
3 Waters and the AMIS Programme

Phil Cahill – AMIS Programme Manager





A M i S

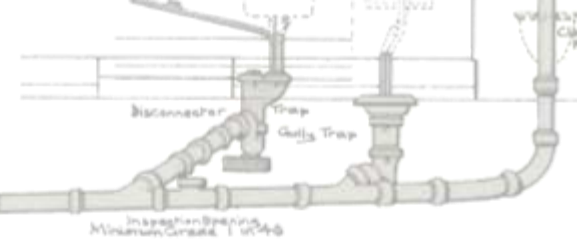
Water & Waste Services
Asset Management Information System Programme

Coming Up

- Background to the Dunedin City of today
- Challenges to maintaining old infrastructure
- Current business model
- Progressing to Advanced Asset Management
- The information system to support our future
- Current progress on our AMIS

Dunedin City

- Founded 1848
- Recognised as NZ's first city in 1865
- Home to around 126,000 residents today
- Influx of ~20,000 students for each University semester
- Territorial land area of 3,314 km²
- Urban land area of 255km



Water & Waste Infrastructure

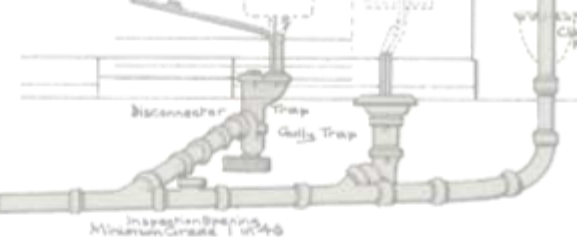


Table 1 - Infrastructure Information

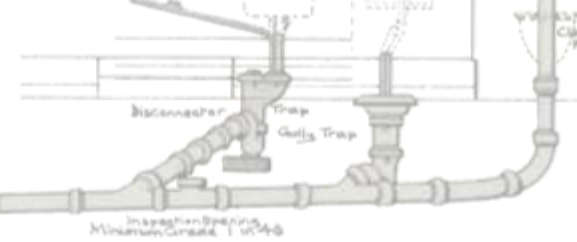
	Water Main	Sewer Main*	Stormwater Main
Total Length	1468 km	900.5 km	369.4 km
Average Age	42 years	56 years	55 years
Average Remaining Life	47 years	46 years	51 years
Oldest in Service / Install Year	146 years / 1867	110 years / 1903	152 years / 1861
Location	The Octagon	University Precinct	Rattray Street

* Dunedin originally had combined sewers. The sewer dates are based on dedicated sewers

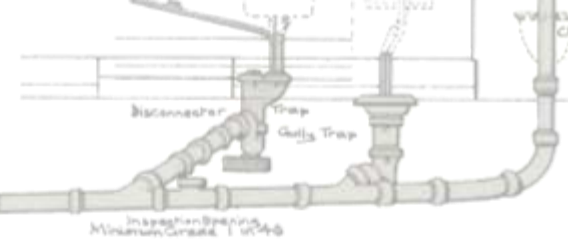


City Topography

- Lowest service in South Dunedin - buried below sea level on reclaimed land.
- Highest raw water service is for farming irrigation at 640m
- Highest treated water services is at 340m
- 60-70% of raw water is gravity fed
- ~95% of treated water is gravity fed



Current Business Model



Management, Administration & Planning



Solid Waste



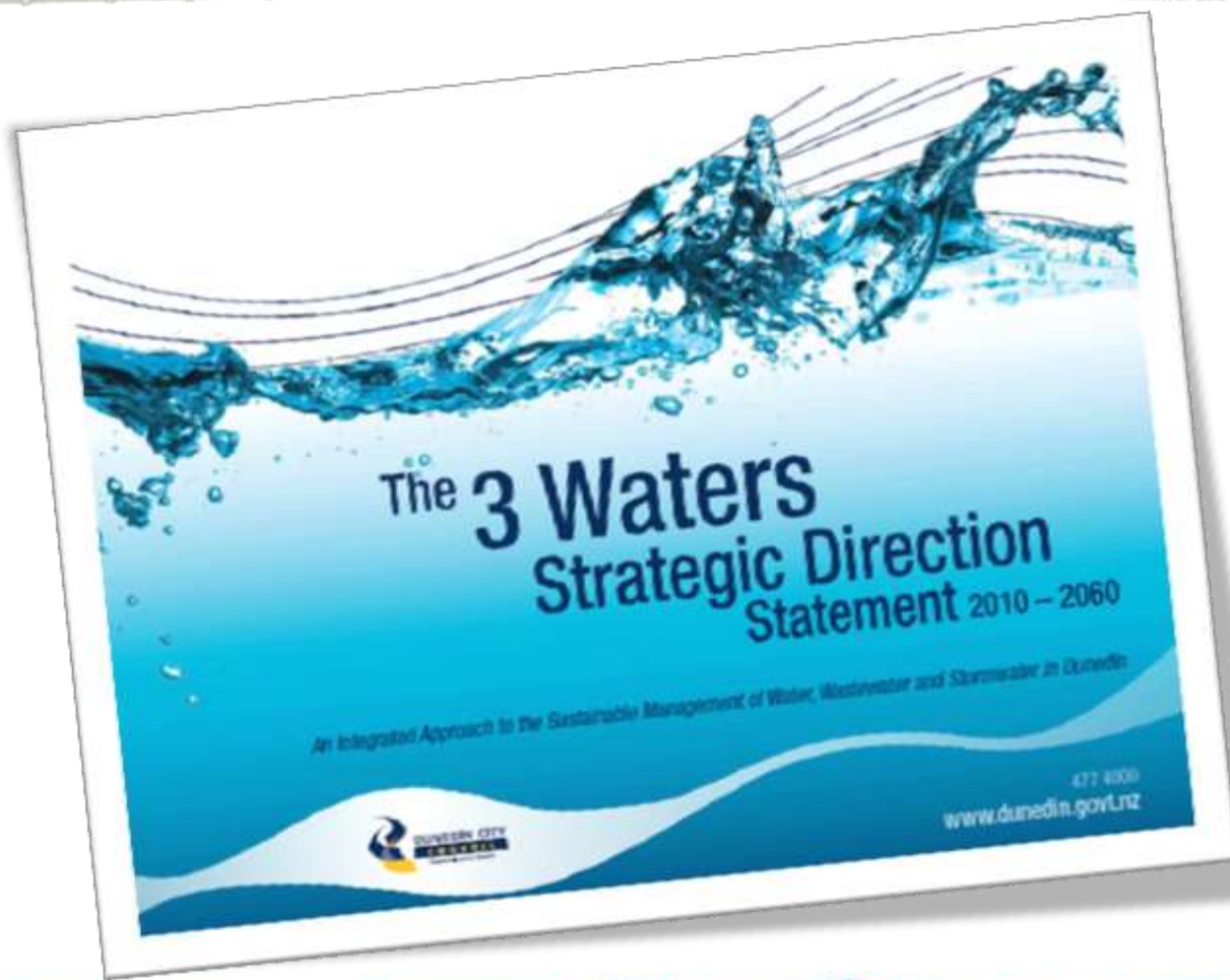
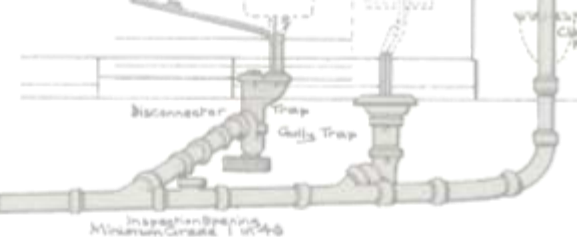
Network Operations & Maintenance



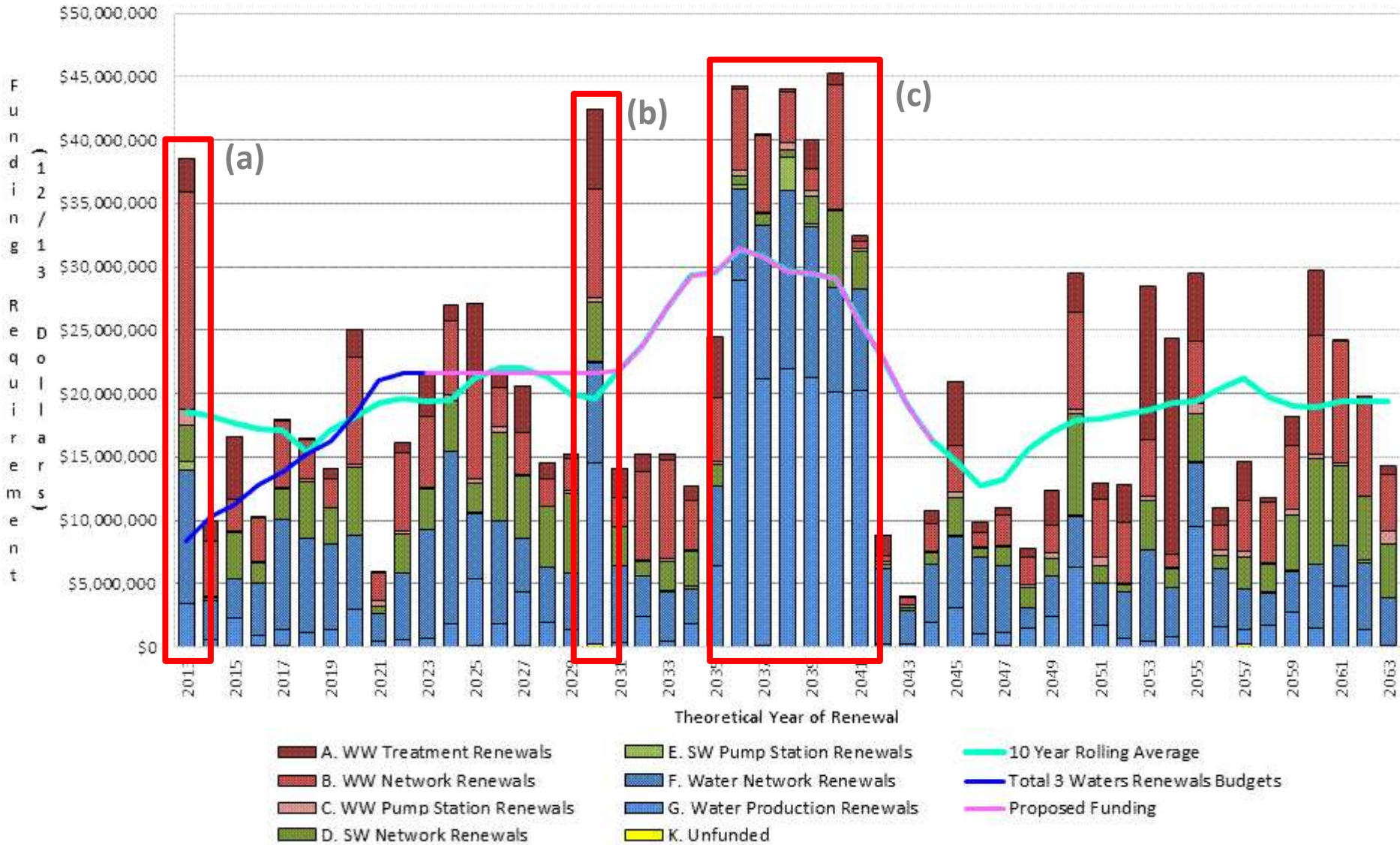
Plant Operations



3 Waters Strategy



3 Waters 50 Year Renewals Profile



Renewal Budgets



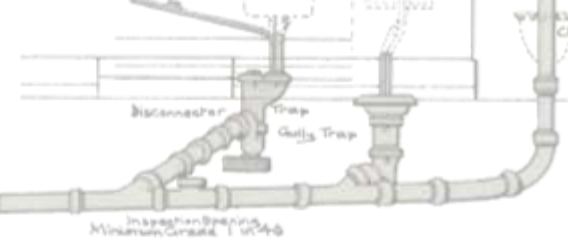
\$12 million
2012 / 2013



\$21.6 million
2022 / 2023

What we know...

- We have a significant number of assets which require renewal over the next 20-50 years
- The information we have on our assets is good, but could be even better
- There can be long term consequences of investing in the wrong areas
- Improved tools and data collection methods are required



Business Challenges



Business Challenges...



Obtaining Information vital to making good decisions.



Business Challenges...



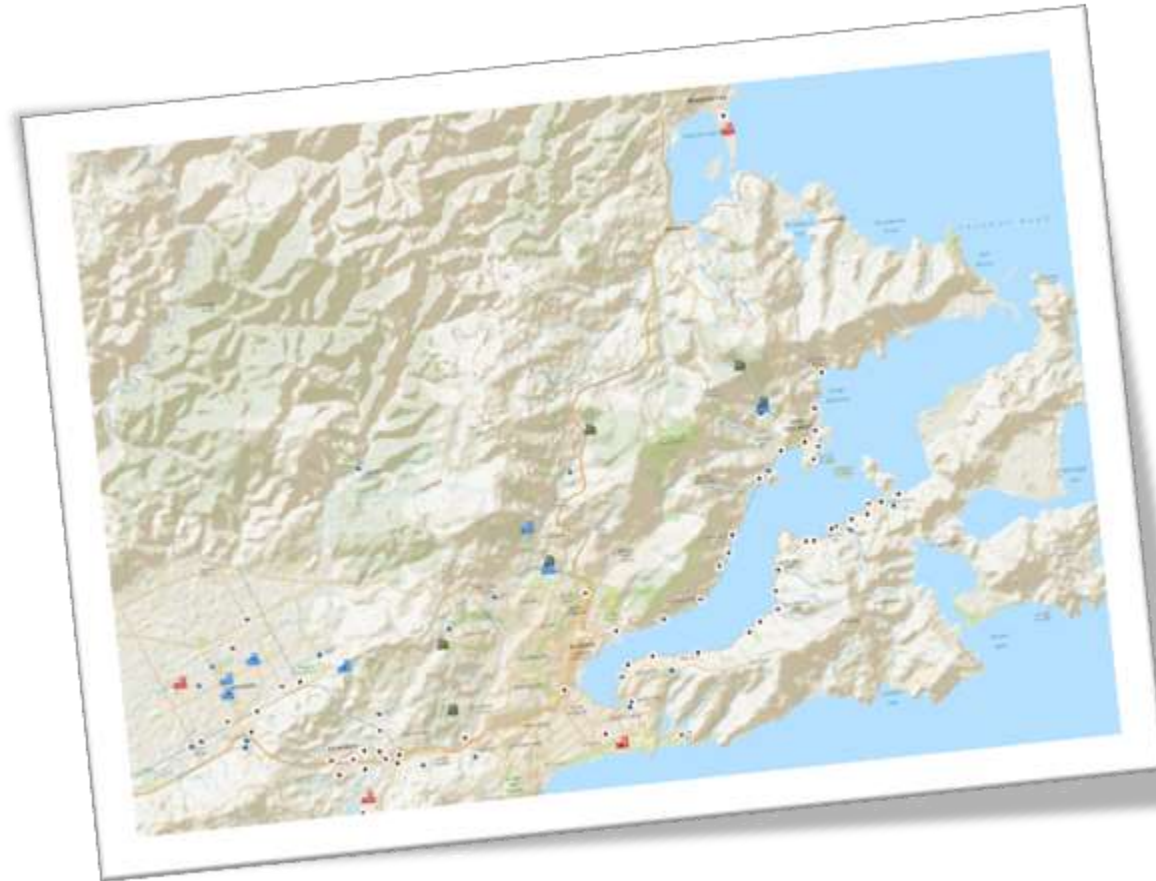
Paper, paper & more paper!

Business Challenges...



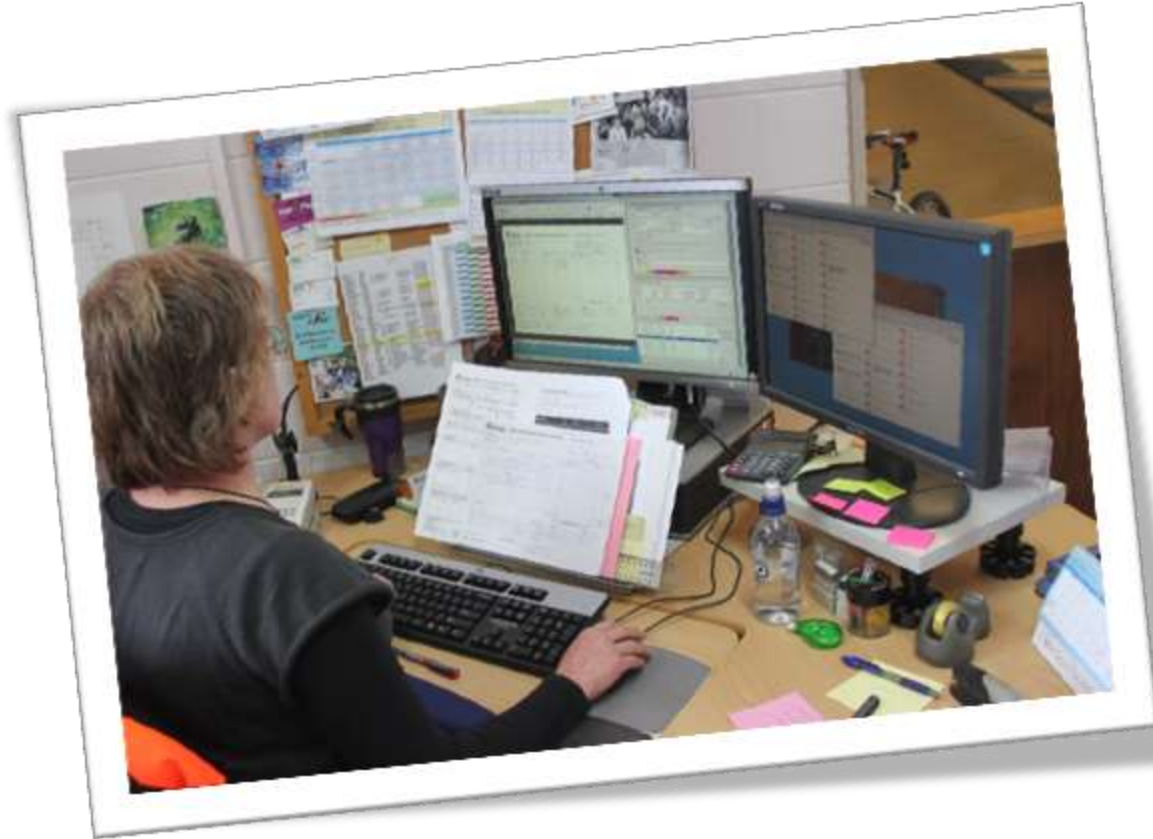
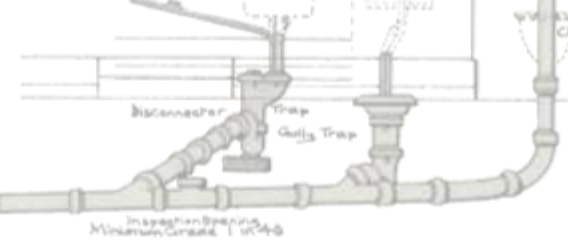
Business Diversity – one size doesn't fit all.

Business Challenges...



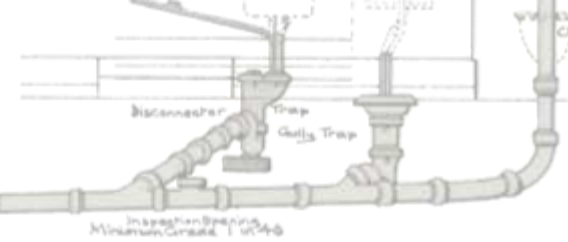
Geographical diversity issues with delivering information services

Business Challenges...



Data is needed for decision-making – not just financial tracking.

Business Challenges...

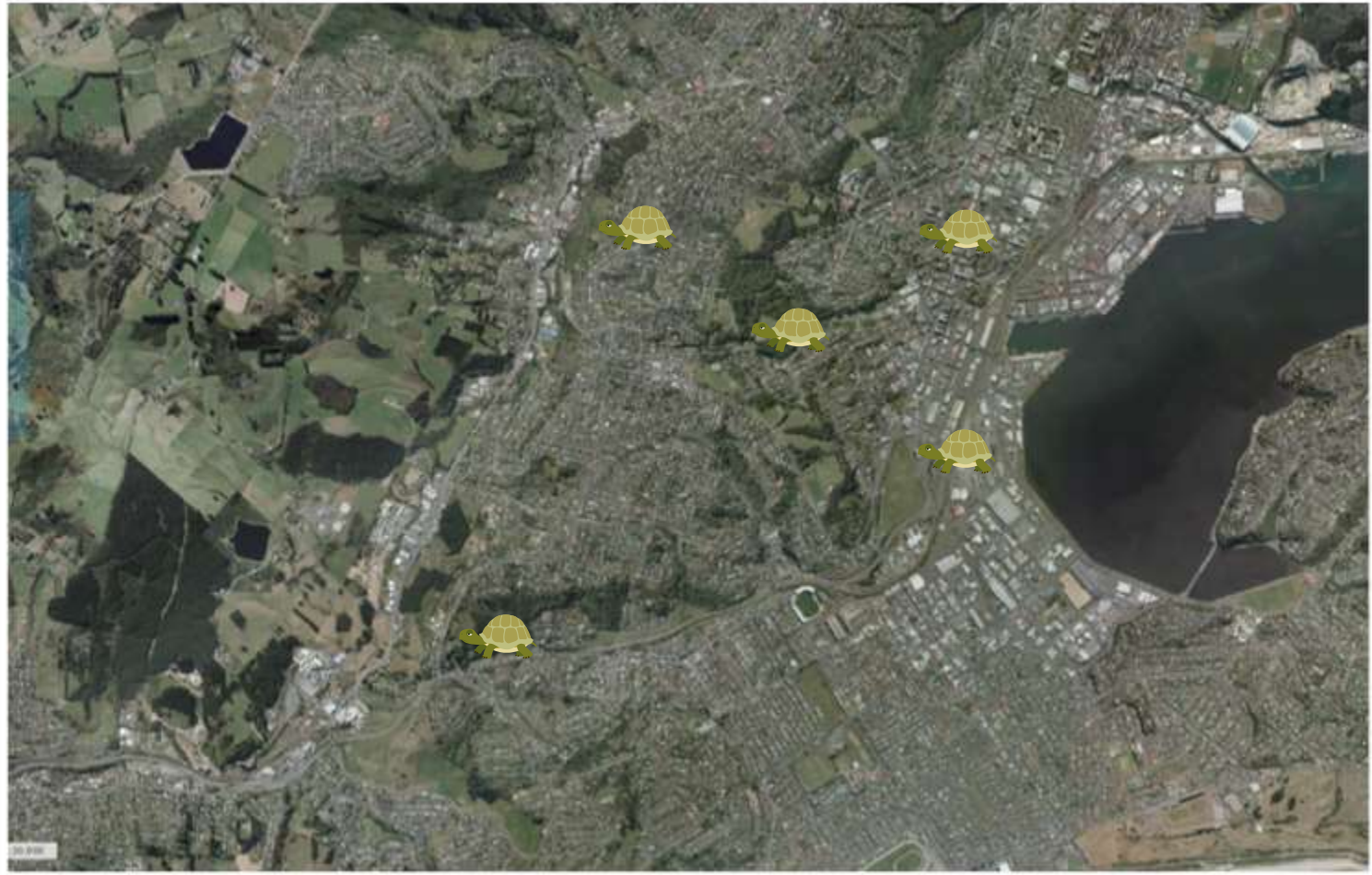


Current inability to appropriately manage the customer's relationship with WWSBU

Technology Challenges

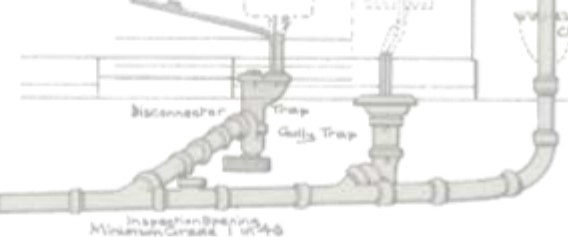


Technology Challenges...



Poor Data Connectivity to Operational Sites

Technology Challenges...



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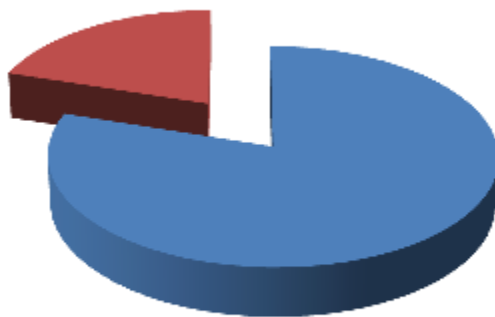
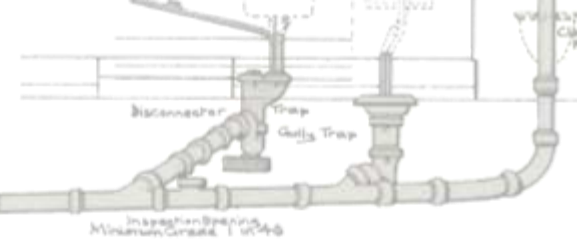
InfoWorks[™]

ORACLE[®]
JD EDWARDS ENTERPRISEONE

A suite of separate applications

which don't talk to each other.

Technology Challenges...



■ Cross-over
■ Specialist



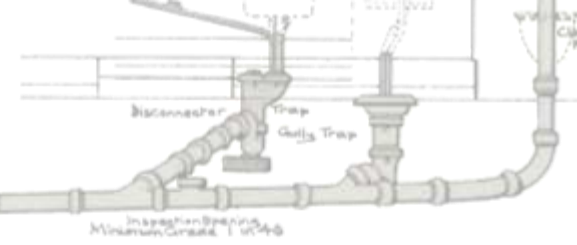
■ Cross-over
■ Specialist

Applications which individually do a lot of what we need, but not all.

What do we need?



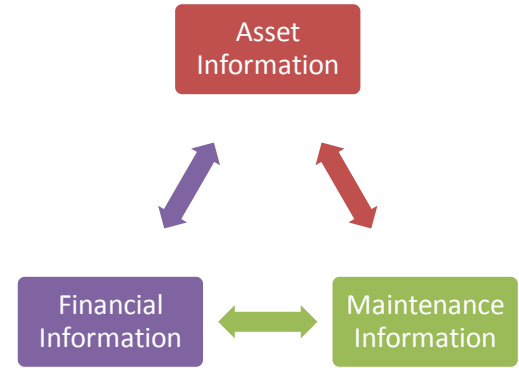
What do we need?



Lifecycle Costs

- ✓ Size
- ✓ Shape
- ✓ Material
- ✓ Condition
- ✓ Geospatial Location

Increased Data Confidence



Data Integration / Links

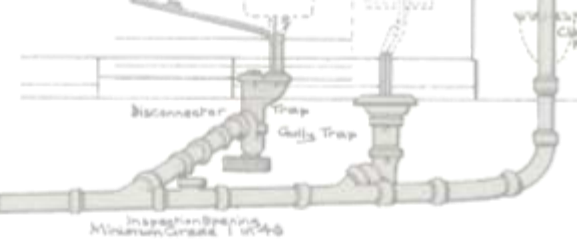
Data for decision-making *as well as* financial tracking

What do we need?



An appropriate information system which meets our business needs.

What do we need?

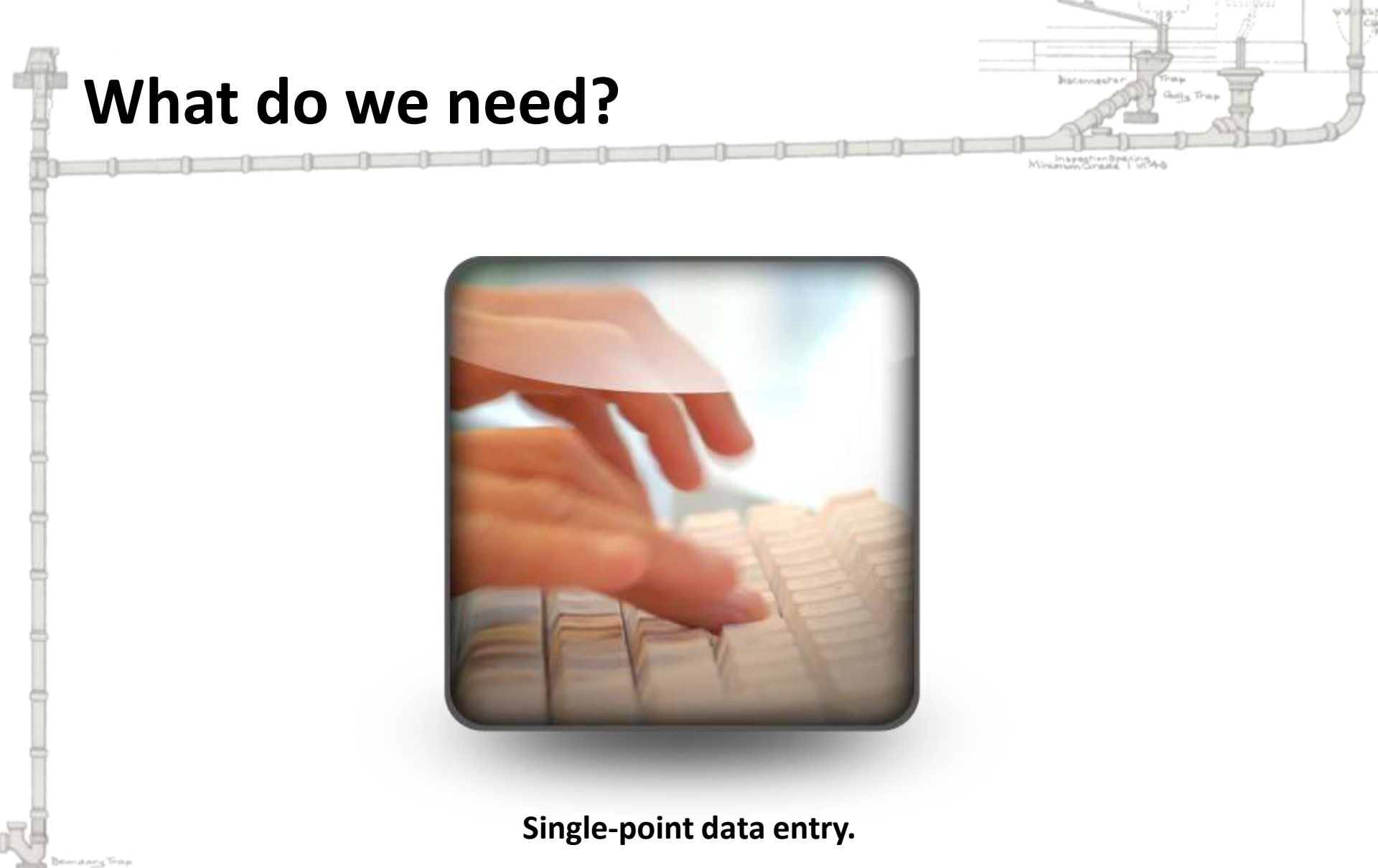


Access to vital information in all places where work is performed

What do we need?



Single-point data entry.

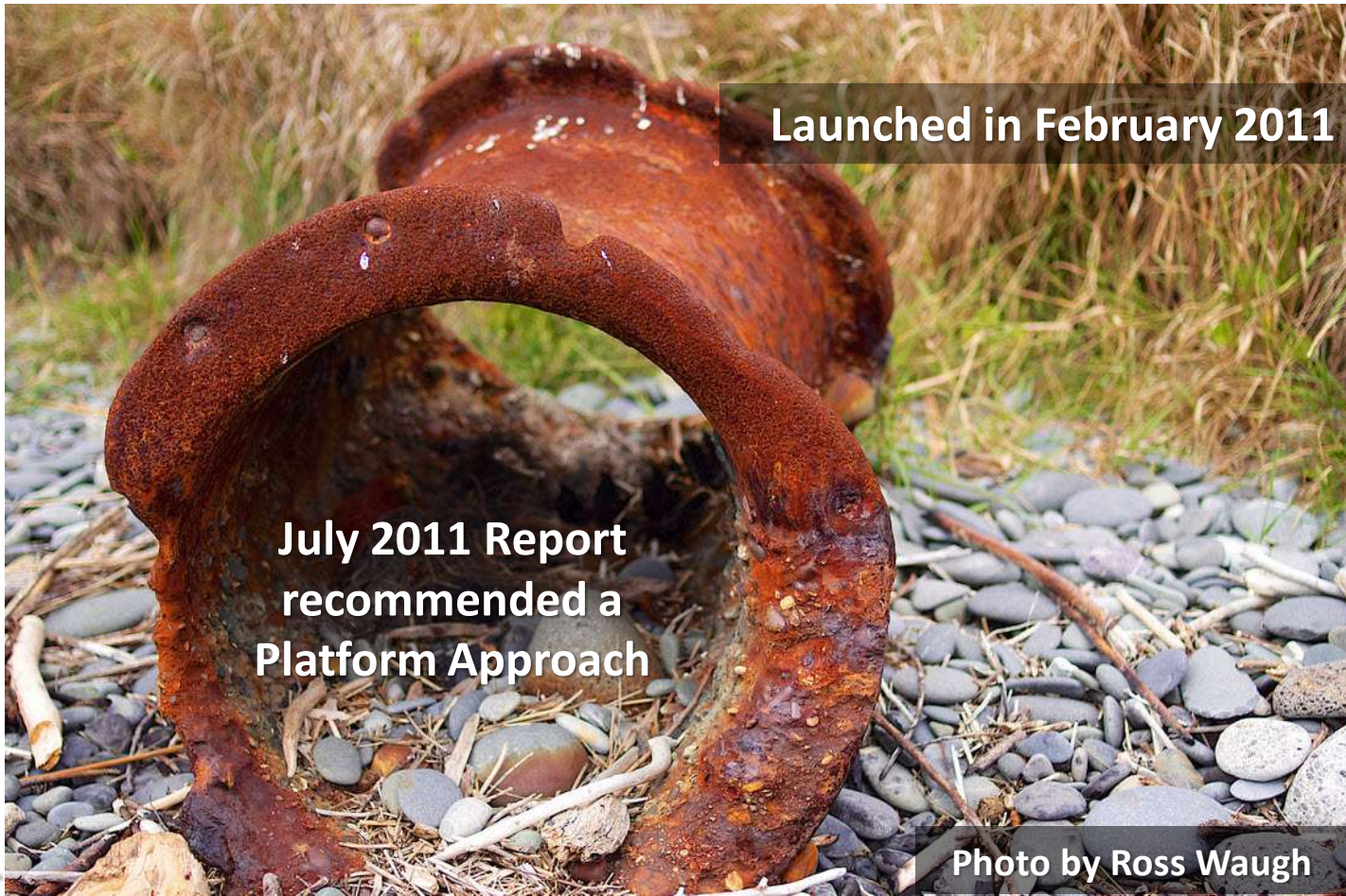
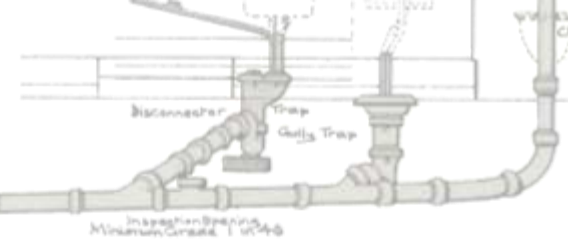




AMIS to the Rescue



Systems Decision Project



Launched in February 2011

July 2011 Report recommended a Platform Approach

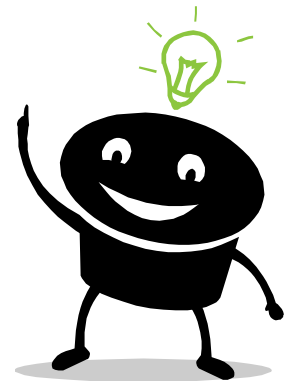
Photo by Ross Waugh



Ross Waugh



A Platform Approach

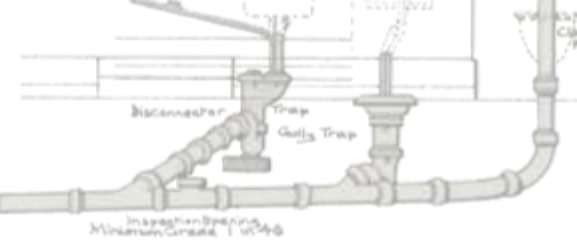


A Platform Approach?

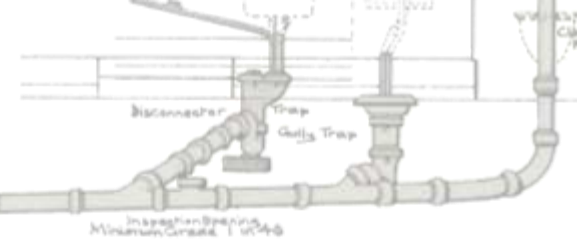


Why A Platform?

- Historical specialist applications
- One size **does not** fit all
- Right tool for the right job
- Operations vs Asset Management
- Future-proofing for long-term benefit
- Water Governance & Appropriate Investment
- A tool to connect applications together



Our Platform





infor
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People. Government. Solutions.

Asset Register




WWS Call Management
Operations & Maintenance

infor
pathway software
Corporate CRM / Call Management

Geospatial Information Tools




JD EDWARDS ENTERPRISEONE
Financial System


Non-Platform Applications

Infor ION
Integration Middleware

InfoWorks[™]
Hydraulic Modelling



or

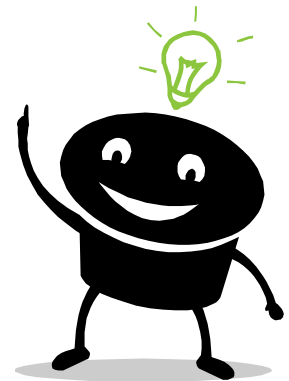


Mobile

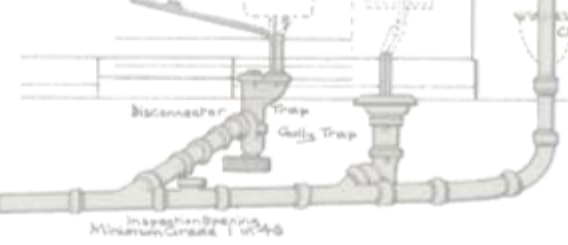
Mobile Computing



Data for Decisions



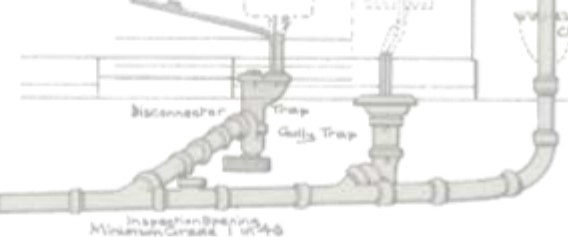
We currently have...



... and keyed into the system ...

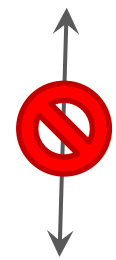


We currently have...



Current Maintenance Information Flow

ORACLE
JD EDWARDS ENTERPRISEONE
 Financial System



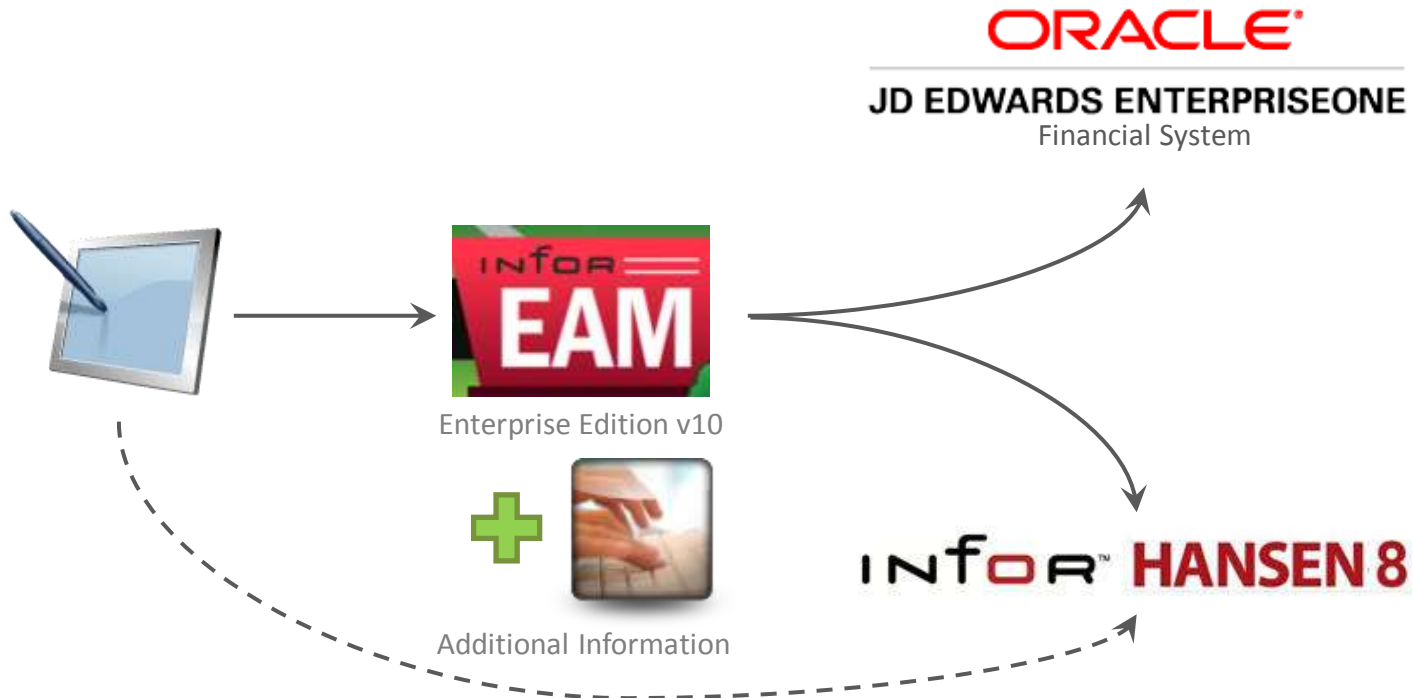
infor
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 Hansen 7

... but not accessible for multiple purposes!



Data for Decisions

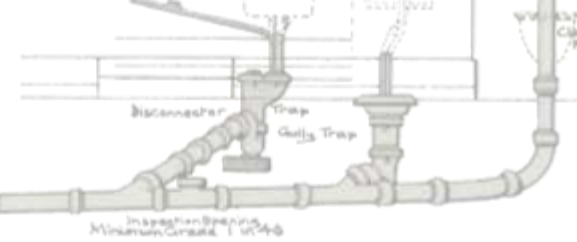
Proposed Operational Information Flow



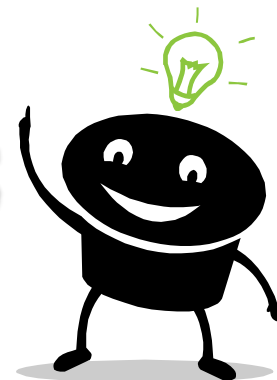
Single-point collection of data – distributed to where it is required!

What does this mean?

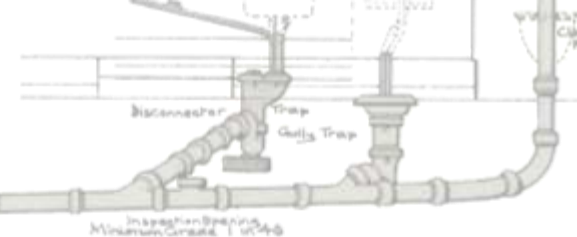
- Single-point data entry
- Asset Lifecycle Cost Analysis
- Repair or Renew?
- Transparent Operational Costs
- Validated, complete data for decision-making
- Traceability from customer contact to job resolution



Efficiency Improvements



Efficiency Improvements



Water / Wastewater Activity Form

Activity	Start Time	End Time	Duration	Notes
1.00	08:00	08:15	00:15	Check for leaks
2.00	08:15	08:30	00:15	Check for blockages
3.00	08:30	08:45	00:15	Check for odors
4.00	08:45	09:00	00:15	Check for water level
5.00	09:00	09:15	00:15	Check for gas
6.00	09:15	09:30	00:15	Check for noise
7.00	09:30	09:45	00:15	Check for vibration
8.00	09:45	10:00	00:15	Check for temperature
9.00	10:00	10:15	00:15	Check for pressure
10.00	10:15	10:30	00:15	Check for flow
11.00	10:30	10:45	00:15	Check for level
12.00	10:45	11:00	00:15	Check for quality
13.00	11:00	11:15	00:15	Check for quantity
14.00	11:15	11:30	00:15	Check for location
15.00	11:30	11:45	00:15	Check for direction
16.00	11:45	12:00	00:15	Check for speed
17.00	12:00	12:15	00:15	Check for acceleration
18.00	12:15	12:30	00:15	Check for deceleration
19.00	12:30	12:45	00:15	Check for stop
20.00	12:45	13:00	00:15	Check for start

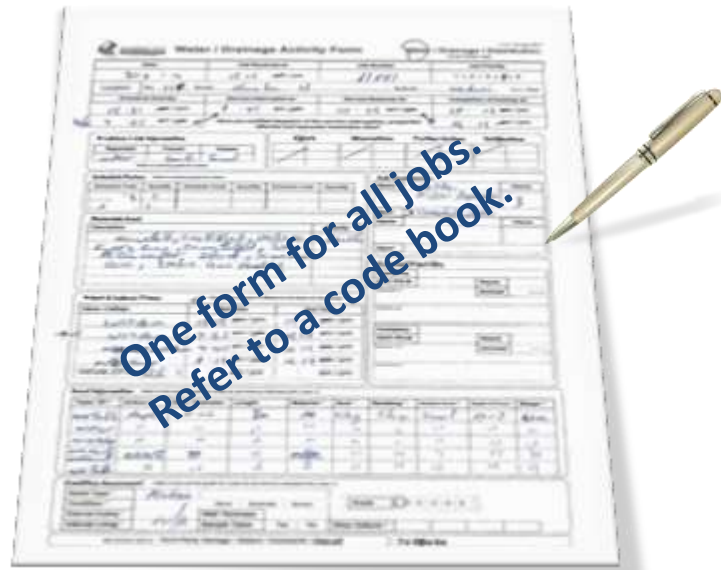
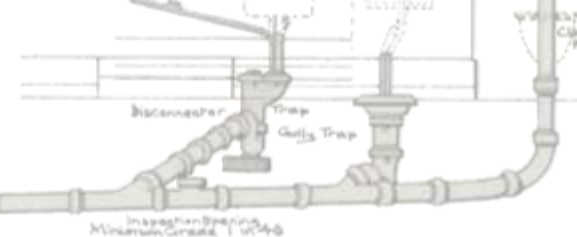
to



Information Collection - Paper to Digital



Efficiency Improvements



One form for all jobs.
Refer to a code book.

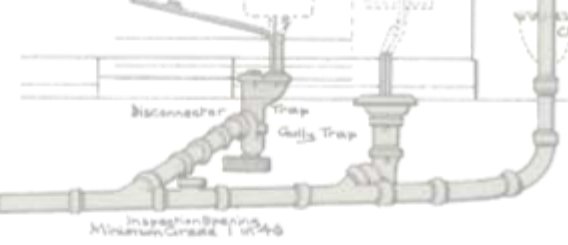
to



Customisable forms
per job type

Full in-field, relevant information

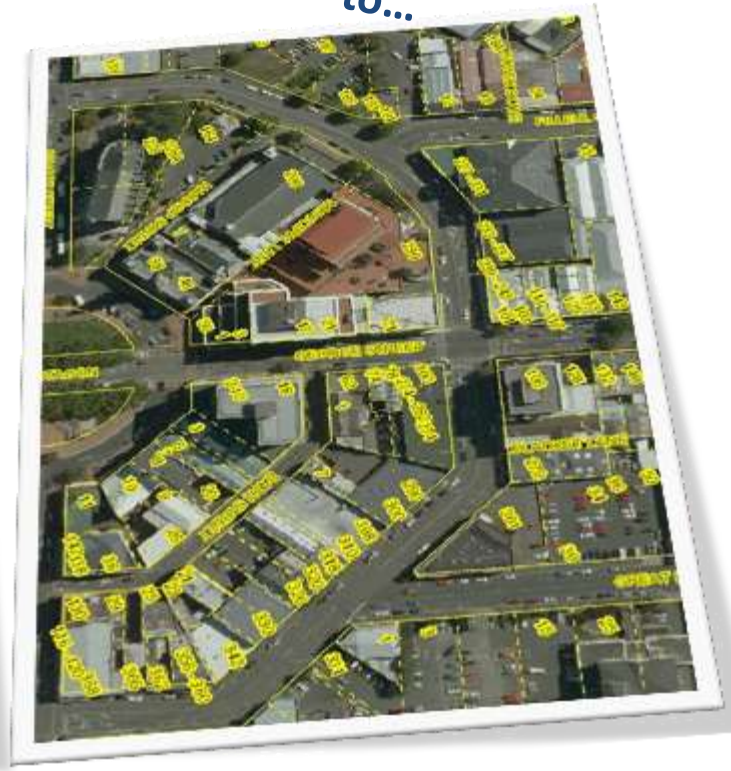
Efficiency Improvements



From...



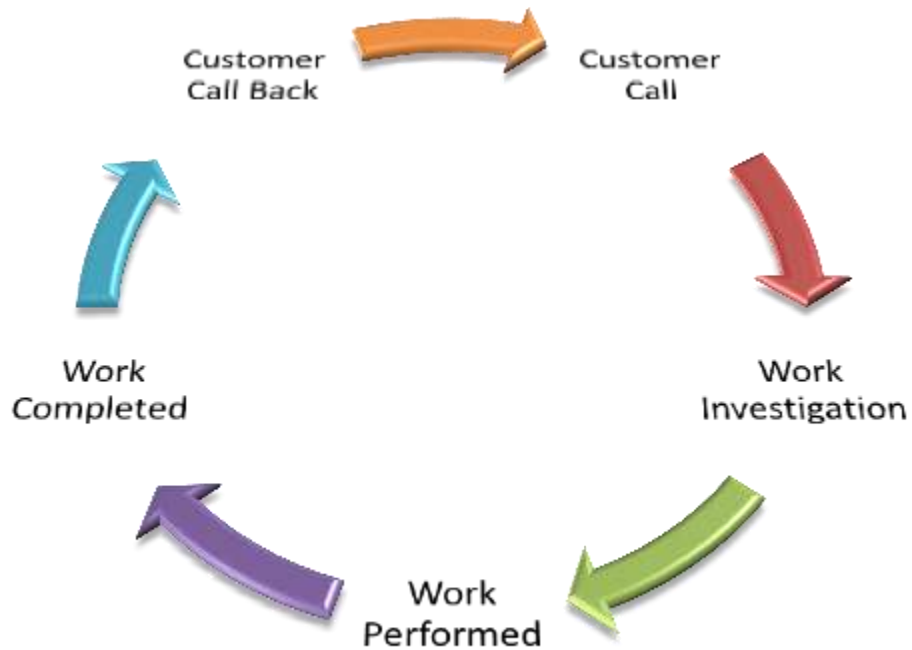
to...



Up to date, interactive network maps

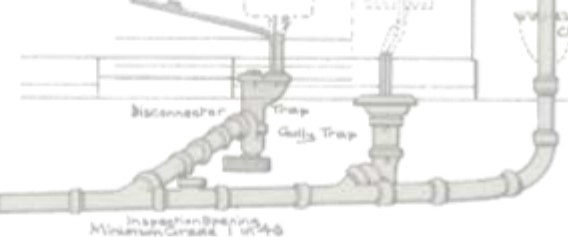


Efficiency Improvements



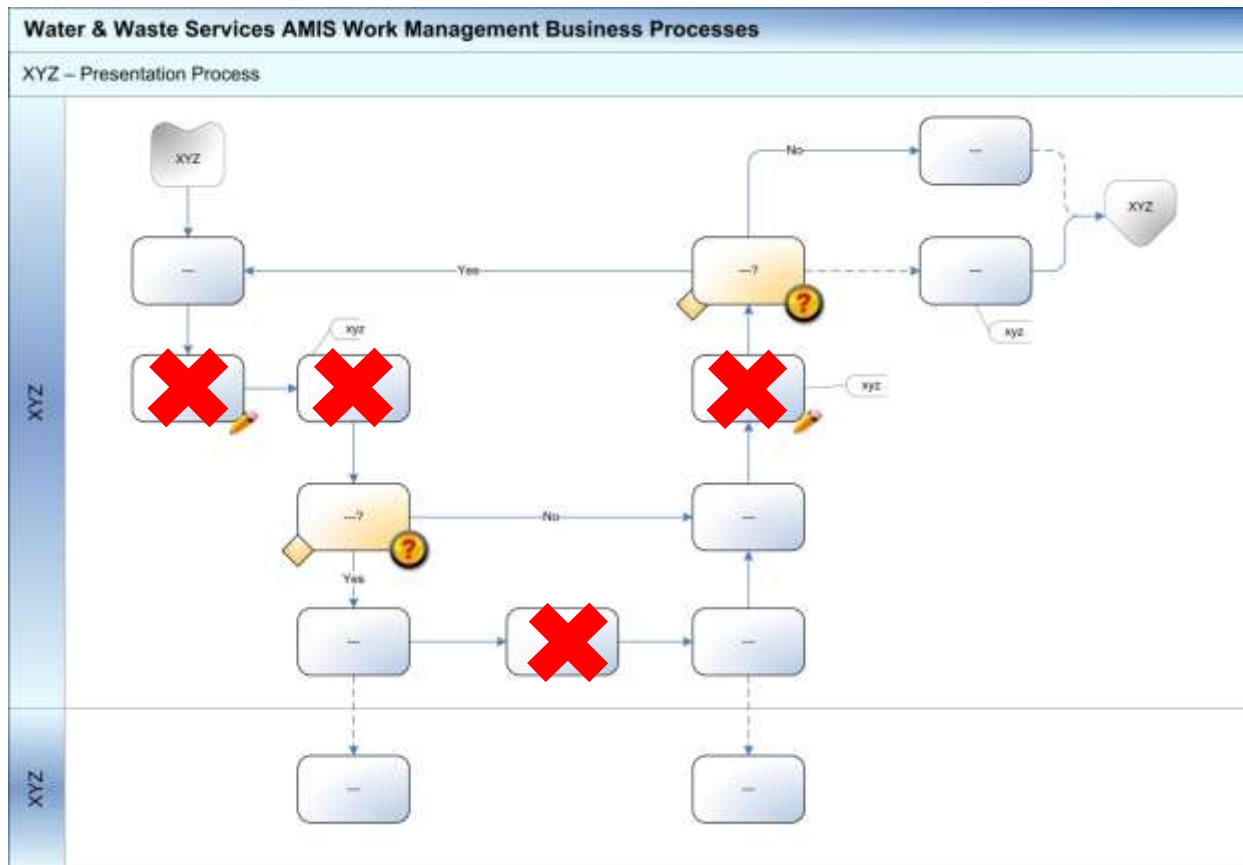
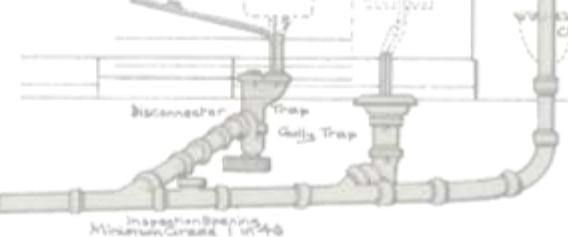
Improved engagement with our customers

Efficiency Improvements



Improved access to status information during a problem's life

Efficiency Improvements

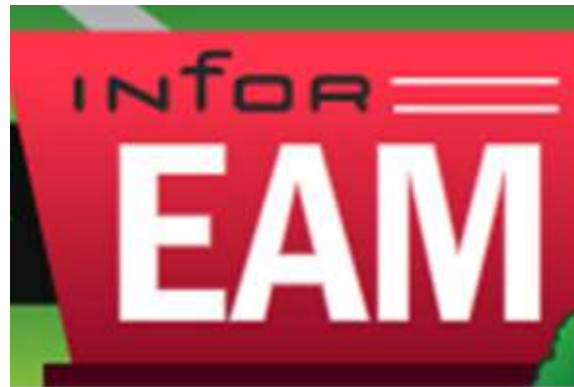
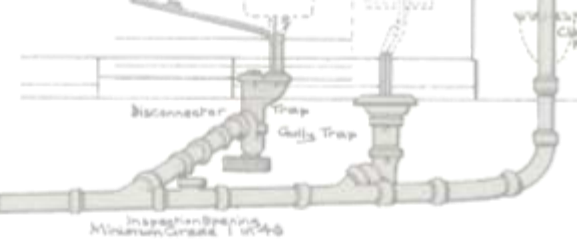


Reductions in processing time / process steps

Where Are We Now?



Where Are We Now?



EAM Upgrade to Enterprise Edition Complete



Where Are We Now?

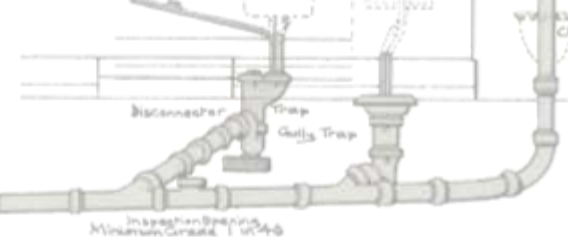


Hansen 7



Hansen 7 to Hansen 8 Migration Preparation

Where Are We Now?



WATER & WASTE SERVICES BUSINESS REVIEW

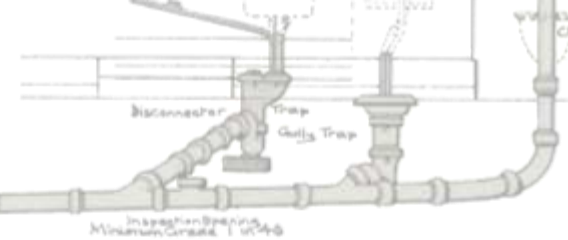


Key Messages



Key Messages to Date...

- Establish clear business processes and system requirements.
- Schedule plenty of project planning time.
- System functionality can help define your policies, processes, procedures and business rules...
- ...but don't let technology define your business!
- Ensure you have enough knowledgeable resource.
- Communication is the most important thing!





Questions?





A M i S

**Water & Waste Services
Asset Management Information System Programme**

