

How GHD revolutionised productivity reporting

James Gallagher



At a glance

GHD leading engineering, architecture and environmental consulting company

operating in **5** continents

100+ offices worldwide

85+ years in operation

5500+ people

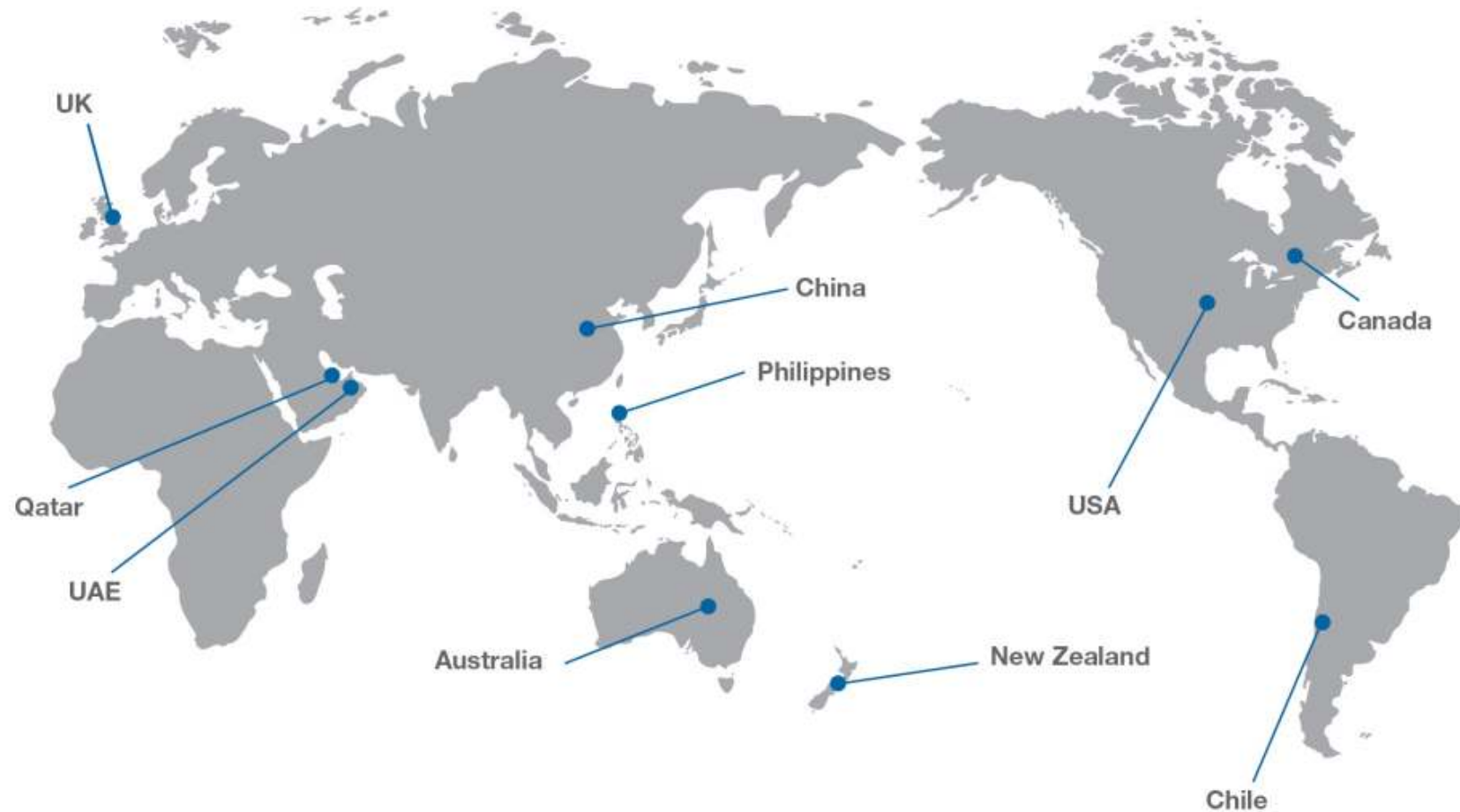
2013 revenue: AUD **1.04** billion

serving **5** global markets

70+ service lines



Where are we?



About James Gallagher

- ❑ Joined GHD in 1997
- ❑ From April 2009 - Finance Manager Victoria
- ❑ From July 2012 - Finance Manager Victoria and Sydney
- ❑ From July 2013 became part of a team to roll out a BI solution within GHD Group
- ❑ Experience of local business reporting requirements and a drive for simplification and improvement
- ❑ Basic user of TM1 and Cognos and have increased my understanding over the last 9 months through various projects.



Business Challenge



Business Challenge

- Current utilisation reporting was introduced in 2001
- Business has grown from 1000 + people to 5500+
- Structures has changed
- Regions have been added
- Local reporting has been developed in each office due to no changes in standard reporting to a adapt with business change
- Each office looks at utilisation in local way rather than one uniformed way
- Reports are done at different times
- Reports have different features and information
- Business wanting more information than currently provided



Existing Report – Created in 2001

F3 Report (A, B, D and S staff only) - Time Report Version

Period from 7 / 2013 to 7 / 2013

Page: 1
of: 5

Service Group	Utilisation		Est Client %	Int Client %	Prop Wks	Corp Admin	Office Admin P/Claim	Office Mktg	Prop- ortal	GHD Bu c School	Unas signed	Total Othead	Total Avail	James Gallagher					Total Leave	Paid vs Booked Variance	Missing T/B	Total Paid		
	Prop	Chg												Annual Leave	Long Service Leave	Public Holiday	Sick Leave	Other Leave						
	%	%												%	%	%	%	%					%	%
42C002 Calma Environment																								
26871	Dave Faulkner (FT)	1.8%	85.6%	65.1	0.0	1.3		1.1	6.1	4.0		11.2	76.3	20.0		4.0					24.0	0.0		100.0
19964	Mesi Gonzalez (FT)	0.0%	78.5%	45.7	0.0	0.0	0.5	1.3	10.9			12.8	59.5	24.0		8.0	8.5				40.5			100.0
21244	Bronwyn Hookey (FT)	0.0%	59.0%	56.5	0.0	0.0		0.5				0.5	56.0	36.0		8.0					44.0			100.0
42451	Matthew Jordan (FT)	0.0%	0.0%	0.0	0.0	0.0	4.0					4.0	4.0	88.3		8.0					96.3	0.0		100.0
23990	Kristin Keave (FT)	0.0%	76.1%	56.2	0.0	0.0	2.9	2.0	12.9			17.9	73.1	16.0		8.0	3.5				27.5	0.0		100.0
44116	Andrew Small (FT)	0.0%	58.3%	31.5	0.0	0.0		0.5				0.5	32.0	64.0		4.0					68.0			100.0
26874	Vince Geoffrey Tooley (FT)	0.0%	0.0%	0.0	0.0	0.0						0.0	0.0	52.0		8.0					100.0			100.0
Total for 42C002 Calma Environment		0.3%	84.1%	34.2	0.0	0.1		1.3	0.8	4.1	0.4	6.6	40.3	50.9		6.8	1.6				59.3	0.0		100.0
42C004 Calma Project Management																								
19869	Josepi Estrada (FT)	0.0%	56.3%	61.1	0.0	0.0		1.1	1.6			2.7	63.7	23.2		8.0	5.1				36.3			100.0
44054	Neal Morrow (FT)	0.0%	56.0%	15.2	0.0	0.0			0.8			0.8	16.0	76.0		8.0					34.0			100.0
23529	Samuel Thomas (FT)	0.0%	85.9%	61.9	0.0	0.0		0.3	9.9			10.1	72.0	16.0		8.0	4.0				28.0			100.0
Total for 42C004 Calma Project Management		0.0%	91.7%	39.7	0.0	0.0		0.4	3.2			3.6	48.3	46.3		8.0	2.4				56.7			100.0
42C005 Calma Building																								
28433	Marla Bernarte (FT)	0.0%	100.0%	58.9	0.0	0.0						0.0	58.9	32.0		8.0	1.1				41.1			100.0
28437	Aaron Best (FT)	0.0%	88.9%	49.3	0.0	0.0		4.3	1.3	0.5		6.1	55.5	36.5		8.0					44.5			100.0
23587	Andrew Bissett (FT)	0.0%	52.9%	66.4	0.0	0.0	1.6		3.5			5.1	71.5	20.5		8.0					28.5			100.0
28436	Mark Bitt (FT)	5.1%	60.6%	44.3	0.0	3.7			25.6	3.2		28.8	73.1	18.9		8.0					26.9			100.0
28423	Rob Bitt (FT)	15.5%	41.9%	23.5	0.0	8.7		7.5	4.9	20.1		32.5	56.0	36.0		8.0					44.0			100.0
28424	Joe Catalano (FT)	10.5%	73.7%	40.3	0.0	3.8			5.6			14.4	54.7	36.0		8.0	1.3				45.3			100.0
28446	Kave Edward Hart (FT)	6.7%	57.3%	52.0	0.0	6.0			6.0	32.0		38.0	90.0			10.0					10.0			100.0
16301	Callie Heggie (FT)	0.0%	50.2%	54.1	0.0	0.0			5.9			5.9	60.0	24.0		16.0					40.0			100.0
28430	Sonia Holzlemer (FT)	7.2%	53.5%	38.5	0.0	5.2		8.7	5.1	18.1	1.6	33.5	72.0	20.0		4.0	4.0				28.0			100.0
18516	Reza Kaiti-Pati (FT)	0.0%	52.6%	70.4	0.0	0.0			5.6			5.6	76.0	16.0		8.0					24.0			100.0
29729	Dave Malin (FT)	0.0%	38.0%	38.0	0.0	0.0				62.0		62.0	100.0											100.0
48042	Jim Reid (FT)	0.0%	53.2%	56.2	0.0	0.0		4.0				4.0	59.2	16.0		8.0	16.2				40.8			100.0
28435	Michael Steekla (FT)	2.9%	83.3%	53.3	0.0	1.9			7.5	3.2		10.7	64.0	12.0	16.0	8.0					36.0			100.0
28426	Graeme Stoddard (FT)	0.0%	0.0%	0.0	0.0	0.0						0.0	0.0		52.0	8.0					100.0			100.0
28429	Alla Taylor (FT)	6.5%	60.1%	44.3	0.0	4.8			19.2	10.1		29.3	73.6	14.4		8.0	4.0				26.4			100.0
28440	Cassie Taylor (FT)	1.2%	29.2%	22.7	0.0	0.9		50.7	2.8			53.5	76.1	16.0		8.0					24.0	0.0		100.0
28431	Kari Wilkanski (FT)	0.0%	56.9%	71.2	0.0	0.0			0.8			0.8	72.0	20.0		8.0					28.0			100.0
Total for 42C005 Calma Building		4.5%	71.9%	42.8	0.0	2.7		3.6	2.1	7.8	3.3	16.2	59.6	20.1	10.7	7.9	1.7				40.4	0.0		100.0
42C007 Calma Urban Development & Transport																								
28565	Cameron Broadway (FT)	0.0%	56.7%	65.1	0.0	0.0		2.4		0.5		2.9	68.0	16.0		8.0	8.0				32.0			100.0
23829	Mark Clancy (FT)	0.0%	32.7%	14.7	0.0	0.0		20.8	2.7	6.7		30.1	44.8	20.0		8.0	6.1	21.1			55.2			100.0
24099	Emma Flavagan (FT)	9.4%	50.2%	61.3	0.0	6.4			2.9	2.1	1.6	6.7	68.0	20.0		8.0	4.0				32.0			100.0
28288	John Hall (FT)	0.0%	35.1%	26.7	0.0	0.0			44.3	5.1		49.3	76.0	16.0		8.0					24.0			100.0
29740	Amanda Jill Maddocks (FT)	0.0%	25.0%	20.0	0.0	0.0				60.0		60.0	80.0			20.0					20.0			100.0
24473	Joel Thomas (FT)	0.0%	59.2%	63.5	0.0	0.0				0.5		0.5	64.0	16.0		8.0		12.0			36.0			100.0
Total for 42C007 Calma Urban Development & Transport		1.5%	56.1%	35.9	0.0	0.9		6.1	16.0	3.9	2.1	28.1	64.0	17.2		8.4	3.0	7.3			36.0			100.0
42C008 Calma Water																								
24097	Ian Brown (FT)	0.0%	56.7%	54.1	0.0	0.0			1.3	0.5		1.9	56.0	32.0		8.0	4.0				44.0			100.0
40460	Jose Deluca (FT)	0.0%	0.0%	0.0	0.0	0.0		28.0				28.0	28.0	64.0		8.0					72.0			100.0
29736	Amy Patrice Eiba (FT)	0.0%	31.7%	31.7	0.0	0.0				68.3		68.3	100.0								100.0			100.0
29738	Glen Ireland (FT)	0.0%	26.7%	26.7	0.0	0.0		1.7		71.7		73.3	100.0											100.0



As GHD grew – so did local adhoc reporting

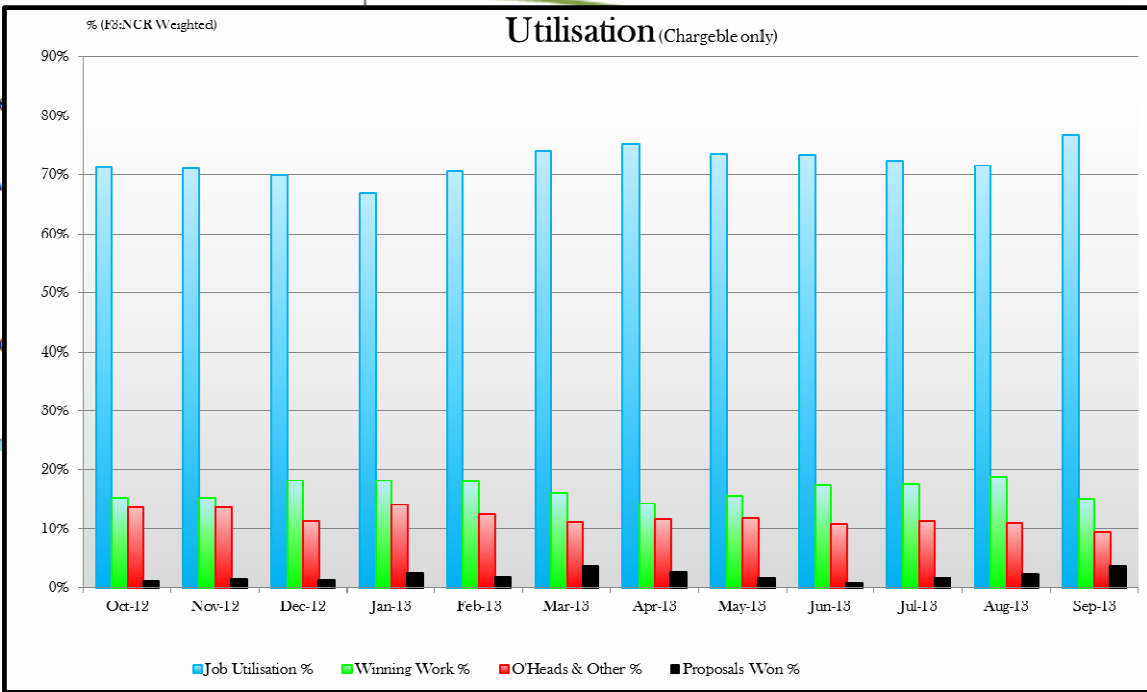
F3 Report (A, B, D and S staff only) - Time Report Version

Period from: 7 / 2013 to 7 / 2013

Service Group	Utilisation	Proj	Off	Int	Pro	Off	Off	Pro	Off	Int	Total	Total	Annual	Long	Public	Stat	Other	Total	Proj	Missing	Total
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

SG Name	BG	Target	Prior Month	Week 1	Week 2	Week 3	Week 4	Week 5	Month Variance	Oct YTD Utilization
Operations	Business Services	13.5%	11.6%	8.0%	9.0%	7.2%	6.9%	8.4%	-5.1%	8.2%
Business Services Total		13.5%	11.6%	8.0%	9.0%	7.2%	6.9%	8.2%	69.7%	8.2%
Risk Management	Energy	81.9%	67.8%	74.3%	78.6%	78.6%	72.7%	71.4%	-10.5%	70.7%
Power	Energy	68.9%	66.2%	49.9%	45.1%	48.0%	42.5%	65.7%	-3.2%	61.9%

- Environment & Coastal Offices
- 22B001 Ballina Office
- 22C001 Coffs Harbour Office
- 22N007 Newcastle Environmental Services
- 22N014 Newcastle Contamination Assessment & Remediation
- 22P001 Port Macquarie Office
- 22T001 Tuggerah Central Coast Office



Time for Change

- Simplification
- Consistency
- Improved Accuracy
- Remove local reporting
- Need one version of the truth



CHALLENGE ACCEPTED.



Utilisation change journey



Utilisation change journey



Business calling for change



Decision made for TM1 & BI solution



Engaged with stakeholders



Decision to get external help - Tridant



Scoping/project management plan

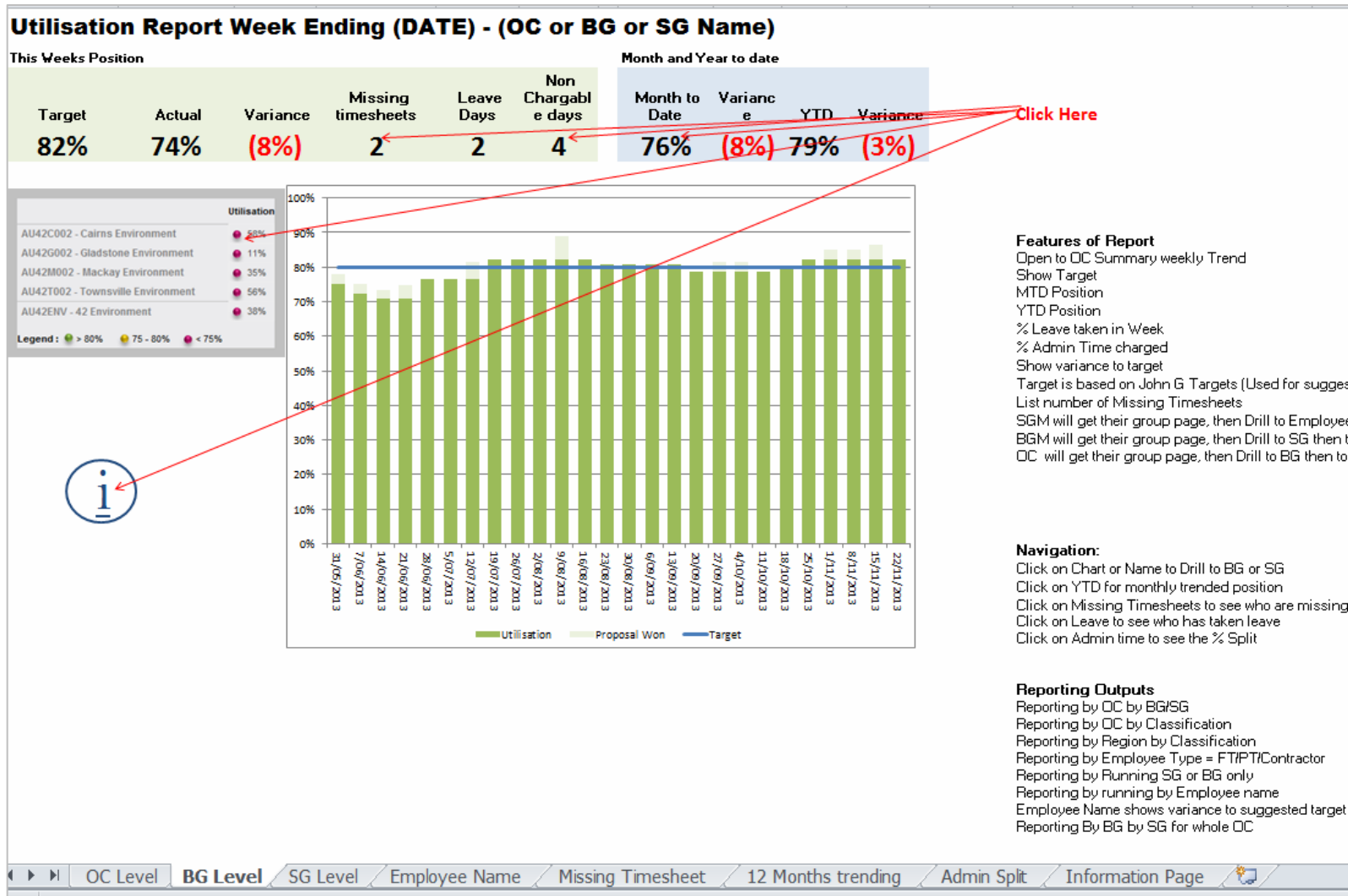


Report completed January for Go Live

Solution overview



Started with internal Mockup



Then got Tridant who worked on this Wireframe

Utilisation Dashboard (All Levels Exc. Employee)

See Additional Metrics Slide

Drill to 12-Month Trend

Drill between levels (Group, Region - OC - BG - SG - Employee)

Switch between Operating Centre/Employee and Employee Class

Parameters to Slice Data by:

- Operating Group
- Employee Class
- Business Group/ Service Group

26 week rolling chart (more periods will be assessed)

The dashboard features a summary table and a 26-week rolling bar chart. The summary table includes:

Target	Actual	Variance	Proposed %	Missing	Booked	Max	Month to Date	Variance	YTD	Variance
80%	75%	(5%)	75%	3	2	2	4	74%	(5%)	73%

TRIDANT data driving decision making

Utilisation Dashboard (Additional Metrics)

Drill to missing timesheet report

Drill to Paid vs Booked Report

Drill to Leave Hours Report

Drill to Overtime Hours Report

Drill to Admin Split Report

Missing Timesheets	Leave Hours	Overtime Hours	FTS	Booked v Paid	Non-chargeable Hours
60	111	12	45	234	47

TRIDANT data driving decision making

OC, BG, SG Design Considerations

Should show region on subpage panel here if space available, otherwise not necessary.

Get with traffic light indicators as per and colour when on screen.

TRIDANT

Design Considerations

The parameter in header, includes above subheader in all parameters.

TRIDANT

Utilisation Dashboard (Employee Level)

See Additional Metrics Slide

Drill to 12-Month Trend

Spark line to represent utilisation trend

Introduce parameters to slice change between:

- Operating Group
- Employee Class
- Business Group/ Service Group

Control to change report between utilisation and admin split views

Introduce Back Button to drill back to BG Report

The dashboard includes a summary table and a sparkline chart. The summary table includes:

Target	Actual	Variance	Proposed %	Missing	Booked	Max	Month to Date	Variance	YTD	Variance
80%	75%	(5%)	75%	3	2	2	4	74%	(5%)	73%

TRIDANT data driving decision making

Utilisation Dashboard (Drill Hierarchy)

Group

Region

OC

Business Group

Service Group

Employee

TRIDANT data driving decision making

OC, BG, SG Design Considerations

Show examples of how to link to the previous slide.

TRIDANT

Other Design Considerations

- Colour Palette
 - Colour blind friendly
- HTML Report
 - This report will be consumed on the via a pc (not an iPad report)
- Print friendly (light on ink)
 - PDF version of the reports will be emailed out and most likely printed
- Level indicator
 - Somewhat of knowing at which level the user is in the drill hierarchy
- Information Page
 - Icon available on each page to allow drill to information page
- Back button
 - Available on drill pages to allow navigation back to previous page

TRIDANT

Then got to see it!





Final Solution





Utilisation Dashboard

- Group >
- Region >
- Operating Centre >
- Business Group >
- Service Group >





Utilisation Report

Week Ending : 01-11-13

Region : 42 - North Queensland

Operating Centre : All Business Units

Employee Class : All

Operating Centre

WEEKLY UTILISATION %



MONTH AND YEAR UTILISATION %



THIS WEEK'S POSITION



Home

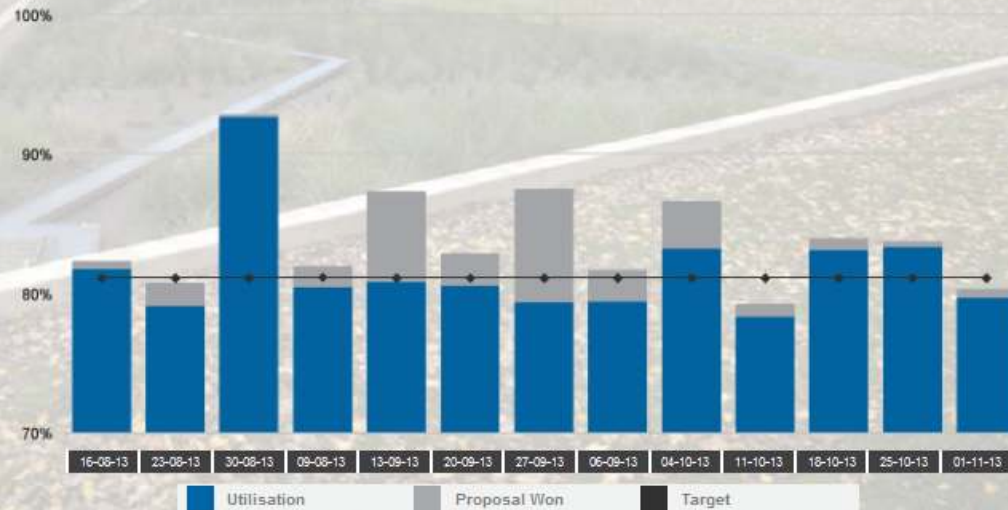
Information

Parameters

● - Meets Target ◆ - Within 5% ■ - Below 5%

Utilisation

	WTD	MTD	YTD
AU42BLDSTRS - 42 Building and Structures	87%	89%	87%
AU42ENV - 42 Environment	77%	79%	77%
AU42PRJMGNT - 42 Project Management	83%	79%	83%
AU42SUPS - 42 Support Services	45%	49%	47%
AU42URBTRNS - 42 Urban Development and Transport	85%	85%	88%
AU42WAT - 42 Water	90%	86%	85%





Utilisation Report

Week Ending : 01-11-13

Region : 42 - North Queensland

Operating Centre : All Business Units

Employee Class : All

Operating Centre

WEEKLY UTILISATION %



MONTH AND YEAR UTILISATION %



THIS WEEK'S POSITION

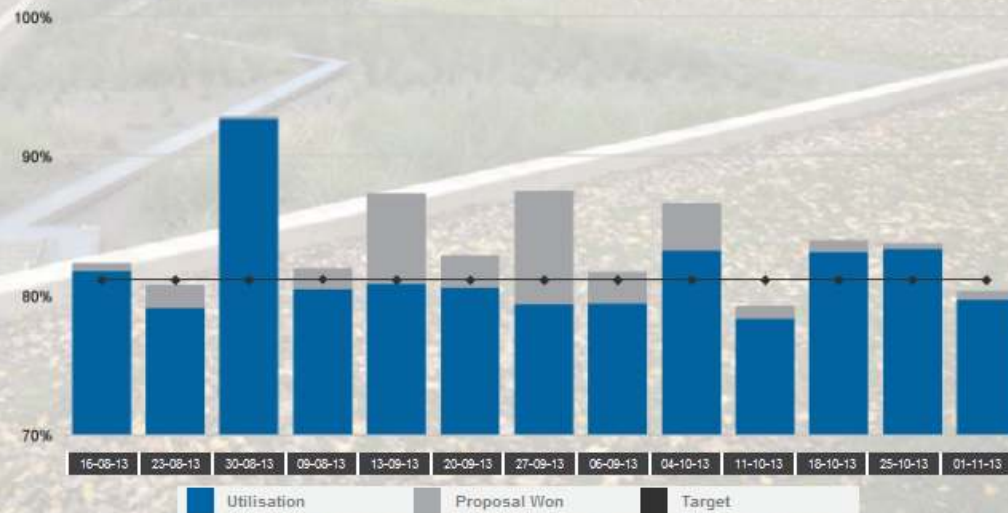


Home

Information

Parameters

	Utilisation		
	WTD	MTD	YTD
AU42BLDSTRS - 42 Building and Structures	87%	89%	87%
AU42ENV - 42 Environment	77%	79%	77%
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AU42WAT - 42 Water	90%	86%	85%





Utilisation Report

Week Ending : 01-11-13

Region : 42 - North Queensland

Operating Centre : All Business Units

Employee Class : All

Operating Centre

WEEKLY UTILISATION %



MONTH AND YEAR UTILISATION %



THIS WEEK'S POSITION



Home

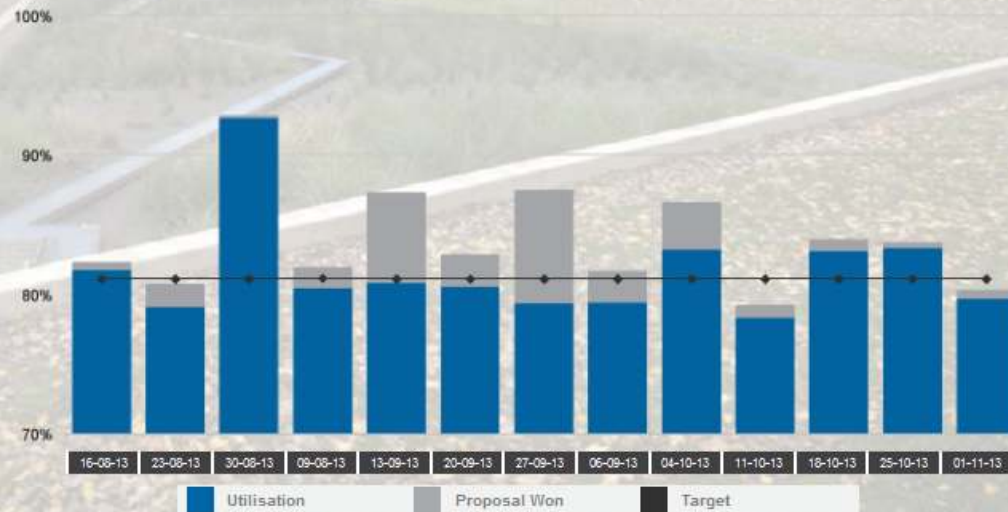
Information

Parameters

Meets Target Within 5% Below 5%

Utilisation

	WTD		MTD		YTD	
AU42BLDSTRS - 42 Building and Structures	87%	Meets Target	89%	Meets Target	87%	Meets Target
AU42ENV - 42 Environment	77%	Within 5%	79%	Within 5%	77%	Below 5%
AU42PRJMGNT - 42 Project Management	63%	Within 5%	79%	Meets Target	83%	Meets Target
AU42SUPS - 42 Support Services	45%	Below 5%	49%	Below 5%	47%	Below 5%
AU42URBTRNS - 42 Urban Development and Transport	85%	Within 5%	85%	Within 5%	88%	Meets Target
AU42WAT - 42 Water	90%	Meets Target	86%	Meets Target	85%	Meets Target





Utilisation Report

Monthly Trend

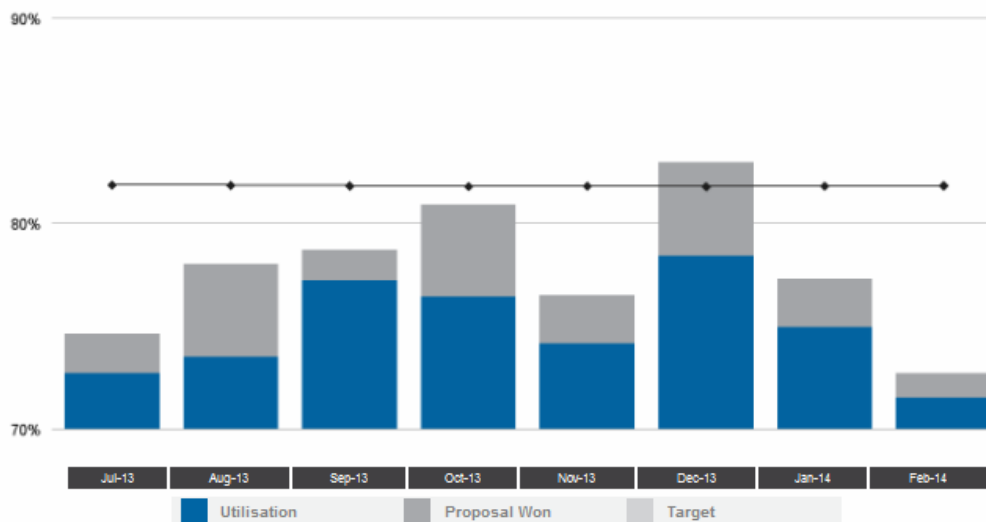
Week Ending : 07-02-14

Region : 21 - Sydney

Operating Centre : All Business Units

Employee Class : All

- Home
- Information
- Parameters





Utilisation Report

Week Ending : 01-11-13

Region : 42 - North Queensland

Operating Centre : All Business Units

Employee Class : All

Operating Centre

WEEKLY UTILISATION %



MONTH AND YEAR UTILISATION %

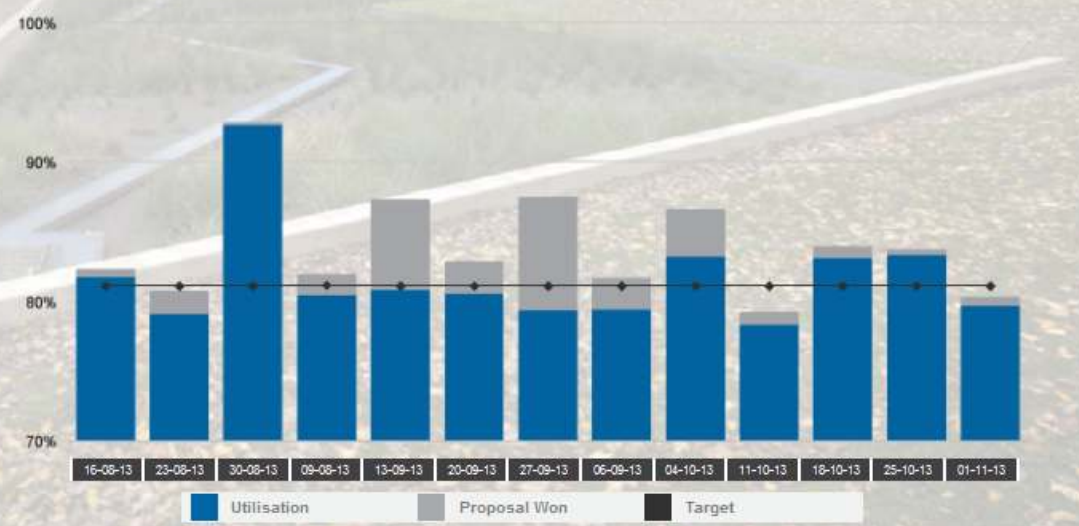


THIS WEEK'S POSITION

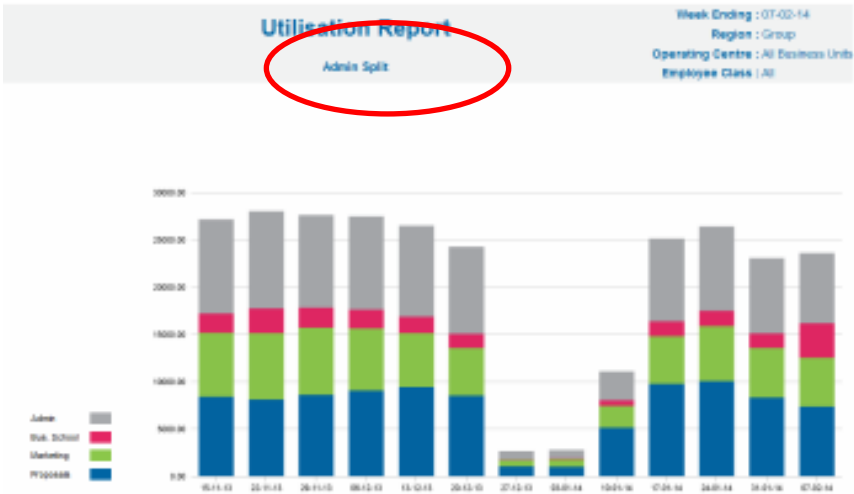


- Home
- Information
- Parameters

	Utilisation		
	WTD	MTD	YTD
AU42BLDSTRS - 42 Building and Structures	87%	89%	87%
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AU42URBTRNS - 42 Urban Development and Transport	85%	85%	88%
AU42WAT - 42 Water	90%	86%	85%



Drill through options



Utilisation Report
Overtime Hours

Employee Name	Overtime Hours
Danny Fleming (13491)	7.50
Tristan Thomas (18413)	3.00
Parham Foomanni (25907)	9.50
Ray Hills (65045)	14.50
Ryan Dodds (15487)	6.00
Amy Patricia Elkington (19290)	7.50
Mazyar Razmavar (25293)	7.50
Steve Gunawan (23954)	7.50
Adrian White (30743)	7.50
Fangling Chan (25920)	12.00
Doug Lewis (28848)	5.00
John Markham (26340)	4.00

Utilisation Report
Missing Timesheets

Employee Name	Week Ending
Alan Carr (2922)	07-12-13
Stephen Eddie Ferguson (18522)	07-12-13
Paula Jane Caldwell (2022)	07-12-13
John Wilson (16702)	07-12-13
Alan Wilson (2022)	07-12-13
Chris Green (2019)	07-12-13
Paul Green (2022)	07-12-13
Steve Lee (2022)	07-12-13
Heather Clark (2019)	07-12-13
Paul Green (1444)	07-12-13
Caroline McDonald (2019)	07-12-13
Alan Daniels (2019)	07-12-13
Eric Daniels (2019)	07-12-13
Alan Page (2019)	07-12-13
John White (2019)	07-12-13
John White (2192)	07-12-13



Drill through options

IBM Cognos Viewer - UtilDash - Leave Taken Hours

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Keep this version

Utilisation Report

Week Ending : 07-12-14
 Region : Gr
 Operating Centre : All
 Employee Class : All

Leave Taken Hours

Home | Information | Parameters

Employee Name	Annual	Long Service	Personal	LWOP / Other	Total Leave	Total Leave YTD (excl Public Hol)
AU13485				-8.00	8.00	0.00
AU30807				15.00	15.00	15.00
Munawar A Kaware (UA76110)						382.00
John Aaltonen (15682)						228.00
Michael Gamil Samuel Abadir (UA76312)						104.00
Abbas Abbasi (29846)						16.00
Michael Abbot (15513)	7.50			2.00	9.50	347.75
Hesham Abdalla (DT75381)						142.50
Nechyil Abdul (DT75061)	16.00				16.00	217.00
Roberto Abeluk (85010)						220.50
Fouad Abo (32729)						130.50
Chris Acavski (28761)	15.00		18.50		33.50	278.00
Graham Anders (19804)						606.00

IBM Cognos Viewer - UtilDash - Time Above Std Hours

James Gallagher | Log Off | About | IBM

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Utilisation Report

Week Ending : 07-12-14
 Region : 21 - Sydney
 Operating Centre : All Business Units
 Employee Class : All

Time Above Standard Hours

Home | Information | Parameters

Employee Name	WTD	MTD	YTD
Elena Bullo (21138)			1.00
Cristina Cabral (25820)			1.00
Lara Caffrey (28938)			4.50
Barbara Campary (25813)	4.00	4.00	5.00
John Campbell (22473)			5.00
Pete Carlson (22628)			3.50
Sheme Castaldini (25089)			2.00
Roger Chance (26959)			18.80
Ian Chapman (21500)			1.50
Tim Chapman-Motimer (14336)	3.50	3.50	58.00



Operating Centre level



Utilisation Report

Week Ending : 01-11-13

Region : 42 - North Queensland

Operating Centre : All Business Units

Employee Class : All

Operating Centre

- Home
- Information
- Parameters

WEEKLY UTILISATION %



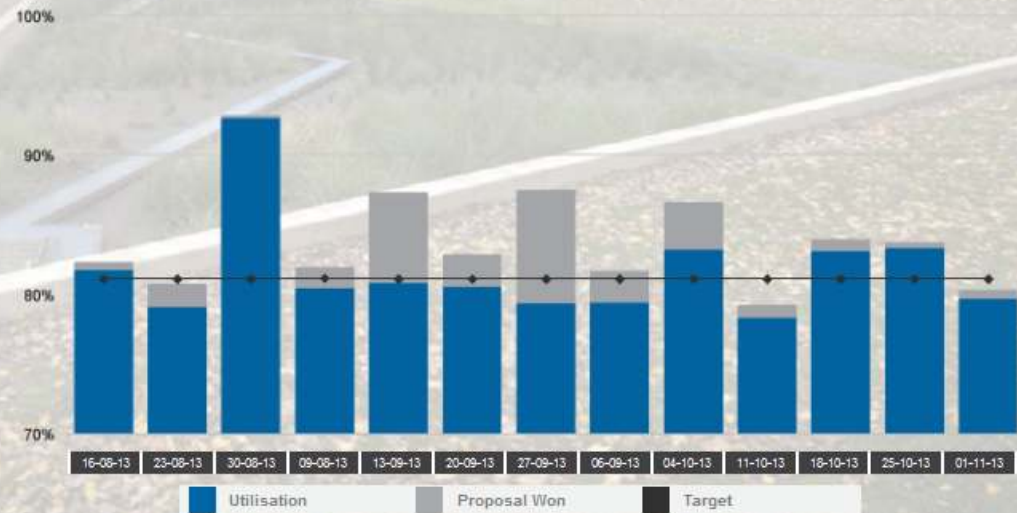
MONTH AND YEAR UTILISATION %



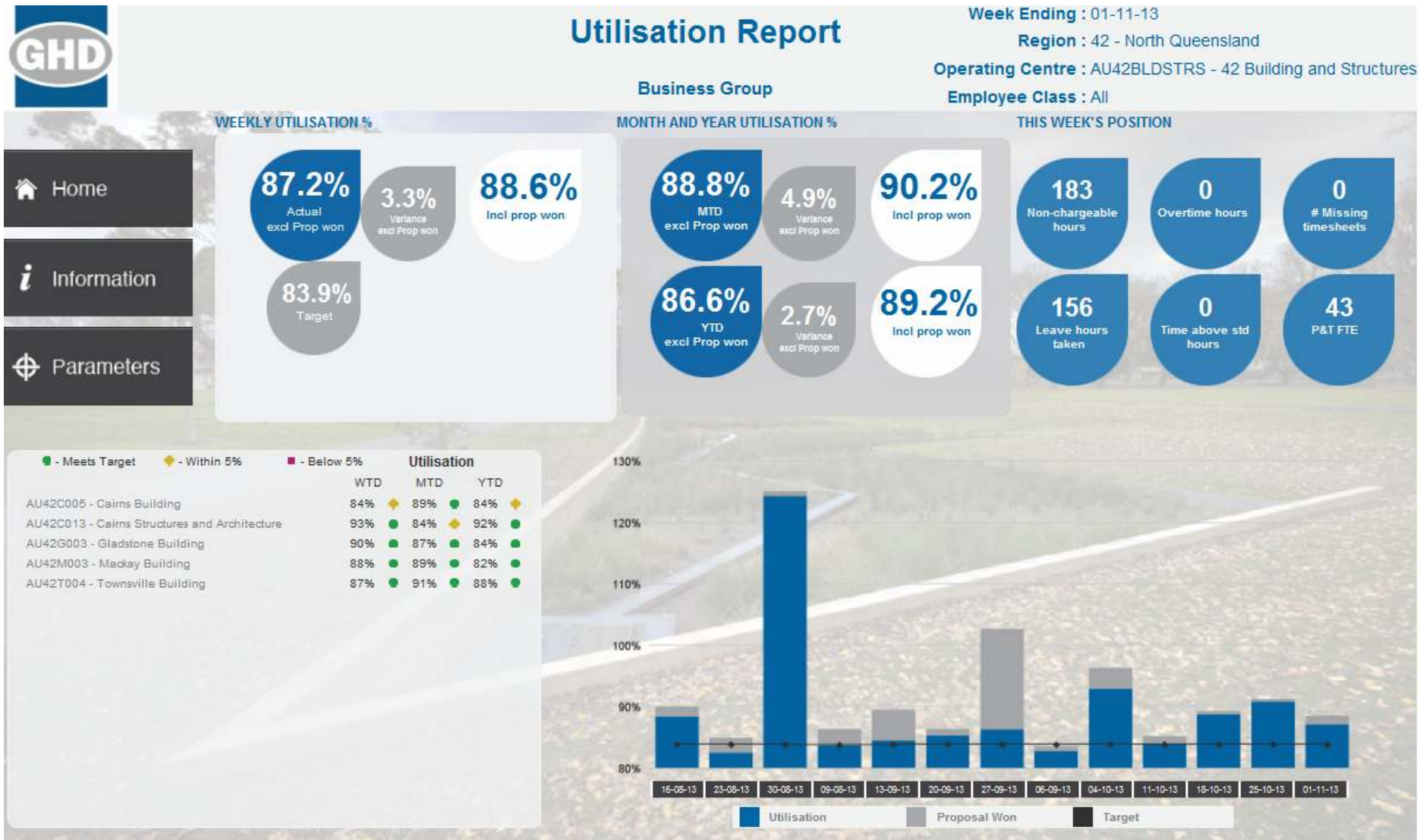
THIS WEEK'S POSITION



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AU42SUPS - 42 Support Services	45%	49%	47%
AU42URBTRNS - 42 Urban Development and Transport	85%	85%	88%
AU42WAT - 42 Water	90%	86%	85%



Business Group level



Alternate BG views

The screenshot shows the IBM Cognos Viewer interface with a 'Please Select Parameters' dialog box open. The dialog box contains several dropdown menus and a list of business groups. Red circles and lines highlight specific areas with annotations:

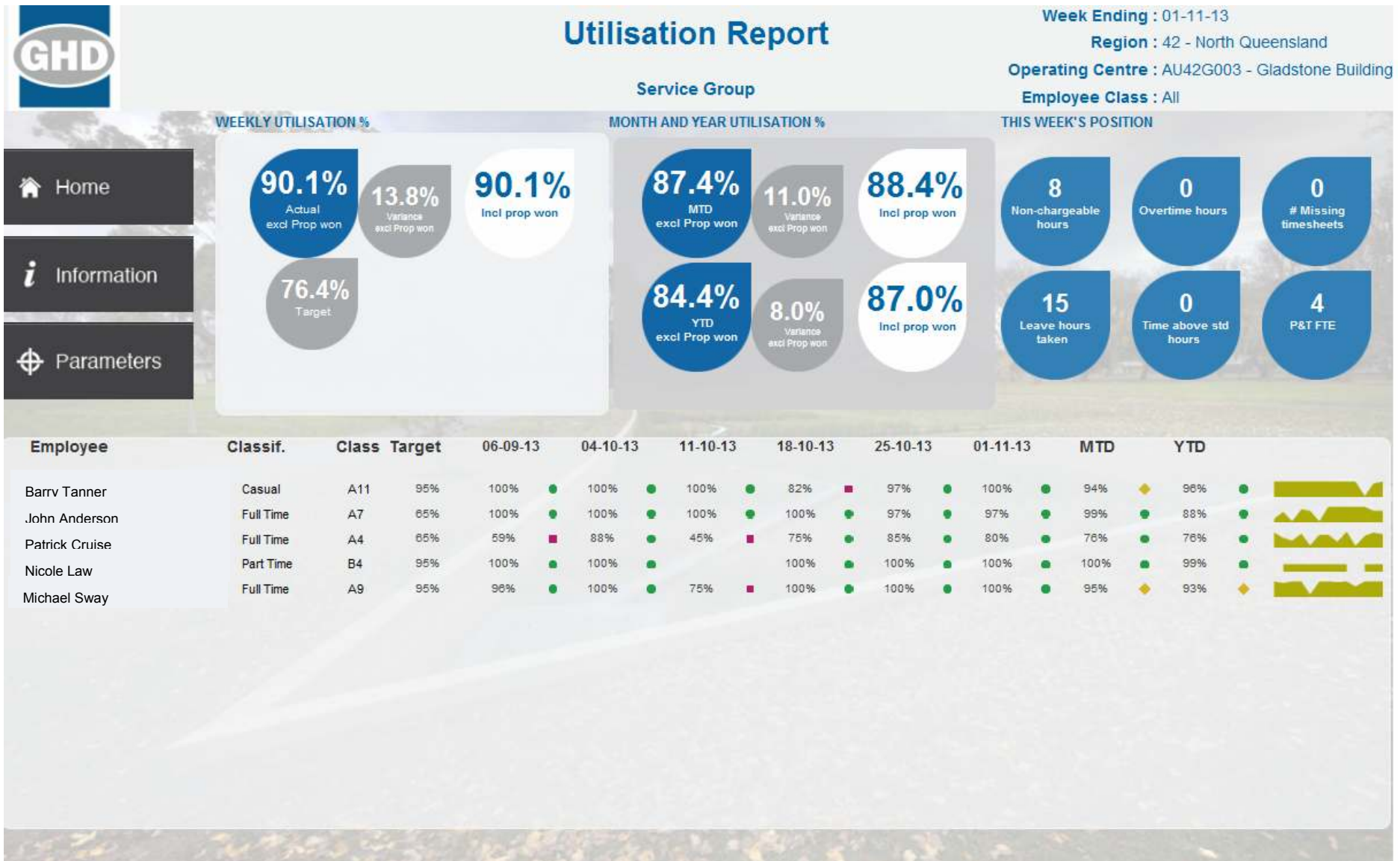
- Parameters:** A red circle around the 'Parameters' button in the left sidebar.
- Change to prior Periods:** A red circle around the 'Period' dropdown menu.
- Change to another BG:** A red circle around the 'Region' dropdown menu.
- Report just on a Class:** A red circle around the 'Employee Class' dropdown menu.
- Change output:** A red circle around the 'CrossTab view' dropdown menu.

The background of the dialog box shows a list of business groups with columns for 'Region', 'Business Group', and 'Employee Class'. Below the dialog box, there is a table with columns for 'Meets Target', 'Within 5%', 'Below 5%', and 'Utilization' (WTD, MTD, YTD). A bar chart is also visible at the bottom right of the screen.

	Meets Target	Within 5%	Below 5%	Utilization		
				WTD	MTD	YTD
AU210023 - Sydney Architecture & Building Engineering	■	■	■	87%	87%	73%
AU210024 - Sydney Rail	■	■	■	71%	11%	60%
AU210025 - Sydney Project Management	■	■	■	89%	89%	90%
AU210028 - Sydney Roads	■	■	■	88%	85%	85%
AU210049 - Sydney Materials Technology	■	■	■	68%	60%	63%
AU210044 - Sydney Civil Structures	■	■	■	87%	87%	75%
AU210020 - Sydney (SO NOT USED) Building Engineering	■	■	■	16%	16%	48%
AU210001 - Sydney Integrated Transport Planning	■	■	■	88%	80%	85%
AU210002 - Sydney Mining	■	■	■	88%	80%	79%



Service Group level





Utilisation Report

Week Ending : 31-01-14

Region : Group

Operating Centre : AU33A008 - Adl Building Engineering

Employee Class : All

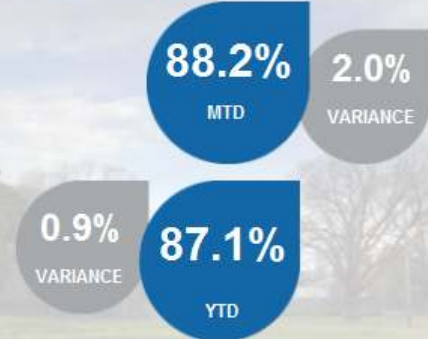
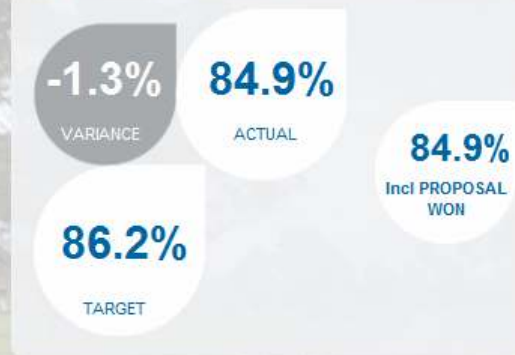
Service Group

WEEKLY UTILISATION %

MONTH AND YEAR UTILISATION %

THIS WEEK'S POSITION

- [Home](#)
- [Information](#)
- [Parameters](#)



Employee	Classif.	Class	Target	Actual	MTD	YTD	Administration Split					
							Bus. Service	Office	Marketing	Proposals	Bus. School	Unassigned
Barrv Tanner	Full Time	A7	85%	98%	93%	85%			0			0
John Anderson	Full Time	B2	95%	100%	100%	92%						
Patrick Cruise	Full Time	A5	75%			50%						
Nicole Law	Full Time	A5	75%	100%	98%	97%						
		A6				94%						

Hours each week charged to overhead type



Where are we today



Where are we today

- Embraced by Senior Management
- Report has been launched
- Listening to feedback
- Some enhancements have been made post launch
- Some slow to transition



Challenges post implementation



Challenges post implementation

- Allowing office to launch when ready
- February vs July launch
- Resisters to change
- Detail engineers



Benefits



BENEFITS



- Improved more transparent
- Weekly snapshot
- Quicker access to information
- Automation of report issue
- Timesheet completion rates improved



Thank You