



BUILDING UCT'S ENTERPRISE DATA WAREHOUSE - THE JOURNEY SO FAR

SESSION 37011
12 October 2016

PRESENTER

Sean Bester – Systems Portfolio Manager

2005 – 2011 Lead developer involved in the implementation of PeopleSoft Campus Solutions at UCT

2012 Responsible for implementing Business Intelligence solutions at UCT



UNIVERSITY OF CAPE TOWN

- Over 25 000 Students
- Top-rated African University
- Strong Research Focus
- 5 Nobel Prize Winners
- World's First Heart Transplant

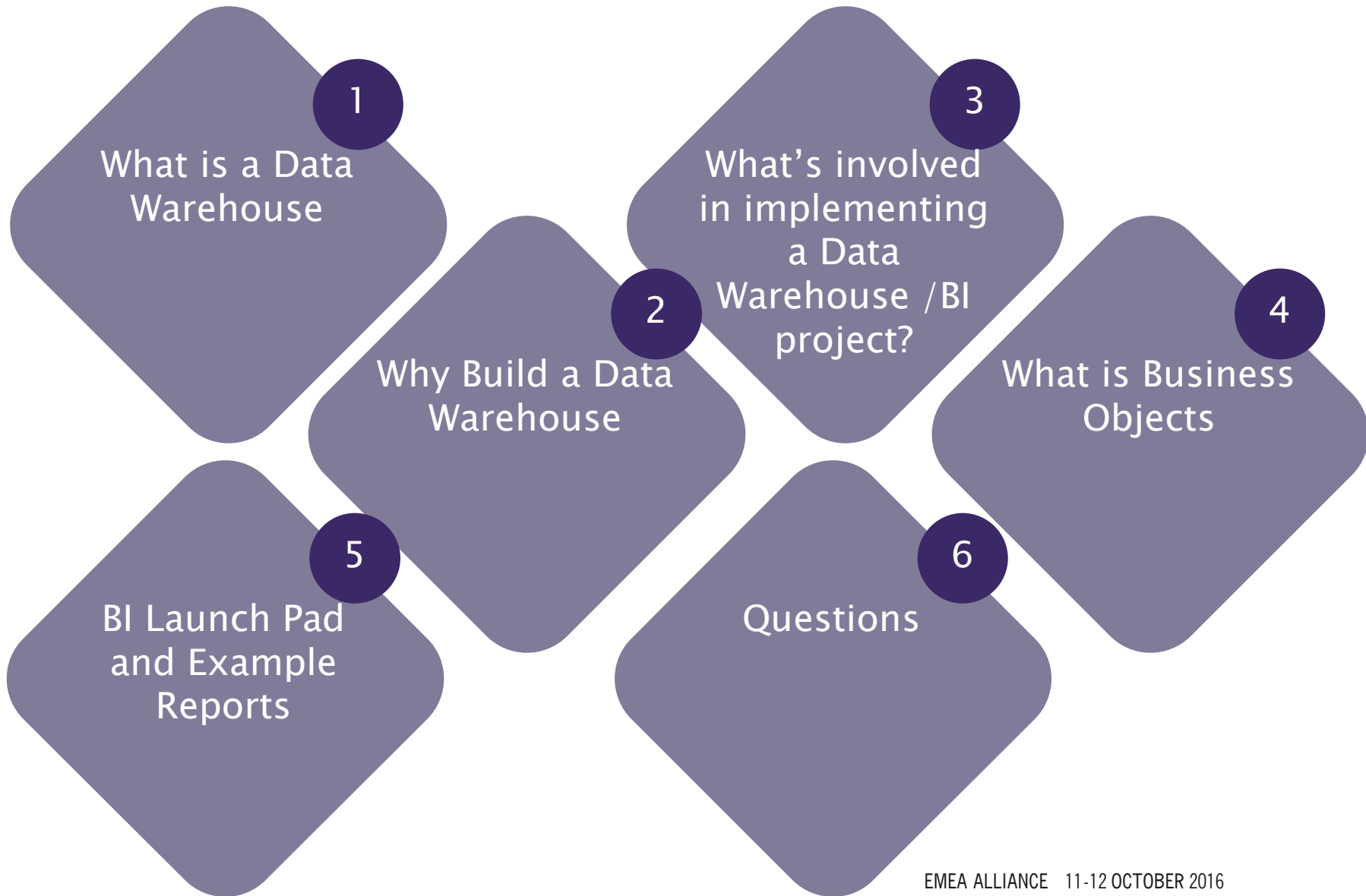


UNIVERSITY OF CAPE TOWN ERP SYSTEMS

- Oracle PeopleSoft Campus Solutions 9
- Up to Bundle #37 Applied
- People Tools 8.54.25
- SAP Finance
- SAP HR
- SAP Business Objects

EMEA ALLIANCE 11-12 OCTOBER 2016

AGENDA



WHAT IS A DATA WAREHOUSE?

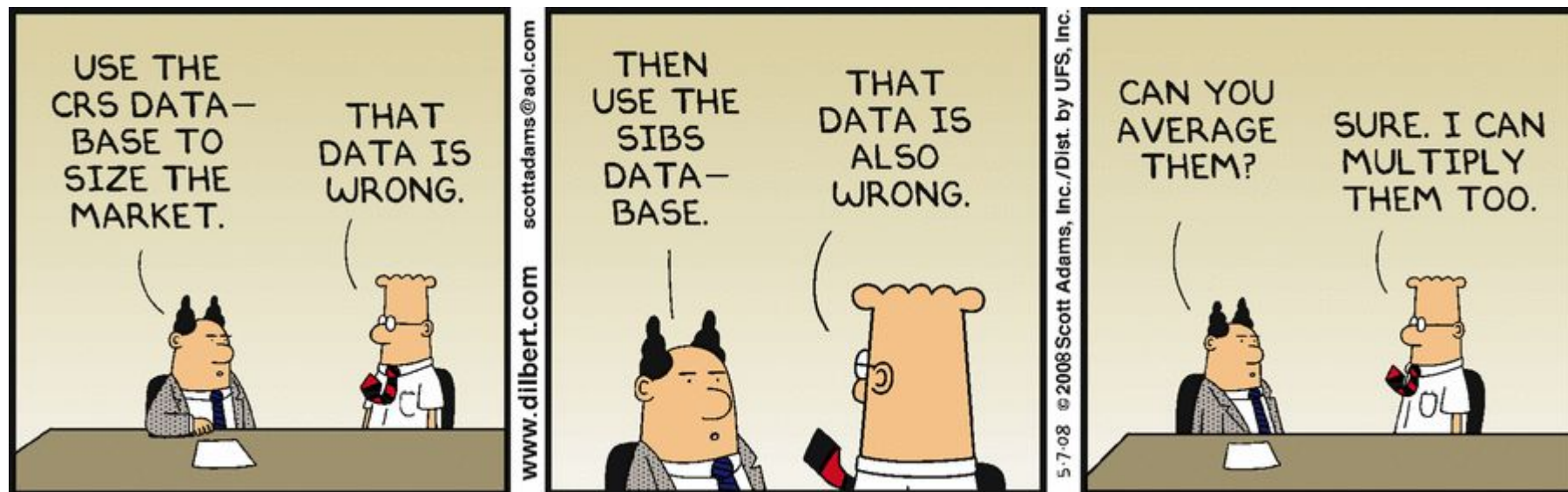
Consistent store of data

Data obtained from a authoritative source

Data can be used to support of a decision– making process.

Goal of UCT's Data Warehousing BI initiative

- Easy access to data
- Slice and dice data from every aspect
- Make decisions, rather than argue about numbers



WHY BUILD A DATA WAREHOUSE?

University of Cape Town
ERP Systems

PeopleSoft

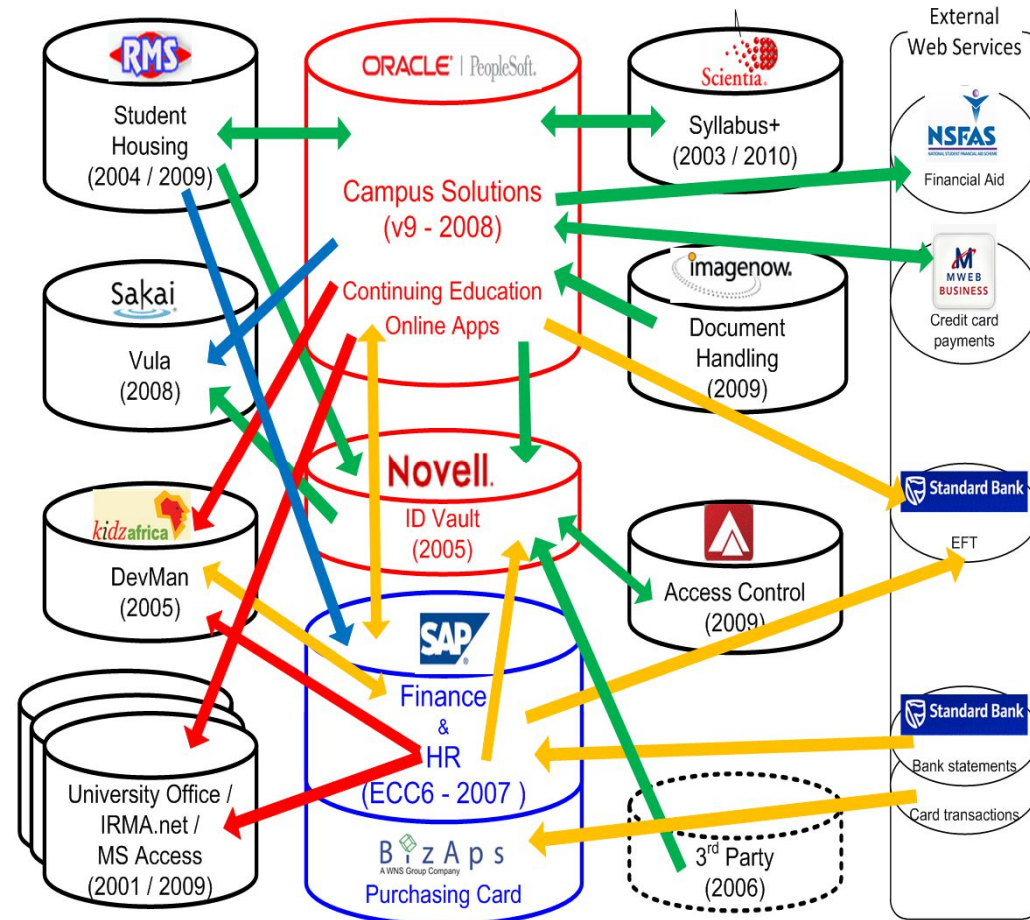
- Admissions
- Student records and
- Progression
- Student Financials
- Financial Aid

SAP Finance

SAP HR

RMS Student Housing

Syllabus +



WHAT'S INVOLVED IN IMPLEMENTING A DATA WAREHOUSE /BI PROJECT?

- Identify Business Sponsor/ Champion
- Collect Business Requirements
- Design Dimensional Data Model
- Develop the Extract, Transform, Load (ETL) Process
- Develop BI portal together with initial reports

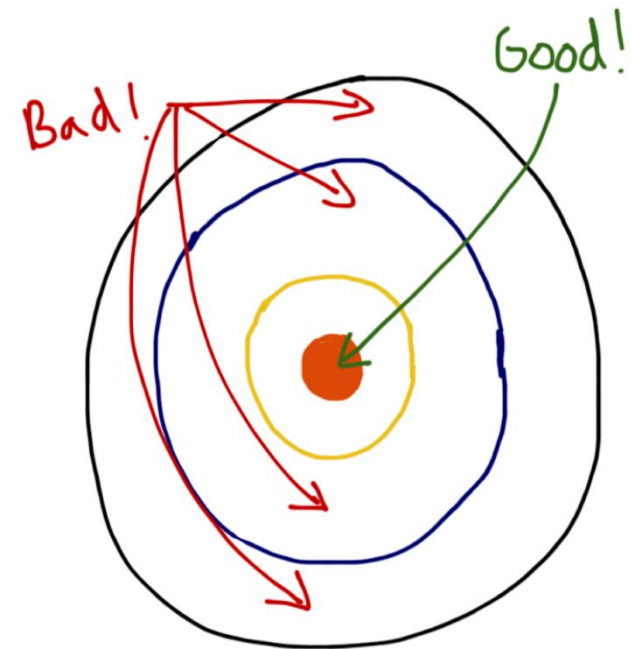
IDENTIFY BUSINESS SPONSOR/ CHAMPION

- Build good relationship
- Business owner of excel process to become your key BI user



COLLECTING REQUIREMENTS

- Select one Business Process
- Focus on user need
- Focus on KPI's



DIMENSIONAL DATA MODEL

- Design Critical
- Get good training
- Make everything as simple as possible

Dimensional Data Model

Although it is a relational model but data would be stored differently in dimensional data model when compared to 3rd normal form.

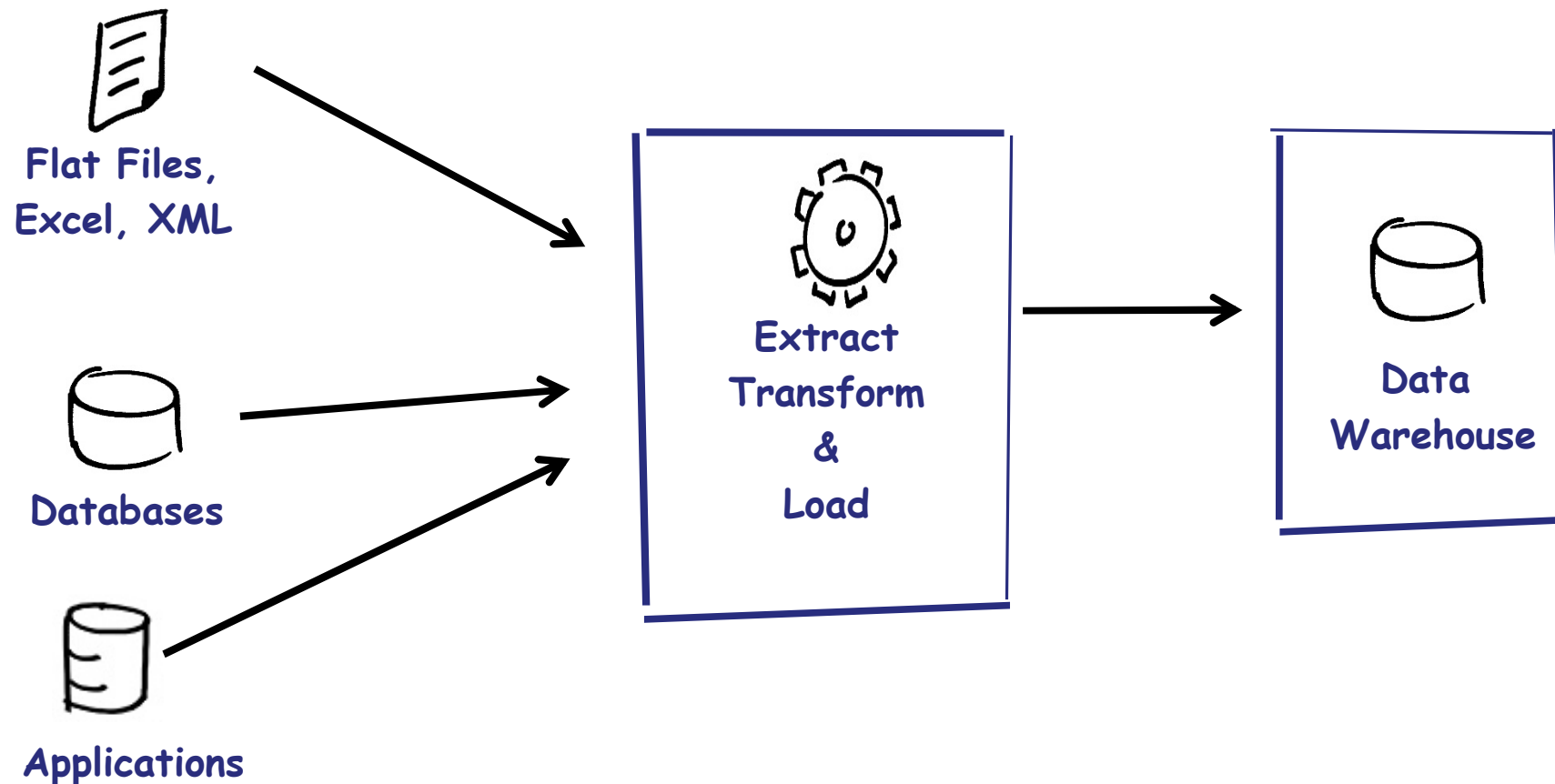
Dimension: A category of information. Ex. the time dimension.

Attribute: A unique level within a dimension. Ex. Month is an attribute in the Time Dimension.

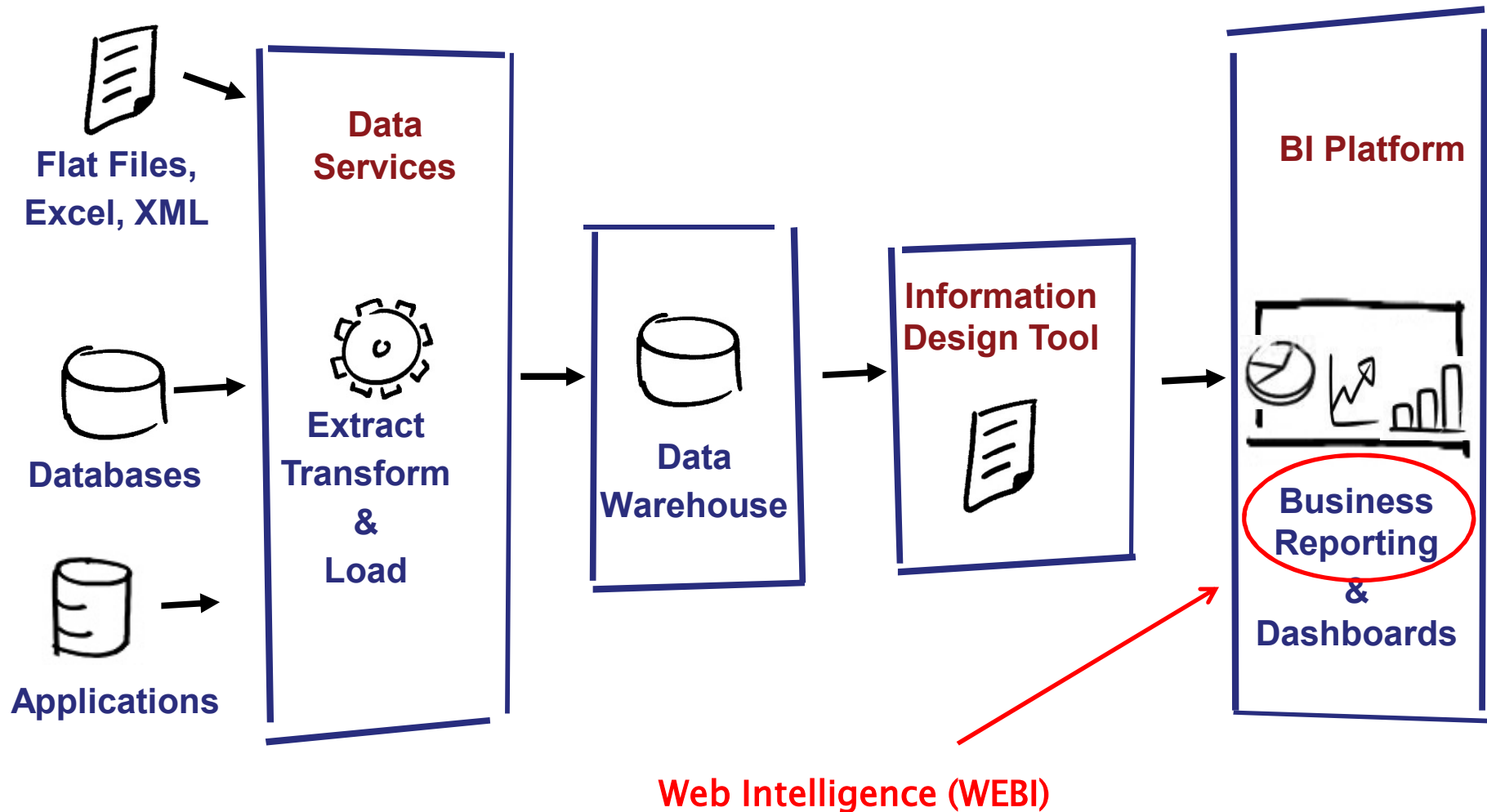
Hierarchy: The specification of levels that represents relationship between different attributes within a dimension. Ex. one possible hierarchy in the Time dimension is Year → Quarter → Month → Day.

Fact Table: A fact table is a table that contains the measures of interest. Ex. Sales Amount is a measure.

DEVELOP THE ETL PROCESS



WHAT IS BUSINESS OBJECTS ?





UCT ENTERPRISE DATA WAREHOUSE

Admissions

**Student
Records**

**Student
Financials**

**Financial
Aid**

**RMS
Housing**

SAP HR

**Financials
(GL)**

**Fund
Management**

**Procurement
& Payments**

Libraries

**Micro
Lab
Statistics**

**Exit
Survey**

HEMIS

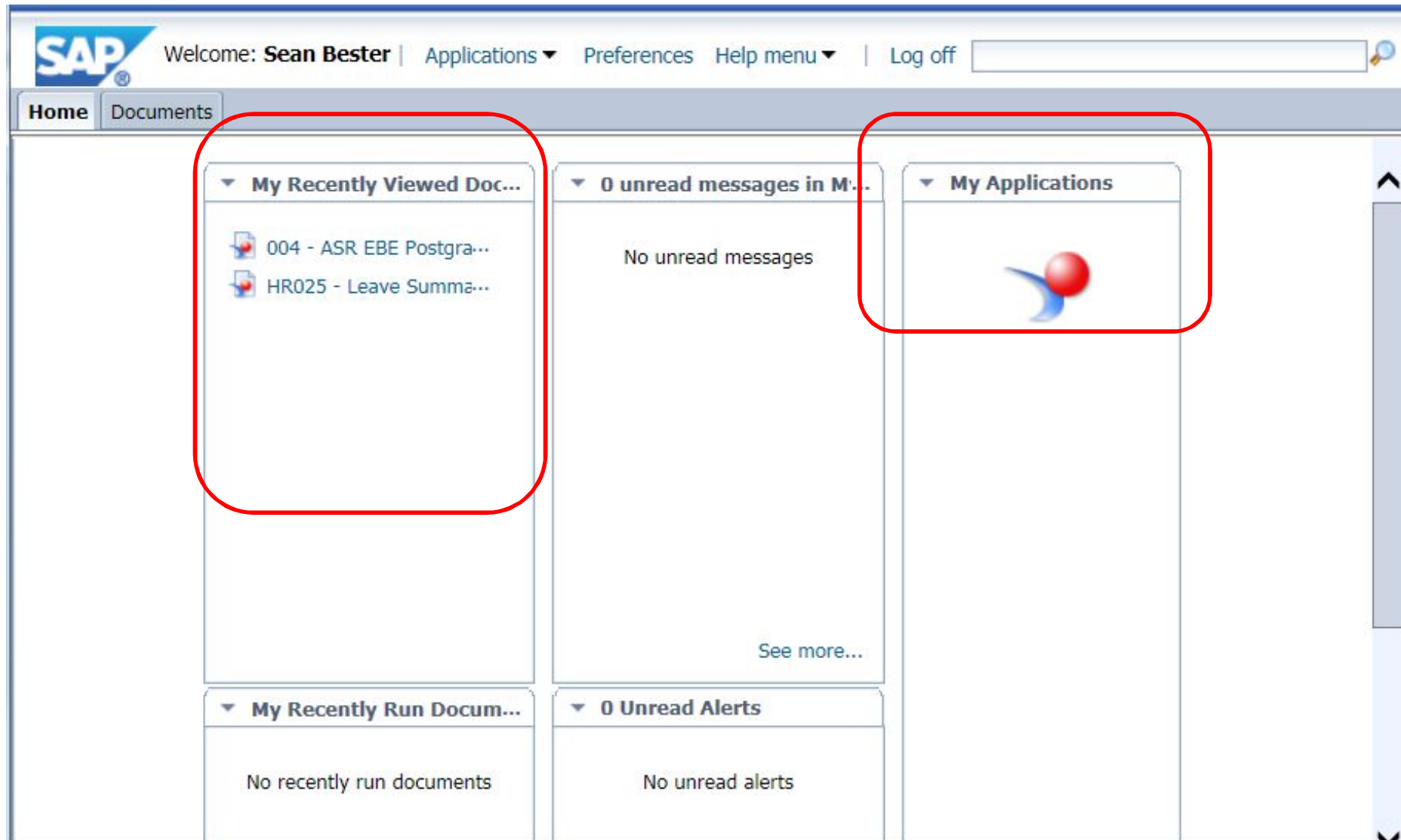
**NSC
Results**

**Learning
Activity (Vula)**

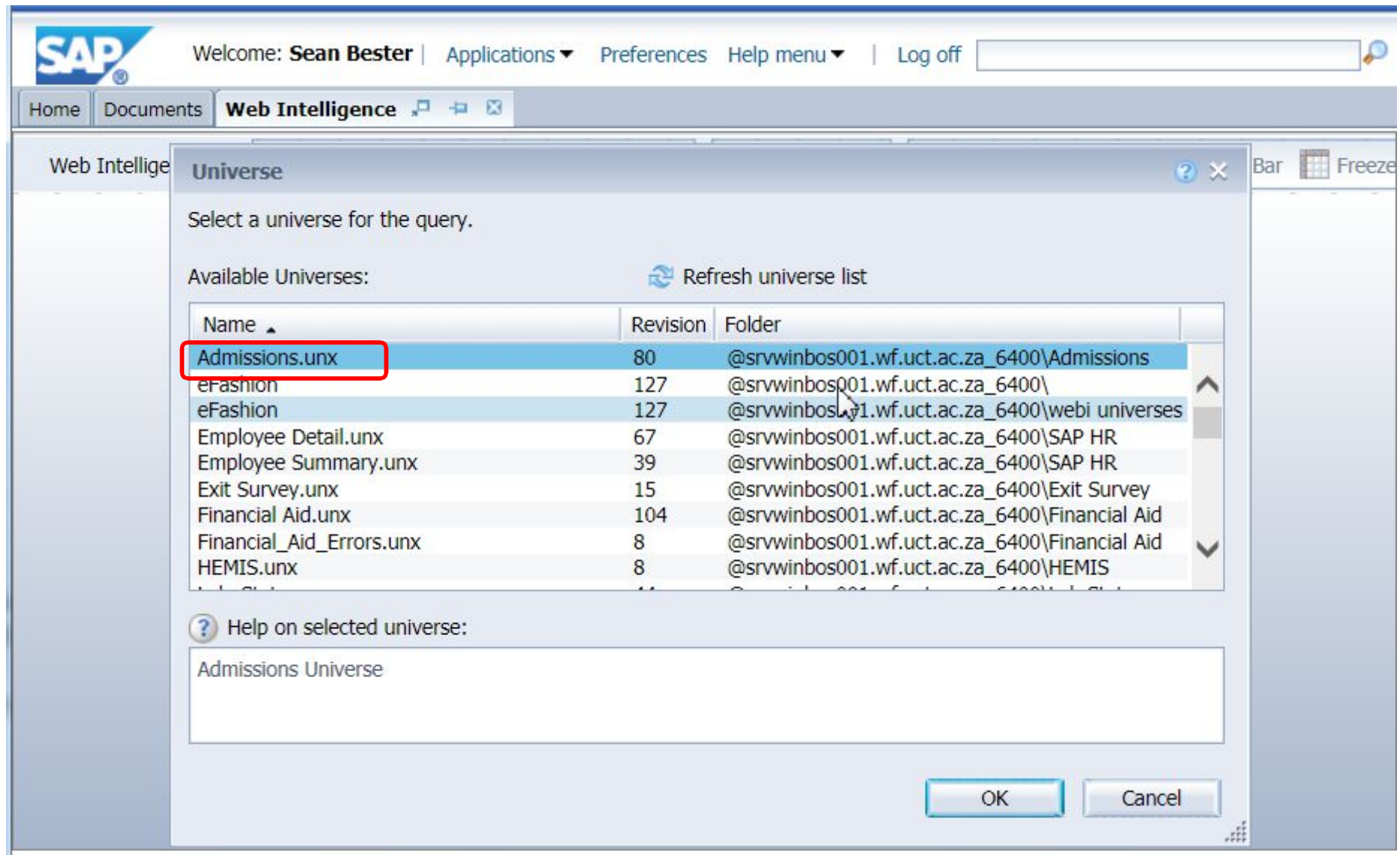
NBT

REPORTING

BI Launch Pad



COUNT OF APPLICATIONS VS REGISTRATIONS PER FACULTY FOR A PARTICULAR TERM



COUNT OF APPLICATIONS VS REGISTRATIONS PER FACULTY FOR A PARTICULAR TERM

The screenshot displays a software interface for creating and running queries. The main window is titled "Query Panel" and contains several sections:

- Universe outline:** A tree view on the left showing the database structure. It includes folders like "Admissions", "Date", "Term Year", "Applicant Bio Demo", and "Faculty". Under "Term Year", "Term" is circled in red. Under "Faculty", "Faculty" is circled in red. Red arrows point from these circled items to the "Term" and "Faculty" buttons in the "Result Objects" section.
- Result Objects:** A section on the right with buttons for "Term" and "Faculty", which have been added to the query.
- Query Filters:** A section below "Result Objects" with instructions: "To filter the query, drag predefined filters here or drag objects here then use the Filter Editor to define custom filters."
- Data Preview:** A section at the bottom right with a "Refresh" button.
- Footer:** A status bar at the bottom shows "Query 1" and "Last refresh date: (this document has never been refreshed.)"

COUNT OF APPLICATIONS VS REGISTRATIONS PER FACULTY FOR A PARTICULAR TERM

The screenshot displays a software interface titled "Query Panel" with a toolbar at the top containing icons for adding queries, running queries, and closing the panel. The main workspace is divided into four sections:

- Universe outline:** A tree view on the left showing a hierarchy of data sources. Under the "Admissions" folder, "Application Count" and "Registration Count" are highlighted with a red circle. A red arrow points from this circle to the "Application Count" button in the "Result Objects" section.
- Result Objects:** A central area with buttons for "Term", "Faculty", "Application Count", and "Registration Count". A mouse cursor is positioned over the "Application Count" button.
- Query Filters:** A section below "Result Objects" with instructions: "To filter the query, drag predefined filters here or drag objects here then use the Filter Editor to define custom filters." It includes a funnel icon and a "Refresh" button.
- Data Preview:** A section at the bottom right for viewing query results.

The bottom status bar shows "Query 1" and a message: "Last refresh date: (this document has never been refreshed.)"

COUNT OF APPLICATIONS VS REGISTRATIONS PER FACULTY FOR A PARTICULAR TERM

The screenshot displays the 'Query Panel' interface for a query named 'Query 1'. The interface is divided into several sections:

- Universe outline:** A list of objects is shown on the left. The 'Registration Count' object is highlighted with a red circle. The 'Latest Effective Date' object is also highlighted with a red circle, and a red arrow points from it to the 'Query Filters' section.
- Result Objects:** A section in the top right showing the objects included in the query. The 'Term' object is highlighted with a red circle, and a red arrow points from it to the 'Query Filters' section.
- Query Filters:** A section in the middle right showing the filters applied to the query. The 'Latest Effective Date' filter is highlighted with a red circle, and a red arrow points from it to the 'Query Filters' section.
- Data Preview:** A section at the bottom right showing the results of the query. It includes a 'Refresh' button and a text input field for filtering values.

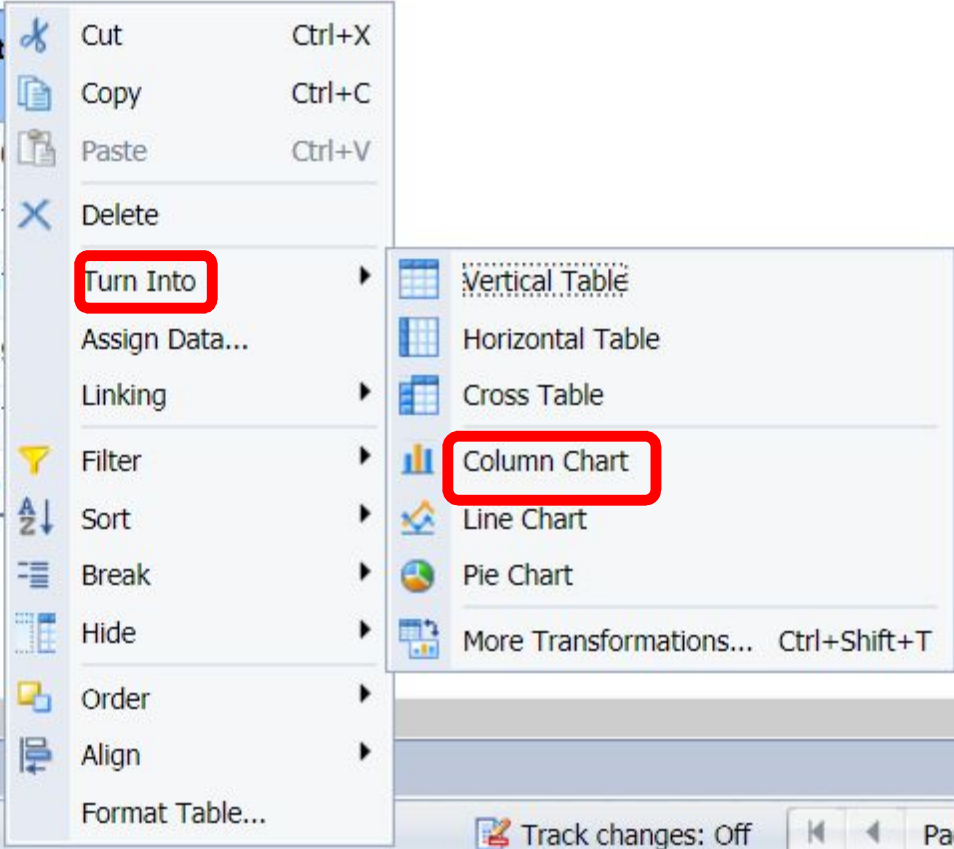
The 'Run Query' button in the top right corner is also highlighted with a red circle.

COUNT OF APPLICATIONS VS REGISTRATIONS PER FACULTY FOR A PARTICULAR TERM

Term	Faculty	Applicant Count	Registration Count
2016	Commerce	15,169	3,297
2016	Engineering/ Built Environment	9,771	1,536
2016	Health Sciences	9,977	1,336
2016	Humanities	12,595	2,824
2016	Law	5,775	620
2016	Science	7,513	1,154

COUNT OF APPLICATIONS VS REGISTRATIONS PER FACULTY FOR A PARTICULAR TERM

Term	Faculty	Applicant Count
2016	Commerce	15,1
2016	Engineering/ Built Environment	9,7
2016	Health Sciences	9,9
2016	Humanities	12,5
2016	Law	5,7
2016	Science	7,5

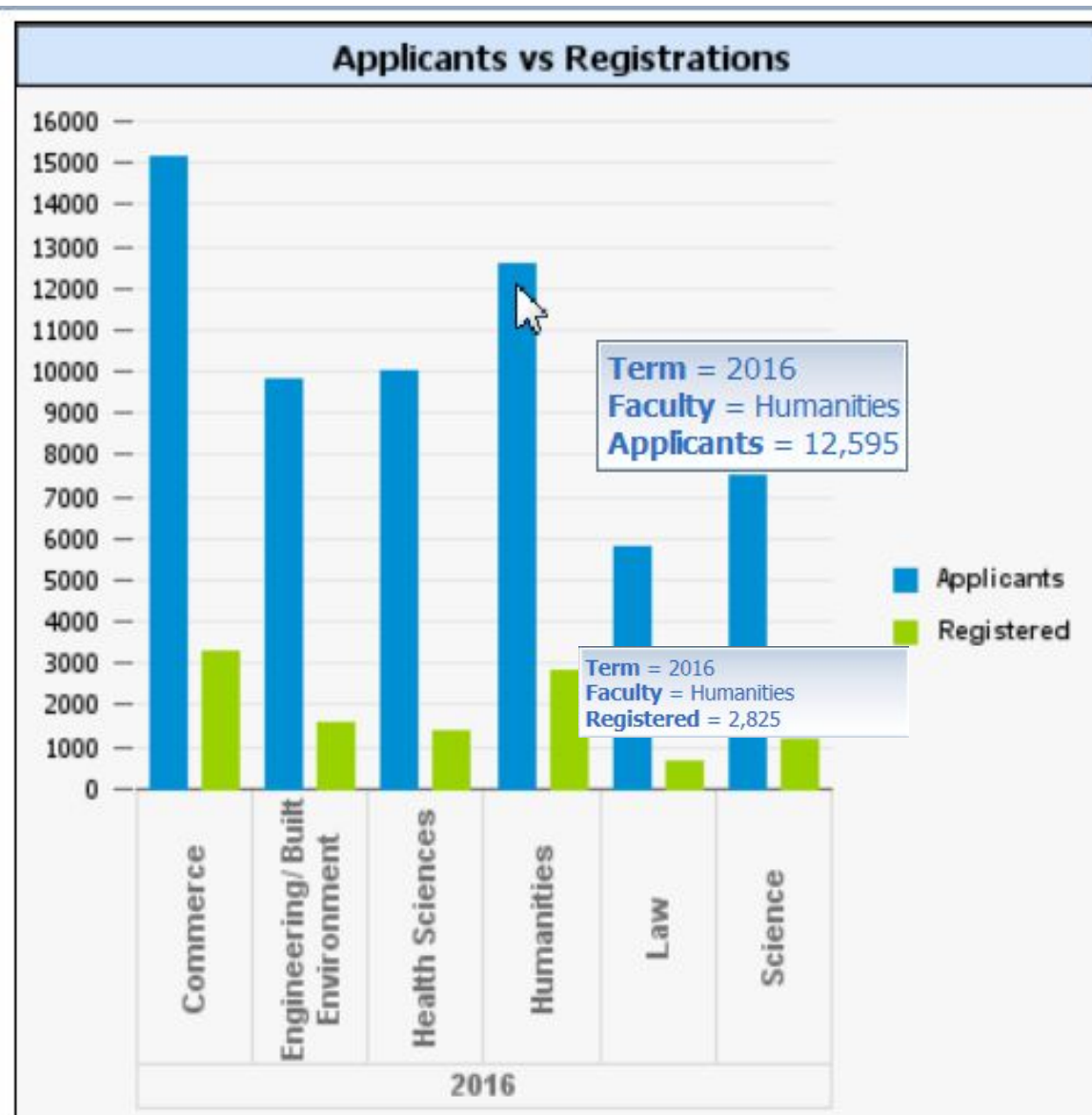


The screenshot shows a software interface with a data table and a context menu. The table has three columns: Term, Faculty, and Applicant Count. The context menu is open, showing options like Cut, Copy, Paste, Delete, Turn Into, Assign Data..., Linking, Filter, Sort, Break, Hide, Order, Align, and Format Table... The 'Turn Into' option is highlighted, and a submenu is open showing options like Vertical Table, Horizontal Table, Cross Table, Column Chart, Line Chart, Pie Chart, and More Transformations... The 'Column Chart' option is highlighted in the submenu.

Report 1

Track changes: Off Page 1

COUNT OF APPLICATIONS VS REGISTRATIONS PER FACULTY FOR A PARTICULAR TERM



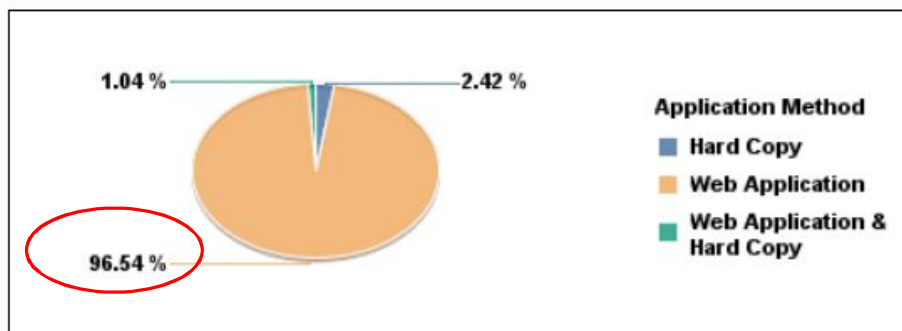
ADMISSIONS SUMMARY REPORT



Summary of 2017 Applications Received and Processed
as at Monday 19 September 2016

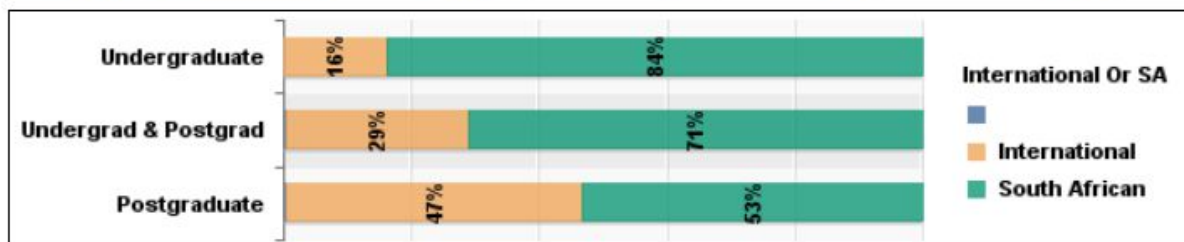
Application Methods

Application Method	Web Application & Hard Copy	Web Application	Hard Copy	Total Applicants
Applicant Count	354	32,768	821	33,943



Citizenship and Residency of Applicants

	South African	International		Total Applicants
Undergraduate	22,333	4,303	23	26,659
Undergrad & Postgrad	268	109	1	378
Postgraduate	3,669	3,213	24	6,906
Total Applicants	26,270	7,625	48	33,943



APPLICANT STATUS REPORT

Prompts

Prompts Summary

✓	* 1. Enter Term: 2017	
✓	* 2. Enter Faculty: Law	Undergraduates
✓	3. Enter values for Academic Career Code: UGRD	
✓	4. Enter values for Academic Program Code:	
✓	5. Enter values for Academic Plan 1 Code:	
✓	6. Enter values for Program Status:	
✓	7. Enter values for Program Action Code: DDEF	Defer Decision
✓	8. Enter values for Program Reason Code: MARG	Marginal Applicants
✓	9. Enter values for Admit Type Code:	
✓	10. Enter values for International Or SA:	
✓	11. Enter Application Date (yyyymmdd):	

* Required prompts

2. Enter Faculty:

Type values here

Refresh Values

Faculty

[EMPTY_VALU]

Admissions

Arts

Centre for High

CHED - Contin

Commerce

Education

Engineering/ Bi

Fine Art & Arch

24 May 2016
1:45:15 PM

OK Cancel

APPLICANT STATUS REPORT

ASR for Application Year 2017 , Law Faculty

Total Applications: 491

Prompts Summary	
Term	2017
Faculty	Law
Academic Career Code (Optional)	UGRD
Academic Program Code (Optional)	
Academic Plan Code 1 (Optional)	
Program Status (Optional)	
Program Action Code (Optional)	DDEF
Program Reason Code (Optional)	MARG
Admit Type Code (Optional)	
International Or SA (Optional)	
Application Date (Optional)	

Report Summary	
Date Time Warehouse Last Updated	2016-09-19 22.10.10
Date Report Last Refreshed	2016-09-20
Total Applications	491



APPLICANT STATUS REPORT

Application Number	Application Method	Academic Career	Academic Program	Academic Plan 1	Admit Type	Choice	Program Action	Program Reason	Prev Program Action	Prev Program Reason	Effective Date	Program Status
00849659	Web Application	UGRD	LB002	LB002RDL06	FU	FRST	DDEF	MARG	APPL	FRST	05-09-2016	Applicant
00820286	ication	UGRD	LB002	LB002RDL06	FU	SCND	DDEF	MARG	APPL	SCND	05-09-2016	Applicant
00847500	ication	UGRD	LB002	LB002RDL06	FU	FRST	DDEF	MARG	APPL	FRST	05-09-2016	Applicant

Eng Grd12 Apr	Eng Grd12 Apr Rslt	Math Grd12 Apr	Math Grd12 Apr Rslt	Phy Sci Grd12 Apr	Phy Sci Grd12 Apr Rslt	Lif Sci Grd12 Apr	Lif Sci Grd12 Apr Rslt	Lif Ori Grd12 Apr	Lif Ori Grd12 Apr Rslt
ENHN	65	MTHN	53			LFSN	55	LFON	76
ENHN	77	MTHN	74	PSCN	74	LFSN	85	LFON	77
ENHN	64	MTHN	70					LFON	82

Grade11 Final Score	Grade12 April Score	Grade12 June Score	Grade12 September Score	Grade12 Final Score	Grade11 Final Weighted Score	Grade12 April Weighted Score	Grade12 June Weighted Score	Grade12 September Weighted Score	Grade12 Final Weighted Score	Disadvantage Factor
313.	402.	341.			344.3	442.2	375.1			1.1
358.	435.	418.			390.22	474.15	455.62			1.09
346.	400.	353.			346.	400.	353.			1.

COVER SHEET

Campus Id		Empl Id	1591782	Other, Mr AN		Male	Admit Type	FU	
Admit Term	2017	Sem		Application Method		Web Application	Appl Date	2016-05-18	
Qualification	LB002 Bachelor of Laws (LB002)			Choice	SCND	Status	DDEF/MARG	Prev	APPL/SCND
Specialisation	LB002RDL06 Law						Prev Appl Term		
Other Qualification	EB002 BScEng in Civil Engineering			Choice	FRST	Status	DENY/ENRQ	Prev	DDEF/NNN
Other Specialisation	EB002CIV01 Civil Engineering								

Birth Date	Id Number	Population Group	Home Language	Disability	Citizenship Residency	Redress Category	Non SA Citizenship
1999-05-22	9905225055087	NA/Unknown	English		SA Citizen	2-Redress Category 2	

Housing Status	HO Date	Allocated Residence	HO Fac	HO Type	HO Reason	Other HO Fac	Other HO Type	Other HO Reason

Bridgetown Senior Secondary Sc - Bridgetown				Western Cape Education Dept			Dept Ed & Cul: House of R	
Year	Exemption	Term	School Subject	Grd11 Final	Grd12 Apr	Grd12 Jun	Grd12 Sept	Grd12 Final
2016		12FN	Afrikaans 1st Additional Lang	73	83	83		OS
			English Home Language	72	62	66		OS
			Geography	76	78	77		OS
			Life Orientation	86	86	79		OS
			Life Sciences	73	75	78		OS
			Mathematics	71	82	67		OS
			Physical Sciences	61	51	46		OS

Total Subjects with Grade12 Results									
NBT	AL	QL	Math	Scores	Grd11	Grd12 Apr	Grd12 Jun	Grd12 Sep	Grd12 Final
Performance	Proficient	Intermediate	Basic	NSC/School	426	431	417		
Test Date	2016-06-25	2016-06-25	2016-06-25	NBT Score	149				
				Weighted	468.6	474.1	458.7		

SCHOOLS UPDATE REPORT



Reddam House 2017 Applicant Status Update for 2016 Grade 12 Applicants as at Tuesday 20 September 2016
Total Applicants: 61

Applicant Number	Academic Program	Current Status	Status Reason
	Bachelor Architectural Studies	Defer Decision	Waiting for portfolio
	Bachelor of Arts	Application	Second Choice
	Bachelor of Arts	Conditional Admit	Conditional on final results
	Bachelor of Arts	Defer Decision	Awaiting NSC results
	Bachelor of Arts	Defer Decision	Marginal candidate (AO)
	Bachelor of Arts	Defer Decision	Marginal candidate (FO)
	Bachelor of Arts	Intention to Matriculate	No deposit-Accepted Cond Offer
	Bachelor of Laws (LB002)	Application	First Choice
	Bachelor of Laws (LB002)	Application	Second Choice
	Bachelor of Laws (LB002)	Conditional Admit	Conditional on receipt of NBT
	Bachelor of Laws (LB002)	Defer Decision	Awaiting NSC and NBT results
	Bachelor of Laws (LB002)	Defer Decision	Awaiting NSC results
	Bachelor of Laws (LB002)	Defer Decision	Marginal candidate (AO)

SCHOOLS UPDATE REPORT



Reddam House 2017 Applicant Status Update for 2016 Grade 12 Applicants as at Tuesday 20 September 2016
Total Applicants: 61

Applicant Number	Received Grade11 Final Result	Received Grade12 April Result	Received Grade12 June Result	Received Grade12 Sept Result	Received NBT AL Result	Received NBT QL Result	Received NBT Math Result
	Yes	Yes	No	No	Yes	Yes	Yes
	Yes	Yes	Yes	No	Yes	Yes	No
	Yes	Yes	Yes	No	Yes	Yes	Yes
	Yes	Yes	Yes	No	Yes	Yes	No
	Yes	Yes	Yes	No	Yes	Yes	Yes
	Yes	Yes	Yes	No	Yes	Yes	Yes
	Yes	Yes	Yes	No	Yes	Yes	No
	Yes	Yes	Yes	No	Yes	Yes	Yes
	Yes	Yes	Yes	No	Yes	Yes	No
	Yes	Yes	Yes	No	Yes	Yes	Yes
	Yes	Yes	Yes	No	Yes	Yes	Yes
	Yes	Yes	Yes	No	Yes	Yes	Yes

SCHOOLS QUALIFICATIONS AND AWARDS



UNIVERSITY OF CAPE TOWN
UNIVESITHI YASEKAPA - UNIVERSITEIT VAN KAAPSTAD

Friday 27 May 2016

Reddam House

Number of students awarded qualifications in 2014 by level and faculty

	Commerce	Engineering/ Built Environment	Health Sciences	Humanities	Law	Science	Total
Undergraduate	10	5		9		5	29
Postgraduate Diploma	4			2			6
Honours	2	2	1	4		4	13
Masters	2	3	1	2	4	3	15
Total	18	10	2	17	4	12	63

Number of students awarded qualifications in 2015 by level and faculty

	Commerce	Engineering/ Built Environment	Health Sciences	Humanities	Law	Science	Total
Undergraduate	6	4	3	16	1	2	32
Postgraduate Diploma	1						1
Honours	1	1	3	3		2	10
Masters		2	1				3
Total	8	7	7	19	1	4	46

SCHOOLS QUALIFICATIONS AND AWARDS



Friday 27 May 2016

Reddam House

Number of Students Awards by Faculty in 2014

	Commerce	Engineering/ Built Environment	Health Sciences	Humanities	Law	Science	Total
Class Medal	2	1		5			8
Dean's Merit List	11	11	1	8	1	2	34
Prize	2	2		2	1		7
Scholarship		1		2			3
	15	15	1	17	2	2	52

Number of Students Awards by Faculty in 2015

	Commerce	Engineering/ Built Environment	Health Sciences	Humanities	Law	Science	Total
Class Medal	1	2		6			9
Dean's Merit List	8	4	3	10	1	1	27
Prize		4		1			5
	9	10	3	17	1	1	41

HEMIS THROUGHPUT

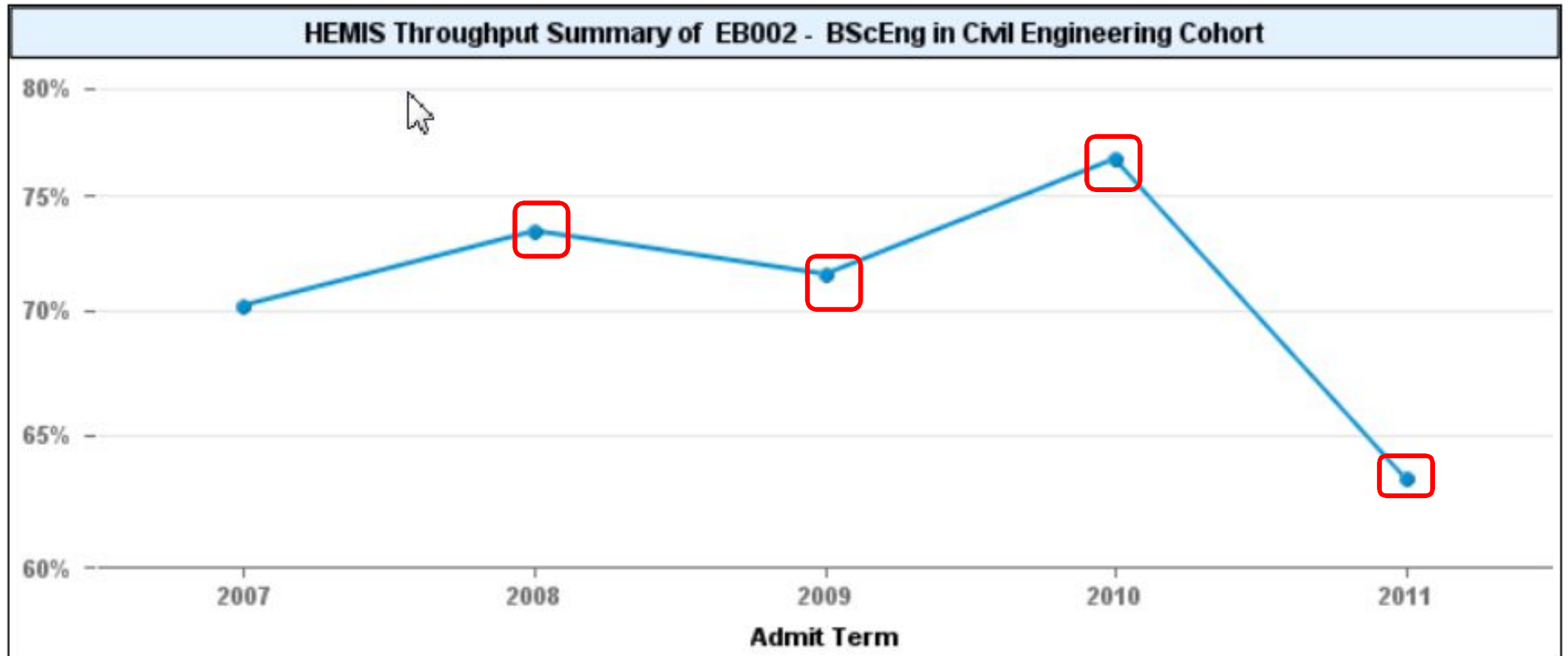
HEMIS Throughput Summary of EB002 - BScEng in Civil Eng

Admit Term	HEMIS Start Academic Program Code	Program Normal Completion (EB002)	Graduating / Latest Academic Program		Number of Students in Cohort	Graduated in less than minimum time	Graduated in minimum time	Graduated in minimum time + 1 year	Graduated in minimum time + 2 years
			Faculty	Academic Program					
2010	EB002	4	COM	BCom	1		1		
2010	EB002	4	COM	BCom Actuarial Science	1		1		
2010	EB002	4	EBE	BScEng in Chemical Engineering	1			1	
2010	EB002	4	EBE	BScEng in Civil Engineering	69		33	12	7
2010	EB002	4	EBE	BSc in Construction Studies	1				
2010	EB002	4	LAW	Bachelor of Laws (LB002)	1			1	
Total					74		35	14	7
						2010 Total HEMIS Graduates			56

HEMIS THROUGHPUT

Graduating Academic Program											
Academic Program	Number of Students in Cohort	Graduated in less than minimum time	Graduated in minimum time	Graduated in minimum time + 1 year	Graduated in minimum time + 2 years	Graduated in more than minimum time + 2 years	Eligible to Continue	Dropped Out in Good Academic Standing	Excluded	Pending	Total
BCom	1		1								1
BCom Actuarial Science	1		1								1
BScEng in Chemical Engineering	1			1							1
BScEng in Civil Engineering	69		33	12	7		1	3	12	1	69
BSc in Construction Studies	1								1		1
Bachelor of Laws (LB002)	1			1							1
	74		35	14	7		1	3	13	1	74
2010 Total HEMIS Graduates					56				HEMIS Throughput		76%

HEMIS THROUGHPUT



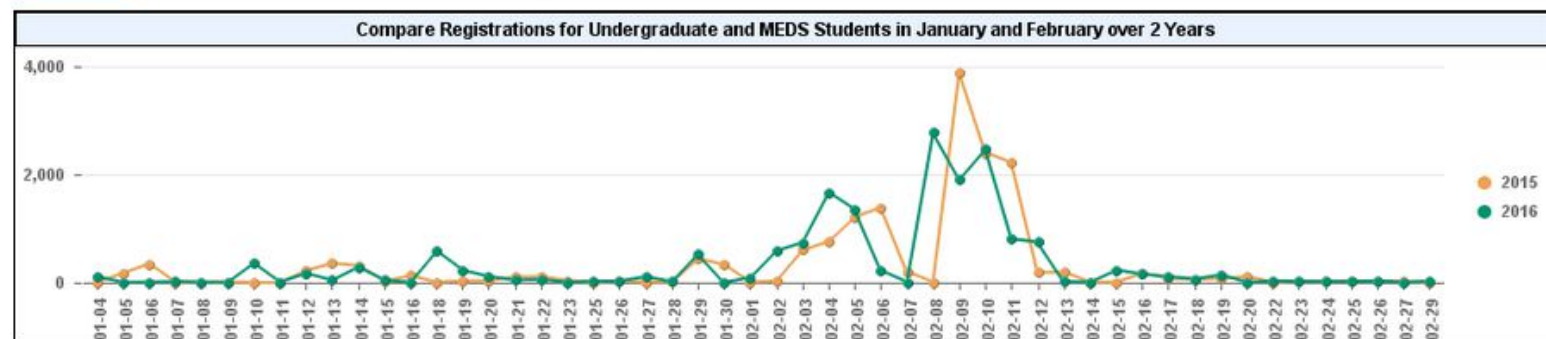
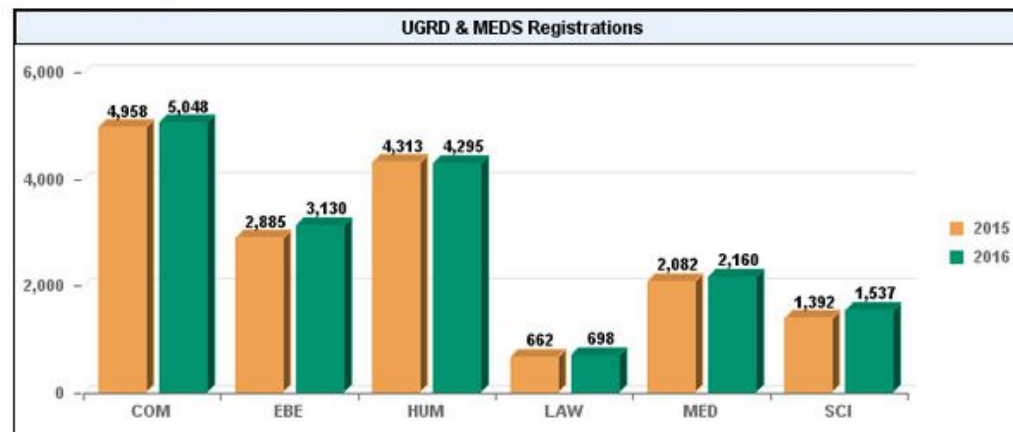
COMPARE REGISTRATION PATTERNS OVER 2 YEARS

Complete Registrations for Undergraduate and MEDS Students in January and February over 2 Years

Date and Time Warehouse Last Updated 2016-05-26 22:09:09

The date of registration is determined by using the first date a student registered on a course.

	2015 Registered Students in Jan & Feb	2016 Registered Students in Jan & Feb	Percentage of 2016 Registered Students in Jan & Feb Compared to 2015
COM	4,958	5,048	101.82%
EBE	2,885	3,130	108.49%
HUM	4,313	4,295	99.58%
LAW	662	698	105.44%
MED	2,082	2,160	103.75%
SCI	1,392	1,537	110.42%
Totals	16,292	16,868	103.54%



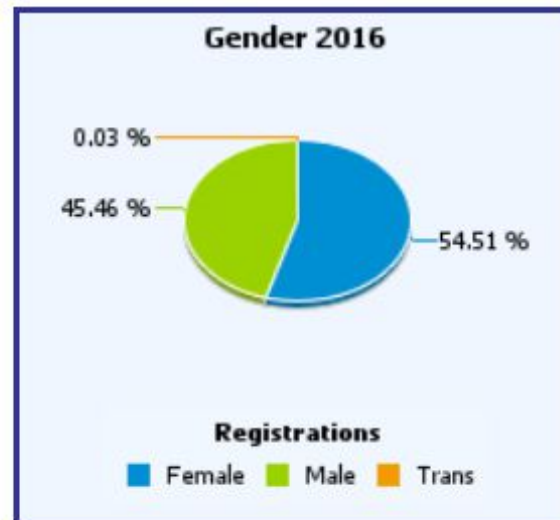
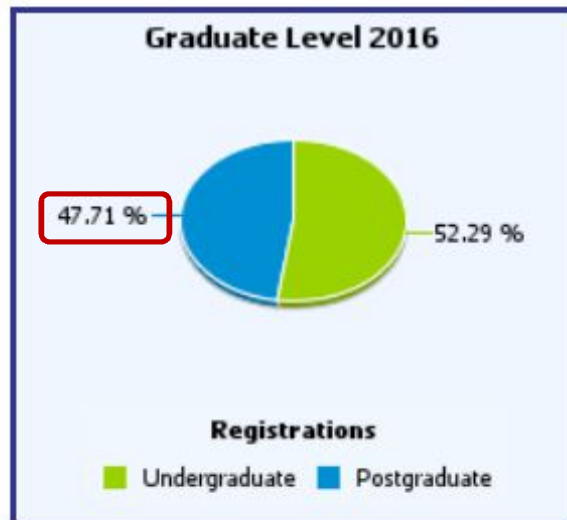
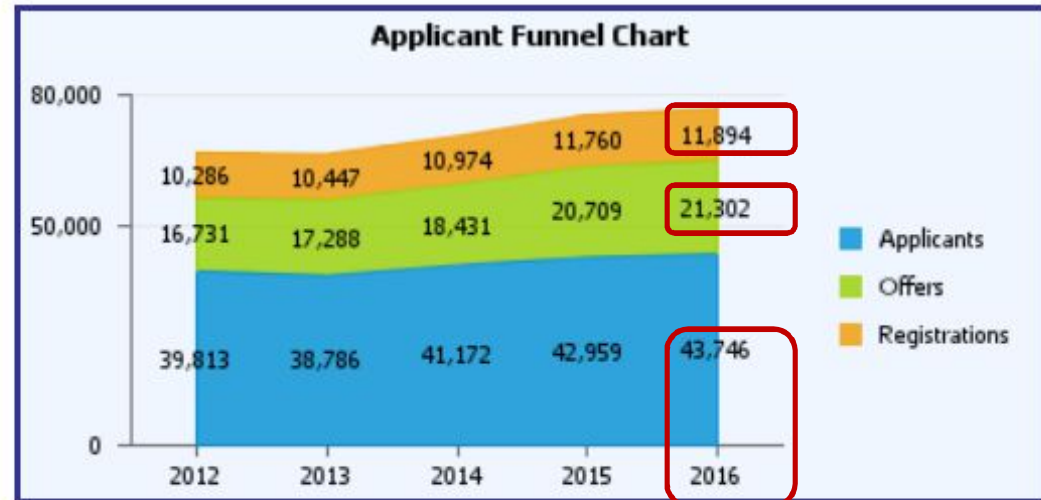
Jan	04	05	06	07	08	09	10	11	12	13	14	15	16	18	19	20	21	22	23	25	26	27	28	29	30	Total
2015		173	344	5	4	6			217	355	309	24	123		28	31	98	104	35		24	7	9	439	328	2,661
2016	105	1	3	14	2		354	4	166	39	284	40		579	222	107	41	51		17	25	105	11	528		2,698

Feb	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	22	23	24	25	26	27	29	Total
2015	1	28	601	756	1,217	1,388	196	3	3,888	2,405	2,215	179	189	2	5	167	70	50	68	107		22	13	32	14	14		13,630
2016	89	588	739	1,664	1,347	218	1	2,774	1,908	2,469	804	745	15	3	226	151	105	63	138		28	18	14	16	28		21	14,170

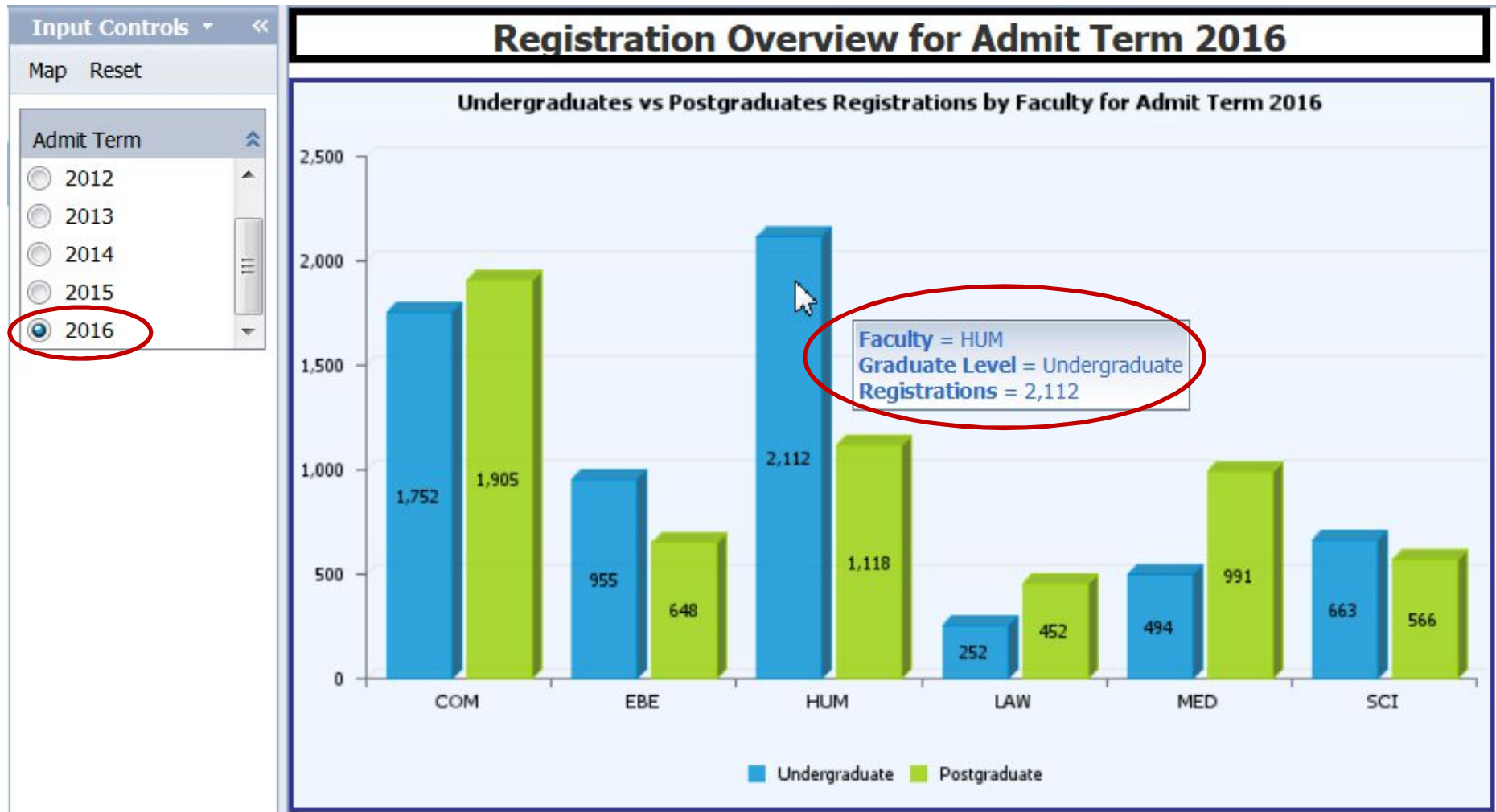
ADMISSIONS DASHBOARD

Applicants vs Offers vs Registrations Overview

Admit Term	Applicants	Offers	Registrations
2012	39,813	16,731	10,286
2013	38,786	17,288	10,447
2014	41,172	18,431	10,974
2015	42,959	20,709	11,760
2016	43,746	21,302	11,894

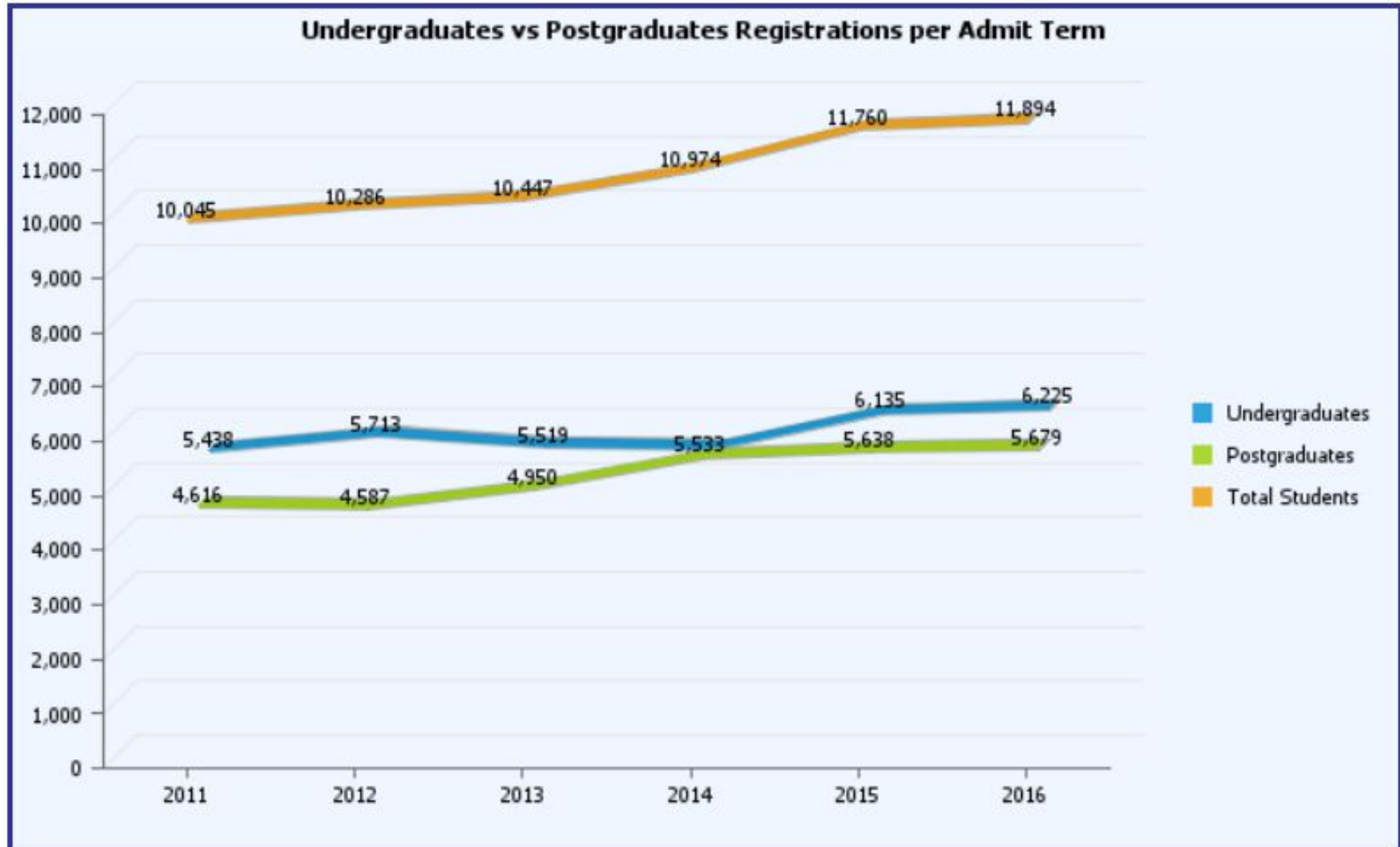


REGISTRATION OVERVIEW FOR ADMIT TERM

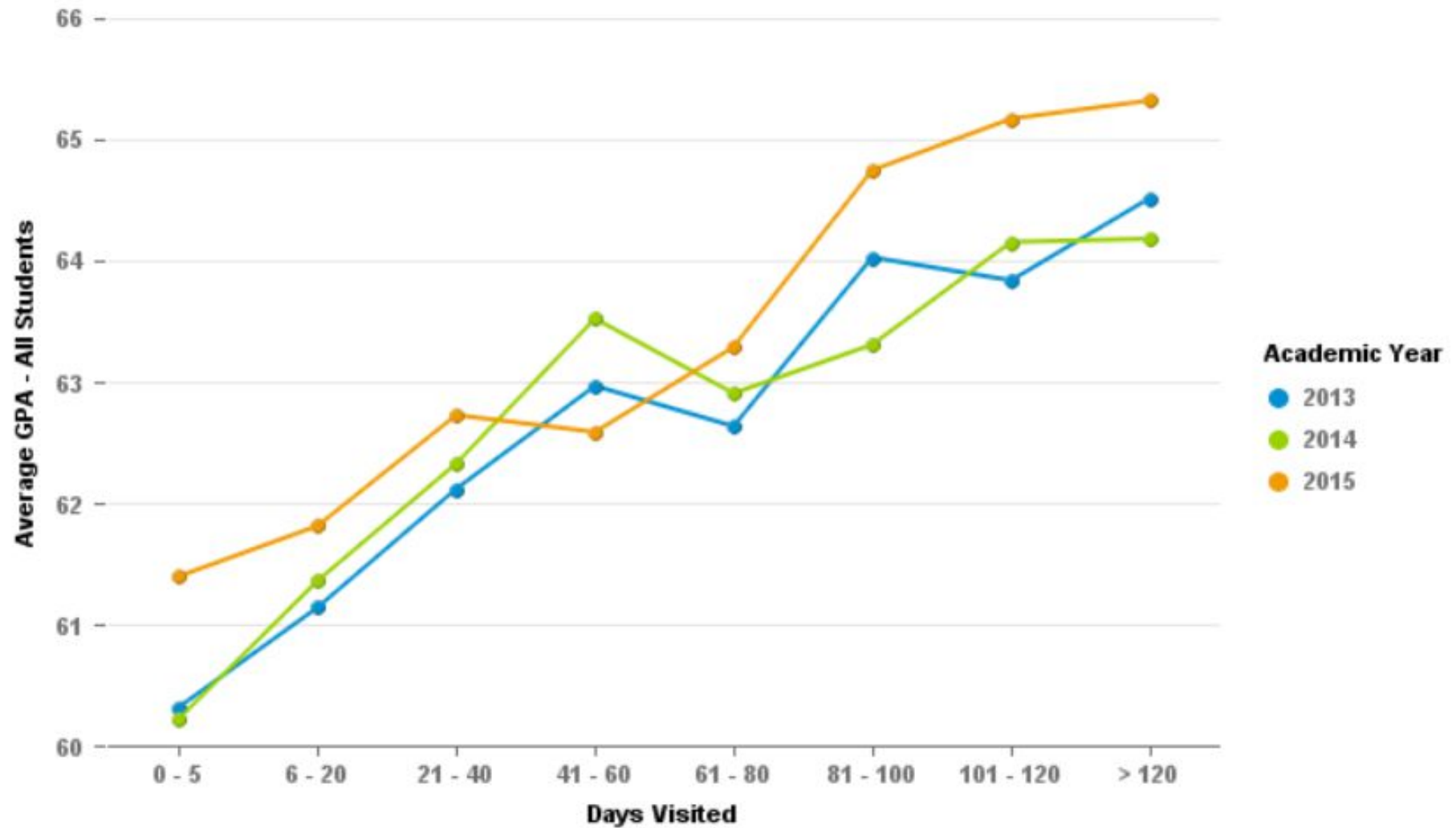


REGISTRATION OVERVIEW FOR ADMIT TERM

Registration Overview per Admit Term



STUDENT'S GPA VS LIBRARY VISITS – HUMANITIES

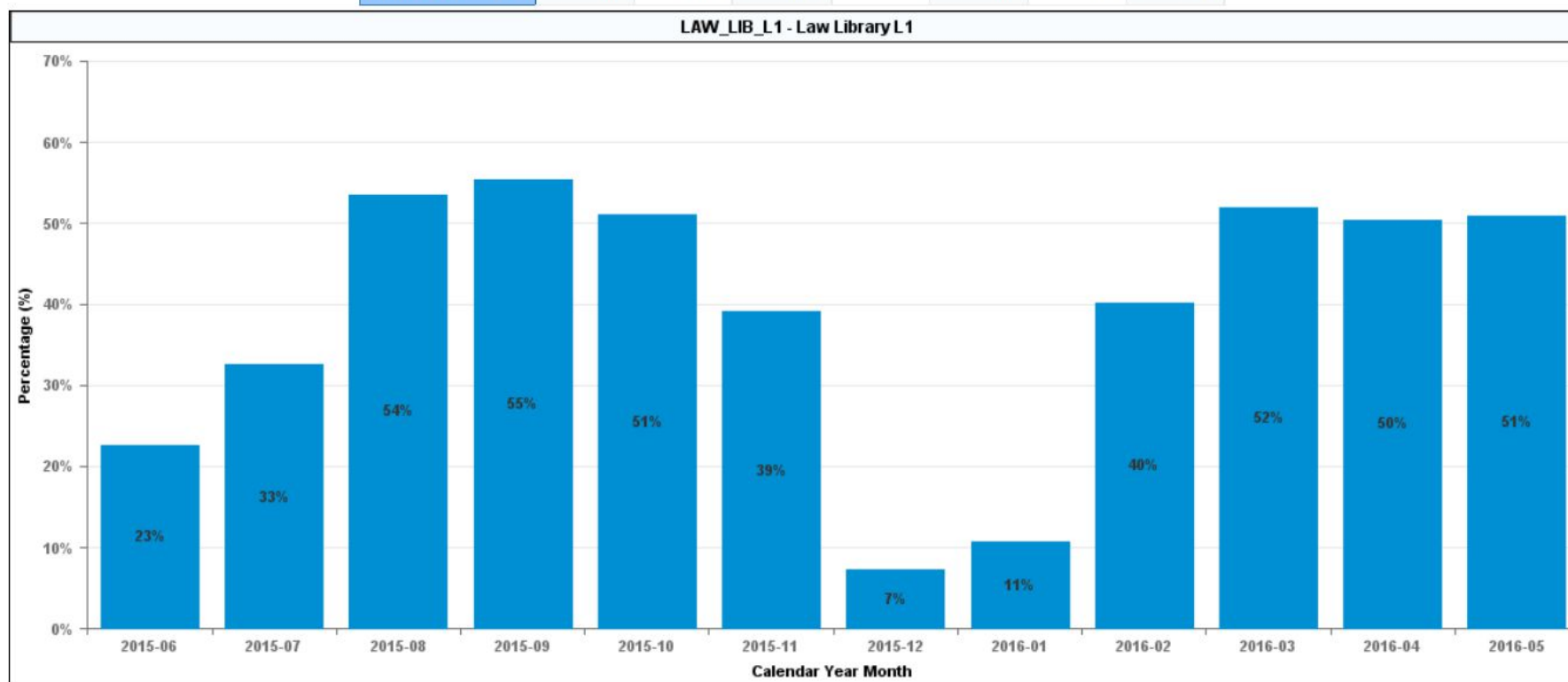


STUDENT LAB PERCENTAGE USAGE BY MONTH

Student lab percentage usage by month graph (bar graph) Graph

LAW_LIB_L1 - Law Library L1

Number of Workstations	53	Day	MON	TUE	WED	THU	FRI	SAT	SUN
Day Of Week		Open	08:30:00	08:30:00	08:30:00	08:30:00	08:30:00	08:30:00	08:30:00
		Closed	22:00:00	22:00:00	22:00:00	22:00:00	22:00:00	17:00:00	17:00:00
		Number Of Hours	13.5	13.5	13.5	13.5	13.5	8.5	8.5

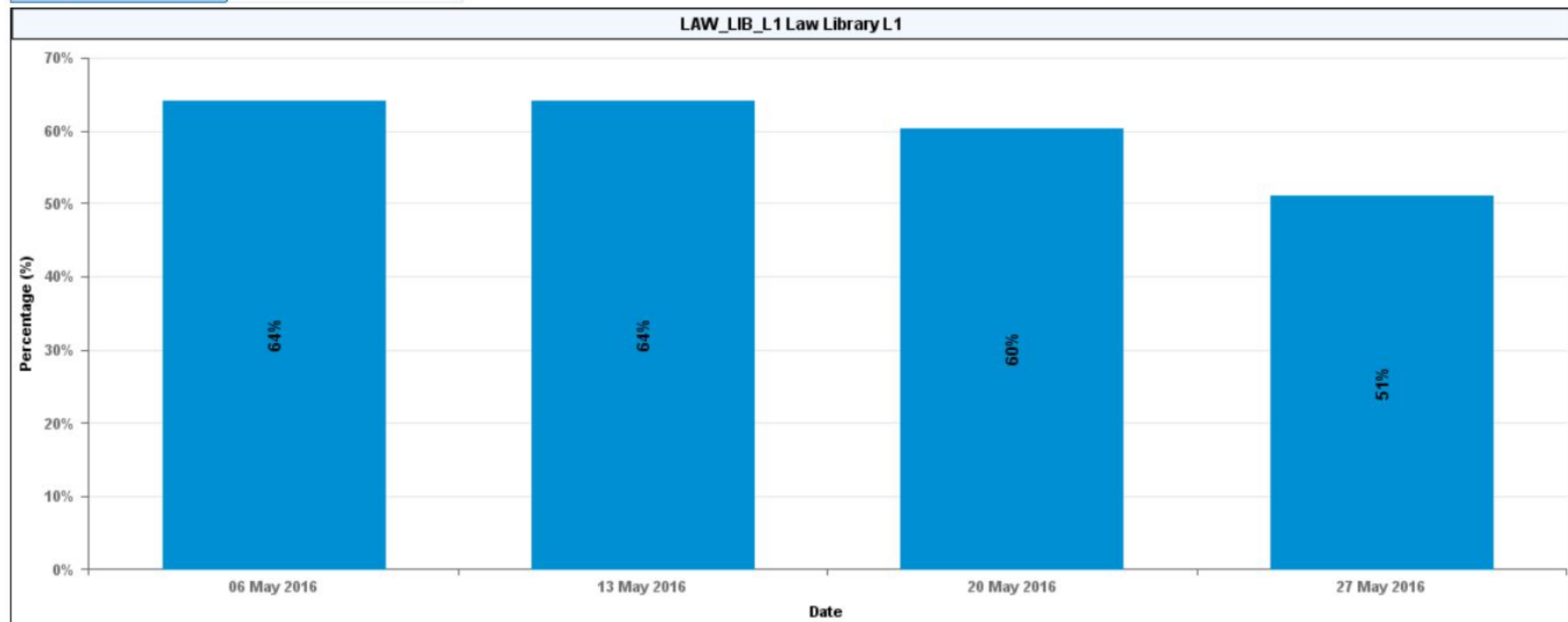


STUDENT LAB PERCENTAGE USAGE FOR A SPECIFIC TIME PERIOD

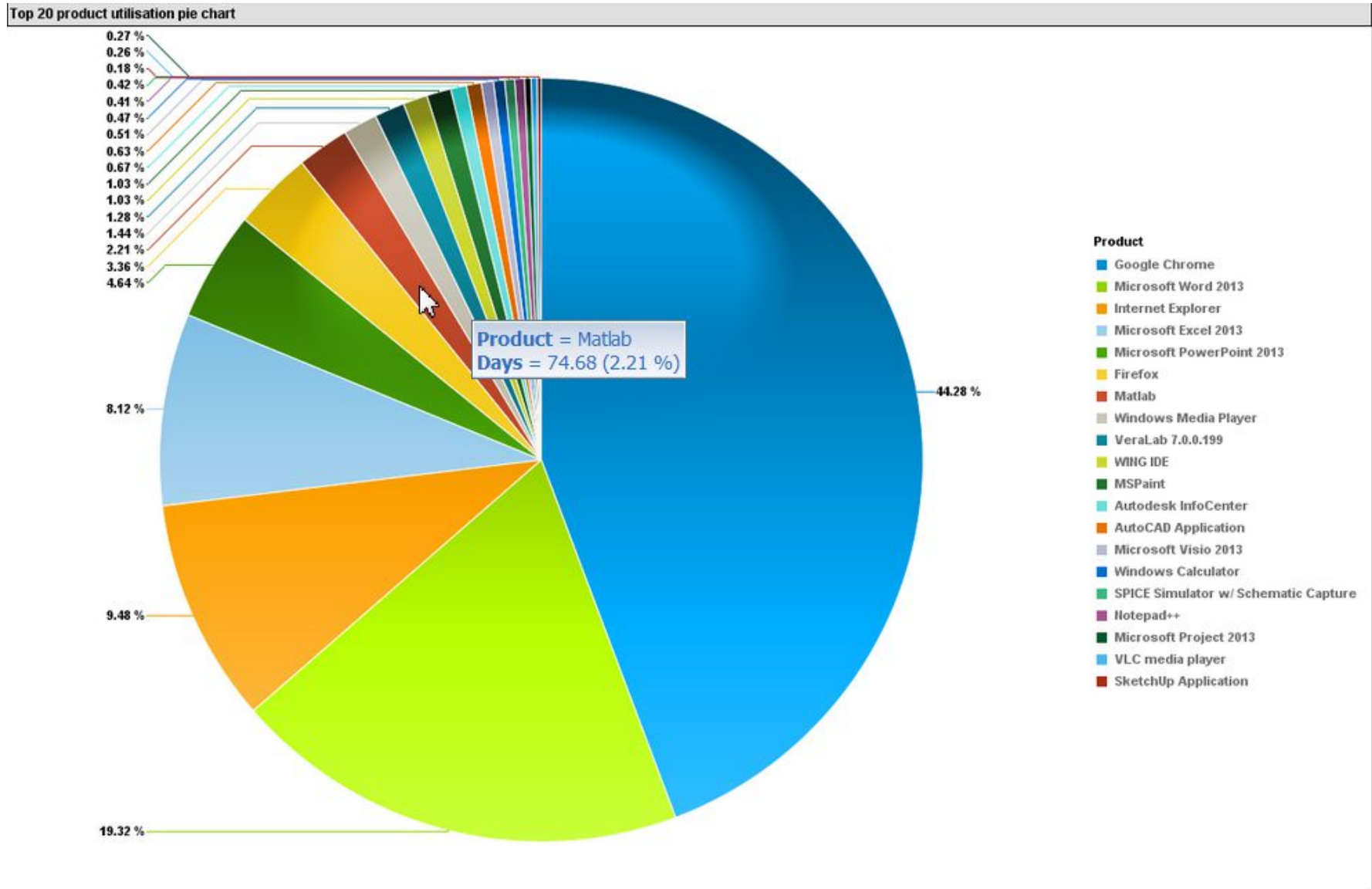
Student lab percentage usage by day bar chart

LAW_LIB_L1

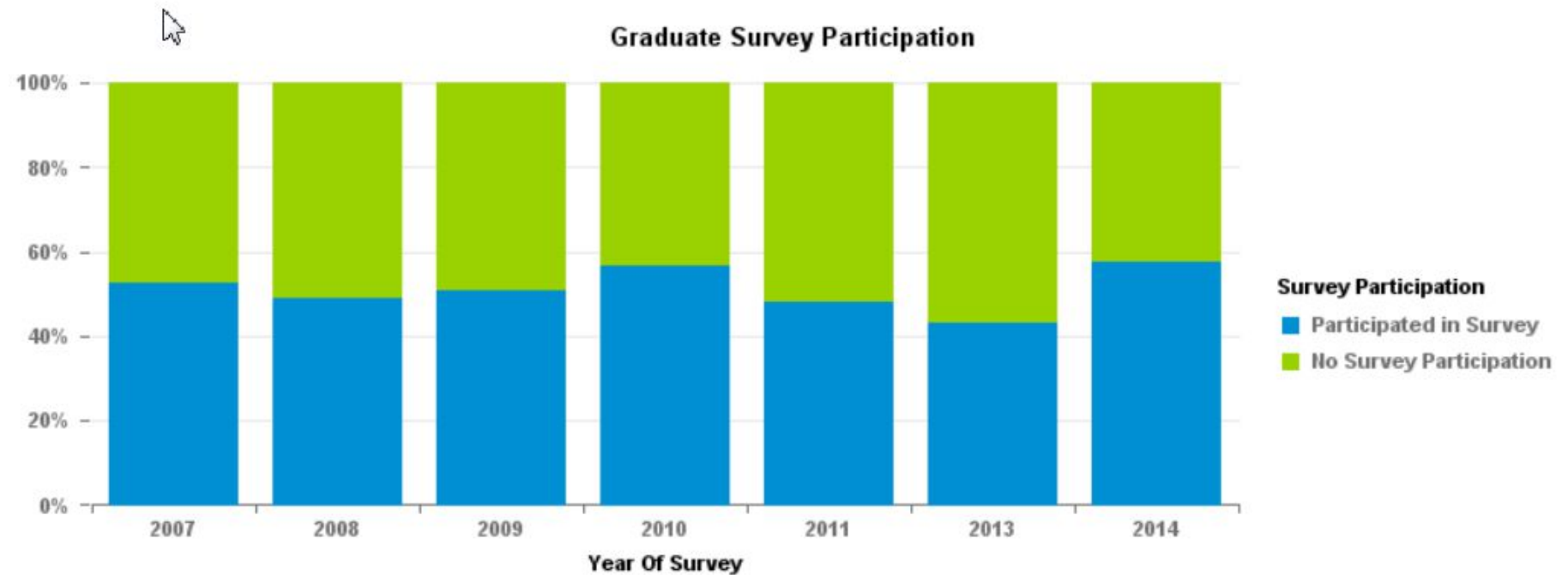
Room Name	LAW_LIB_L1 Law Library L1
Number of Workstations	53
Start Hour	20
End Hour	22
Number of Hours	2
Day Of Week	Friday



PRODUCT UTILIZATION IN AN ENGINEERING LAB FOR 2016

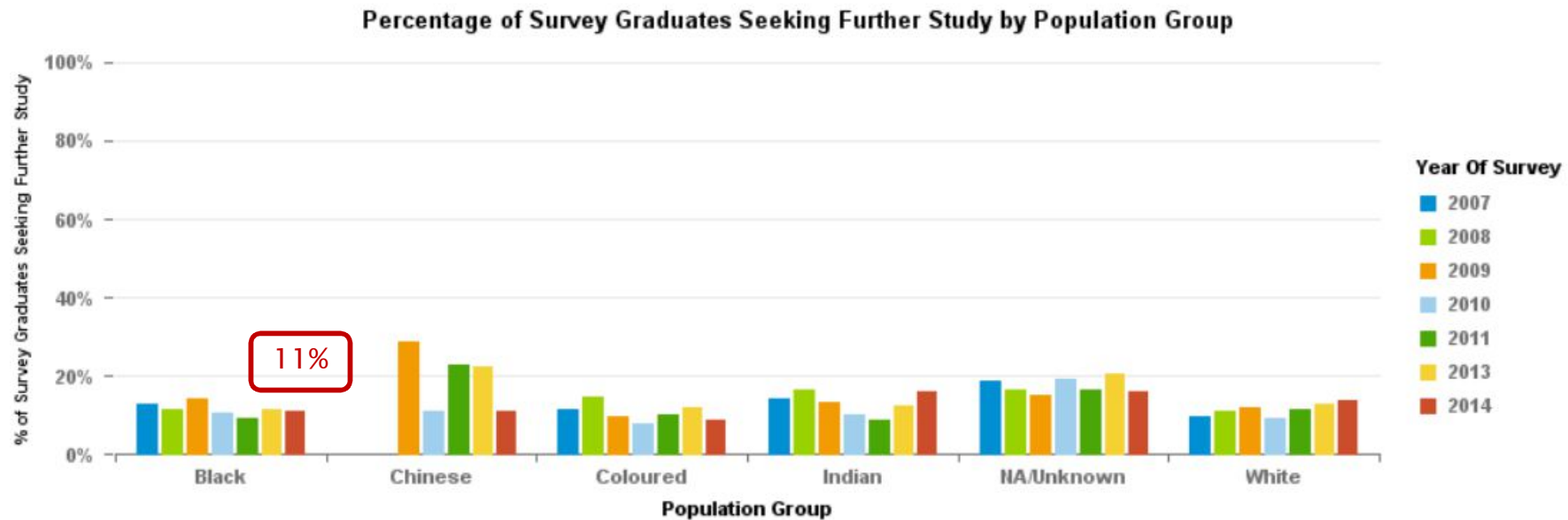
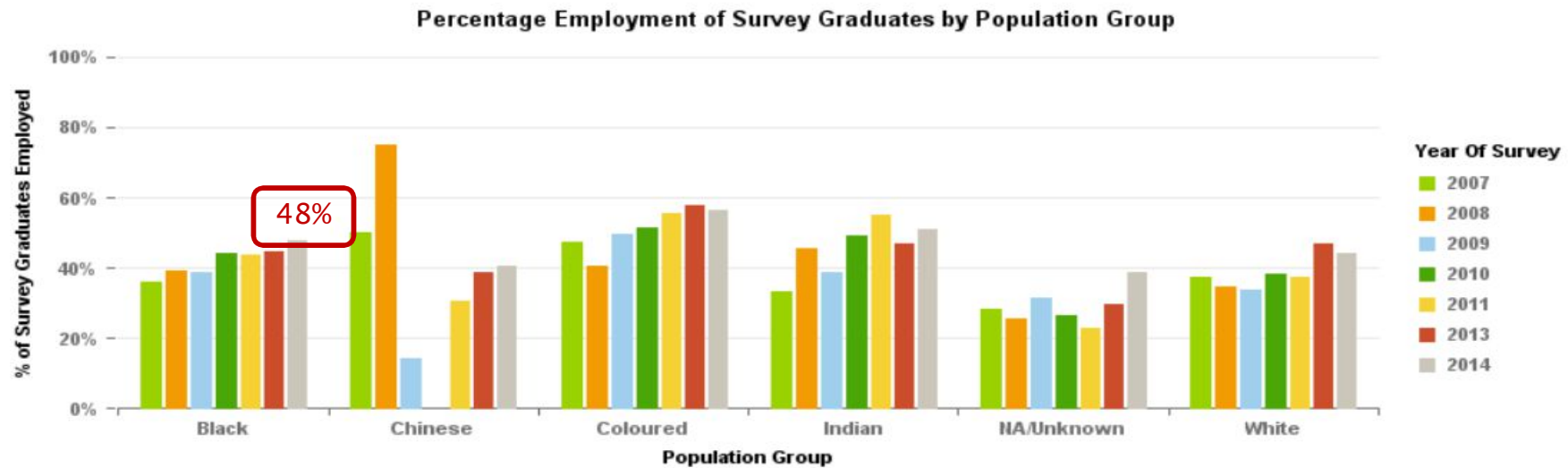


GRADUATE EXIT SURVEY PARTICIPATION

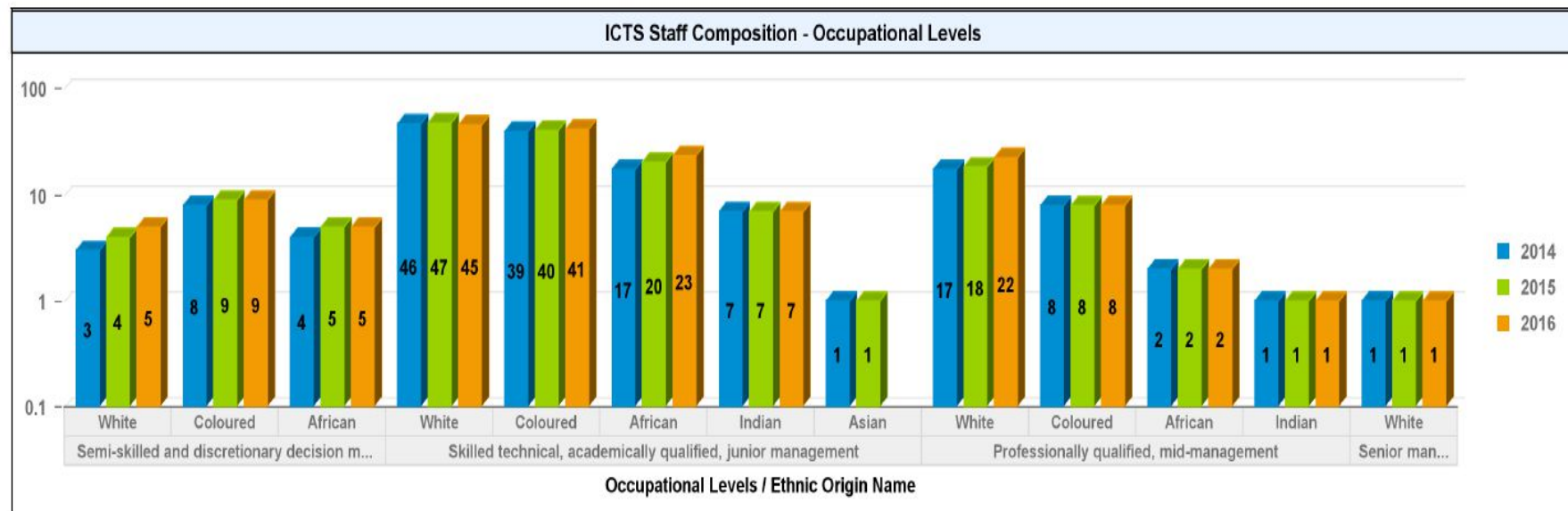
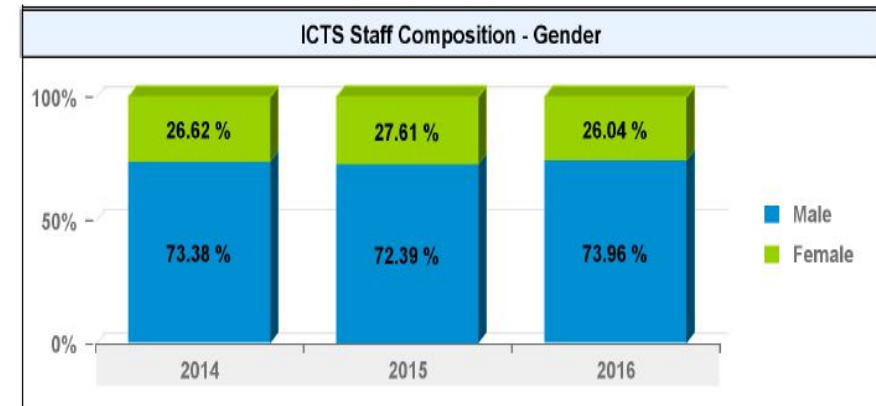
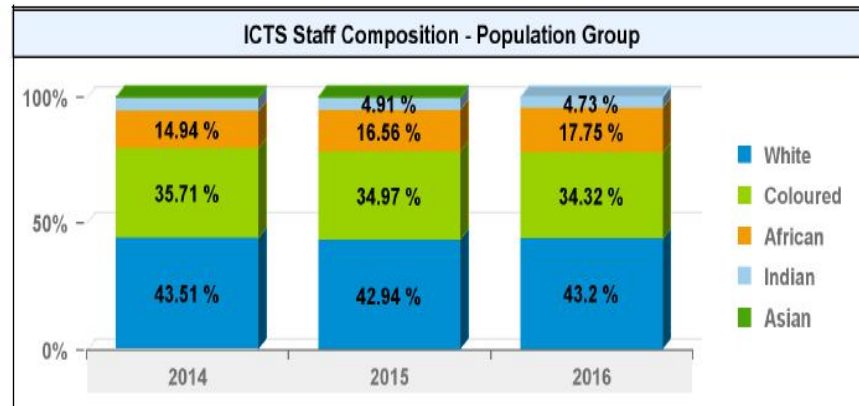


	2007	2008	2009	2010	2011	2013	2014
Participated in Survey	2922	2816	3064	3504	3096	3345	3953
No Survey Participation	2656	2913	2993	2672	3348	4378	2943
Total Graduates	5578	5729	6057	6176	6444	7723	6896
% Participated	52%	49%	51%	57%	48%	43%	57%

GRADUATE EXIT SURVEY EMPLOYMENT / FURTHER STUDIES



EMPLOYMENT EQUITY – ICTS



WHERE TO FROM HERE?

UCT's Enterprise - Data Warehouse Proposed Roadmap 2015-2016											
		2015				2016					
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Dependencies	
Owner	Data Mart										
Office of the Registrar	Admissions	Ongoing Report Development									
Careers Office	Exit Survey							Exit Survey Additional Questions			
Finance	SAP Finance	Redevelop SAP Finance Rapid Mart				Research Funding Reporting		Ongoing Report Development		Redevelop SAP Finance Rapid Mart	
					SpendTrak						
Office of the Registrar	Student Records	Ongoing Report Development							Graduate Research Management		
								Potgrad Reporting			
Properties & Services		Timetabling	Ongoing Report Development								
Department of Student Affairs & Finance	Student Financials	Ongoing Report Development									
Housing & Residence Life		SHRL (Housing)			Ongoing Report Development						
Academic Development Programme		NSC Results			Ongoing Report Development			NBT Results			
Human Resources	HR					Employment Equity Reporting		Leave, Standby and Additional Payments Reporting for HR			
Institutional Planning								Cross-functional Reporting		Stu Recs, Finance KPIs, HR KPIs	
Information & Communication Technology Services	Resources	BObj Upgrd 4.1 SP5			ImageNow Access	Change Requests	BObj Upgrd 4.1 SP7				
CILT	CILT					Learning Management Data Mart					
Libraries		Library Usage Data		Ongoing Report Development							
Legend		Requirements need to be defined				Completed					
						In Progress					
						Not started					

QUESTIONS?

PRESENTER



ALL ALLIANCE PRESENTATIONS WILL BE AVAILABLE
FOR DOWNLOAD FROM THE CONFERENCE SITE



THANK YOU!



EMEA ALLIANCE 11-12 OCTOBER 2016