

Data, Data, and More Data: A Business Intelligence Approach

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UMACRAO
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The University of Iowa Demographics

- Enrollment of 30,400
 - 21,000 Undergraduate Students
 - 5,500 Graduate Students
 - 4,000 Professional Students
- 11 Colleges
- Approx. 170 departments and programs

What Changed?

- A new Student Information System
- The desire to provide access to all institutional data from the same warehouse
- A new data warehouse

How did our users access student data before?

Office o
User I

[MAUI](#) | [Ulowa Home](#) | [Registrar Public Web Site](#) | [Log Out](#)

Main Menu >> mauStudentPos

Step 1: Select session, POS, student type and student status

Session Fall 2014	Academic Unit Accounting	Program of Study (Academic Unit) Accounting (Accounting)	Subprogram All Subprograms
Student Type Undergraduate	Allow Paging No		

Step 2: Select saved query or select fields you want to view

---Private Queries--- | ---Public Queries---

Please select "Email" if you want to use "Send Bcc WebEmail" function in the next page!

advByAcadUnitAbbreviation advByAcadUnitName advByAcadUnitShortName advIsAdvisingCtr advName advUnivID citizenshipDescr citizenshipShortDescr classificationDescr combinedPgm	<input type="button" value="Add"/> <input type="button" value="Help"/> <input type="button" value="Sort Source"/>	age bdate CIP gender citizenship	<input type="button" value="Remove"/> <input type="button" value="Move Up"/> <input type="button" value="Move Down"/> <input type="button" value="Sort Target"/>
---	---	--	---

step 3: add search criteria (optional)

Logic Operator: and

advByAcadUnitAbbreviation | --please select criteria-- |

put value here |

Step 4: Get Report

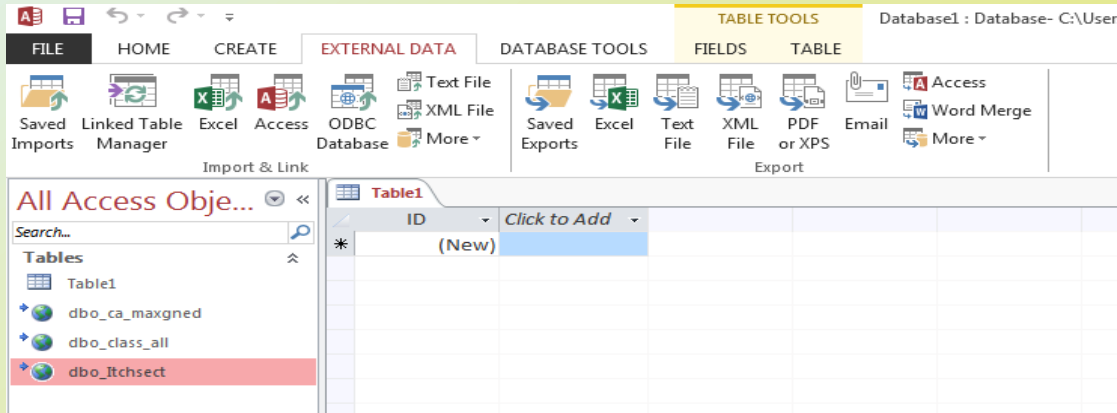
Save query as:

For more information please [Contact Us](#).

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How do power users get data?

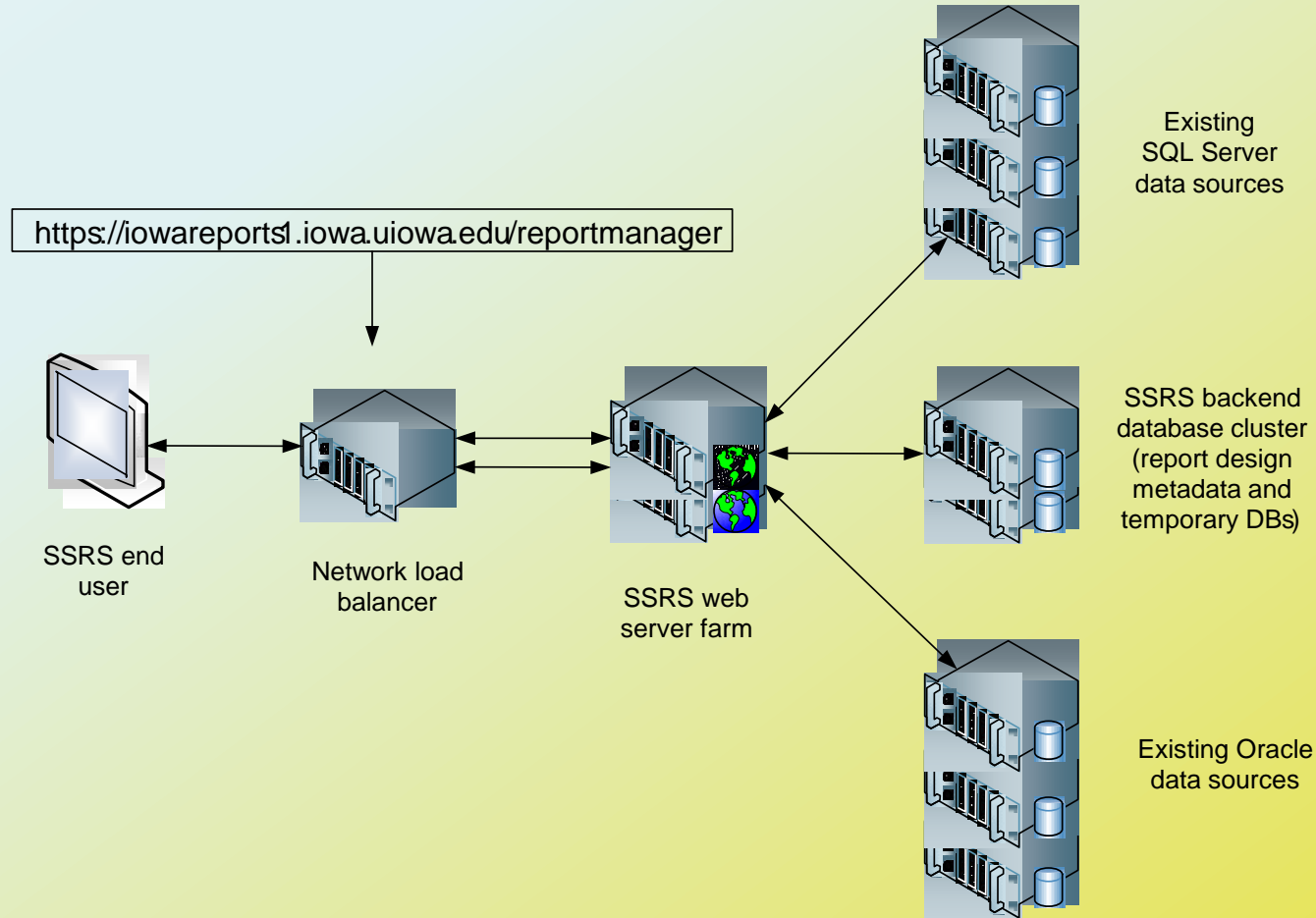
- Many of our users access our student record data warehouse via an ODBC connection, with MS Access, or MS Excel as the query tool.



How do non-technical users get data today?

- A report portal, or a web application that provides the dataset, aka canned reports
 - SSRS deployment on the Ulowa campus
 - A web page that provides a dataset

SSRS Model



How do we provide the SSRS reports?

MAUI Logged in as

[Home](#) [Admissions](#) [Advising](#) [Registrar](#) [Billing](#) [Financial Aid](#) [Support](#)

Quick Links: ▼ [Reports](#) | [Work](#)

Reports

Please select the system for which you would like to view available reports: ▼ Optionally select a category:

Data Dictionary

- [MAUI Data Dictionary](#)
- [MAUI Data Dictionary Crosswalk](#)
- [MAUI Data Dictionary Hub \(Logical Table Group\) Owner](#)
- [MAUI Data Dictionary Hub \(Logical Table Group\) Definition](#)

Resources

High Level Overview

- [Admissions MAUI DW High Level Overview](#)
- [Billing MAUI DW High Level Overview](#)
- [Financial Aid MAUI DW High Level Overview](#)
- [Registrar MAUI DW High Level Overview](#)
- [Academic Calendar](#)

Snapshot Information

- [Data Warehouse Snapshot Interval Information](#)

Admissions

- [FAQ \(under construction\)](#)

Advising

- [FAQ \(under construction\)](#)

Registrar

- [FAQ](#)

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REGISTRAR Reports

Student - Athletes Grade Change	
Student - Athletes Labels	Labels for individual SA folders
Student - Athletes Labels With POS	Labels with Primary POS for each SA
Student - Athletes Midterm Attendance	Midterm D/F Grade Report and Attendance/Non-attendance displayed
Student - Athletes No Major	Pre-majors & no majors displayed by current UI classification
Student - Athletes Registration Holds	Current, active list of registration holds (low scholarship, lacks transcripts, etc.)
Student - Athletes Remedial Enrollment	Enrollment of athletes in remedial courses.
Student - Athletes Voids/Withdrawals	Voids/Withdrawals of athletes
Student - Class List	a class list based on enrollment to a course. Includes all sections of the course.
Student - Residency	List of residency status changes for a given date range.
Student - Set Up For Registration	List of students, their authorization status, registration time/day and any existing holds for the select population and session.
System - Academic Users	Academic Org Admin Roles: For selected admin role displays a list of users, academic unit and campus address.
System - Grade Calendar	Attendance, Midterm and Final Grade Dates including Supplemental for a given session.
System - Maui Calendar	List of all populated calendar dates for the selected sessions.
System - Report List	A list of all MAUI reports regardless of whether users have access to the reports. Includes what security roles have access to a given report.

How do we provide the SSRS reports?

From To

Action

1 of 1 100% Find | Next

MAUI Report

Residency activities between 6/16/2014 and 6/17/2014

univid	name	time	action	entered by	session	residency	residency status	residency
00307	Ebe Zacl	6/16/2014 11:04:30 AM	update	dgraber	Fall 2014 (20143)	resident	resolved	Iowa Clinton
00406	Ron	6/16/2014 10:05:37 AM	update	dgraber	Summer 2014 (20141)	resident	resolved	Iowa Buena Vista
00407	Cro	6/16/2014 11:17:29 AM	update	dgraber	Fall 2014 (20143)	resident	resolved	Iowa Scott
00586	Frin	6/16/2014 10:48:32 AM	update	dgraber	Fall 2014 (20143)	resident	resolved	Iowa Clay
00692	Jete	6/16/2014 10:22:30 AM	update	dgraber	Summer 2014 (20141)	resident	resolved	Iowa Johnson
00726	Yod Brar	6/16/2014 12:13:25 PM	update	dgraber	Summer 2014 (20141)	resident	resolved	Iowa Scott
00788	Len:	6/16/2014 3:40:28 PM	update	dgraber	Fall 2014 (20143)	resident	resolved	Iowa Scott
00817	Erik Rac	6/16/2014 2:09:32 PM	update	dgraber	Fall 2014 (20143)	resident	resolved	Iowa Johnson
00830	Bry:	6/16/2014 2:02:06 PM	update	dgraber	Fall 2014 (20143)	resident	resolved	Iowa Johnson
00856	Bec Can	6/16/2014 10:38:22 AM	update	dgraber	Fall 2014 (20143)	non_resident	resolved	Arizona
00978	Bah	6/16/2014 10:18:11 AM	update	dgraber	Summer 2014 (20141)	resident	resolved	Iowa Monona
01084	Con Reg	6/16/2014 10:27:13 AM	update	dgraber	Summer 2014 (20141)	non_resident	resolved	Missouri

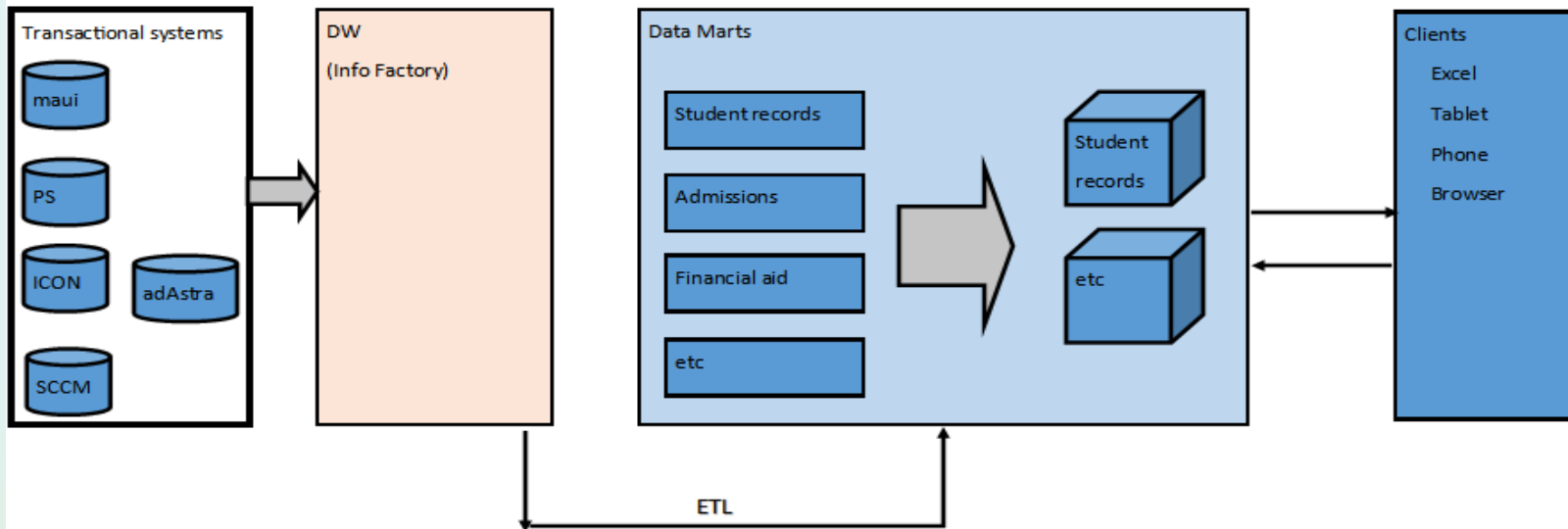
Problems

- Writing scripts is not for everyone
- Canned reports are just that: canned
- No data analysis capability
- Distributed data silos everywhere
- Very limited self-service feature
- ...

Business Intelligence(BI)

- Technology based on institutional data warehouse and data marts
- Self-service
- Data analysis capability
- Intuitive user interface (Excel based)
- Flexibility

BI Framework



1. Point in time transactions

1. Point in time
2. range in time

1. Star schema/snowflake schema and companion cube (OLAP)
2. resembles Excel sheet and pivot table
3. drill through and drill across
4. tabular and multidimensional

ETL:

1. cleanse data
2. build conformed schema

Business Intelligence(BI)

- Demo

So now how can users access data?

- Self service via our SIS
- SSRS reports
- Query tools via our warehouse
- BI tool and a data cube

Remaining Issues

- How do we train users to use the tool?
- Users still need to know about the data?
- Where should users go for help first?

Questions

