

Integrated Asset management



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What is asset management

- ‘Infrastructure’ not ‘financial’
- Municipal infrastructure (i.e.)
 - Sewer mains
 - Street Lights
 - Water Hydrant
 - City owned buildings
 - Fiber networks

W's of Asset Management

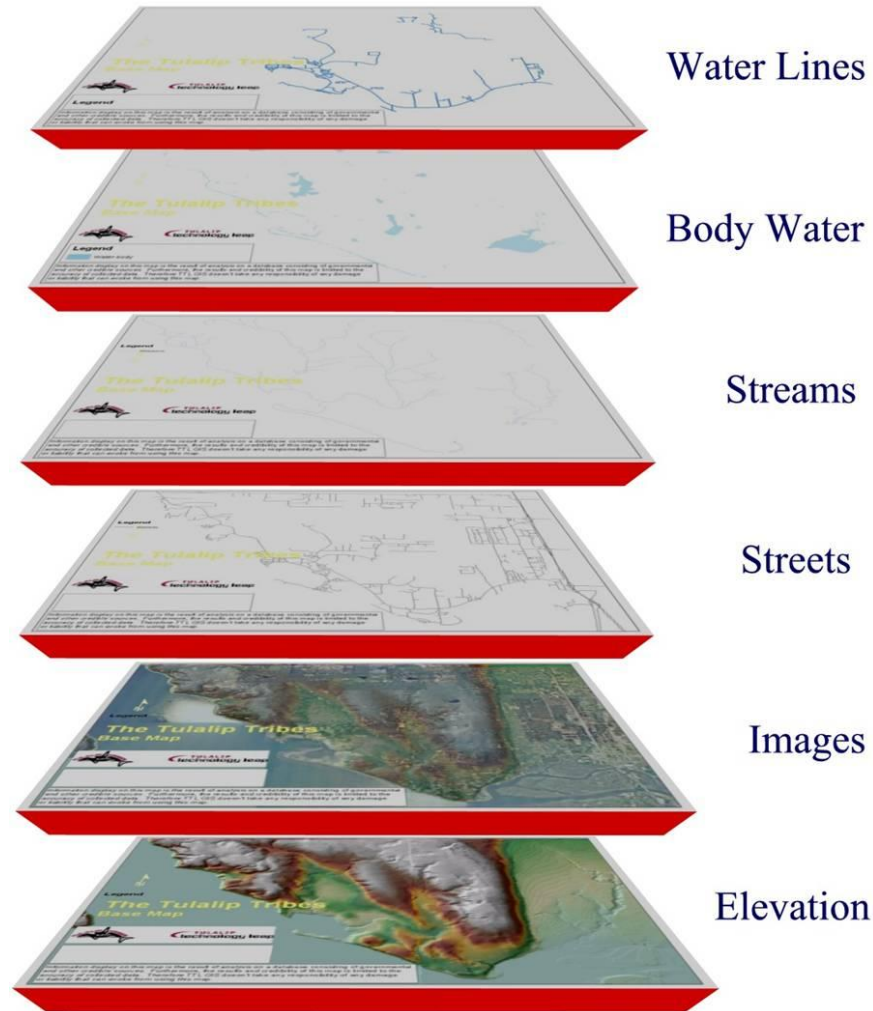
- What assets do we own?
- Where are they located?
- What condition are the assets in?
- What is its value?
- What needs to be done to preserve the assets (repair, renewal, or replacement)?
- When do you need to do it and how much will it cost?

'W's of Asset Management

Knowing when, where, and why can help us anticipate the problems and proactively replace them before they fail



How does GIS fit in with AM?



Collecting the data was only half the battle...

we were....

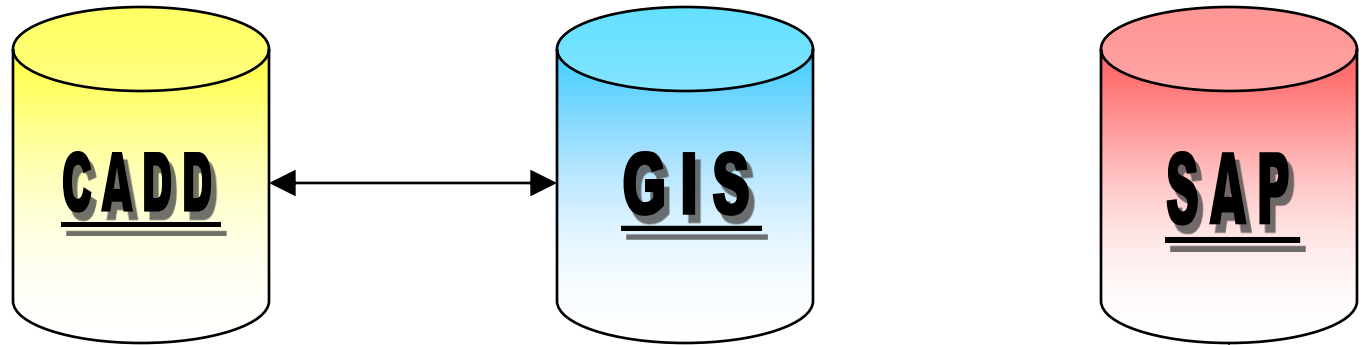
- Storing & displaying the as-built locations of the assets
- Maintaining a data dictionary describing the characteristics of the assets
- Still printing out paper maps ☹️

we weren't...

- Using the data to assist us in our decision making processes
- Integrating our GIS with our business systems

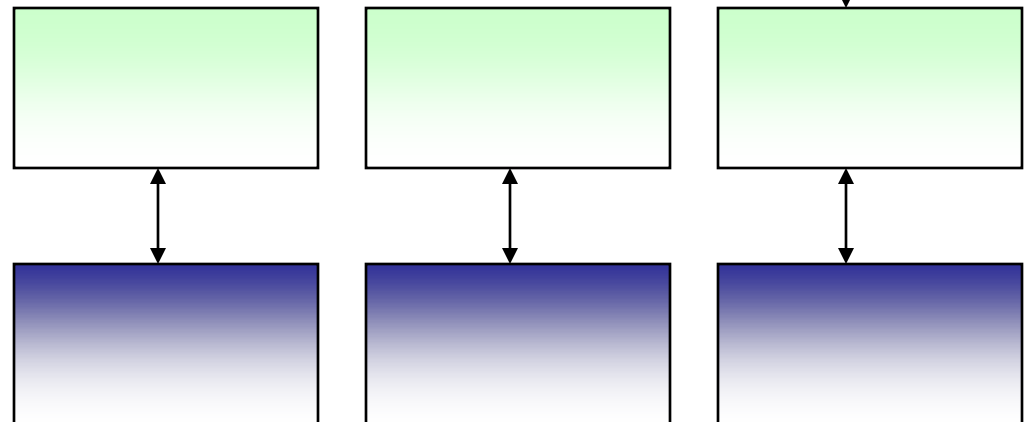
The Result

Systems separated by function



Work Management Systems

Dispatch Systems



Sewer

Waterworks

Electrical

So along came IMS...

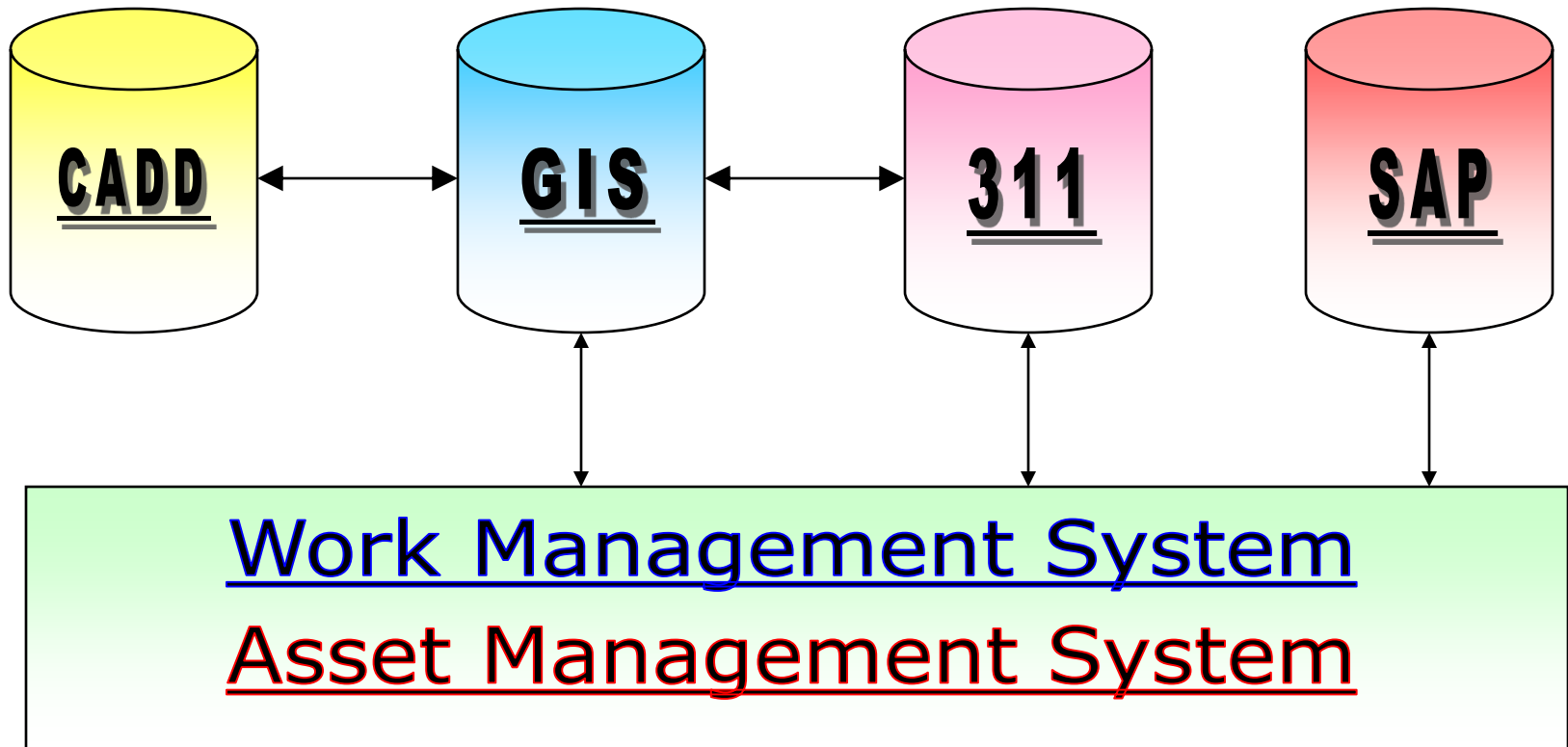
(Infrastructure Management strategy)

We'd identified a...

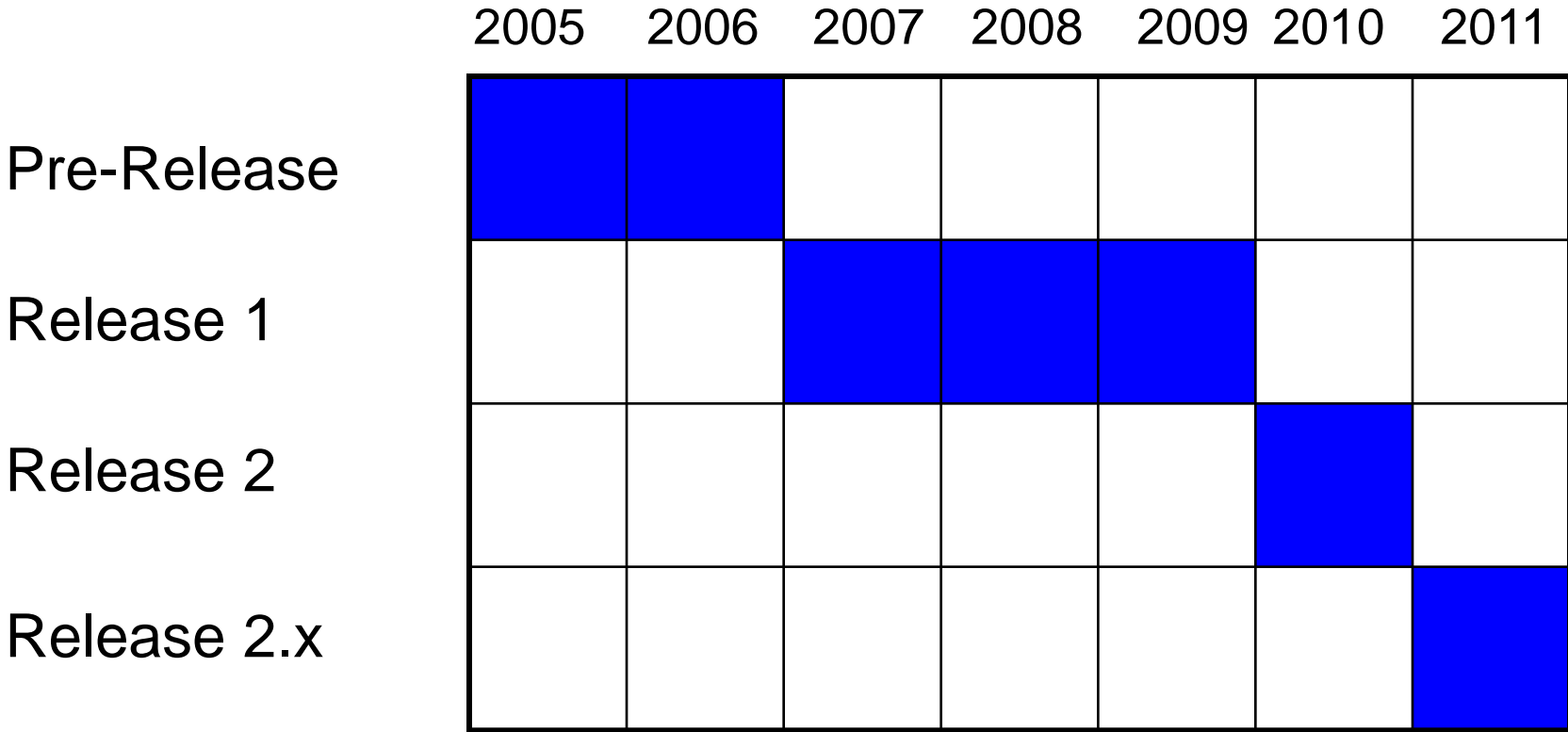
- **Need to** optimize use of dollars spent maintaining / replacing City's \$8 billion in infrastructure assets
- **Need to** minimize the risk of critical infrastructure failure
- **Need to** meet citizen's rising customer service expectations
- **Need to** create centralized way to monitor and record work history, condition, and data related to infrastructure assets
- **Need to** replace obsolete systems and disparate processes
- **Need to** establish better systems for financial accountability and capital planning
- **Need to** comply with new Public Sector Accounting Board (PSAB) requirements

The Goal

Integrated Systems



TIMELINE



What was delivered?

A system that featured:

- consistent business-driven work management processes impacting over 500 staff
- integration with our SAP financial system
- integration with our 311 call centre for trouble calls
- asset valuation models for many of our asset classes
- an integrated GIS front-end
- custom SSRS reporting interfaces

A scary IT slide

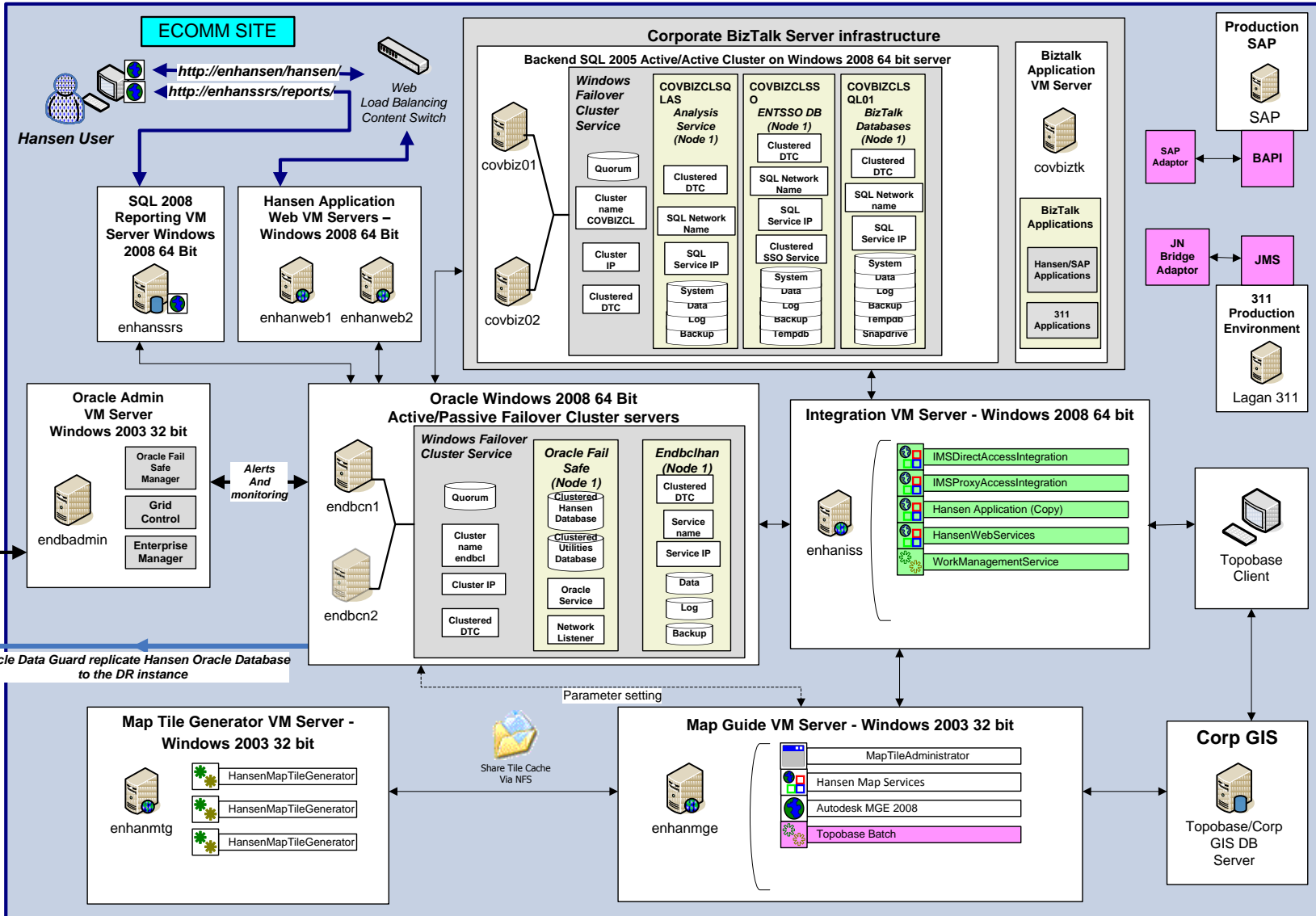
Hansen Production Integration Architecture

VM host Information

ECOMM Site:
Covesx01ec Hosting:
 Enhanmtg
 Enhanweb1
 Enhanssrs
 Enhansis

Covesx02ec Hosting:
 Endbadmin
 enhanmge
 Enhanweb2

OPS DR Site:
Covesx02 Hosting:
 All Hansen production VM from ECOMM when issue arise



What is left to do?

- Mobile computing
- Legacy systems still in use
- New business areas
 - Land Fill
 - Fiber Networks
 - Facilities Management
- Business Intelligence

A few more words about GIS...

The screenshot displays the Autodesk Topobase Client 2009 interface for a sewer network. The main window shows a map of a sewer network with various pipe sections and manholes. A detailed data window for a specific section is open, providing the following information:

Section - TB_WW

Function: Classification Network Tracer

Address and Location Information

Common Attributes Hansen Related Connection attributes Main Inspection Table

CITY OF VANCOUVER SEWER

Section: [55.14 - 250 ST VC 4.44% 1970] Installation Date: 1/1/1970

Pipe use	Main	Service Status	In Service	Effluent Type	Storm		
Length (m)	55.14	Diameter	250	Grade %	4.44		
Material	Verified Clay	Validation Date		BUN			
Upstream Invert	38.61	Upstream Invert Estimated	No				
Downstream Invert	36.17	Downstream Invert Estimated	No				
Pipe Shape	Round	Height (mm)	0.00	Width (mm)	0.00		
Section Name		Flow Category	Gravity	Normal Pressure	0.00		
Lining Material		On Piles	N	On Slab	N	Wet Weather Only?	No
Drawing Number		PP Number	B66				
NFB Notation		NFB Elevation	0.00				
		NFB Type					

Record 1 of 1 (Filter active)

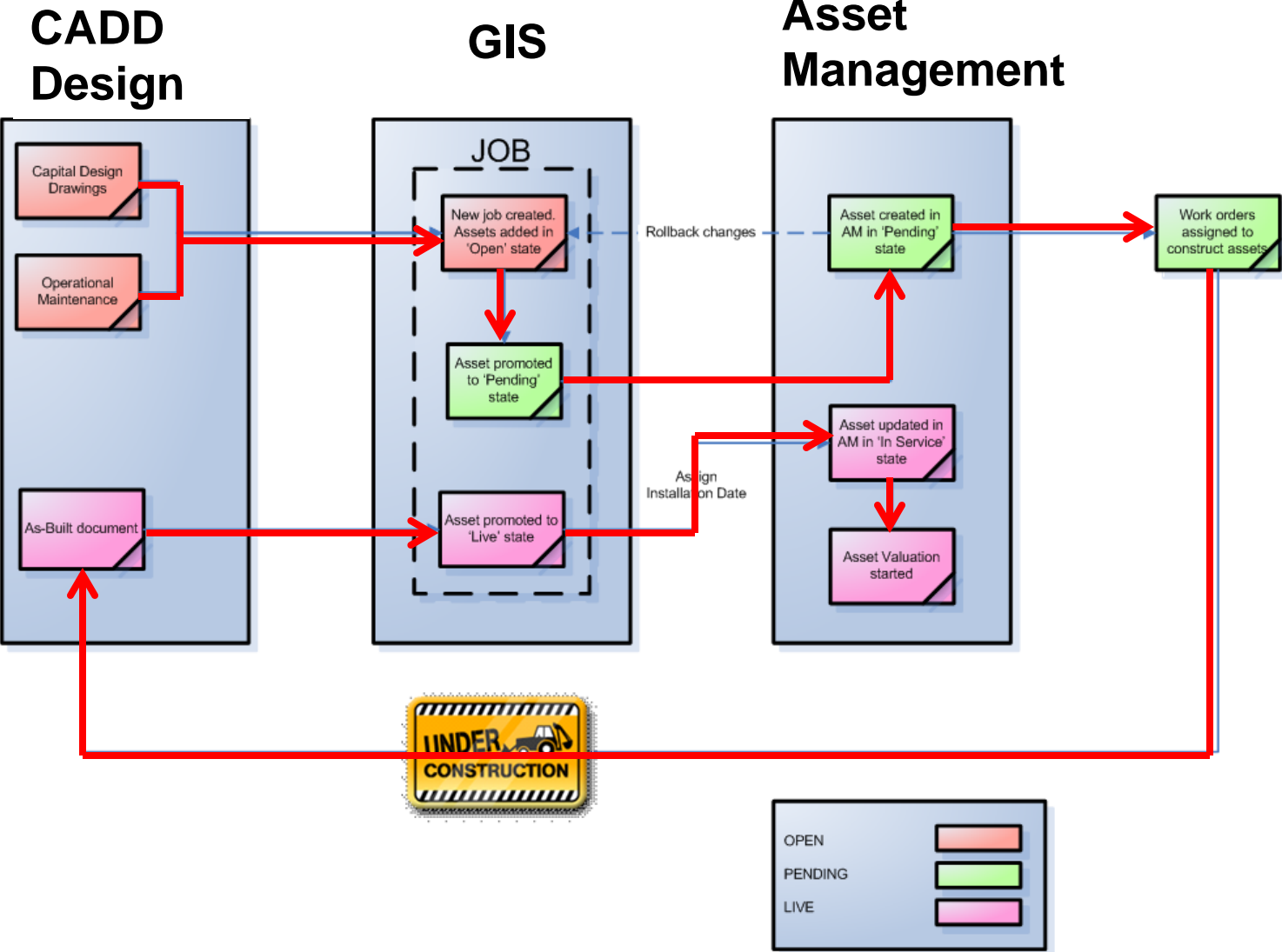
Command: _tbattributes 1 found

The interface also includes a Topobase panel on the left with a tree view showing 'TB_WW' and 'Default' layers. A Task Pane on the right lists various sewer components like 'Section - Combined', 'Section - STM', 'Section - SAN', and 'Manhole - Combined'. The bottom status bar shows 'View Scale 1: 368,749'.

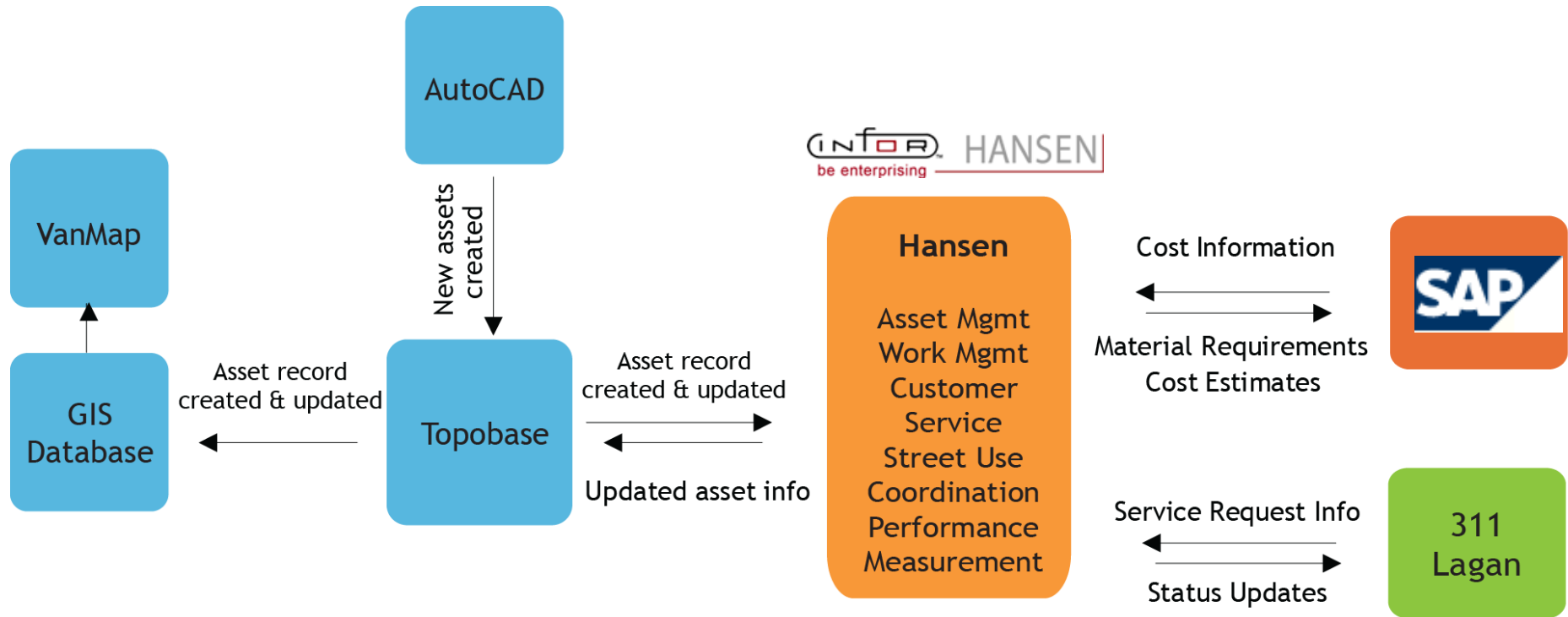
New concepts

- GIS as a front-end to asset management system
 - Two-way updates
- As-built vs. Design time

GIS asset integration



Integrated Asset Management

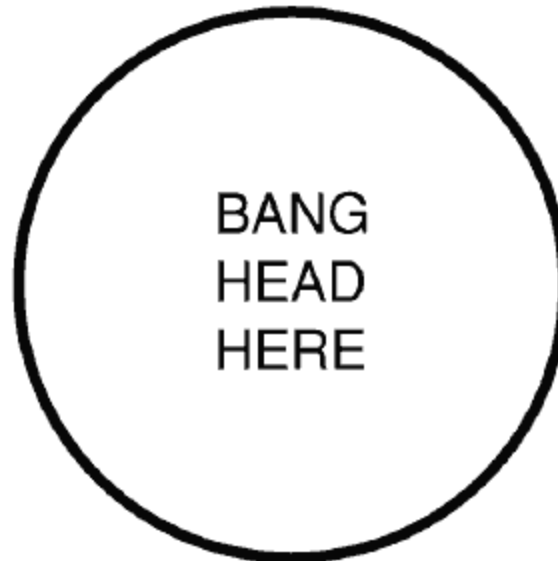


Data is integrated for Systematic Reporting and Operational Efficiency

Please note...it wasn't easy

ANTI-STRESS KIT

1. PLACE ON A FIRM SURFACE
2. FOLLOW DIRECTIONS IN CIRCLE
3. REPEAT UNTIL YOU ARE UNSTRESSED
OR BECOME UNCONSCIOUS



**But thanks to a talented
dedicated team...**

We succeeded!



At least for now...

QUESTIONS?