ Engineering Ops non-Sanitary Sewer Work Orders
  - ➢ Parks Operations Work Orders
  - ➢ Facilities Work Orders
  - ➢ Capital Projects

Roadmap

CITYWORKS IMPLEMENTATION & MAXIMO RETIREMENT

Feb 06
Service Request System Go-Live

2006

May 06
San. Sewer Implementation Kick-off

Feb 07
San. Sewer Service Requests

May 07
San. Sewer Go-Live: Work Mgt & Asset Mgt

Jul 07
Traffic Ops Service Requests

Sep 07
Traffic Ops Go-Live Work Mgt & Asset Mgt Go-Live

Oct 07
San. Sewer/CCTV & Misc ESRI Commitments

Dec 07
Solid Waste & Garage/Fleet Financial

2007

Jun 07
Traffic Model - GIS

Sep 07
Financial Cubes for Sewer & Traffic

Oct 07
Water Model - GIS

Dec 07
Financial Cubes - Solid Waste & Garage/Fleet

Jan 08
Water/P&C Asset Management Work Management Service Requests Go-Live

Jul 08
Roads & Drainage, P&C Asset Management Work Management Service Requests Go-Live

December 2008
Ops Admin Financial Management

2008

Jan 08
Financial Cubes - Water

Feb 08
Roads Model - GIS Drainage Model - GIS

Jul 08
Financial Cubes Roads & Drainage

Dec 08
Financial Cubes: Administration

Dec 08
Eng-Ops Maximo Retirement

Components of Cityworks

GIS

Cityworks

Crewsheet

Integration

Reports

Custom Utilities

Integration

Gary Harms
Application Integration Architect
Information Technology Division
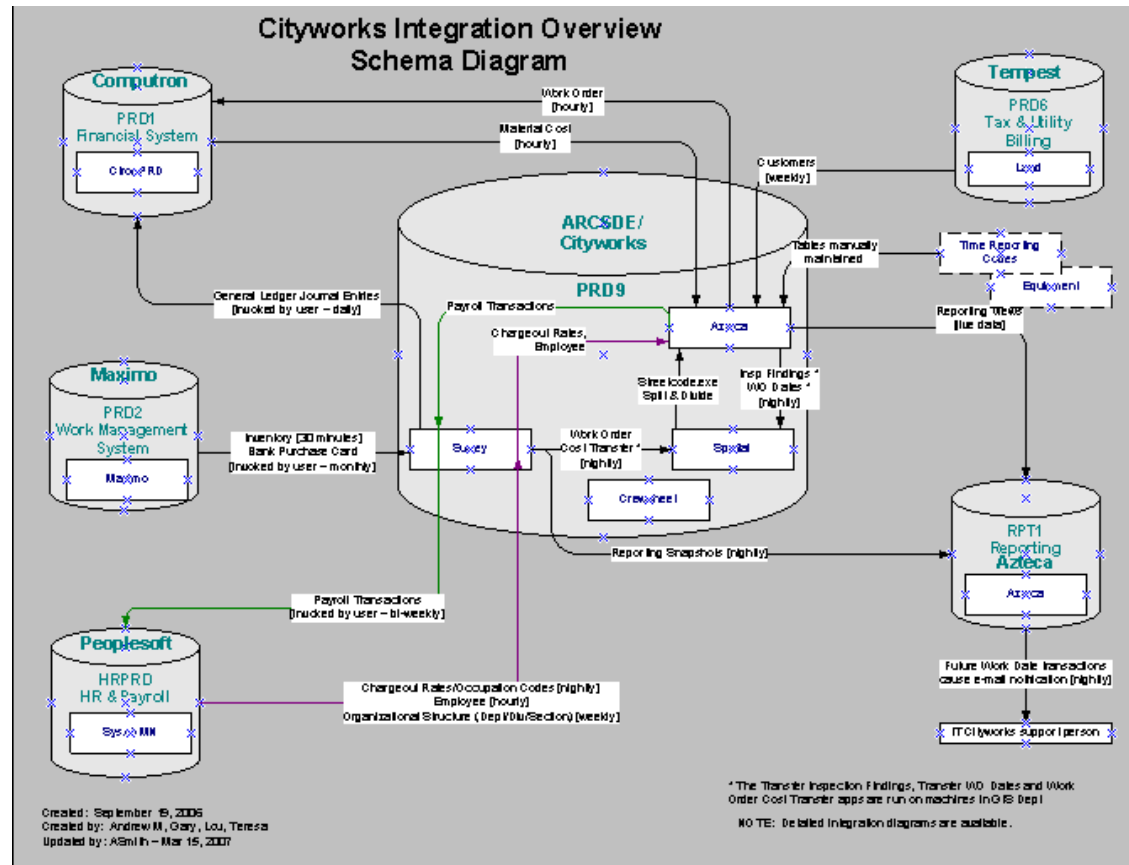
What is Integration?

The orchestrated sharing of data between applications within the enterprise.

- Cityworks is inherently integrated with GIS

- Remaining integration custom built

Why Automate Integration?

- Reduce manual intervention with it's associated effort and risk of error
- Enter data as close to the source of origin as possible to make available to all as soon as possible and to reduce error
- Enter data once to avoid reconciliation of multiple systems
- Enter data once to avoid effort associated with duplicate entry
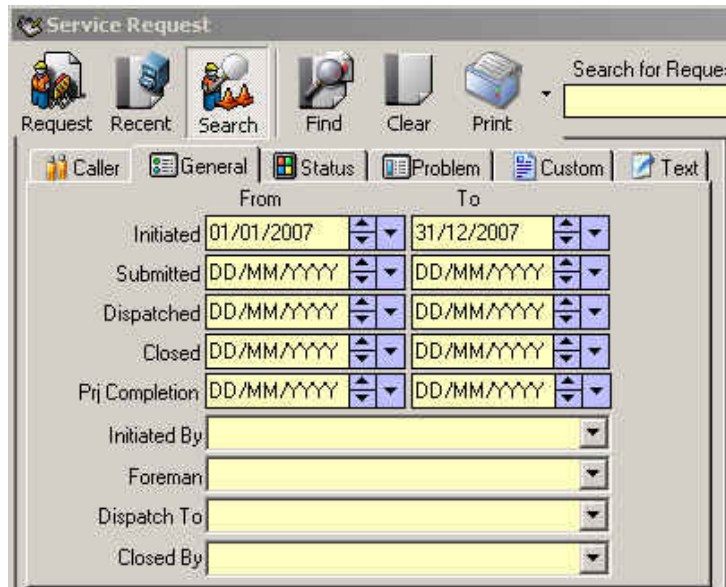
❖ Reduce manual effort & error
❖ Availability of data

Cityworks GIS Integration

Determine the # of reported water main breaks in 2007 and plot the locations
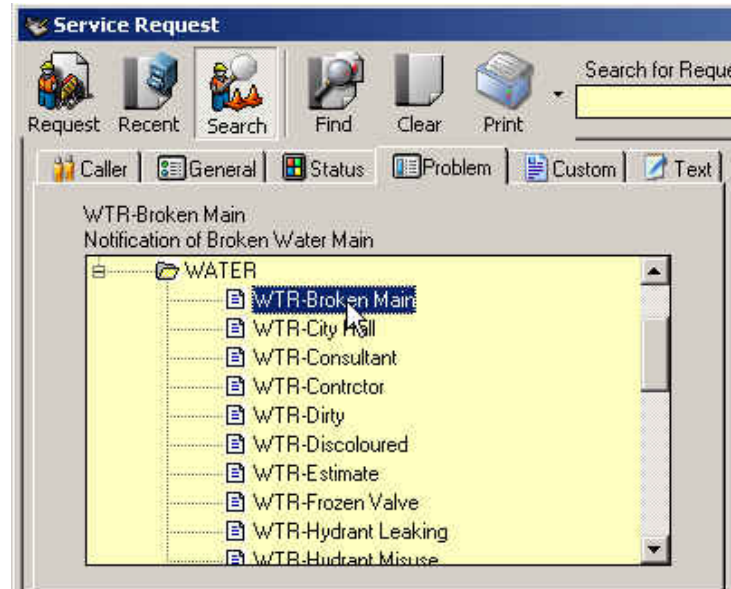
Cityworks GIS Integration

Enter date range

Enter problem

Cityworks GIS Integration

Query the data base

Cityworks GIS Integration

Save as Event Layer

Define Event Layer in GIS
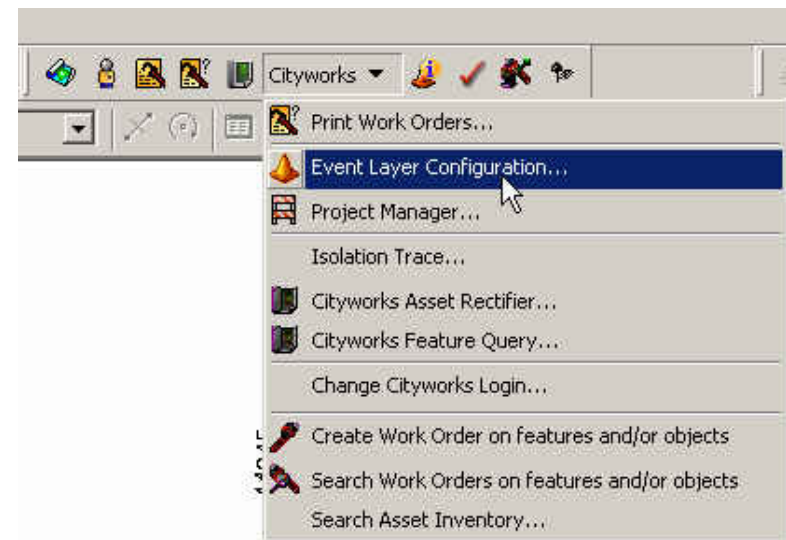
Plot the results

- Previously 1-2 months elapsed time.

- Currently 15 minutes.

13
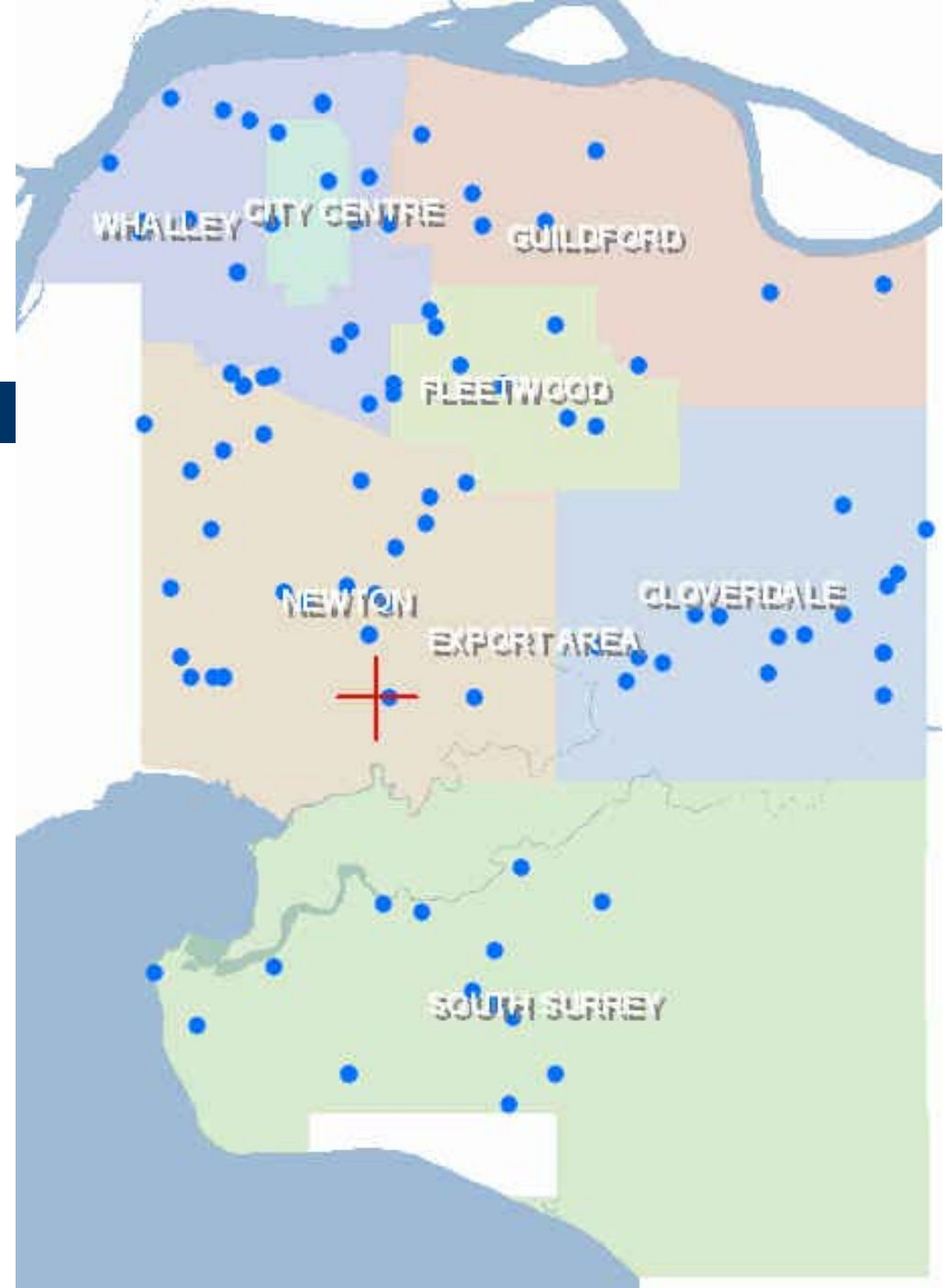
Triskaidekaphobia

- Fear of the number 13
- from Greek tris=three, kai=and, deka=ten

System Integration

- Human Resources & Payroll (PeopleSoft)
- City Work Management (Maximo)
- Financial Information System (Computron)
- Tax & Utility Billing (Tempest)
- GIS (ESRI)
- Only SS - volumes will increase
- 13 points!

Cityworks Integration Overview
Schema Diagram

Computron

PRD1
Financial System

CtronPRD

Tempest

PRD6
Tax & Utility
Billing

Land

**ARCSDE/
Cityworks**

PRD9

Work Order
[hourly]

Material Cost
[hourly]

Customers
[weekly]

Tables manually
maintained

Time Reporting
Codes

Equipment

General Ledger Journal Entries
[invoked by user – daily]

Payroll Transactions

Chargeout Rates,
Employee

Azteca

Reporting Views
[live data]

Streetcode.exe
Split & Divide

Insp Findings *
WO Dates *
[nightly]

Maximo

PRD2
Work Management
System

Maximo

Inventory [30 minutes]
Bank Purchase Card
[invoked by user – monthly]

Surrey

Work Order
Cost Transfer *
[nightly]

Spatial

Crewsheet

Reporting Snapshots [nightly]

**RPT1
Reporting
Azteca**

Azteca

Payroll Transactions
[invoked by user – bi-weekly]

Peoplesoft

HRPRD
HR & Payroll

SysADMN

Chargeout Rates/Occupation Codes [nightly]
Employee [hourly]
Organizational Structure (Dept/Div/Section) [weekly]

Future Work Date transactions
cause e-mail notification [nightly]

IT Cityworks support person

* The Transfer Inspection Findings, Transfer WO Dates and Work
Order Cost Transfer apps are run on machines in GIS Dept

NOTE: Detailed integration diagrams are available.

Created: September 19, 2006
Created by: Andrew M, Gary, Lou, Teresa
Updated by: ASmith – Mar 15, 2007

1. Organizational Structure

PeopleSoft HR → **Cityworks**
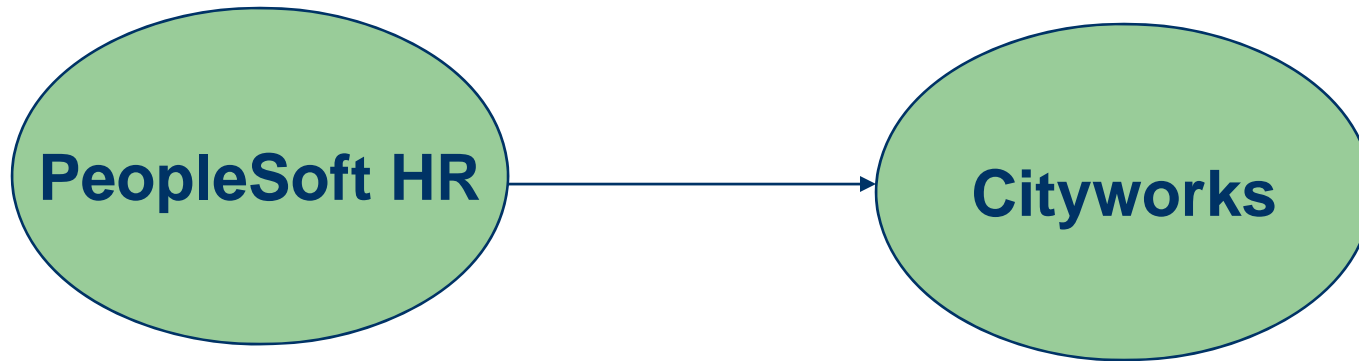
- Department, Division and Section changes
- Updated weekly
- Low volume

2. Employee Information

PeopleSoft HR → Cityworks
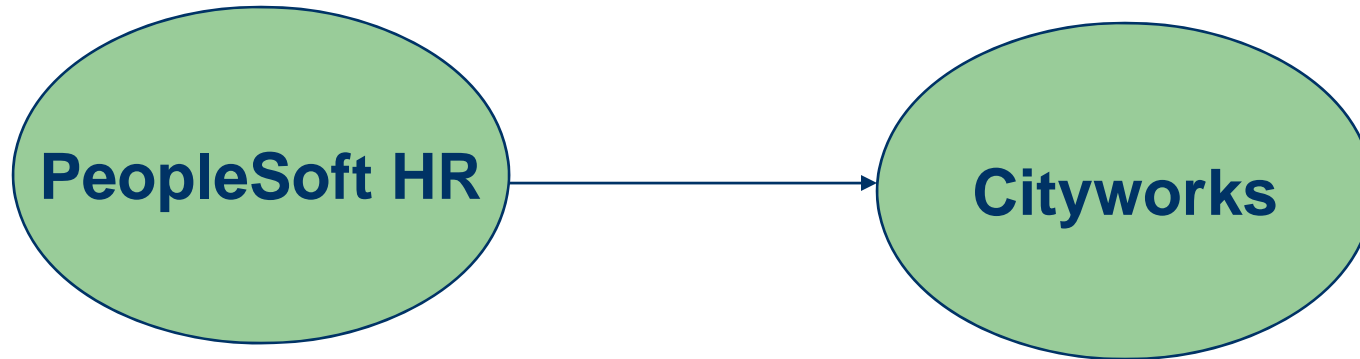
- Employee information changes
- Updated hourly
- Low volume

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Triskaidekaphobia – Origin?

- Arises from the counting method of ancient people who counted on ten toes and two feet.

- Anything beyond that countable dozen was unknown and thus evil.

3. Charge out Rates

PeopleSoft HR → Cityworks
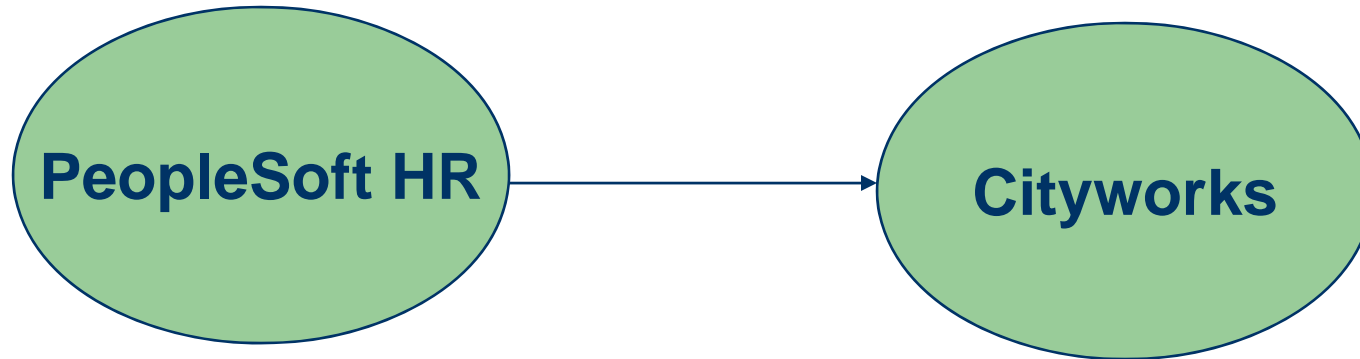
- Calculated from pay rates and overhead %
- Updated nightly
- Low volume

4. Payroll Transactions

Cityworks Crewsheet → **PeopleSoft Payroll**
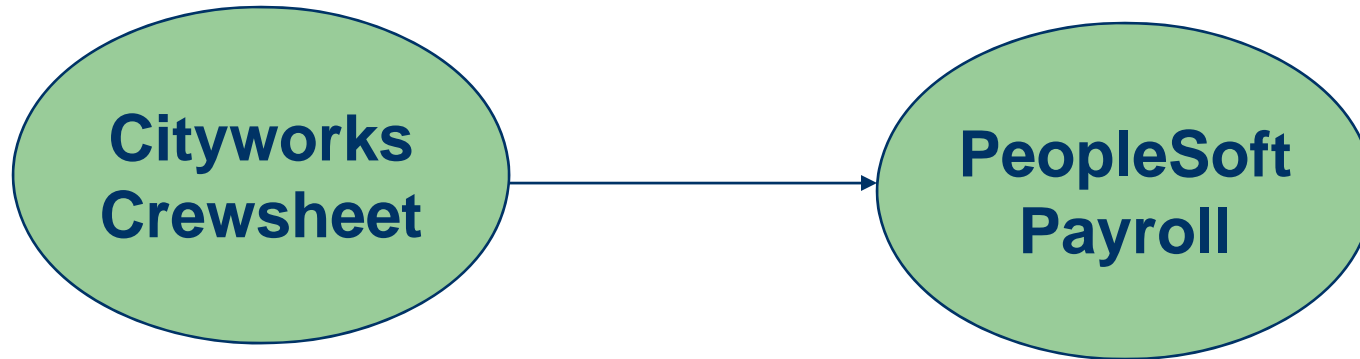
- Labour transactions entered daily via Crewsheet (custom Cityworks entry module)
- Loaded into Payroll bi-weekly
- Average 2200/month

5. Inventory

Maximo Work Mgnt → Cityworks
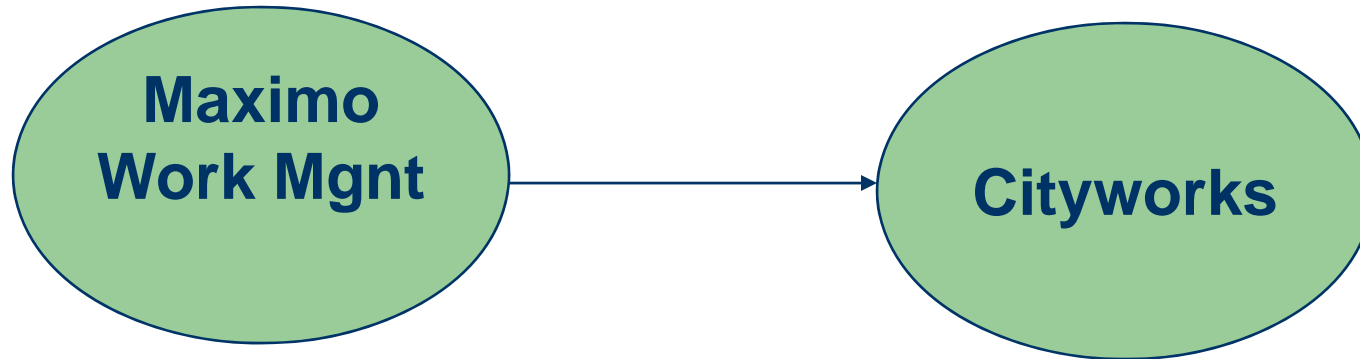
- Inventory issues & returns entered in Maximo
- Updated hourly
- Average 100/month

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Triskaidekaphobia – Origin?

- At the Last Supper, Judas, the disciple who betrayed Jesus, was the 13th to sit at the table, thus 13 is considered to carry a curse

6. Bank Purchase Card

Bank Purchase Card Transactions → **Maximo** → **Cityworks**

- Loaded monthly from bank to Maximo
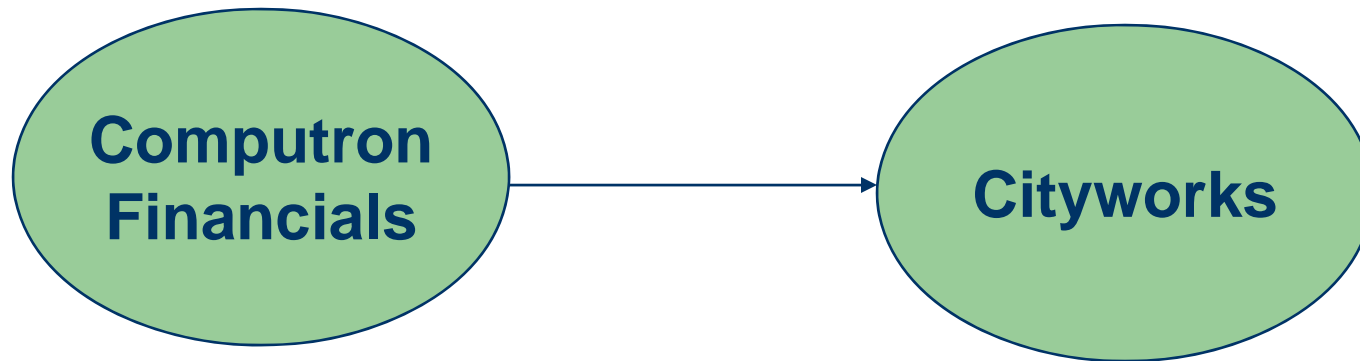- Transactions for Cityworks work orders flow to Cityworks
- Average 3/month, will increase

7. Material Costs

Computron Financials → **Cityworks**

- Purchase Orders, Accounts Payable Invoices and G/L Journal Entries
- Loaded hourly
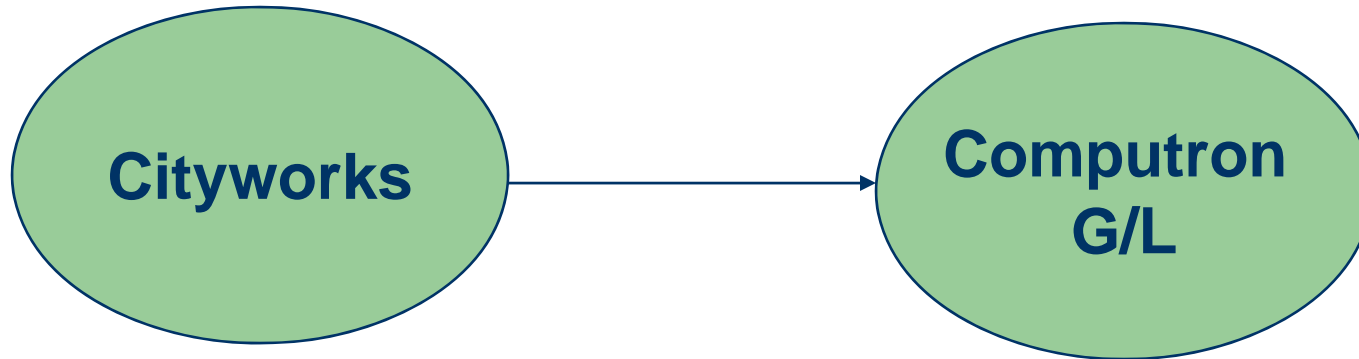- PO 25/month, A/P 250/month, JE G/L 40/month

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Triskaidekaphobia – Origin?

- On Friday October 13, 1307, King Philip IV of France arrested and murdered the Knights Templar

- Knights Templar – fighting unit founded during the Crusades to ensure the safety of Europeans who made the pilgrimage to Jerusalem after its conquest.

8. G/L Journal Entries

Cityworks → Computron G/L
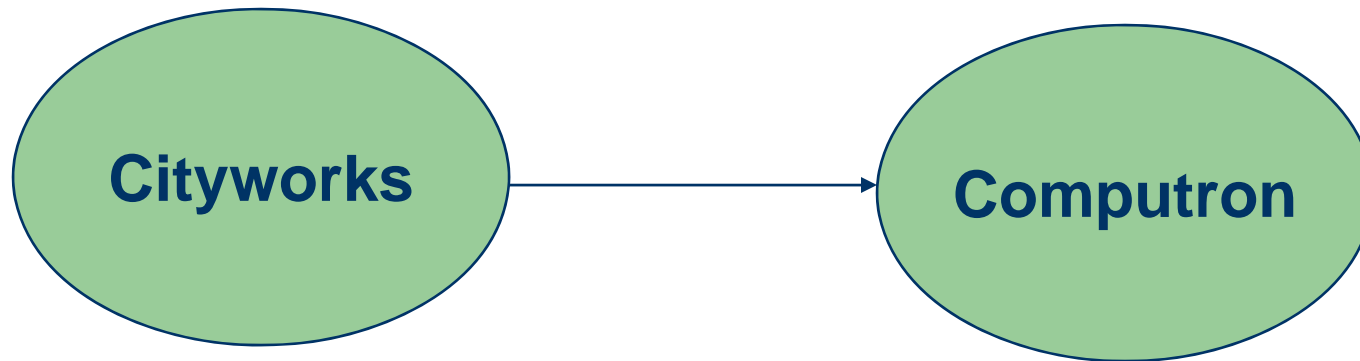
- Labour, Equipment and Material (entered via Crewsheet)
- Updated daily during Finance end-of-day processing
- Labour 2200/month, Equipment 1000/month

9. Work Order

Cityworks → **Computron**
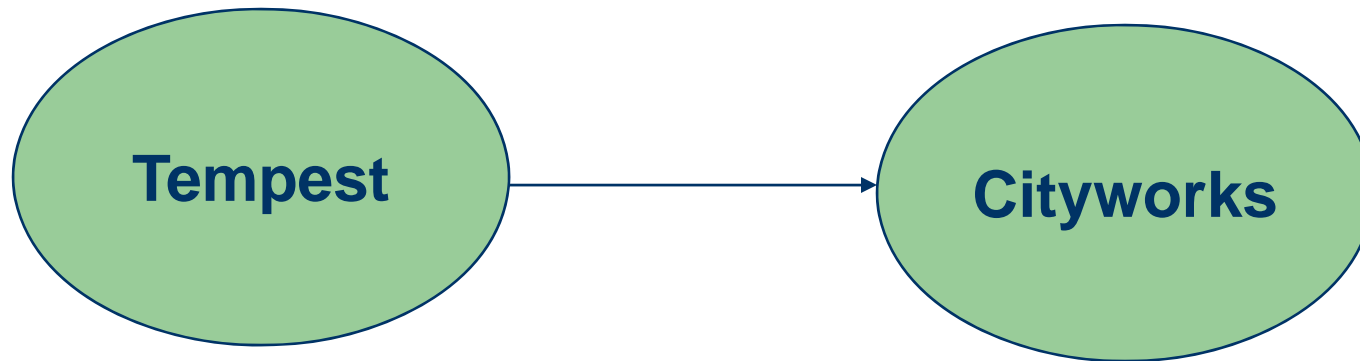
- New WO #s (used to validate WO# in Computron)
- Work Order status changes (i.e closed)
- Updated hourly
- 400/month

10. Customer Information

Tempest → **Cityworks**

- Property Owner names, addresses and garbage collection customer status
- Updated weekly
- Volume?

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Triskaidekaphobia – Origin?

- Who knows!

11-13 GIS Integration
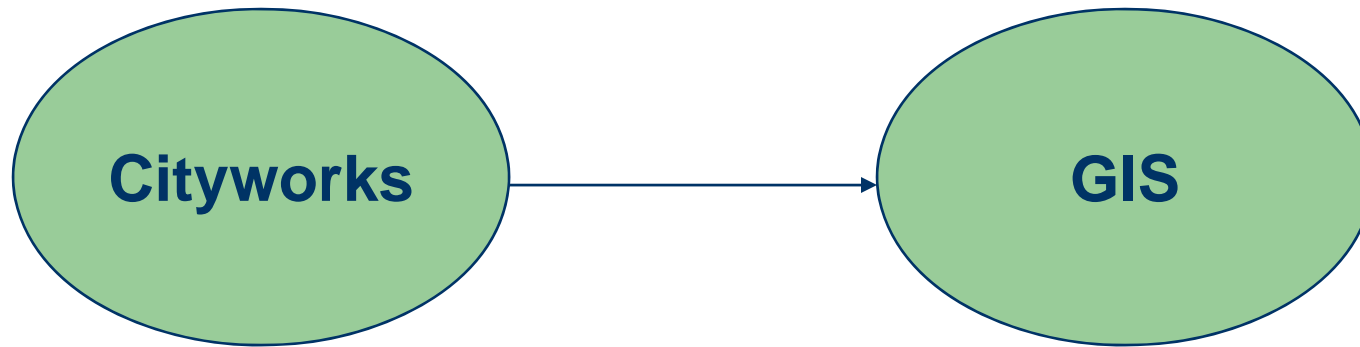
Cityworks → **GIS**
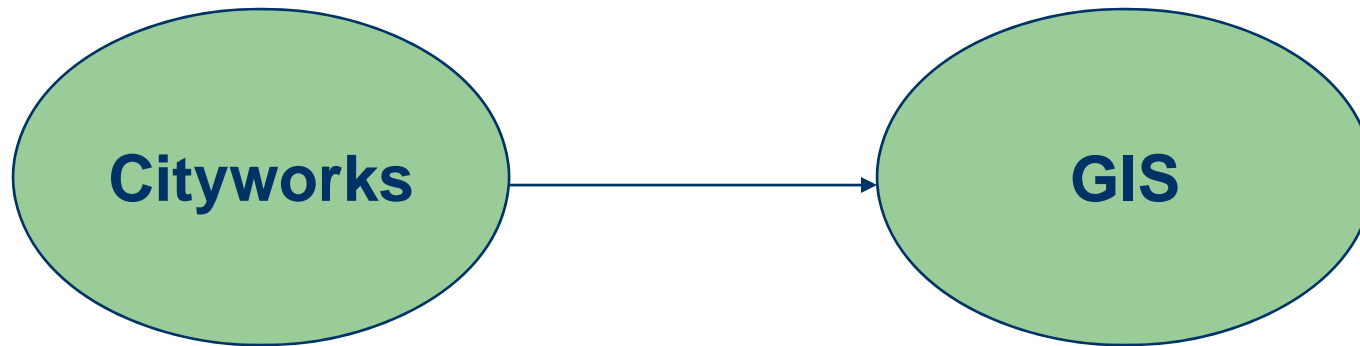
To allow non-Cityworks users access to

➢ cost,

➢ inspection, and

➢ activity dates

via internal COSMOS or GIS tools

11. Asset Maintenance Costs

Cityworks → **GIS**
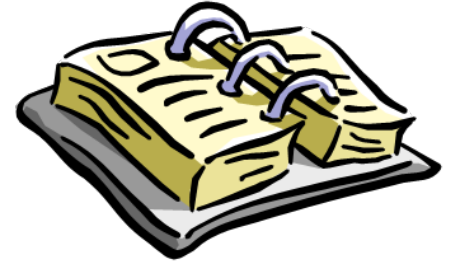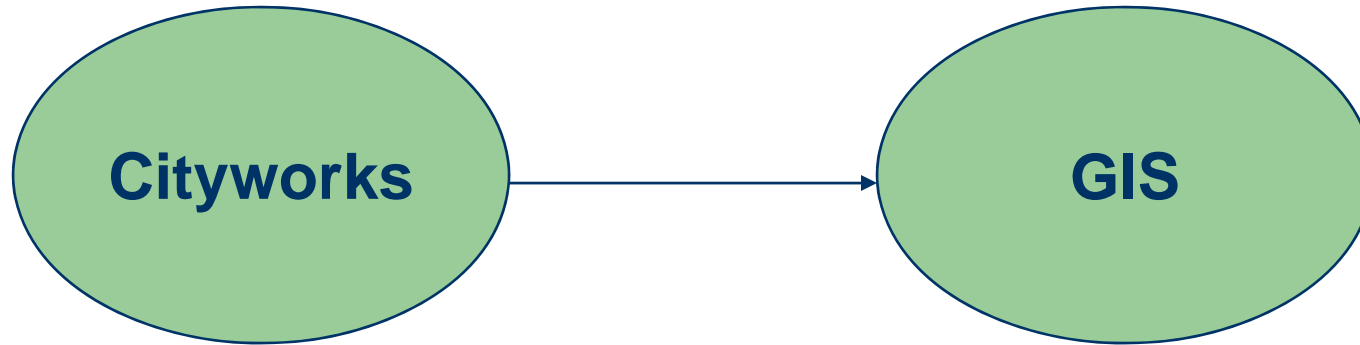
- Cost transactions are pro-rated across each asset assigned to a work order and added to LTD and YTD accumulators in GIS

- Updated nightly

- 70,000/month – each cost split across all assets on WO

12. Work Order Dates

Cityworks → GIS

- Work order finish date
- Updated nightly
- 100 per month

13. Inspections

```
┌─────────────┐              ┌─────────┐
│  Cityworks  │ ──────────►  │   GIS   │
│ Inspections │              │         │
└─────────────┘              └─────────┘
```
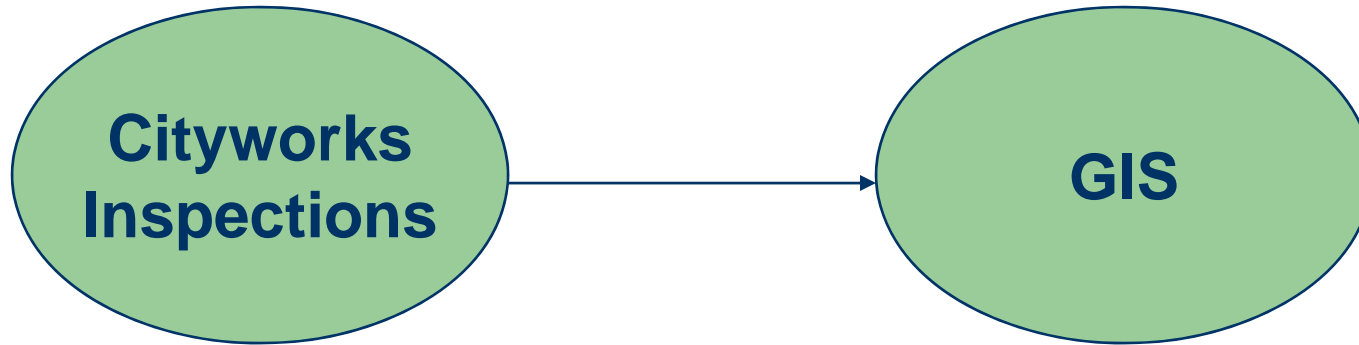
- Transfers inspection findings
  - ➤ Physical attributes (diameter, material)
  - ➤ Asset condition information
- Updated nightly
- 100 per month

Non-Integration Points

- Time Reporting Codes
  - very low volume (1 since go live)

- Equipment
  - limited volume

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Regardless of its origin this fear manifests itself today

- In North America many tall buildings do not have a floor numbered 13

- On some passenger aircraft there is no seating row numbered 13

- In Formula One no vehicle carries the number 13

- Feb 2007 - a Belgian carrier, Brussels Airlines, was forced to change its logo following complaints from superstitious passengers

13

British Medical Journal 1993

"Is Friday the 13th Bad for Your Health?"

Consistently fewer people chose to drive their cars on Friday the 13th

however,

the number of hospital admissions due to vehicular accidents was significantly higher than on "normal" Fridays.

Integration Methods

Gary Harms

Integration Methods

- Uses database triggers to populate interface tables

- Interface tables reside in the database that initiates the transaction

- Destination application pulls the data from the interface table
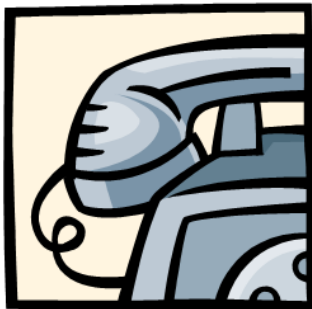
13

Why 13 is lucky… for Gary Harms

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