Welcome to the Smarter Government Briefing Series

6th Session - Thursday, December 2

Workforce Analytics, Reporting and Performance Management (with a Geospatial view)

Alan Simpson
QLD Government Director
Public Service Commission

Conrad Bates
Managing Partner
C3 Business Solutions

IBM Software Industry Solutions

Information Management | Lotus | Rational | Tivoli | WebSphere | IBM

Agenda

1. Transformation of HR data to HR information
   – Alan Simpson

Lunch

2. Adding a Geospatial Twist
   – Conrad Bates

Desert

Transformation of HR data to HR information

Alan Simpson, Director, PSC
2 Dec 2010, Melbourne

Every day, business questions need answers from HR data..

- ..we want a detailed analysis of our PO2 and PO3 workforce profiles & want it compared to the profiles of 5 other agencies as well as public service benchmarks..
- ..how does the ageing workforce affect key occupational groups across the workforce..
- ..what's the recruitment & retention profile for our Indigenous employees like..& how does it compare over the last 3 years?
- ..classification creep – is it real or just a myth?
- ..explain the % growth in the QPS over the last year, in terms of key occupational groups & agencies..
- ..tell us the impact of changing paid maternity leave provisions by x weeks..or how about by y weeks..
- ..if we were to move X group out of the CBD & into Y location, how does this affect public service profiles in X & Y areas?
- ..if we were to negotiate a 4.2% salary increase for xx group of employees, what would this mean for the salary bill? How many employees would be affected? What if it was a 4.5% increase…or maybe 4.0%?

The Qld process – raw HR data in & HR management information out

Agency HRIS Systems

- agency & SSP staff use **MOHRI interface** to collect quarterly HR data in last payroll fortnight of quarter
- data due to PSC 3 weeks after end of snapshot fortnight

→

National WACA database

- used by 6 jurisdictions across Australia
- validates MOHRI or equivalent data
- WACA State Administrator stores cleansed historical data with some calculated fields
- agencies required to sign-off on various key figures in their finalised file (eg FTE/headcount, service delivery nos, SOs etc)

Data modeling process →

ETL or data load process into warehouse; datamarts/ aggregate tables; metadata modelling →

Data Cubes

- used internally by Information Team, PSC to generate ad hoc data requests for central and line agencies
- special data models and data views developed for major or unusual data requests/analyses

WACA Reporting Service

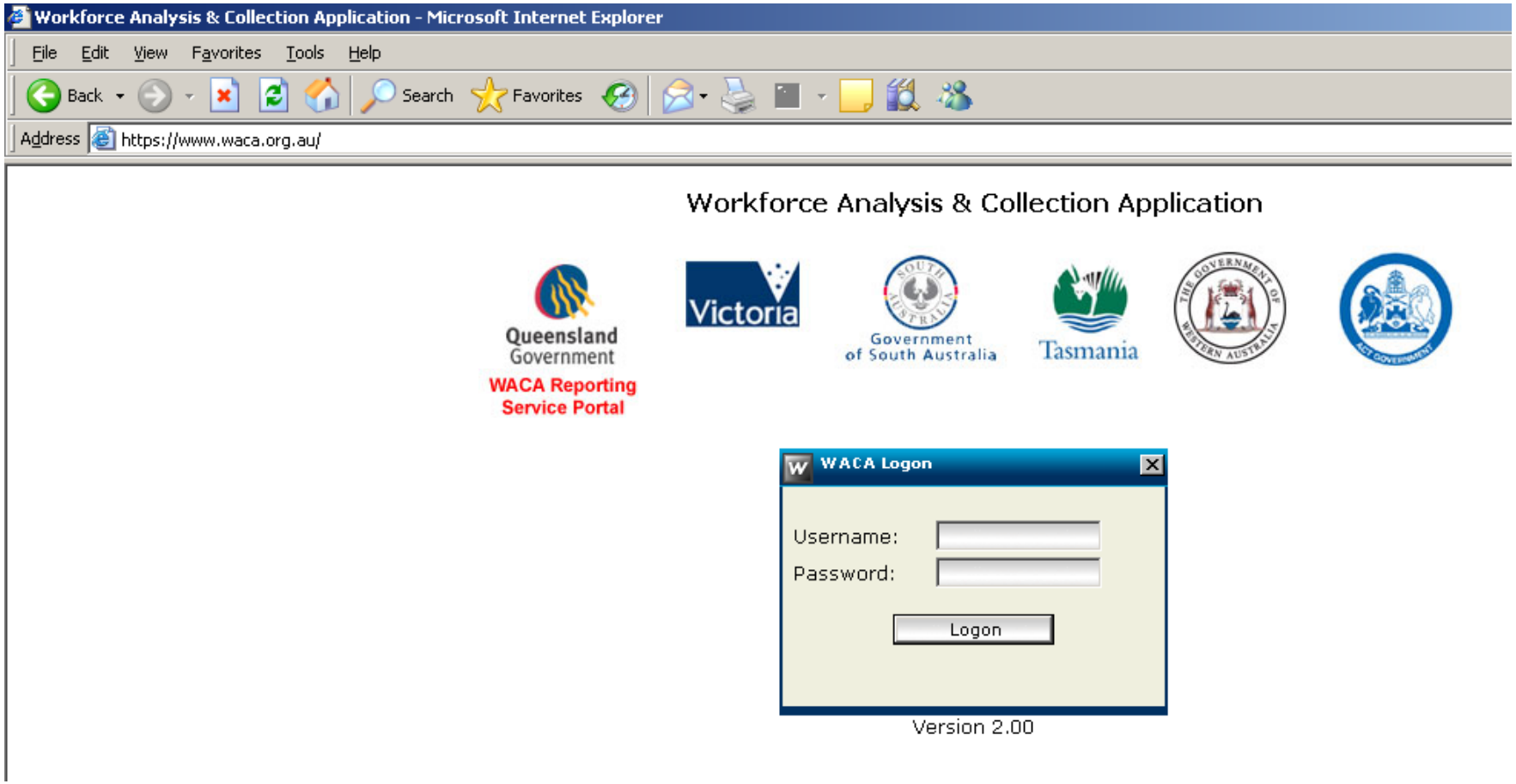
- online, self-help 24/7 workforce reporting service for QPS agencies
- access to a wide range of HR & IR workforce measures based on standardised business rules
- gives agencies access to own and service wide benchmarking data; also some views of data for other agencies
- access for named licensed holders only; sign up via SLA process
- all licenses due for renewal 30/6/2011

approx. 6-8 weeks

NOTES:

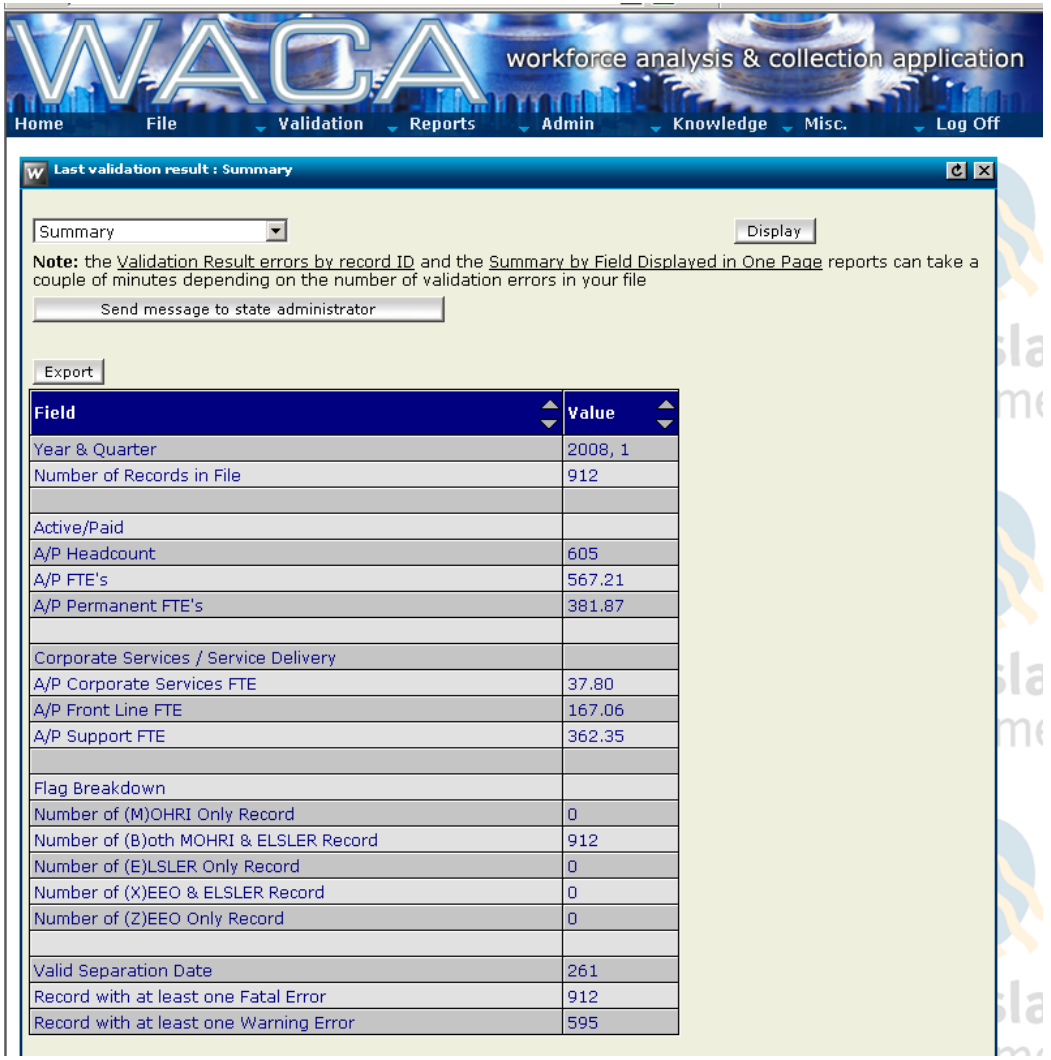
HRIS – Human Resource Information Systems (agency payroll systems)
WACA – Workforce Analysis and Collection Application (national system to collect, cleanse & store historic data)
MOHRI – Minimum Obligatory Human Resource Information (the data that goes into the WACA)

WACA – used by 6 Australian jurisdictions to collect/validate workforce data



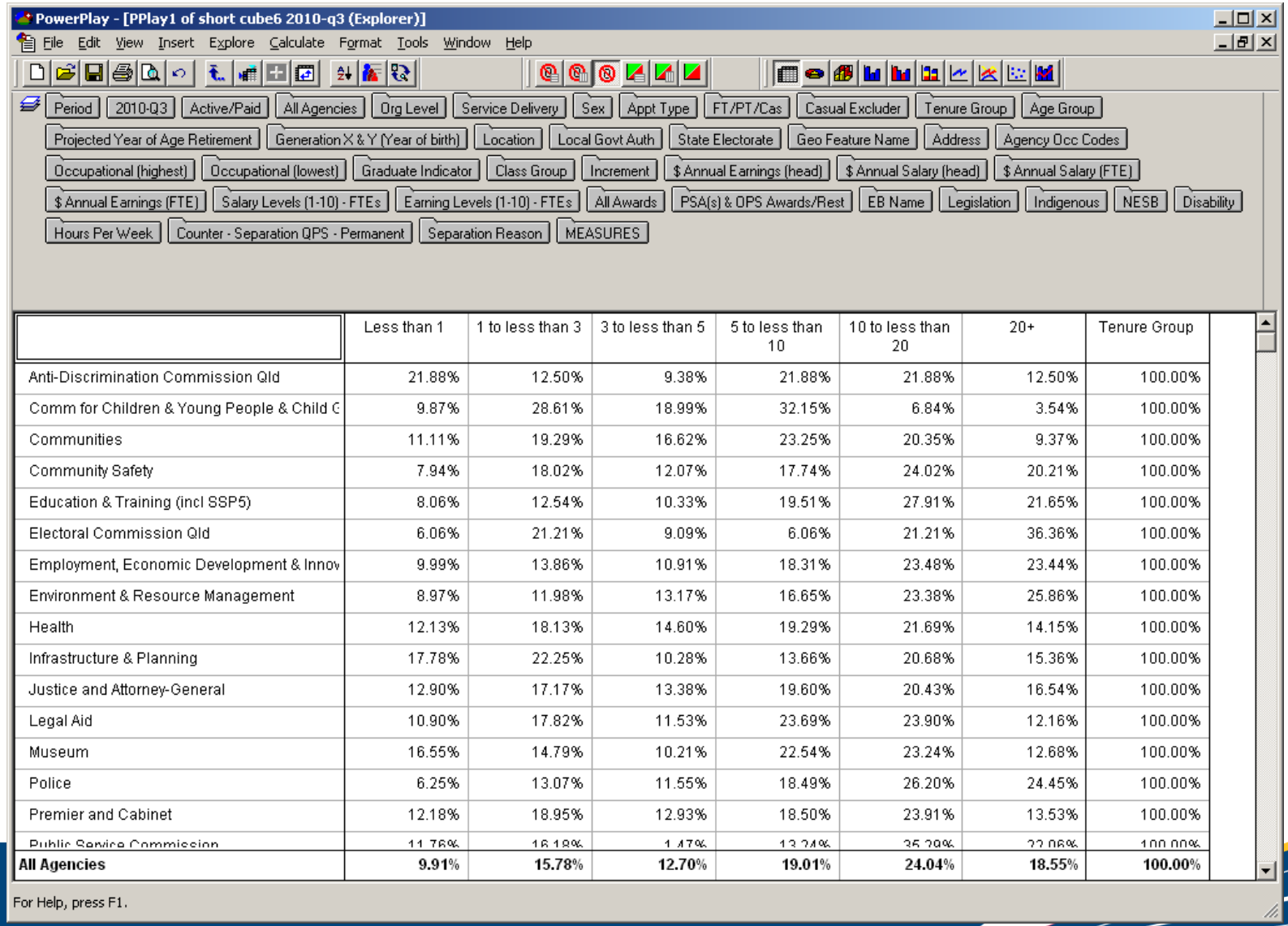
Agencies must electronically sign-off on their files

– ie that they agree with the key figures in this WACA summary report



Field	Value
Year & Quarter	2008, 1
Number of Records in File	912
Active/Paid	
A/P Headcount	605
A/P FTE's	567.21
A/P Permanent FTE's	381.87
Corporate Services / Service Delivery	
A/P Corporate Services FTE	37.80
A/P Front Line FTE	167.06
A/P Support FTE	362.35
Flag Breakdown	
Number of (M)OHRI Only Record	0
Number of (B)oth MOHRI & ELSLER Record	912
Number of (E)LSLER Only Record	0
Number of (X)EEO & ELSLER Record	0
Number of (Z)EEO Only Record	0
Valid Separation Date	261
Record with at least one Fatal Error	912
Record with at least one Warning Error	595

Data cubes – fast ad hoc reporting as well as in-depth analysis



	Less than 1	1 to less than 3	3 to less than 5	5 to less than 10	10 to less than 20	20+	Tenure Group
Anti-Discrimination Commission Qld	21.88%	12.50%	9.38%	21.88%	21.88%	12.50%	100.00%
Comm for Children & Young People & Child C	9.87%	28.61%	18.99%	32.15%	6.84%	3.54%	100.00%
Communities	11.11%	19.29%	16.62%	23.25%	20.35%	9.37%	100.00%
Community Safety	7.94%	18.02%	12.07%	17.74%	24.02%	20.21%	100.00%
Education & Training (incl SSP5)	8.06%	12.54%	10.33%	19.51%	27.91%	21.65%	100.00%
Electoral Commission Qld	6.06%	21.21%	9.09%	6.06%	21.21%	36.36%	100.00%
Employment, Economic Development & Innov	9.99%	13.86%	10.91%	18.31%	23.48%	23.44%	100.00%
Environment & Resource Management	8.97%	11.98%	13.17%	16.65%	23.38%	25.86%	100.00%
Health	12.13%	18.13%	14.60%	19.29%	21.69%	14.15%	100.00%
Infrastructure & Planning	17.78%	22.25%	10.28%	13.66%	20.68%	15.36%	100.00%
Justice and Attorney-General	12.90%	17.17%	13.38%	19.60%	20.43%	16.54%	100.00%
Legal Aid	10.90%	17.82%	11.53%	23.69%	23.90%	12.16%	100.00%
Museum	16.55%	14.79%	10.21%	22.54%	23.24%	12.68%	100.00%
Police	6.25%	13.07%	11.55%	18.49%	26.20%	24.45%	100.00%
Premier and Cabinet	12.18%	18.95%	12.93%	18.50%	23.91%	13.53%	100.00%
Public Service Commission	11.76%	16.18%	1.47%	13.24%	35.29%	22.06%	100.00%
All Agencies	**9.91%**	**15.78%**	**12.70%**	**19.01%**	**24.04%**	**18.55%**	**100.00%**

WACA Reporting Service – agency access to reports

- Online portal linking to interactive benchmarking reports
- Reports benchmark an agency's workforce performance against that of the Queensland Public Service, over time
- Range of HR and IR measures are benchmarked, based on Minimum Obligatory Human Resource Information (MOHRI)
- Reporting portal is accessed by licensed agency users via the WACA.

Benefits

- Only source of validated whole of public service HR benchmarking data
- Access generally 24/7 from any PC/laptop with an internet connection
- More comprehensive report content – a greater range of performance measures available than in previous reporting system and new data views developed
  - some new performance measures – average age of recruits; recruitment rate; permanency ratio; retirements in next 10 years; measures relating to purchased leave and recreation leave costs and balances
  - some new data views – quartiles; rankings; Executive Dashboard for quick high level performance checking;
- Access to as much historic agency data as possible even given the demanding constraints of MOG changes on trend analysis

Accessing the WACA Reporting Service

- To access the WACA Reporting Service, an agency must sign a Service Level Agreement (SLA) with the PSC

- SLA details licensing requirements, fee schedule and services which will be supplied by the PSC. It also outlines agency responsibilities

Security

- To protect the confidential MOHRI data, the Public Service Commission have invested in an SSL (secure sockets layer) certificate with 128-bit encryption

- The use of a “https:” prefix in the WACA web address ensures an additional encryption/authentication layer

- In reports, data is displayed at aggregate levels not employee record level

WACA Reporting Service – sample portal screen

Queensland Government

WACA Reporting Service
SAMPLE REPORT ONLY

Printable Version of This Page

Message Board

05-10-2009: Welcome to the WACA Reporting Service

Sample Agency

Click here to change agency

Reports:

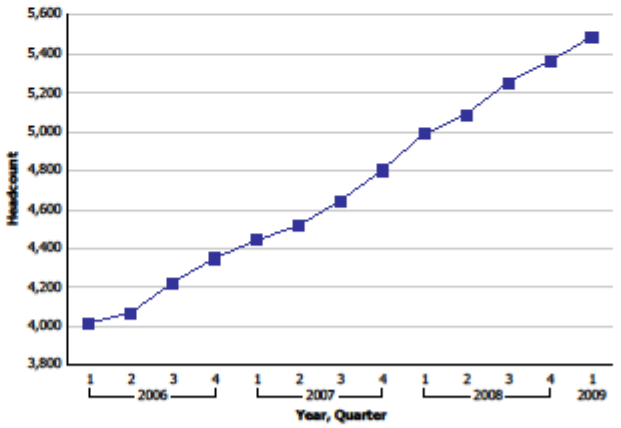
Workforce Performance Report
- Available Data Periods: 2006-Q1 to 2009-Q1

Key Workforce Statistics:

Quarterly Snapshot

Key Measures	2009-Q1 Sample Agency
Headcount	5,486
FTE	5,361.82
QPS Separation Rate	1.29%
Average Age	41.63
Average QPS Tenure Years	11.26
Average Age of Recruitment	35.12
Average Age of Retirement	60.38
Absenteeism Rate	2.87%
Sick Leave Rate	2.47%
Purchased Leave Rate	0.00%
Percentage Higher Duties	15.53%
Permanent Headcount Percentage	89.12%
Part-time Headcount Percentage	4.01%
Salary Sacrifice Headcount Percentage	41.78%
Average Annual Earnings (FTE)	$60,607
Average Annual Salary (FTE)	$60,336
Total Recreation Leave Liability	$29,368,567
Average Recreation Leave Hours Accrued	156.78

Time-Series



Select year and quarter:

Select graph measure:

DO NOT USE FIGURES - SAMPLE REPORT ONLY

WACA Reporting Service – sample dashboard report screen

Queensland Government

Workforce Performance Report

WACA workforce analysis & collection application

Sample Agency *DO NOT USE FIGURES - SAMPLE REPORT ONLY*

Printable PDF View of this Page

Summary Reports

Executive Summary	HTML PDF

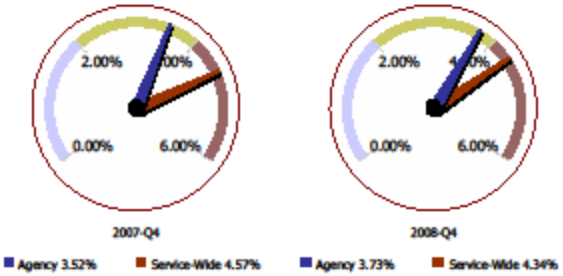
Detailed Information

Size and Composition	HTML PDF
Separations	HTML PDF
New Recruits	HTML PDF
Higher Duties	HTML PDF
Unscheduled Leave	
Total Absenteeism	HTML PDF
Sick Leave	HTML PDF
Carer's Leave	HTML PDF
Worker's Comp.	HTML PDF
Scheduled Leave	
Recreation Leave	HTML PDF
Purchased Leave	HTML PDF
Average Age	HTML PDF
Age Group Profile	HTML PDF
Average Tenure	HTML PDF
Tenure Group Profile	HTML PDF
Earnings and Salary	HTML PDF

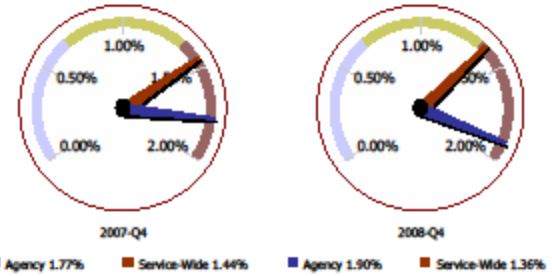
Click here to change report time periods

	Headcount		FTE	
	2007-Q4	2008-Q4	2007-Q4	2008-Q4
Agency	4,801	5,362	4,711.28	5,263.03
Service-Wide	214,795	224,346	183,203.99	191,179.00

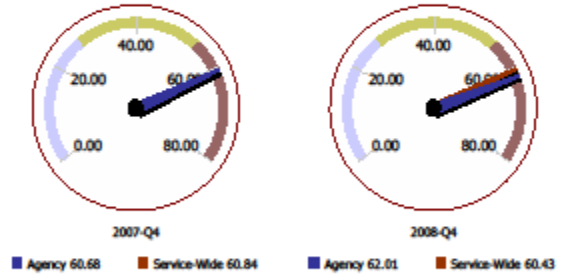
Absenteeism Rate



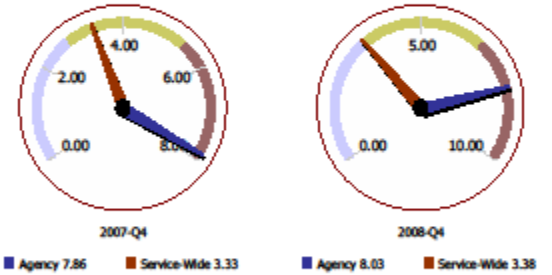
Separation Rate



Average Age of Retirement



Permanency Ratio



SAMPLE REPORT ONLY - DO NOT USE FIGURES
This SAMPLE report is based on Minimum Obligatory Human Resource Information (MOHRI).

Link to Business Rules and Notes

WACA Reporting Service – sample executive summary report

Queensland Government

Workforce Performance Report

WACA workforce analysis & collection application

Sample Agency *DO NOT USE FIGURES - SAMPLE REPORT ONLY*

Report Chapter: Executive Performance Summary

Key Measures	2007-Q4				2008-Q4			
	Agency	Service-Wide	Performance against Service-Wide		Agency	Service-Wide	Performance against Service-Wide	
Absenteeism Rate (%)	3.52	4.57	▼	-1.05	3.73	4.34	▼	-0.61
Average Age of Retirement	60.68	60.84	▼	-0.16	62.01	60.43	▲	1.58
Disability Rate (% of Headcount)	10.62	6.02	▲	4.60	9.32	6.05	▲	3.27
Employees on Higher Duties (%)	20.25	14.78	▲	5.47	19.02	15.01	▲	4.01
Female Proportion (% of Headcount)	30.39	66.17	▼	-35.78	32.88	66.55	▼	-33.67
Front Line Service Delivery (% of FTE)	35.54	77.73	▼	-42.19	32.92	79.57	▼	-46.65
Indigenous Rate (% of Headcount)	0.79	2.21	▼	-1.42	0.80	2.17	▼	-1.37
NESB Rate (% of Headcount)	6.48	8.12	▼	-1.64	6.19	9.76	▼	-3.57
Permanent Employees (%)	87.07	76.42	▲	10.65	87.43	76.65	▲	10.78
Permanent Recruitment Rate (%)	11.08	5.29	▲	5.78	12.01	5.23	▲	6.78

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Link to Business Rules and Notes

WACA Reporting Service – sample report page from size & composition chapter

Queensland Government

Workforce Performance Report

WACA workforce analysis & collection application

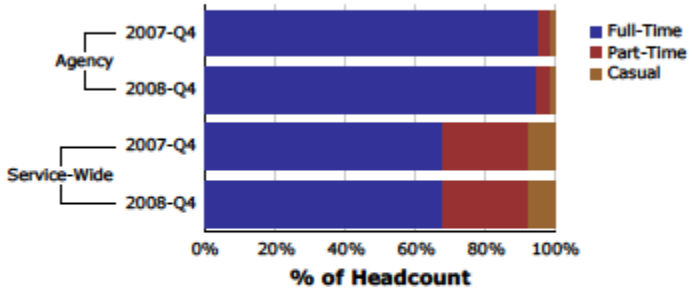
Sample Agency *DO NOT USE FIGURES - SAMPLE REPORT ONLY*

Report Chapter: Size and Composition

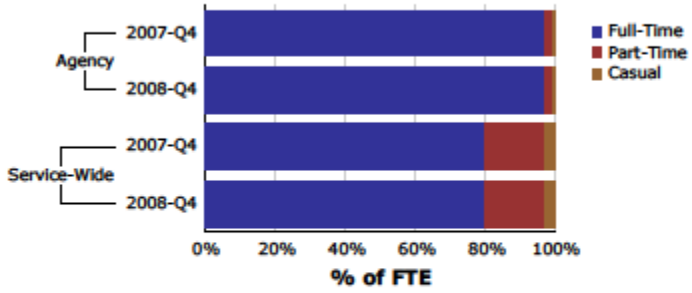
Headcount		2007-Q4	2008-Q4	Headcount Growth	Headcount % Growth
Agency	Full-Time	4,578	5,109	531	11.60%
	Part-Time	170	200	30	17.65%
	Casual	53	53	0	0.00%
	Total	**4,801**	**5,362**	**561**	**11.69%**
Service-Wide	Full-Time	146,428	152,368	5,940	4.06%
	Part-Time	52,392	55,722	3,330	6.36%
	Casual	15,975	16,256	281	1.76%
	Total	**214,795**	**224,346**	**9,551**	**4.45%**

FTE		2007-Q4	2008-Q4	FTE Growth	FTE % Growth
Agency	Full-Time	4,577.94	5,108.95	531.01	11.60%
	Part-Time	106.48	124.75	18.27	17.16%
	Casual	26.86	29.33	2.47	9.20%
	Total	**4,711.28**	**5,263.03**	**551.75**	**11.71%**
Service-Wide	Full-Time	146,412.97	152,351.06	5,938.09	4.06%
	Part-Time	30,998.96	33,148.57	2,149.61	6.93%
	Casual	5,792.06	5,679.37	-112.69	-1.95%
	Total	**183,203.99**	**191,179.00**	**7,975.01**	**4.35%**

% of Headcount by Full-time/Part-time/Casual



% of FTE by Full-time/Part-time/Casual



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Link to Business Rules and Notes

WACA Reporting Service – sample report page from size & composition chapter

Queensland Government

Workforce Performance Report

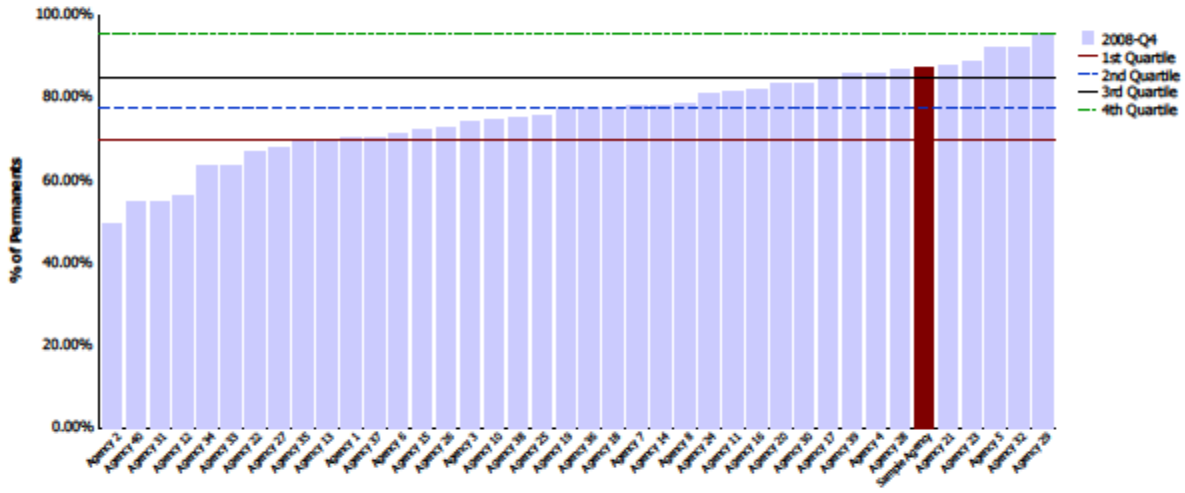
WACA

Sample Agency *DO NOT USE FIGURES - SAMPLE REPORT ONLY*

Report Chapter: Size and Composition

% of Permanents by Quartiles

2008-Q4



Tip: Quartiles Graph

Quartiles divide a set of measurements (eg average age; absenteeism rate etc) into 4 equal parts. 25% of the measurements are lower than the 1st quartile. 50% of the measurements are less than the median or 2nd quartile. 75% of the measurements are less than the 3rd quartile. Therefore, 50% of the measurements fall between the 1st and 3rd quartiles.

SAMPLE REPORT ONLY - DO NOT USE FIGURES

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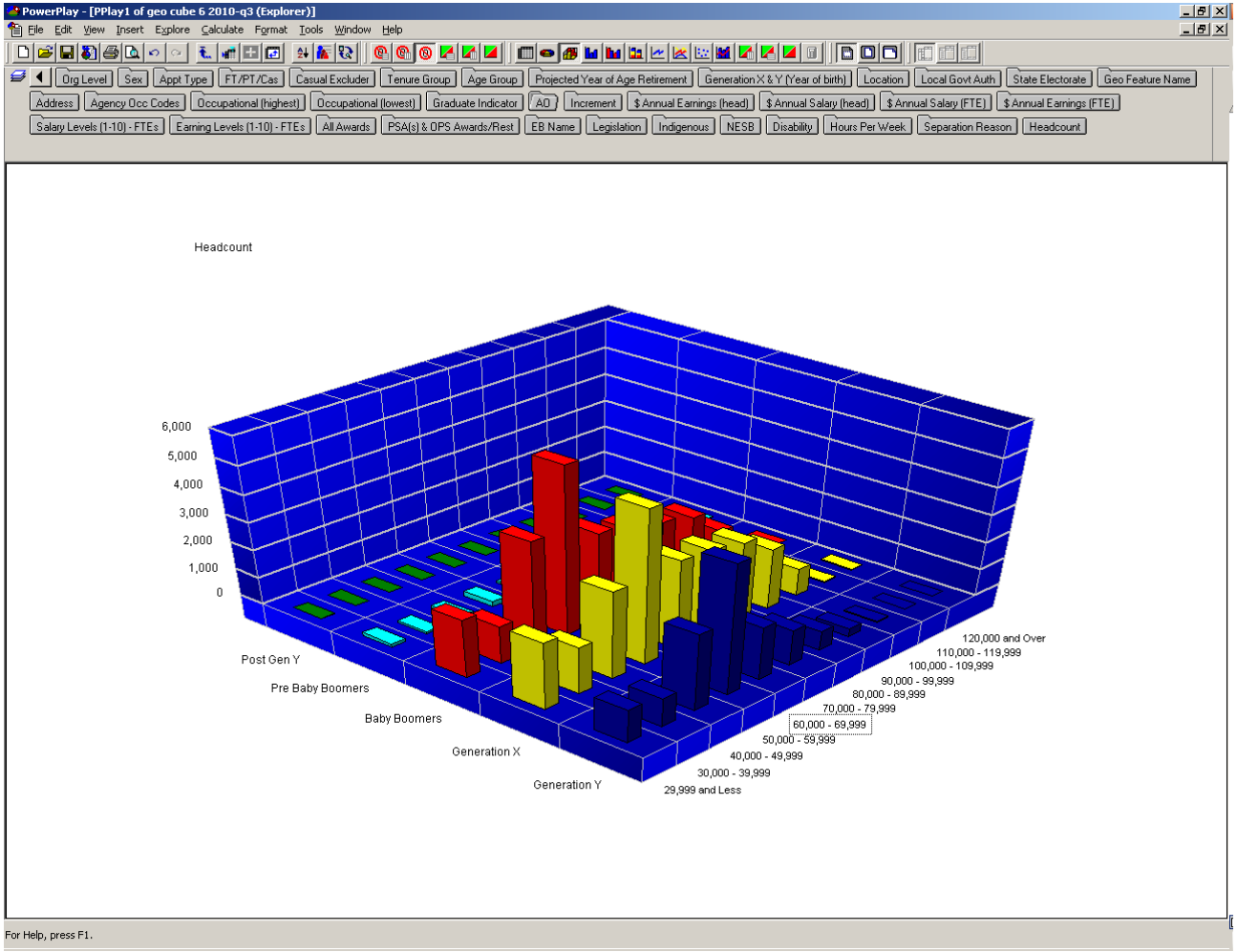
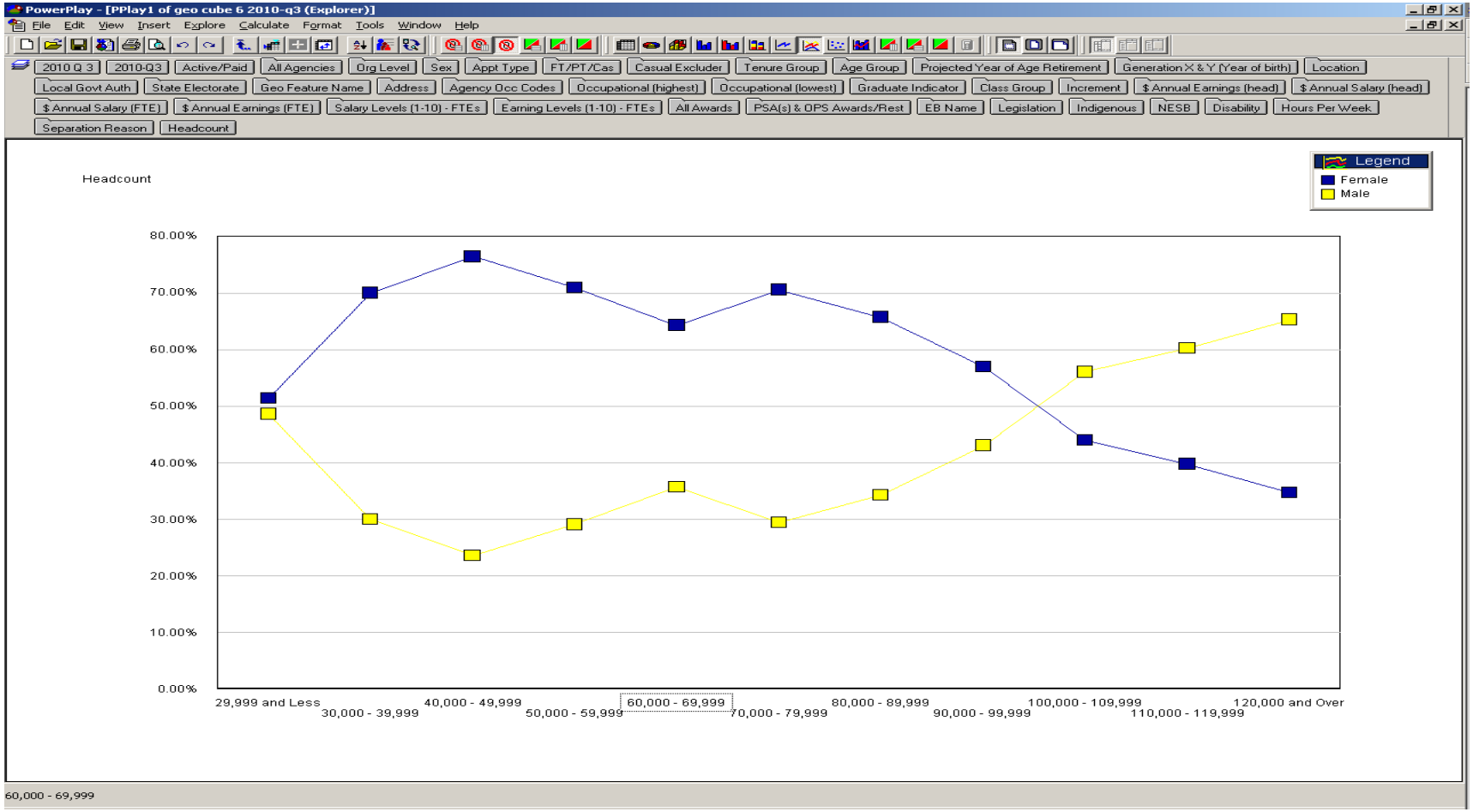
Link to Business Rules and Notes

Cognos 7


PowerPlay - [PPlay1 of geo cube 6 2010-q3 (Explorer)]
File Edit View Insert Explore Calculate Format Tools Window Help
Org Level
Sex
Appt Type
FT/PT/Cas
Casual Excluder
Tenure Group
Age Group
Projected Year of Age Retirement
Generation X & Y (Year of birth)
Location
Local Govt Auth
State Electorate
Geo Feature Name
Address
Agency Occ Codes
Occupational (highest)
Occupational (lowest)
Graduate Indicator
AO
Increment
$ Annual Earnings (head)
$ Annual Salary (head)
$ Annual Salary (FTE)
$ Annual Earnings (FTE)
Salary Levels (1-10) - FTEs
Earning Levels (1-10) - FTEs
All Awards
PSA(s) & OPS Awards/Rest
EB Name
Legislation
Indigenous
NESB
Disability
Hours Per Week
Separation Reason
Headcount
Headcount
6,000
5,000
4,000
3,000
2,000
1,000
0
Post Gen Y
Pre Baby Boomers
Baby Boomers
Generation X
Generation Y
120,000 and Over
110,000 - 119,999
100,000 - 109,999
90,000 - 99,999
80,000 - 89,999
70,000 - 79,999
60,000 - 69,999
50,000 - 59,999
40,000 - 49,999
30,000 - 39,999
29,999 and Less
For Help, press F1.

Cognos 7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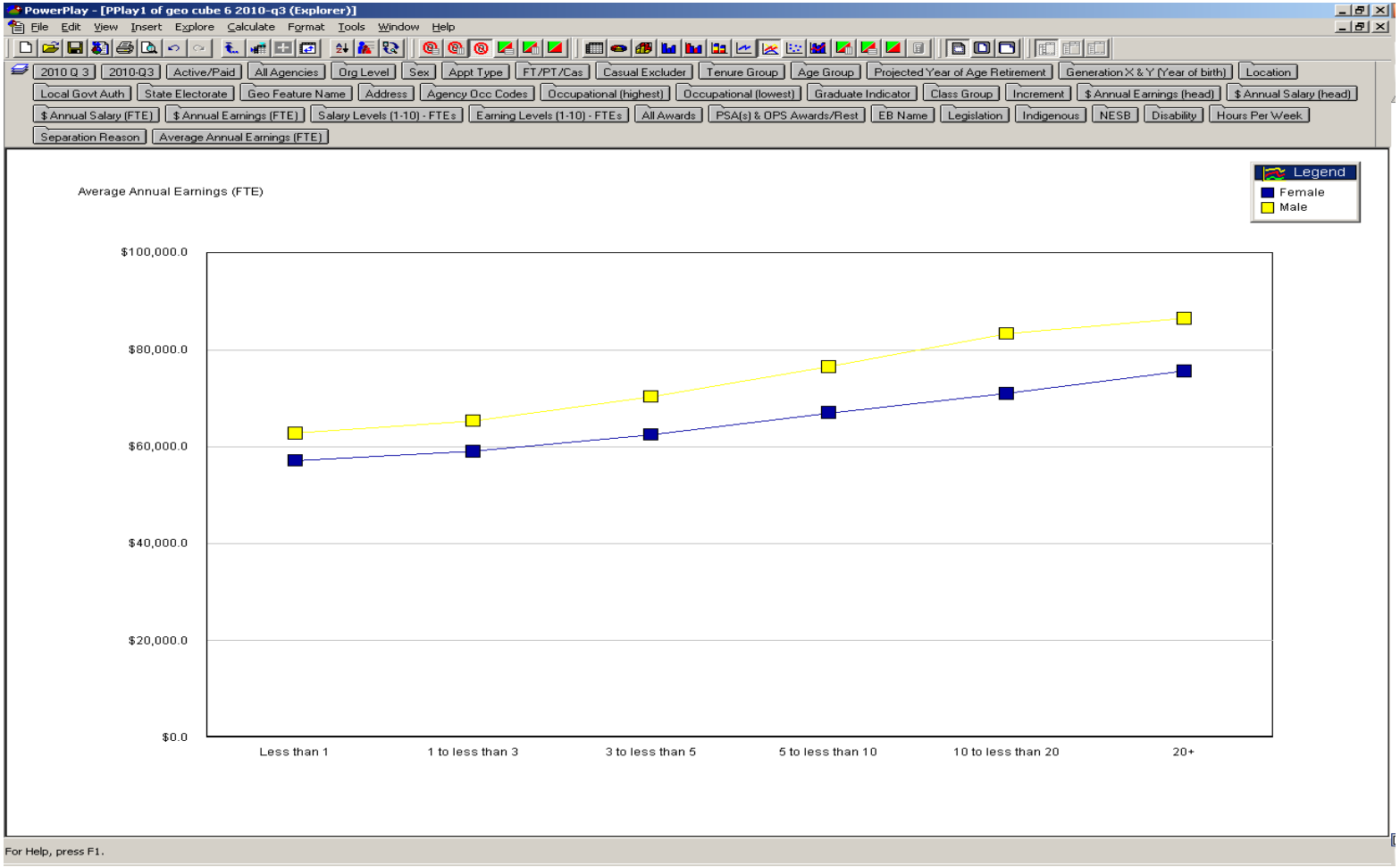
EB Name
Legislation
Indigenous
NESB
Disability
Hours Per Week
Separation Reason
Headcount
Headcount
Legend
Female
Male
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
29,999 and Less
30,000 - 39,999
40,000 - 49,999
50,000 - 59,999
60,000 - 69,999
70,000 - 79,999
80,000 - 89,999
90,000 - 99,999
100,000 - 109,999
110,000 - 119,999
120,000 and Over
60,000 - 69,999

Cognos 7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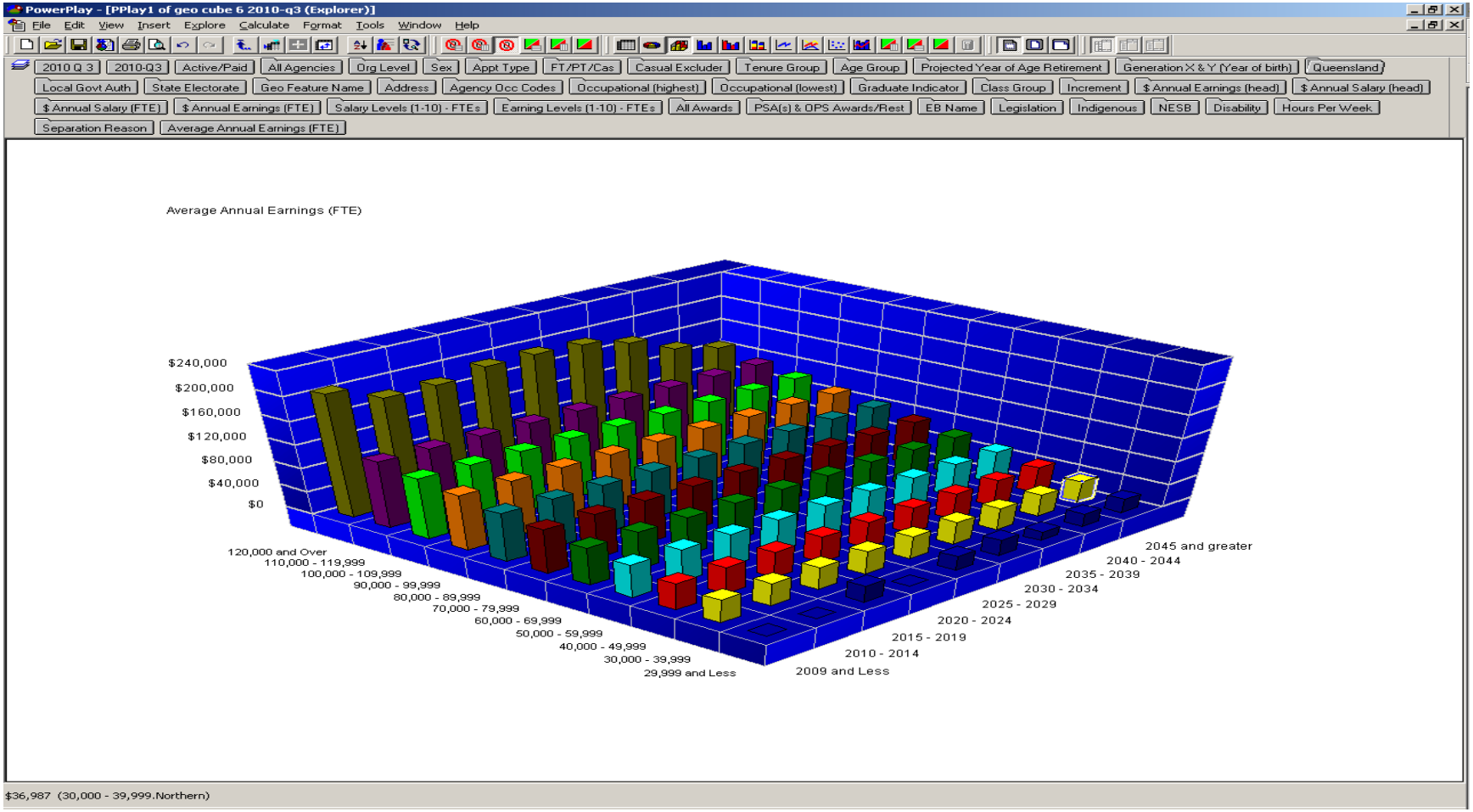
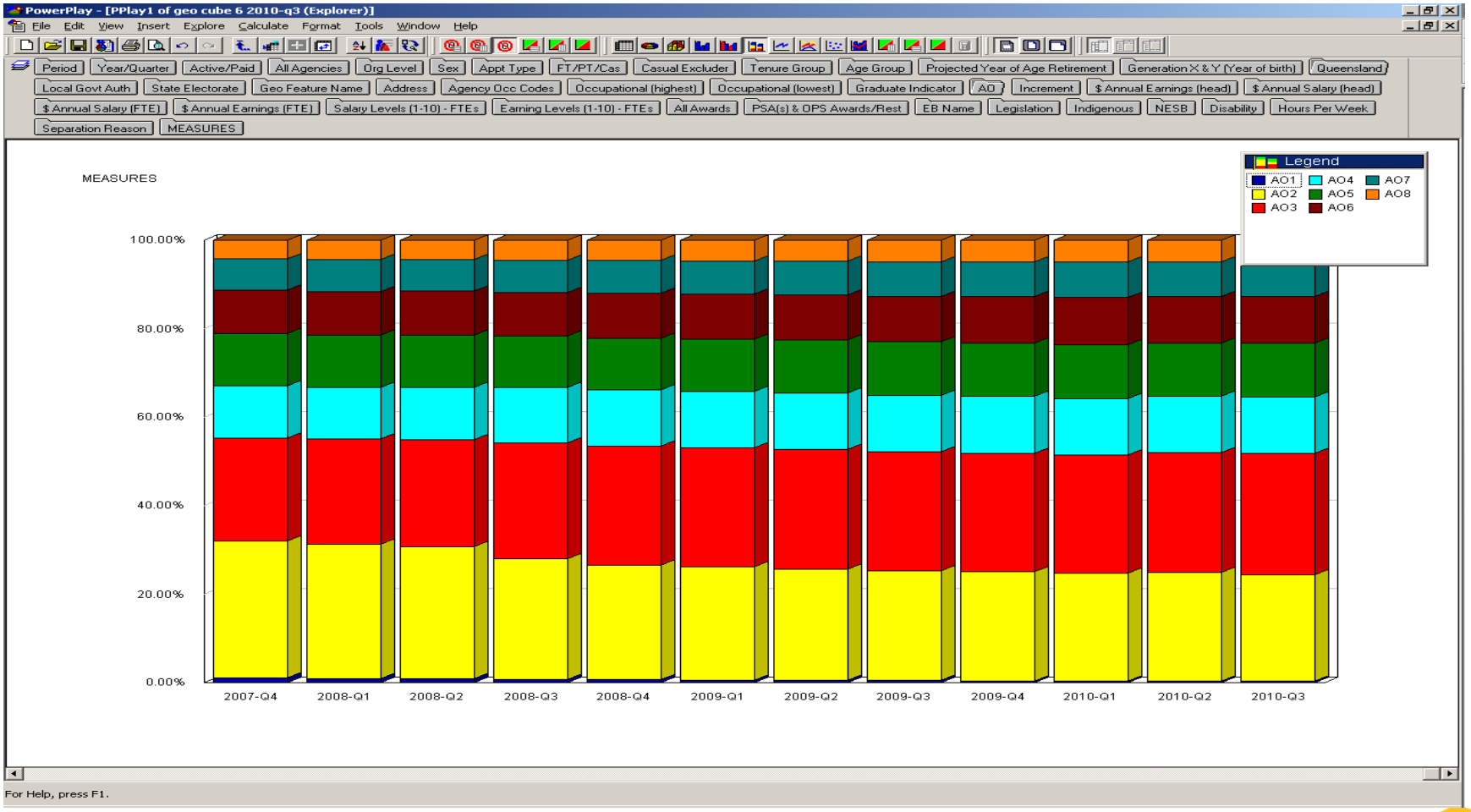
Separation Reason
Average Annual Earnings (FTE)
Average Annual Earnings (FTE)
Legend
Female
Male
$100,000.0
$80,000.0
$60,000.0
$40,000.0
$20,000.0
$0.0
Less than 1
1 to less than 3
3 to less than 5
5 to less than 10
10 to less than 20
20+
For Help, press F1.

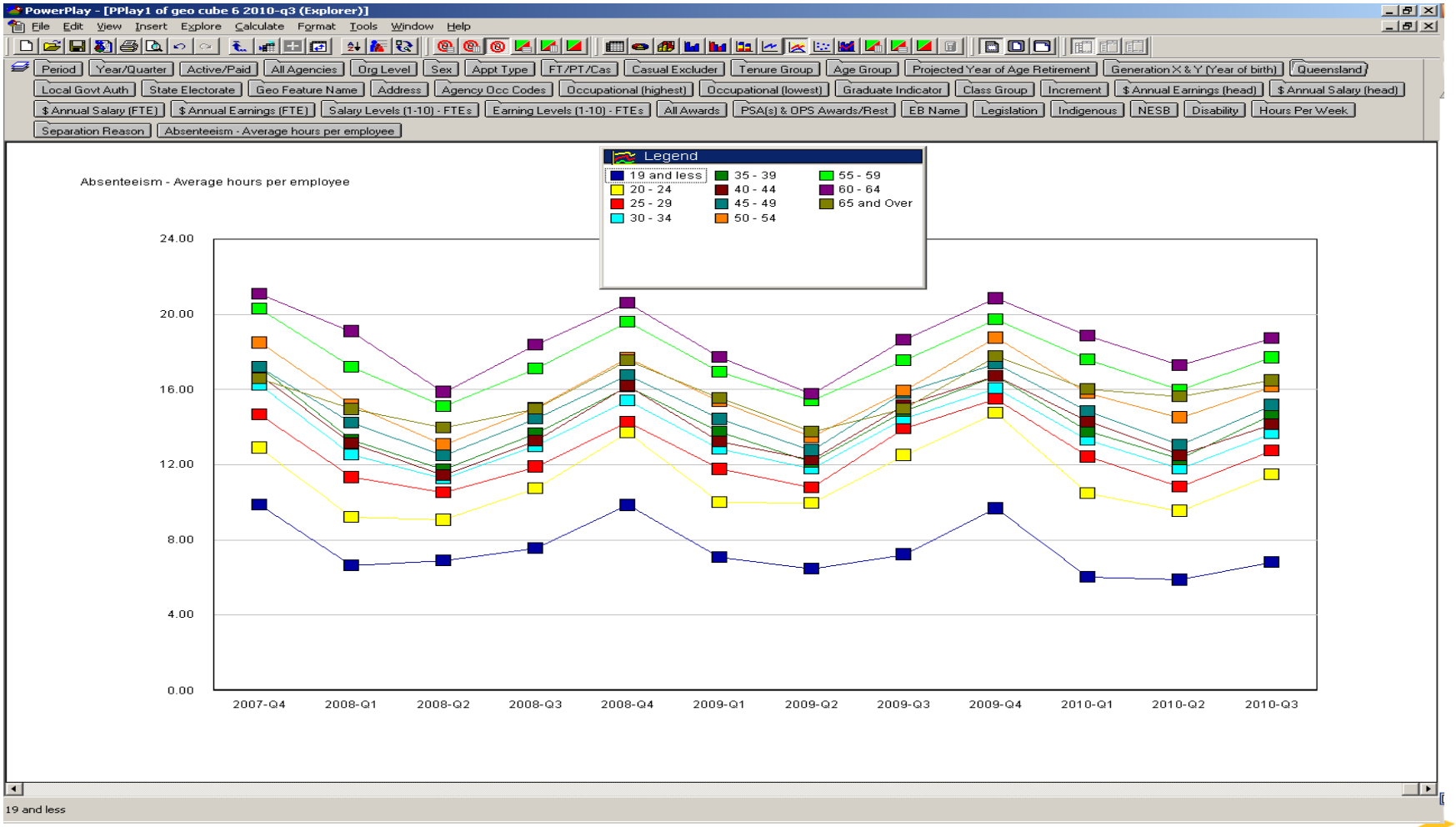
Projected retirements



Cognos 7 class creep



Cognos 7 – absenteeism



Q and A

IBM Software Industry Solutions

Information Management | Lotus | Rational | Tivoli | WebSphere | IBM

Welcome to the Smarter Government Briefing Series

6th Session - Thursday, December 2

Workforce Analytics, Reporting and Performance Management (with a Geospatial view)

Alan Simpson
QLD Government Director
Public Service Commission

Conrad Bates
Managing Partner
C3 Business Solutions

IBM Software Industry Solutions

Information Management | Lotus | Rational | Tivoli | WebSphere | IBM

Collecting and linkage of HR Data with Geospatial Capability

NCS INTERNATIONAL
CERTIFIED
QUALITY
MANAGEMENT SYSTEM
ISO 9001

Agenda

- Who is C3 Business Solutions
- Collecting HR Data
- HR Geospatial Analytics

C3 | business solutions™

- specialist business intelligence & information management consultancy
- quality-certified
- 25th fastest growing company in Australia
- just named in the smart 50 company list
- 2010 iAward winner for R&D and innovation

NCS INTERNATIONAL CERTIFIED QUALITY MANAGEMENT SYSTEM ISO 9001

smart company smart 50 2010 awards

BRW. 2010 FASTstarters

The 2010 iAWARDS Victoria State Award Winner

Products and Solutions

- **products** ...all web-based...all one of a kind...

C3 | integrity™

C3 | cohesion™

C3 | mapper™

- **solutions** ...custom built for each client...

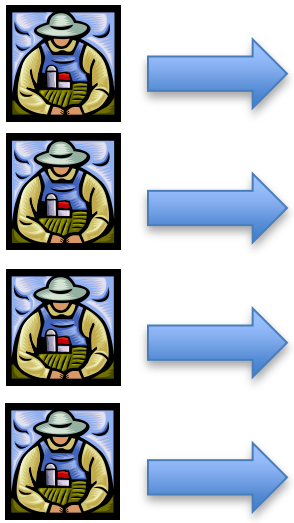
C3 | carbon analytics™

C3 | performance management™

C3 | geospatial analytics™

manual data loading process

traditional process

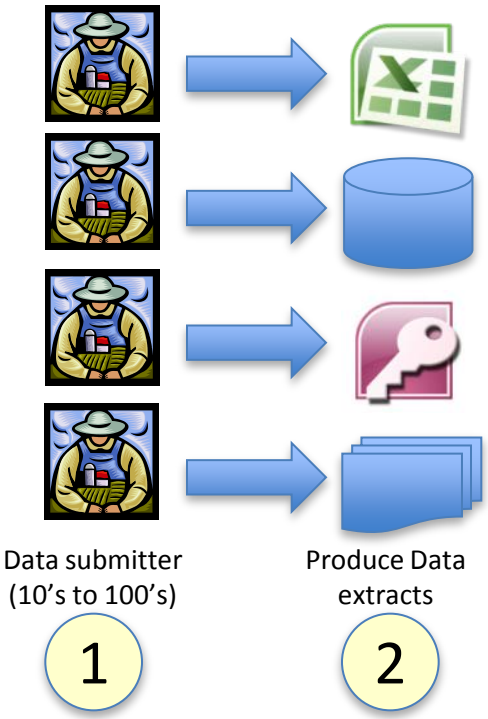


Data submitter
(10's to 100's)

1

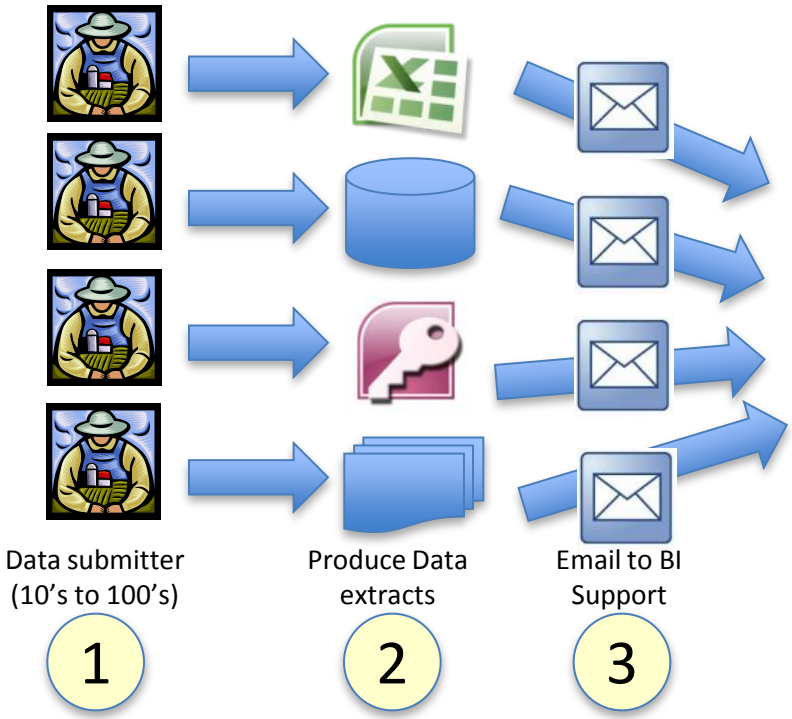
manual data loading process

traditional process



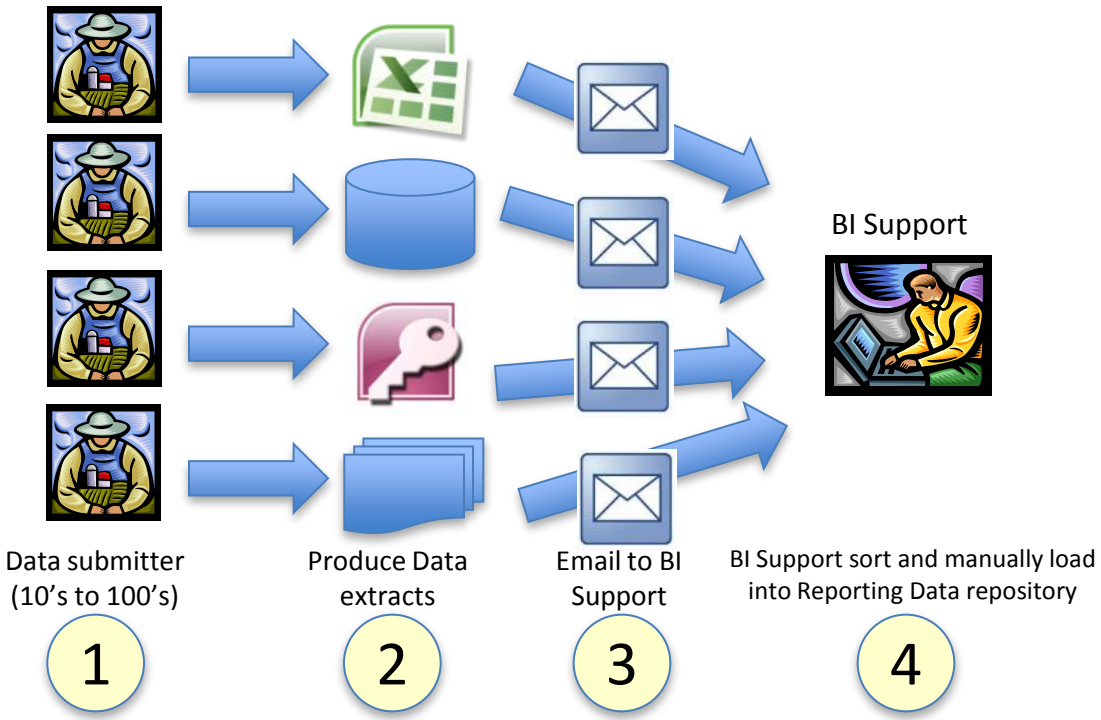
manual data loading process

traditional process



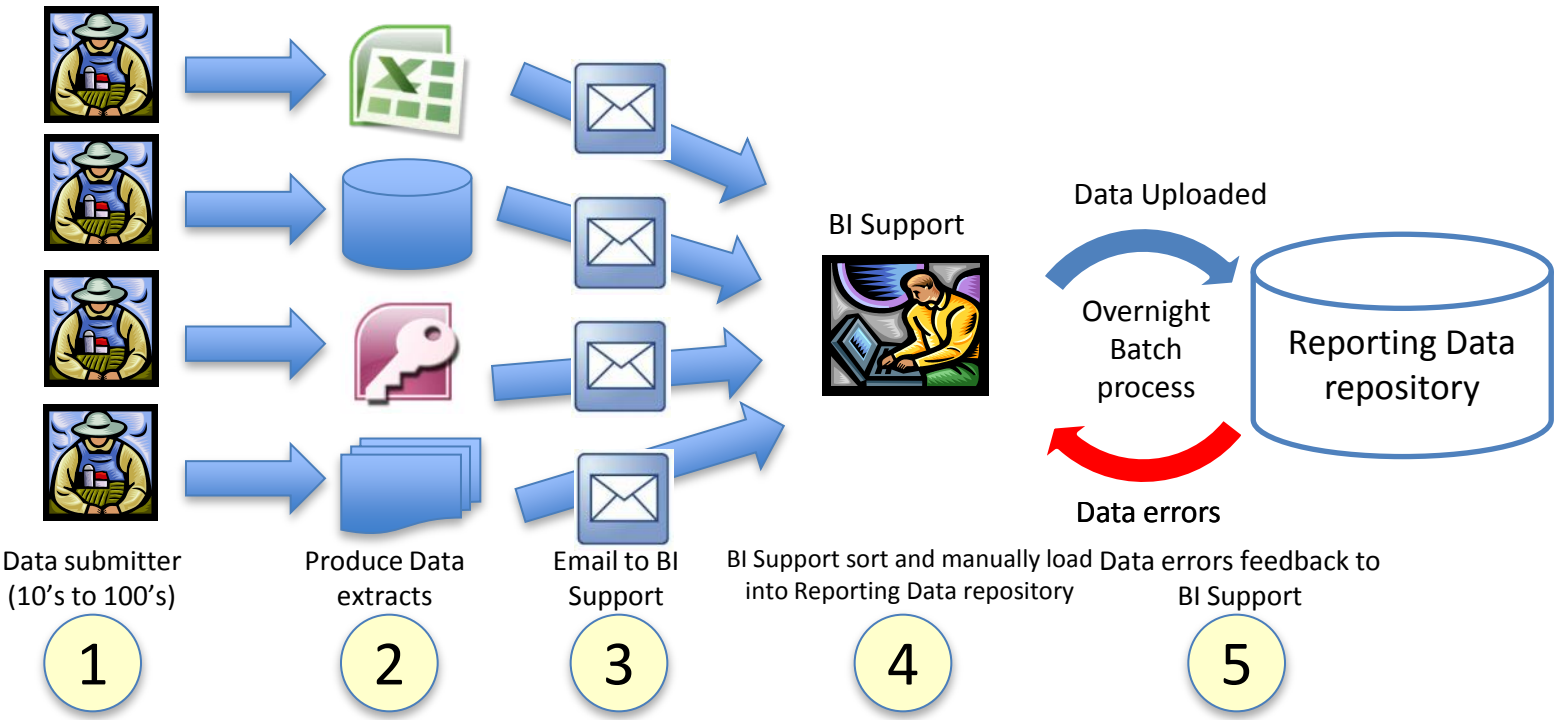
manual data loading process

traditional process



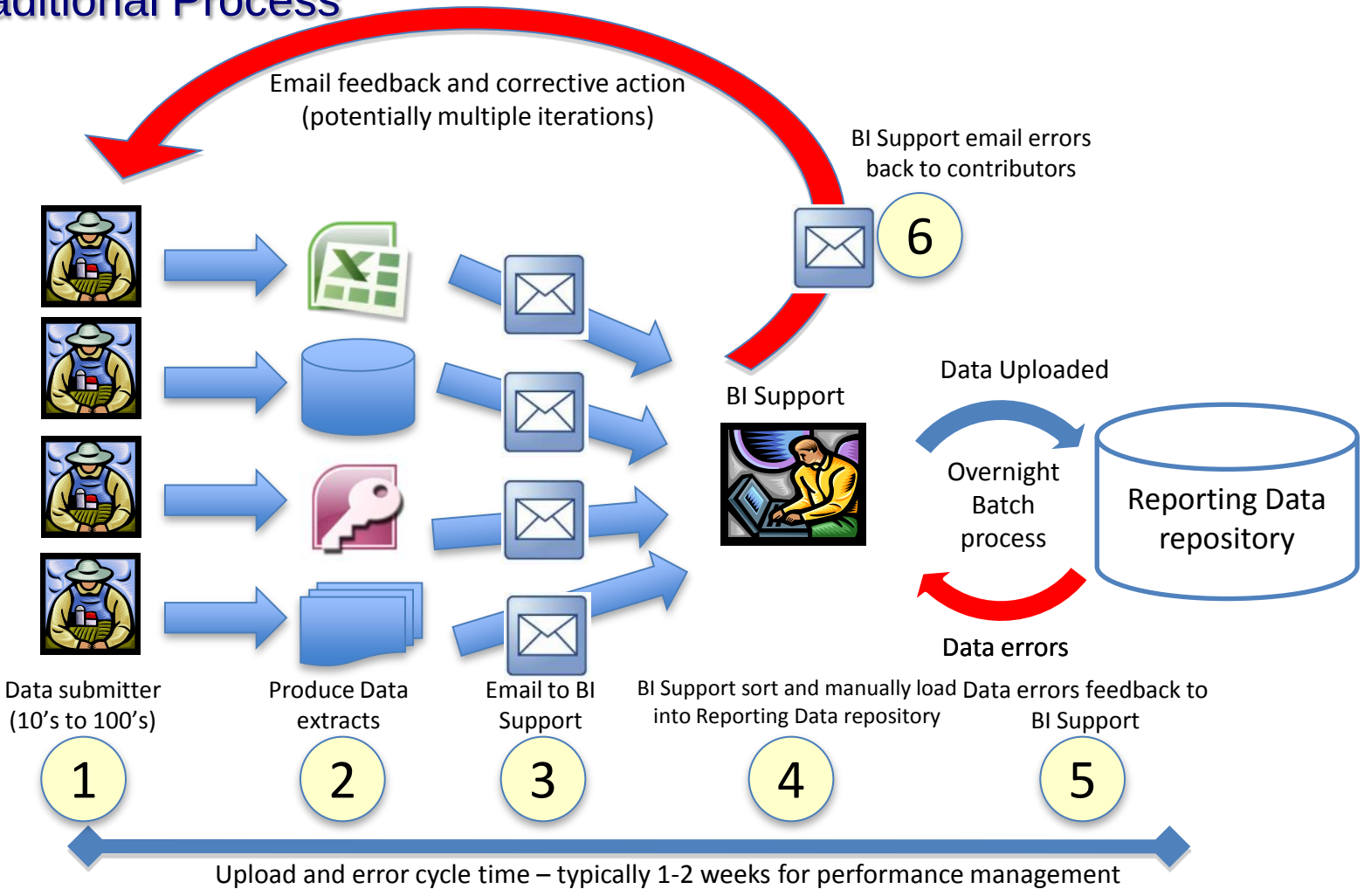
manual data loading process

traditional process



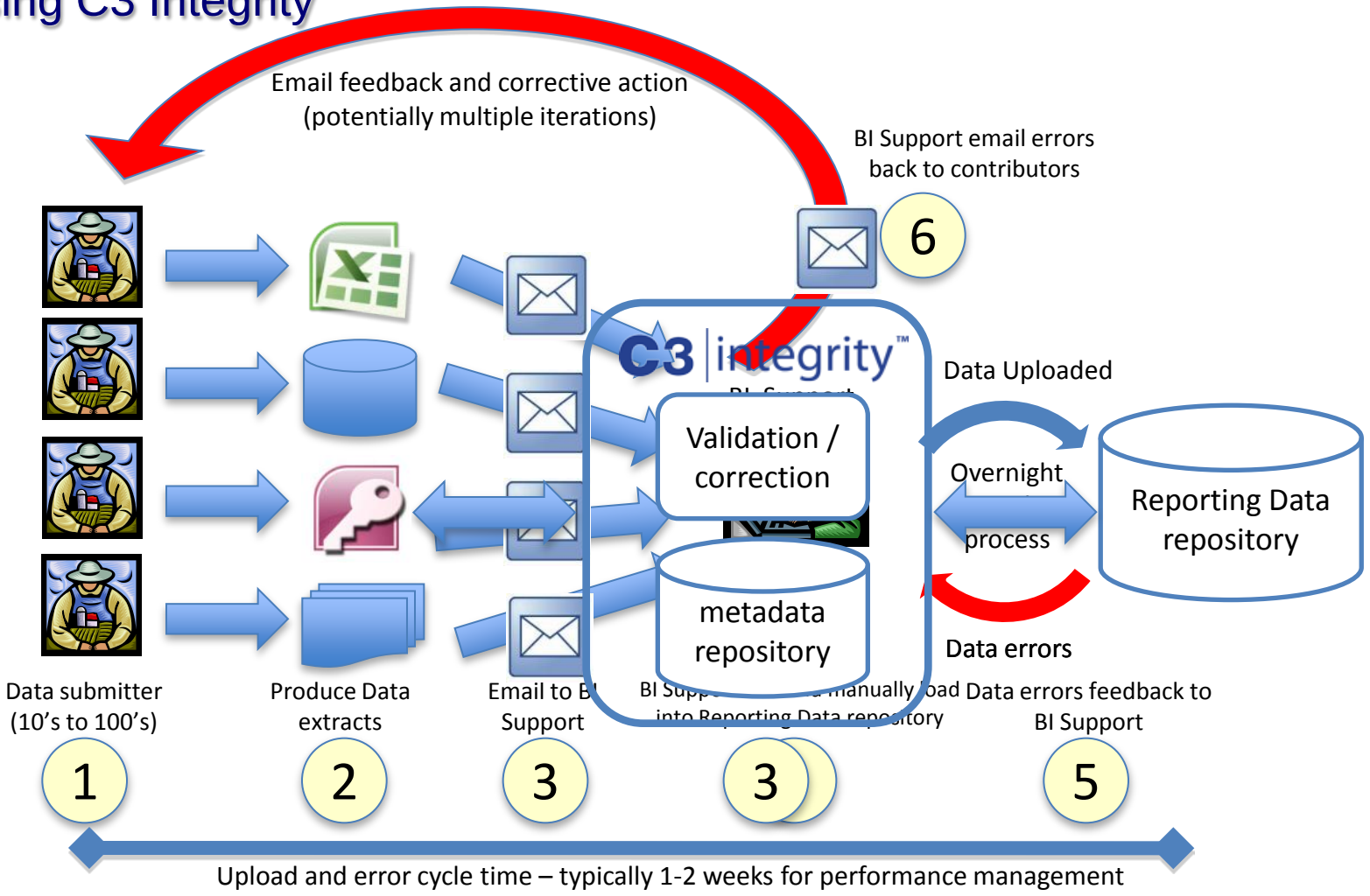
Manual HR Data Collection

Traditional Process



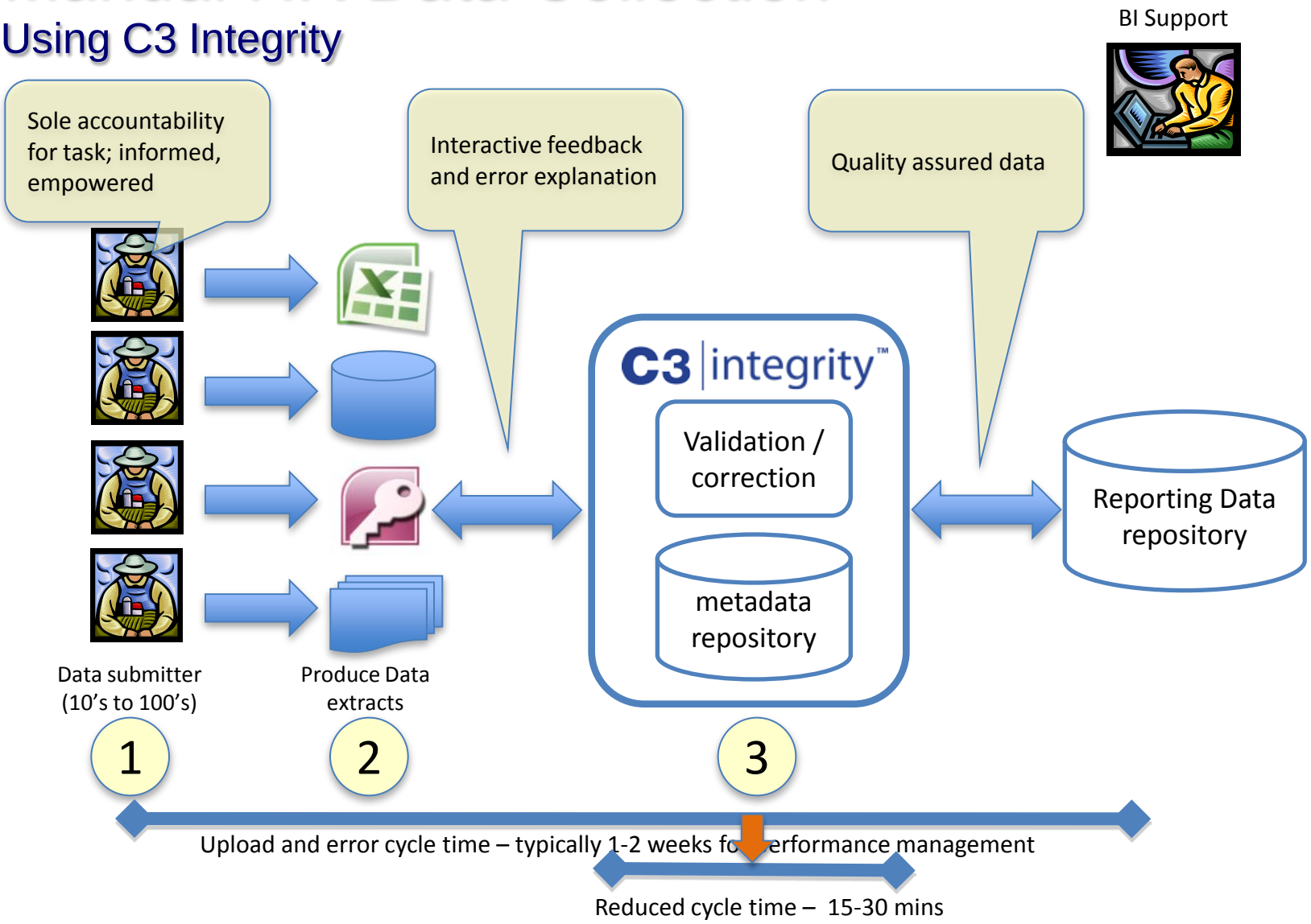
Manual HR Data Collection

Using C3 Integrity



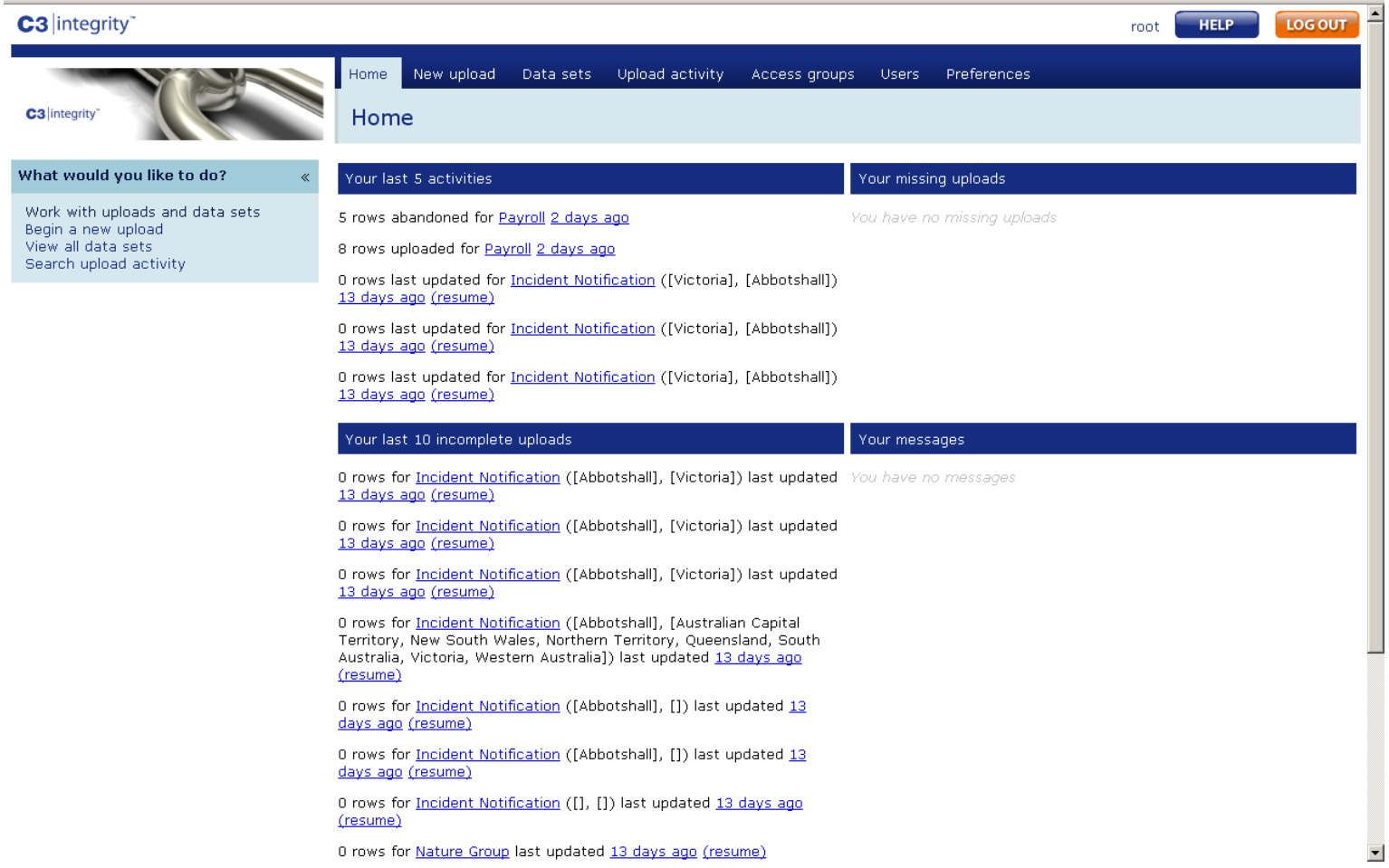
Manual HR Data Collection

Using C3 Integrity

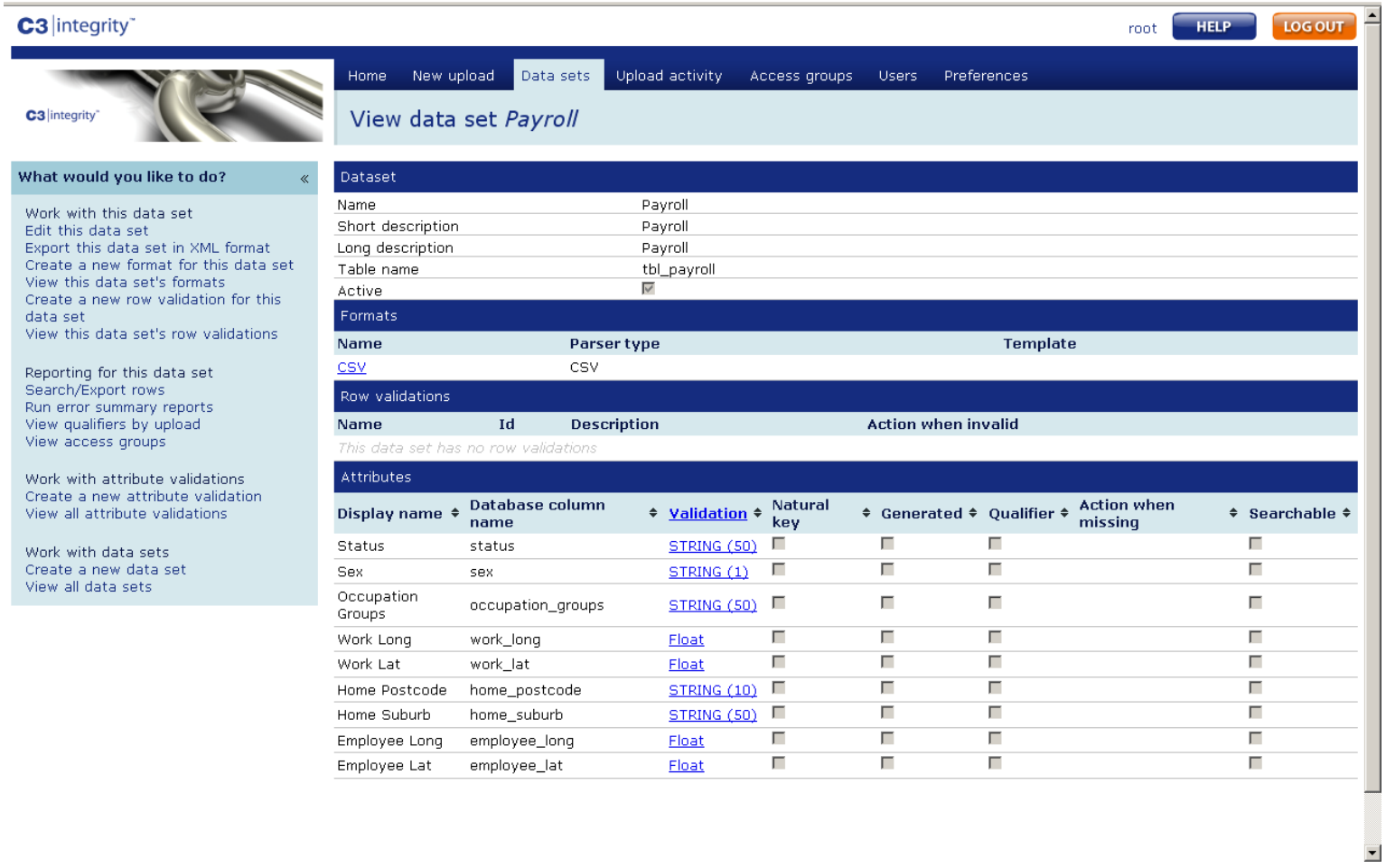


C3 Integrity demonstration

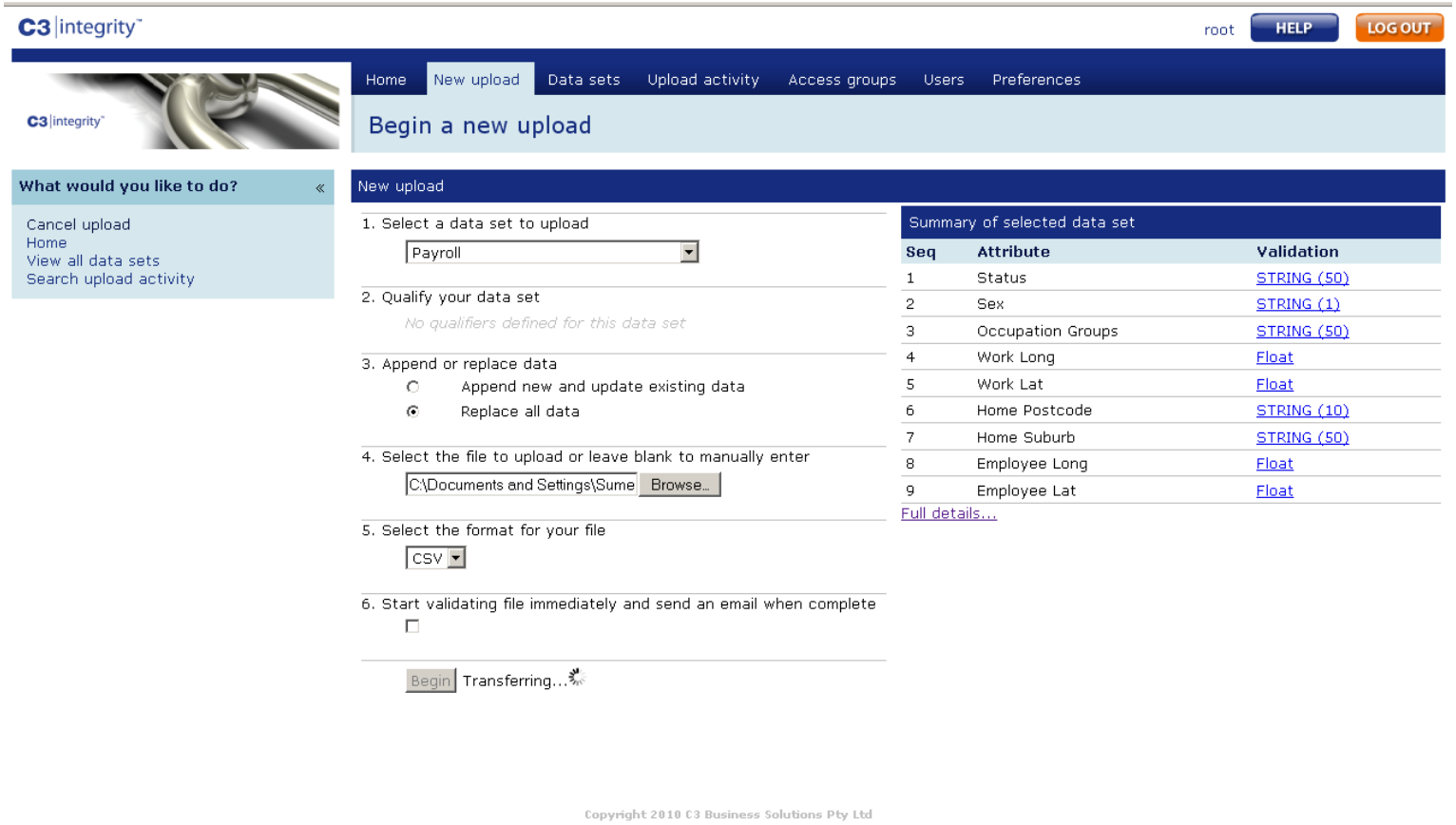
C3 Integrity



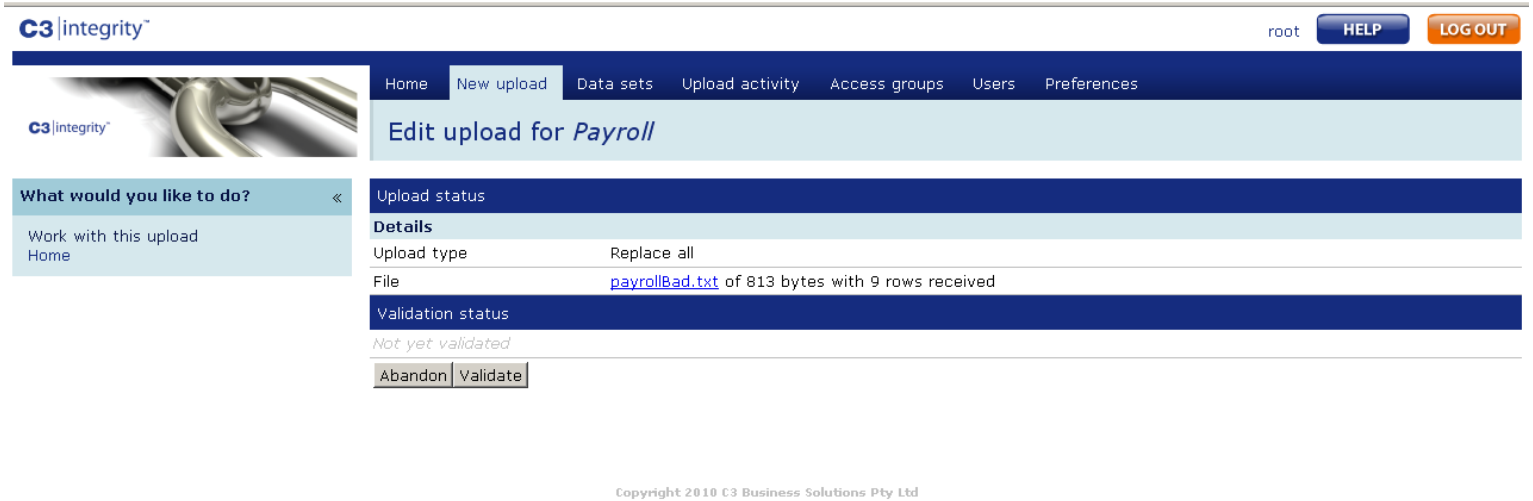
View Payroll Dataset



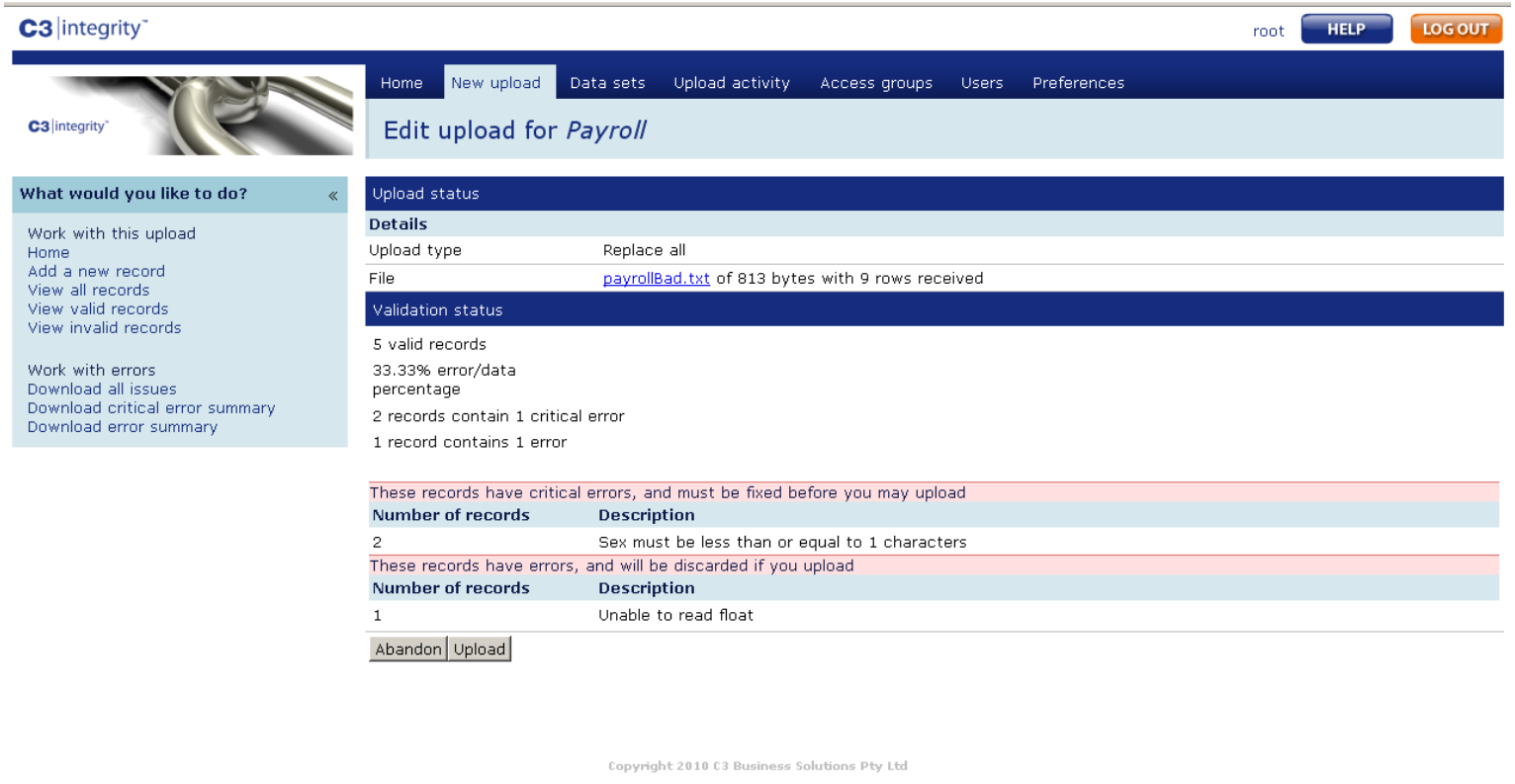
Begin a New Upload



Edit Upload for Payroll



Validation Overview – Errors



View Invalid Records

C3 | integrity™ root HELP LOG OUT

Home | New upload | Data sets | Upload activity | Access groups | Users | Preferences

Invalid rows in upload for *Payroll*

What would you like to do?

- Work with this upload
- Add a new record
- Back to upload

Errors	Status	Sex	Occupation Groups	Work Long	Work Lat	Home Postcode	Home Suburb	Employee Long	Employee Lat	Action
Sex must be less than or equal to 1 characters	Permanent	Female	Intermediate Clerical Sales and Service Workers	153.01	-27.47	4173	Tingalpa			
Sex must be less than or equal to 1 characters	Permanent	Male	Managers and Administrators	145.77	-16.92	4868	Bayview Heights			
Unable to read float	Permanent	F	Intermediate Clerical Sales and Service Workers	ABC	-27.46	4031	Kedron			

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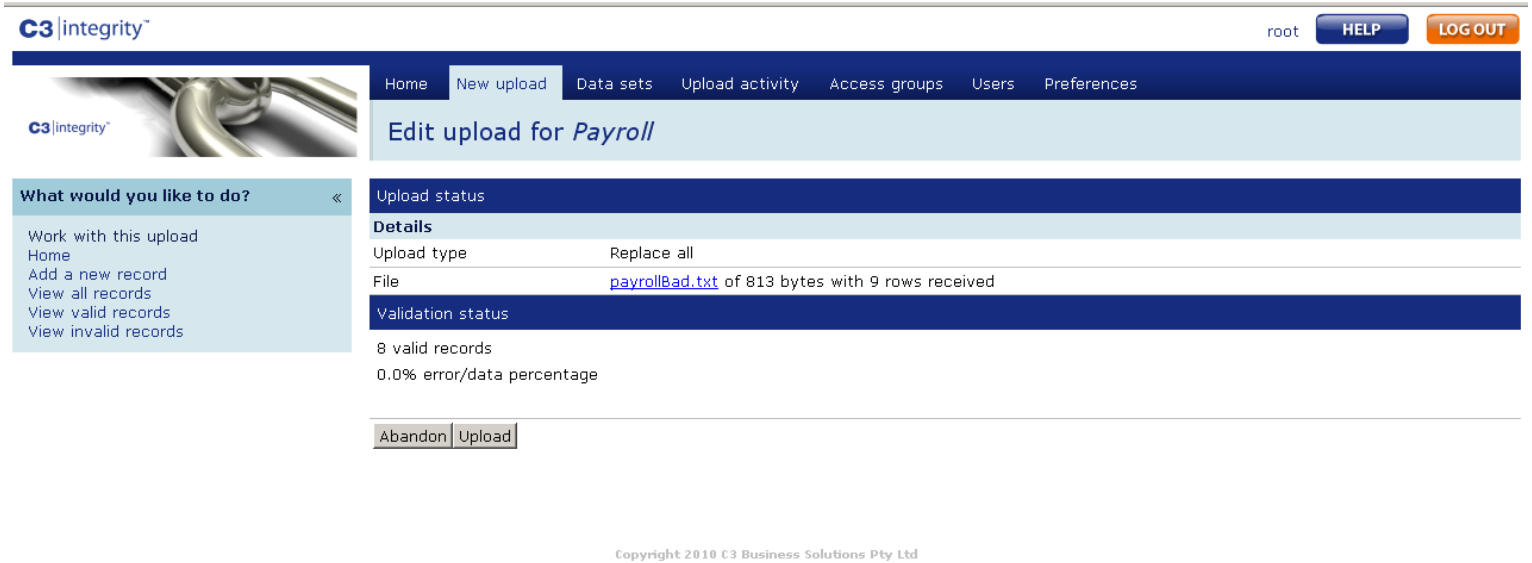
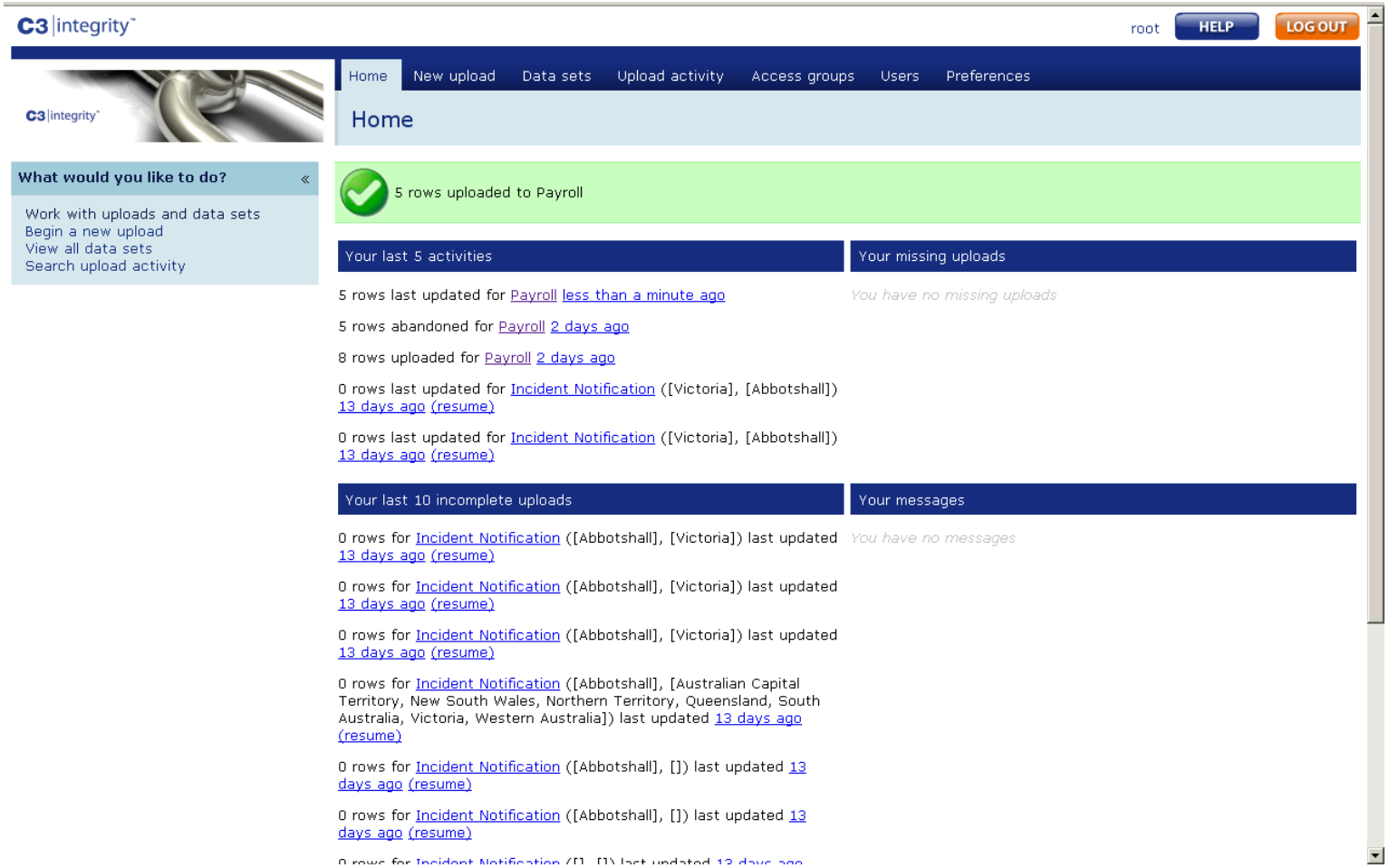
Validation Overview – No Errors



Upload Successful



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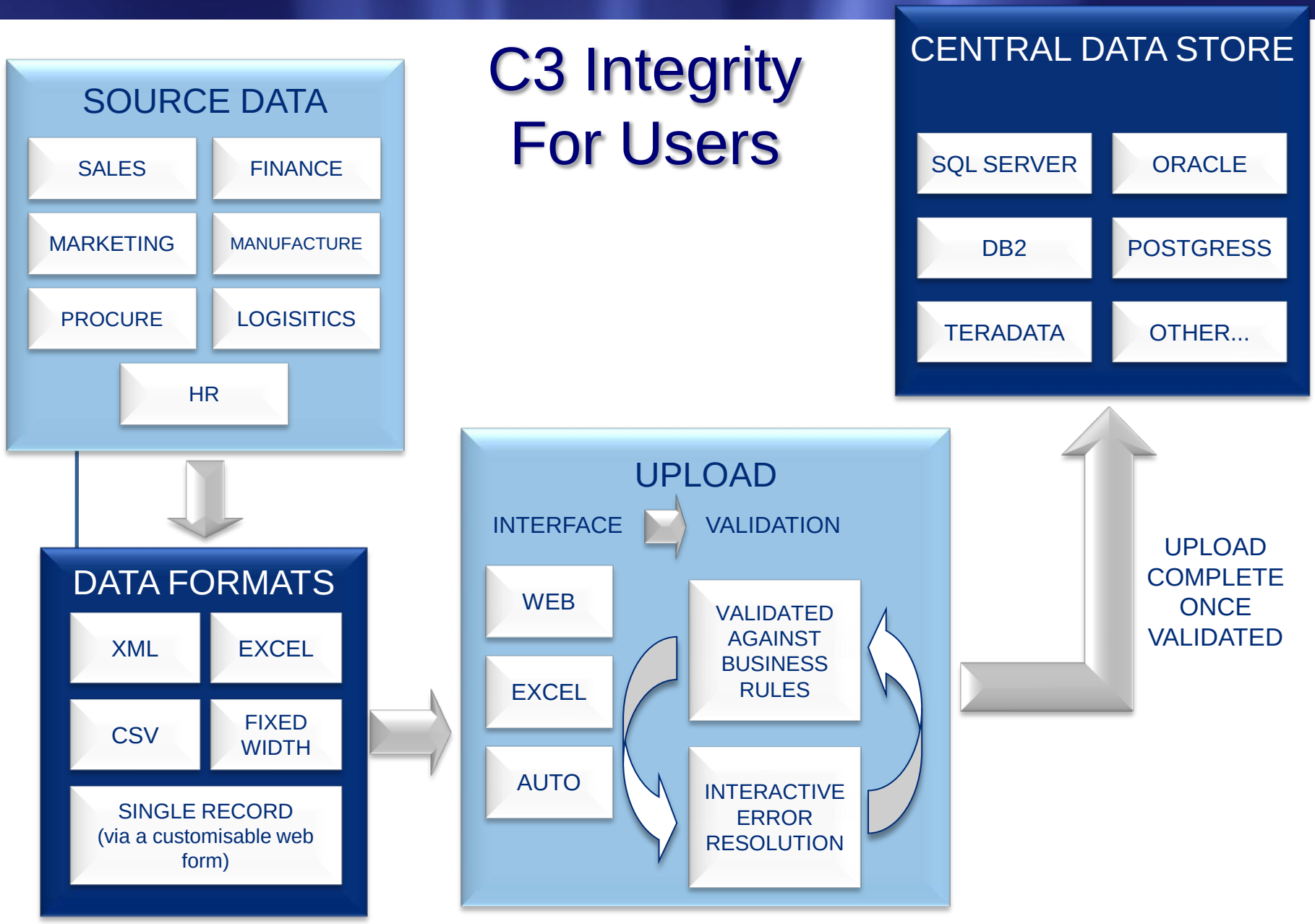
C3 Integrity For Users



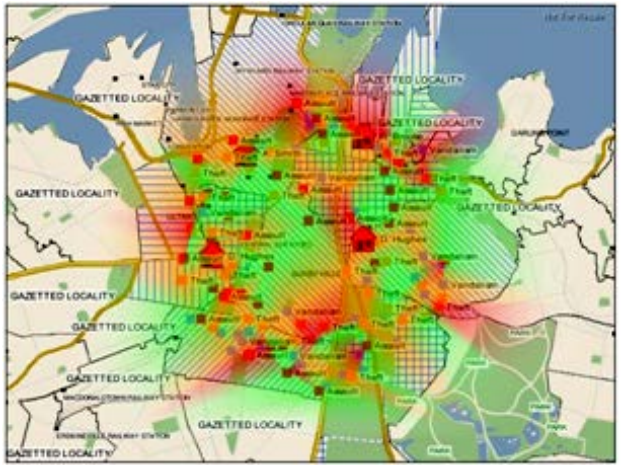
C3 | geospatial analytics™

Linking IBM Cognos Business Intelligence with Integeo Map Intelligence and Maps

Cognos. software

ESRI	GeoServer
MapInfo	OGC
Spatial Platforms	

BI + maps =

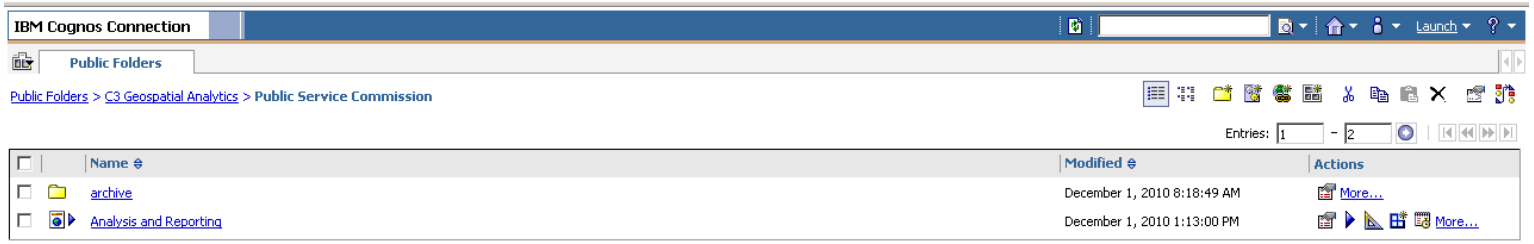


integeo
A FORGE Group Company

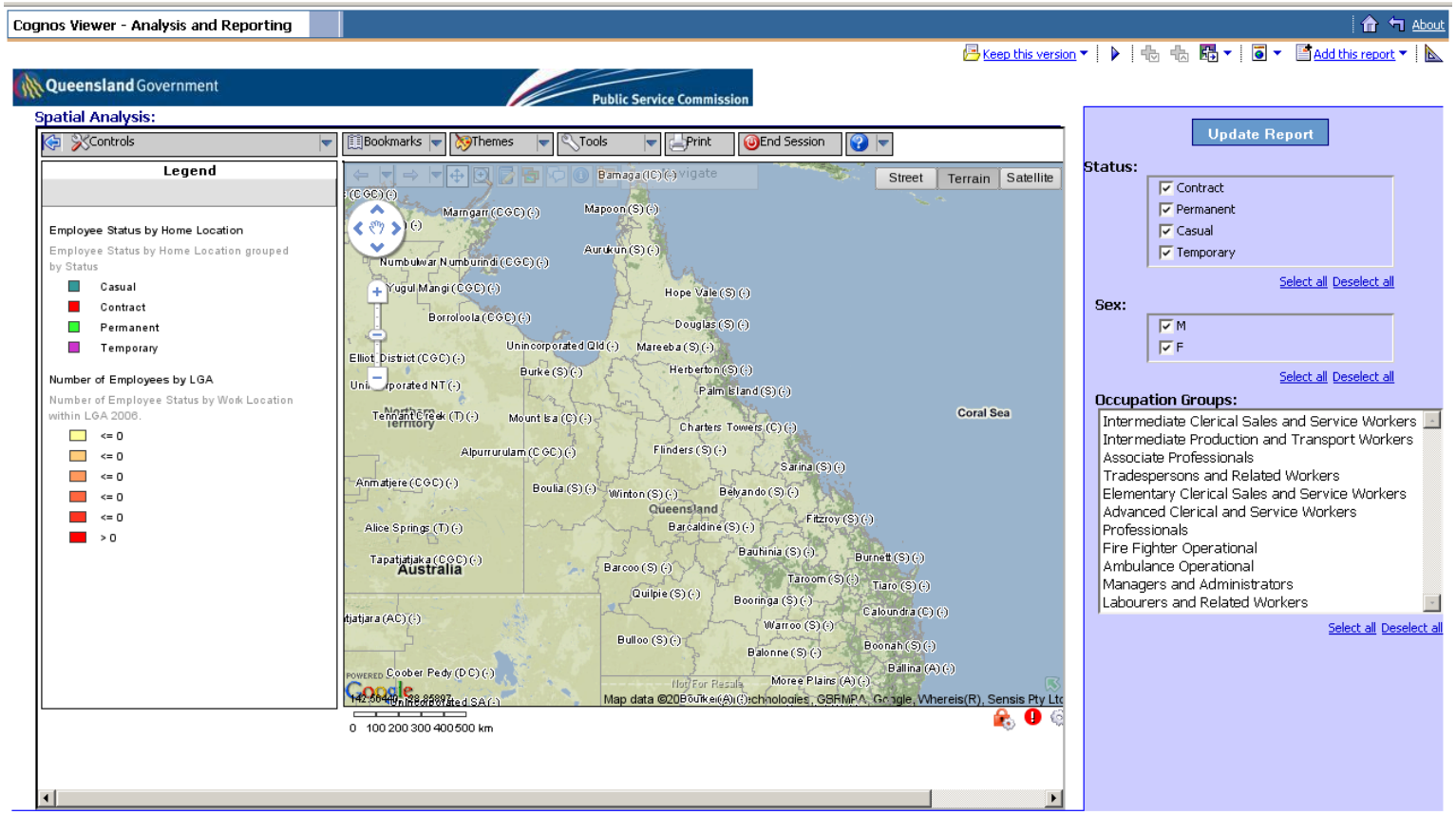
C3 | geospatial analytics™

C3 Geospatial HR demonstration

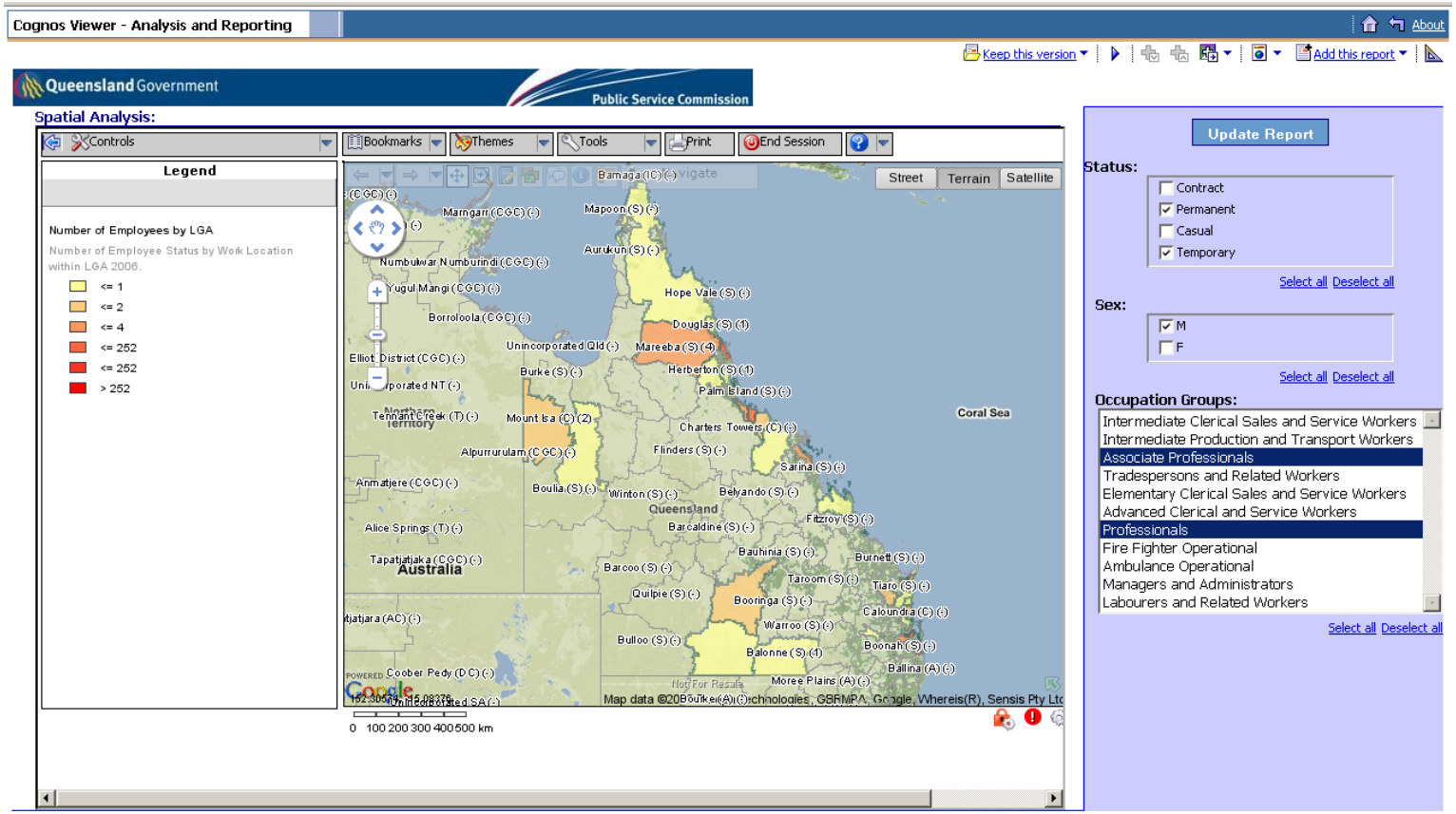
IBM Cognos


IBM Cognos Connection
Launch
Public Folders
Public Folders > C3 Geospatial Analytics > Public Service Commission
Entries: 1 - 2
Name
Modified
Actions
archive
December 1, 2010 8:18:49 AM
More...
Analysis and Reporting
December 1, 2010 1:13:00 PM
More...

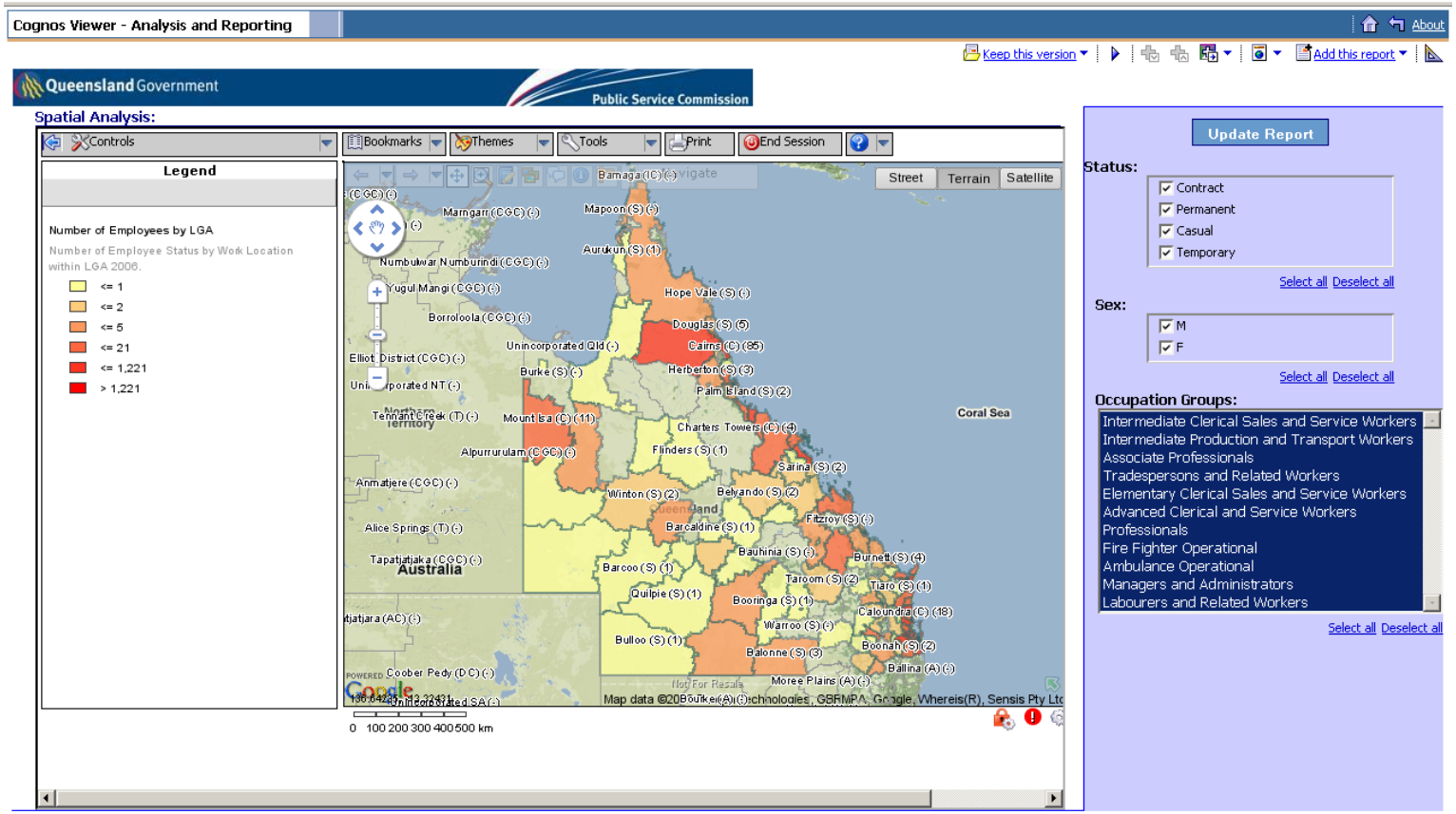
Queensland Terrain



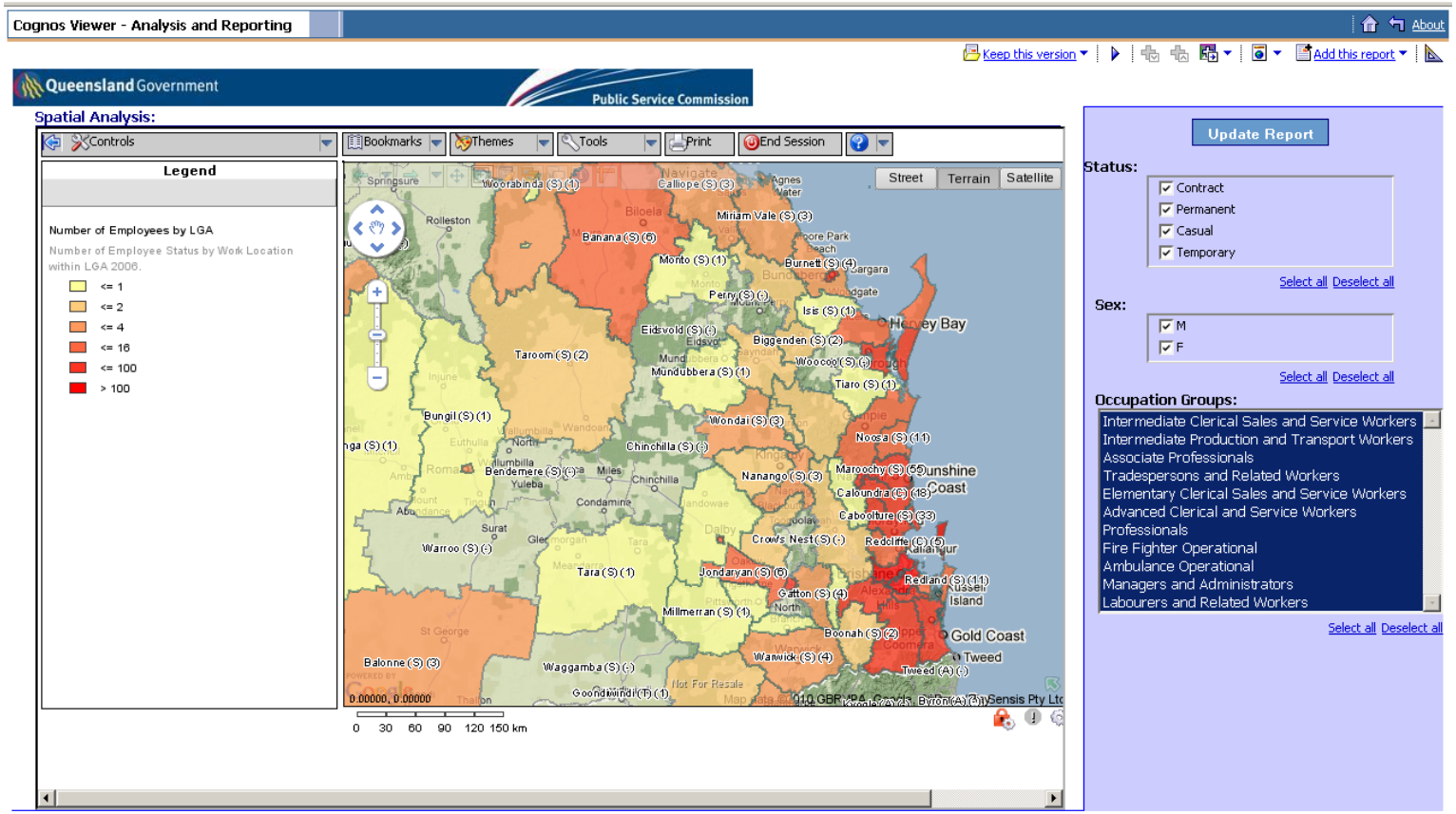
Use Cognos Filters for Interactivity



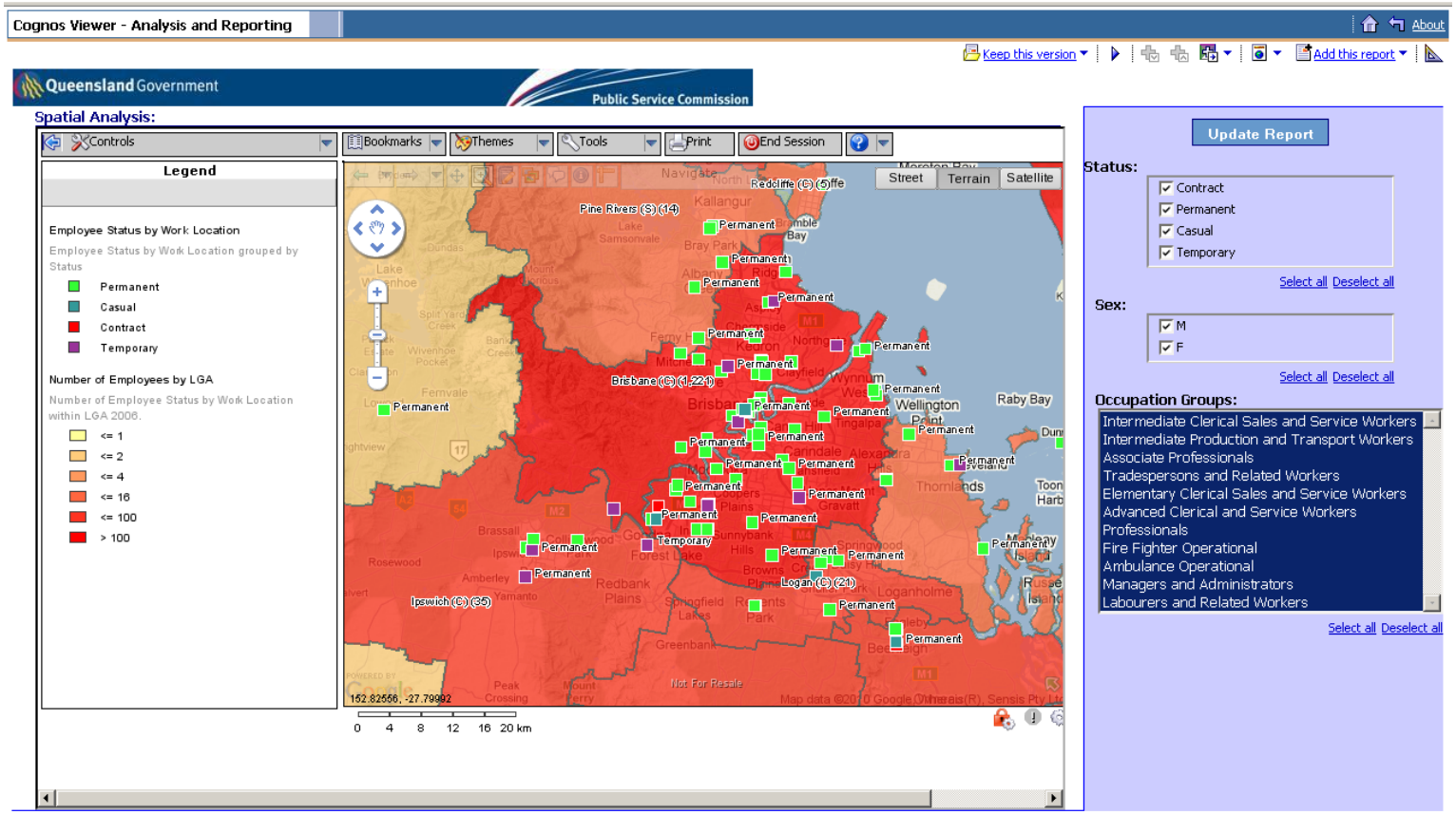
Show All Data On The Map



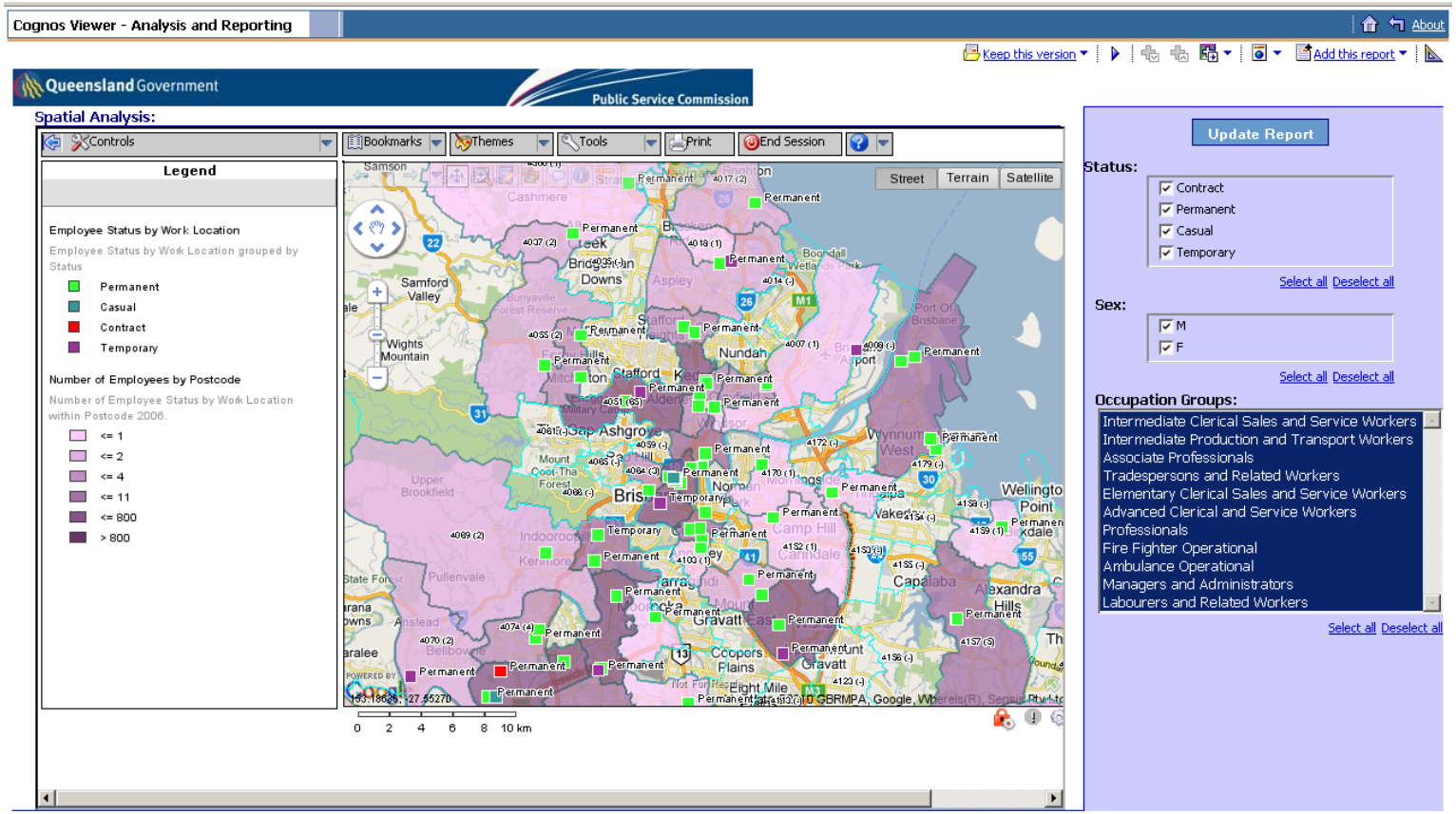
South East Queensland



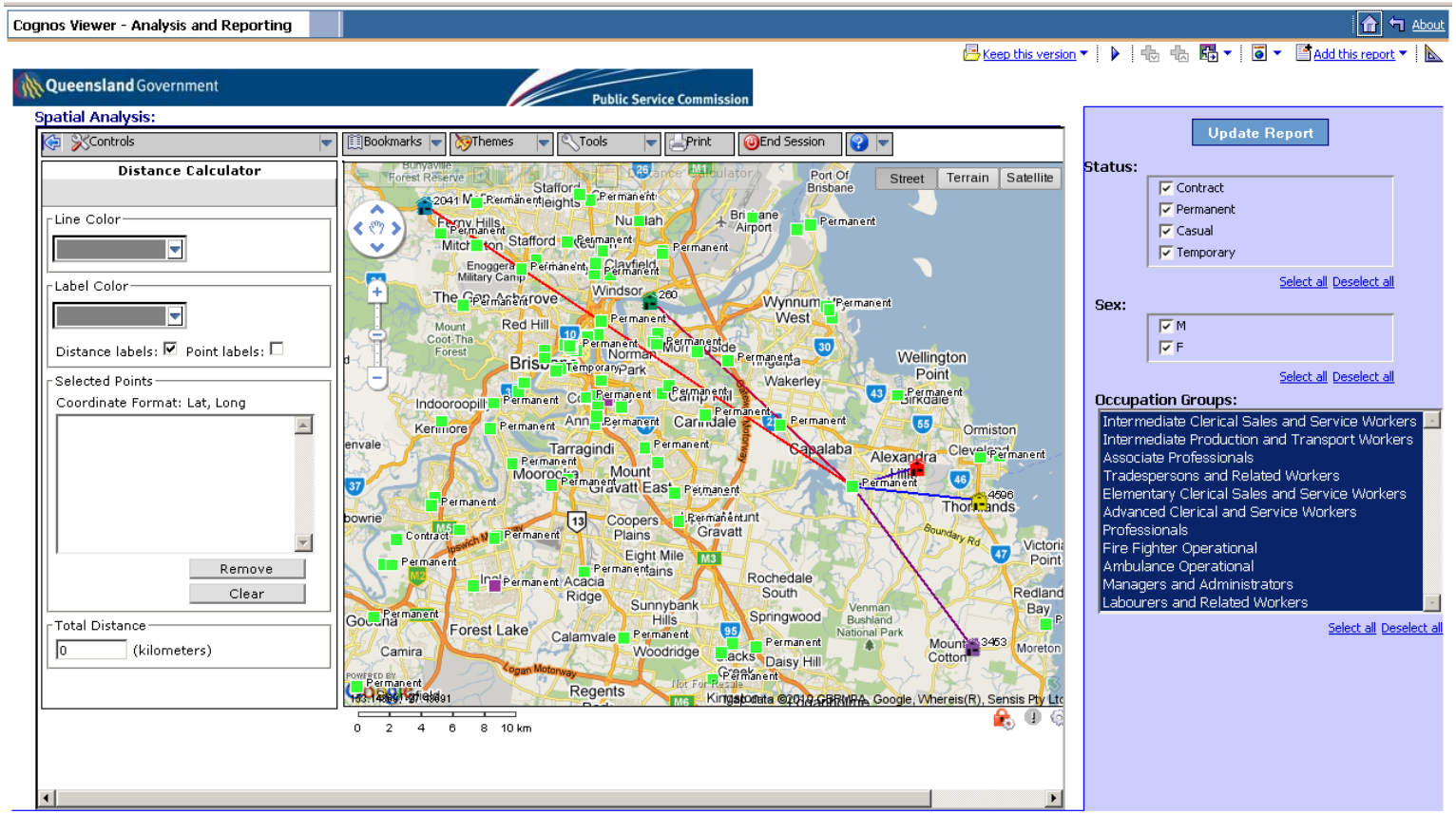
Work Locations by LGA



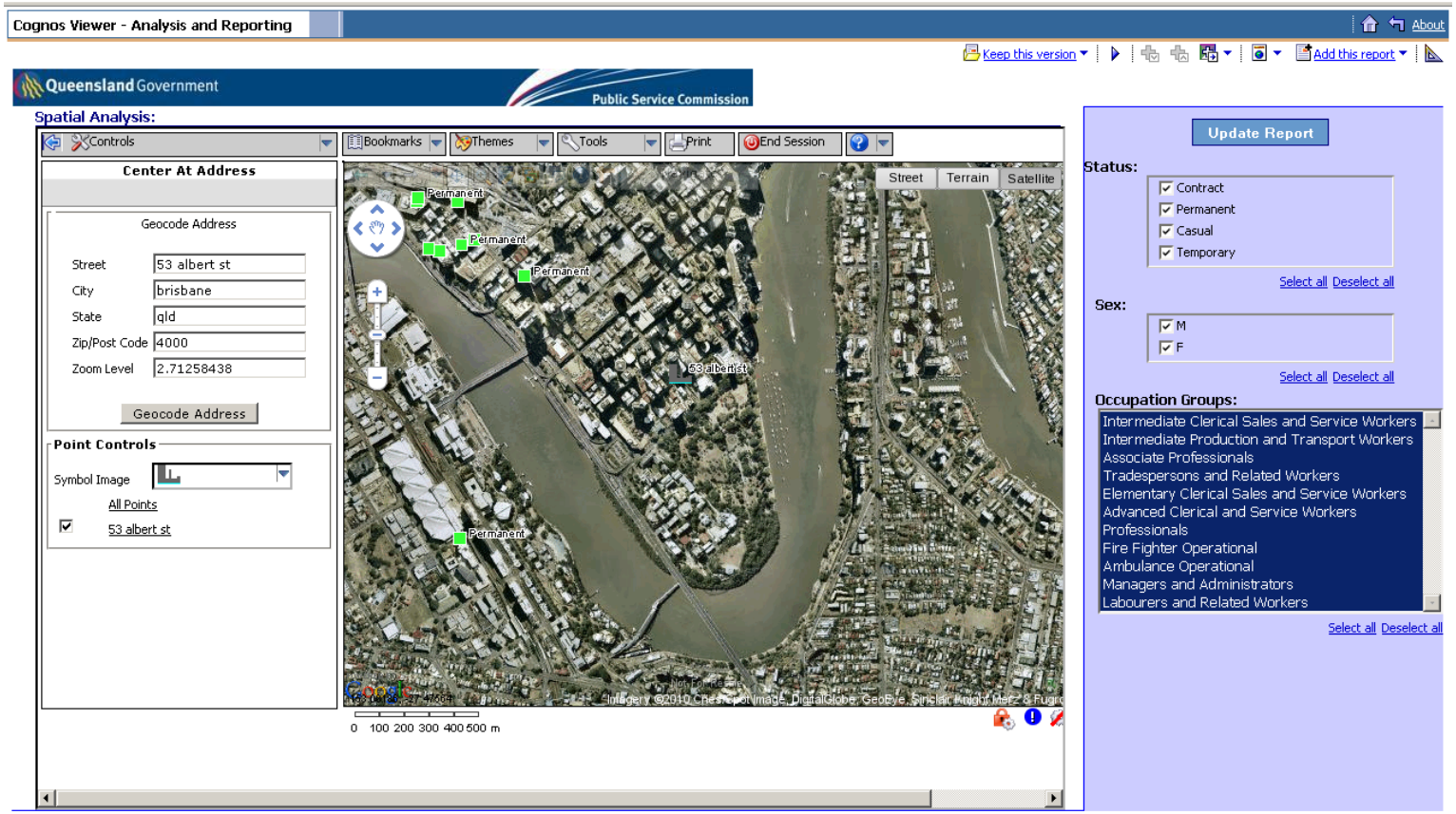
Work Locations by Post Code



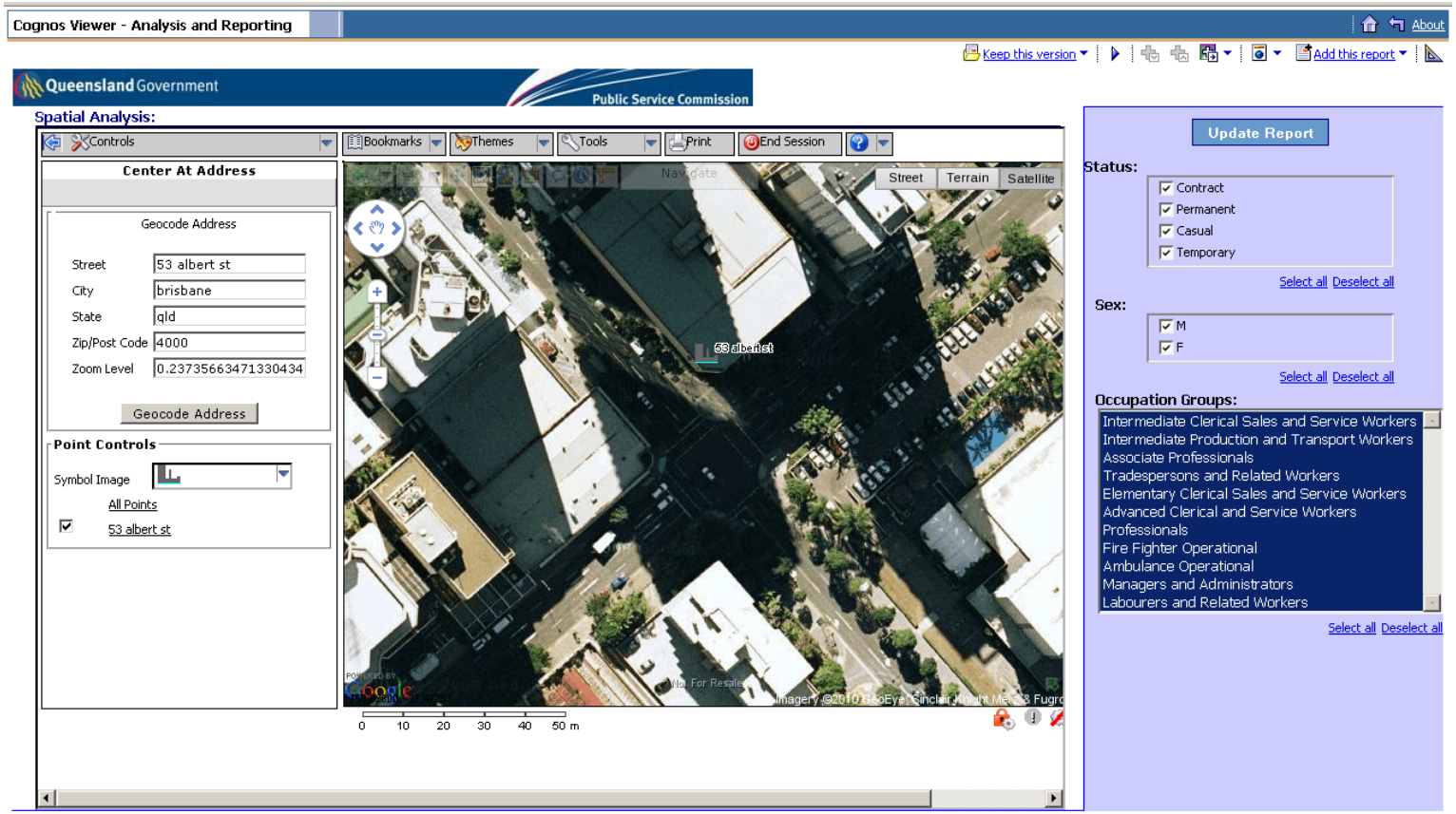
Work vs. Employee Home Location



Geocode New Work Location



Street View


Cognos Viewer - Analysis and Reporting
About
Keep this version
Add this report
Queensland Government
Public Service Commission
Spatial Analysis:
Controls
Bookmarks
Themes
Tools
Print
End Session
Center At Address
Geocode Address
Street
53 albert st
City
brisbane
State
qld
Zip/Post Code
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Zoom Level
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Geocode Address
Point Controls
Symbol Image
All Points
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Navigate
Street
Terrain
Satellite
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50 m
Update Report
Status:
Contract
Permanent
Casual
Temporary
Select all
Deselect all
Sex:
M
F
Select all
Deselect all
Occupation Groups:
Intermediate Clerical Sales and Service Workers
Intermediate Production and Transport Workers
Associate Professionals
Tradespersons and Related Workers
Elementary Clerical Sales and Service Workers
Advanced Clerical and Service Workers
Professionals
Fire Fighter Operational
Ambulance Operational
Managers and Administrators
Labourers and Related Workers
Select all
Deselect all

thank you – questions?

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NCS INTERNATIONAL CERTIFIED QUALITY MANAGEMENT SYSTEM ISO 9001

AUSTRALIAN MADE

The 2010 iAWARDS Victoria State Award Winner

BRW. 2010 FASTstarters

smart company smart 50 2010 awards

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data collection & collaboration