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**Presentation to a Joint meeting of the Senate
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Information Quest (IQ)
The University of Texas at Austin



August 19, 2010

What are the Basic Characteristics of a Business Intelligence system, such as IQ?

- A database, aka “data warehouse” of detailed pieces of information gathered from an entity’s operational or transactional systems.
- A set of processes that collect the data needed to answer key questions, and keep the data accurate, reliable, and up-to-date.
- Definitions and clarifying information, aka “meta-data” and/or “business rules” that help clarify how data should be construed and used for decision-making.

What are the basic characteristics of a Business Intelligence System, such as IQ? (continued...)

- Targeted deliverables, aka “reports” and multi-dimensional “cubes”, that simplify and clarify complex issues to aid in addressing challenging questions for users/leaders.





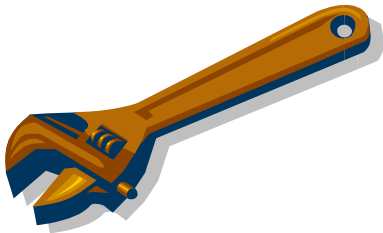
A Slide on Information Technology (IT) Tools

For each basic characteristic, various IT tools are involved, such as:

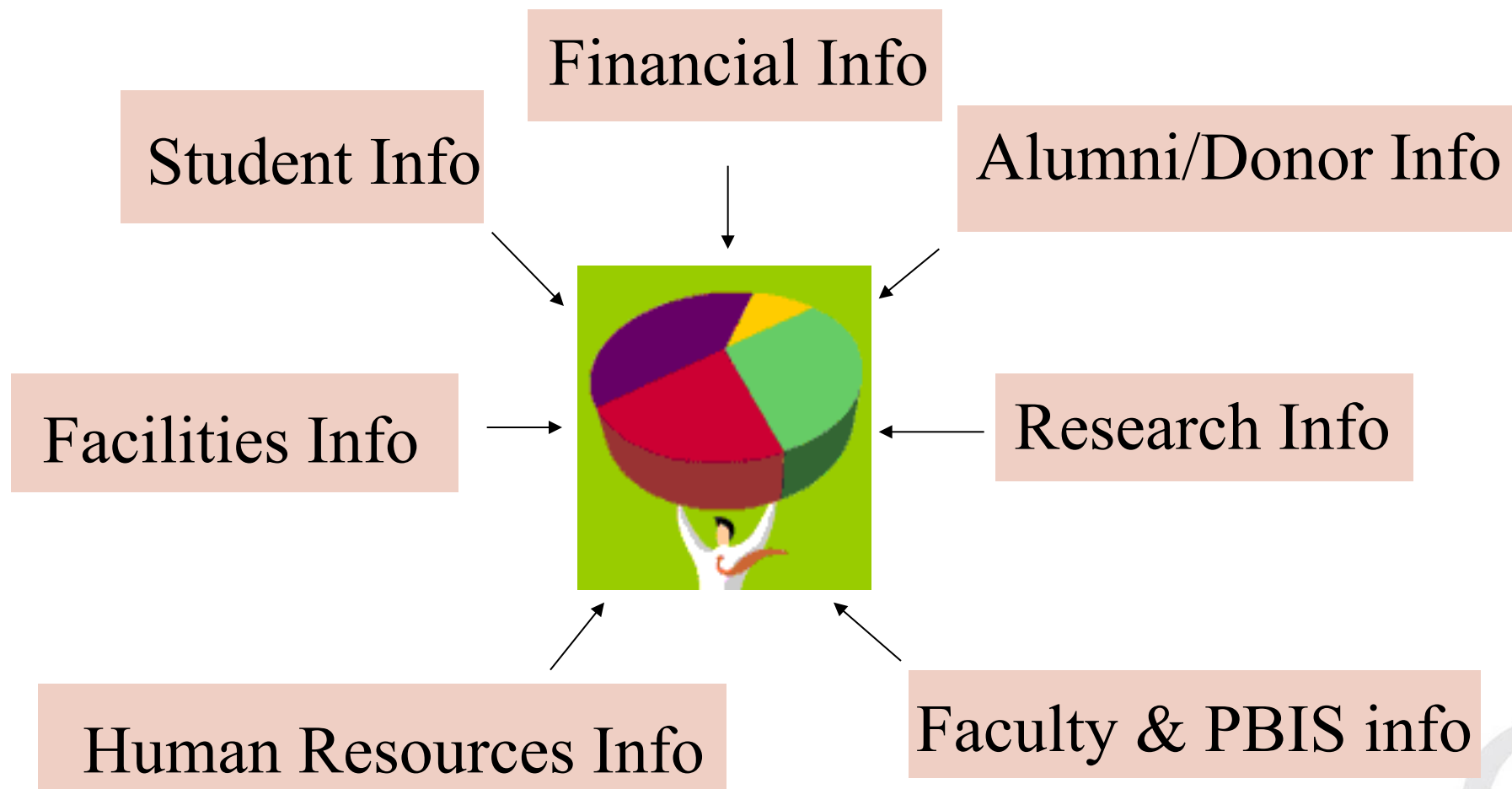
- The database will require hardware, such as servers, relational database software, and other technology tools.
- Similarly, the processes of collecting and cleansing the data will involve an investment in specialized software tools.
- The deliverables will be provided with Business Intelligence (BI) software and there are many options on the market for this need as well.

A Slide on Information Technology (IT) Tools (continued...)

While these tools are all necessary, UT Austin's experience is that the human talent involved, and the quality of planning, design, and data integrity are much more critical to long-term success.



What's in the UT Austin IQ Database: Tip of the Iceberg (2002 – Present)



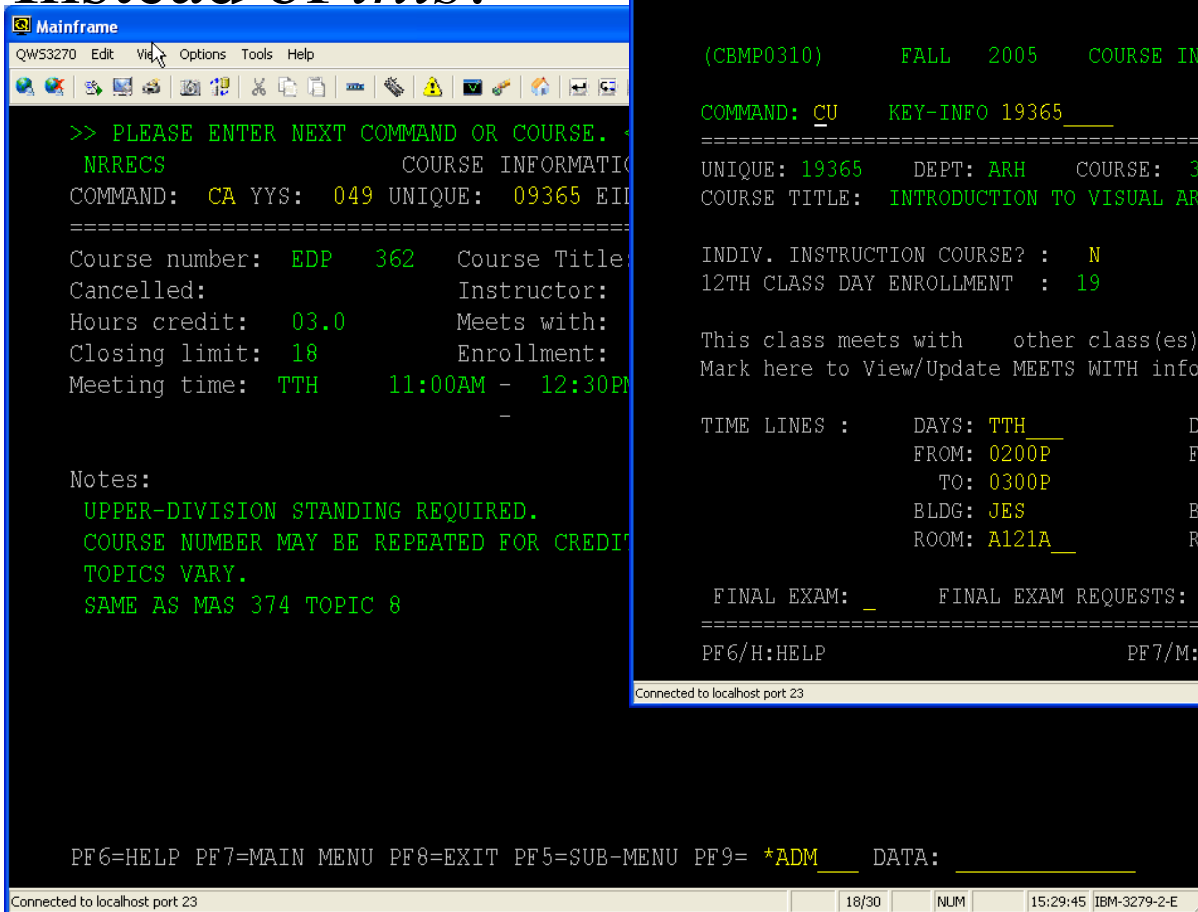
**A Few Examples of what IQ can do for
University leaders.....
One Mouse Click Away**



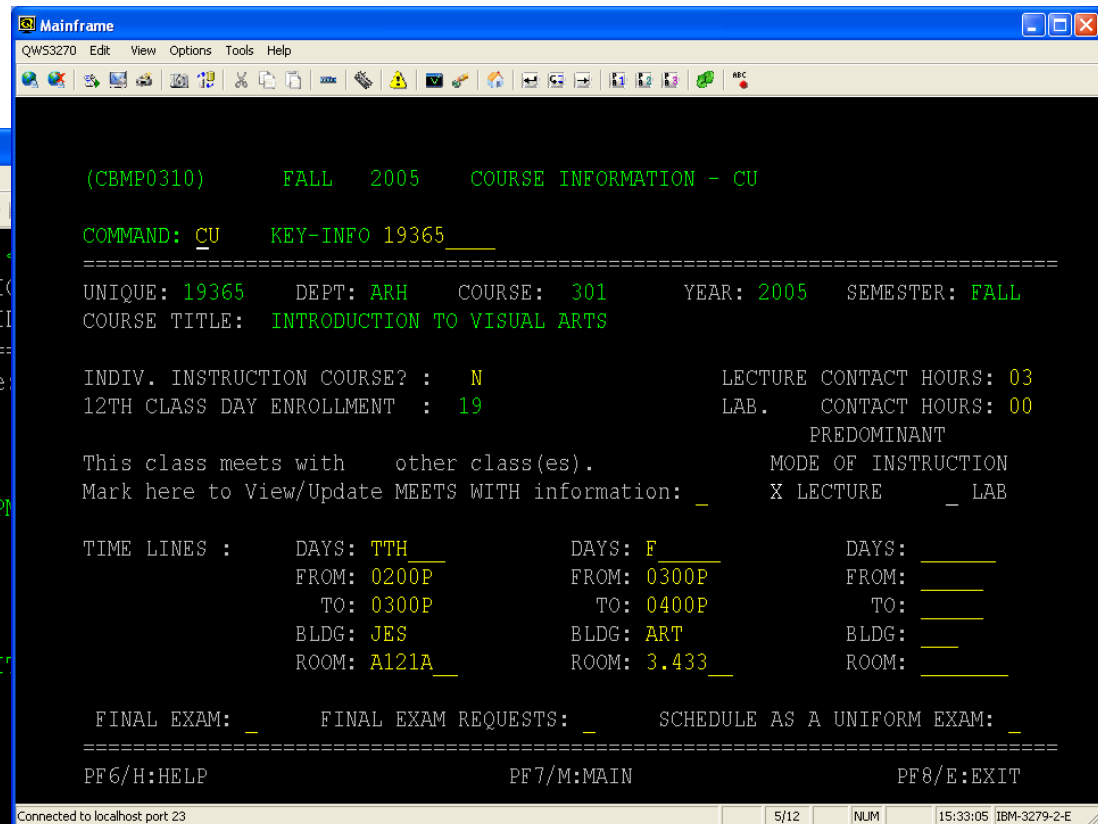
- Into what programs should I invest more resources?
- How are students progressing toward degrees?
- Which faculty are the most productive researchers?
- What changes are needed in our course offerings?
- How can we optimally utilize space, people, and financial resources to maximize productivity?
- And many, many, more.

Turns Mainframe Data...

Instead of *this*:



```
QWS3270 Edit View Options Tools Help
>> PLEASE ENTER NEXT COMMAND OR COURSE.
NRRECS          COURSE INFORMATION
COMMAND: CA YYS: 049 UNIQUE: 09365 EII
=====
Course number:  EDP  362  Course Title:
Cancelled:      Instructor:
Hours credit:  03.0    Meets with:
Closing limit: 18      Enrollment:
Meeting time:  TTH    11:00AM - 12:30PM
-
Notes:
UPPER-DIVISION STANDING REQUIRED.
COURSE NUMBER MAY BE REPEATED FOR CREDIT
TOPICS VARY.
SAME AS MAS 374 TOPIC 8
=====
PF6=HELP PF7=MAIN MENU PF8=EXIT PF5=SUB-MENU PF9= *ADM DATA:
Connected to localhost port 23 18/30 NUM 15:29:45 IBM-3279-2-E
```



```
Mainframe
QWS3270 Edit View Options Tools Help
(CBMP0310) FALL 2005 COURSE INFORMATION - CU
COMMAND: CU KEY-INFO 19365
=====
UNIQUE: 19365 DEPT: ARH COURSE: 301 YEAR: 2005 SEMESTER: FALL
COURSE TITLE: INTRODUCTION TO VISUAL ARTS

INDIV. INSTRUCTION COURSE? : N LECTURE CONTACT HOURS: 03
12TH CLASS DAY ENROLLMENT : 19 LAB. CONTACT HOURS: 00
PREDOMINANT
This class meets with other class(es). MODE OF INSTRUCTION
Mark here to View/Update MEETS WITH information: X LECTURE LAB

TIME LINES : DAYS: TTH FROM: 0200P TO: 0300P BLDG: JES ROOM: A121A
DAYS: F FROM: 0300P TO: 0400P BLDG: ART ROOM: 3.433
DAYS: FROM: TO: BLDG: ROOM:
FINAL EXAM: FINAL EXAM REQUESTS: SCHEDULE AS A UNIFORM EXAM:
=====
PF6/H:HELP PF7/M:MAIN PF8/E:EXIT
Connected to localhost port 23 5/12 NUM 15:33:05 IBM-3279-2-E
```



...Into Management Information

You can analyze *this*:

Cube was last updated on Thursday, September 15, 2005 10:09:54 AM

Offering College - Year / Semester - **Undergraduate** - Student Level - Student Major - Tenure Status - Primary Instructor Rank - Semester Group - Meets With (Yes or No) - Substantial Writing (Y/N) - Primary Instructor Name - Organized / Individual - MEASURES -

SCH (Semester Credit Hours) as values

Offering College	SCH (Semester Credit Hours)
LIBERAL ARTS (L)	2,641,539
NATURAL SCIENCES (E)	1,920,040
MCCOMBS SCHL OF BUSINESS (2)	659,403
ENGINEERING (4)	549,342
COMMUNICATION (C)	454,162
EDUCATION (3)	387,708
FINE ARTS (5)	359,852
Other	470,578

Enrollment (Seats Taken) as values

	1998-1999	1999-2000	2000-2001	2001-2002
EDP 397 (1-PSYCHOPATHOLOGY)	15	17	21	
EDP 380P (5-ADV PSYCHOED ASSMT AND EVAL)	NA	19	16	
EDP 398T (COLLEGE TEACHING METHODOLOGY)	22	16		
EDP 169K (STUDENT ORGANIZATNL LEADERSHIP)	19	21		
EDP 382L (5-PSYCHOLINGUISTICS)	NA	23		
EDP 399R (DISSERTATION)	20	19		
EDP 394K (3-INTRNSHP: PROF PRAC SCH PSY)	20	21		
EDP 397 (2-CHILD PSYCHOPATHOLOGY)	20	14		
EDP 362 (4-MEXICAN AMERS IN SCHOOL PROC)	19	NA		
EDP 382K (6-STRUCTURAL EQUATION MODELING)	NA	NA		
EDP 362T (TESTS AND MEASUREMENTS)	17	13		

Class profile report

Class Info:

CCYYS: 20049
 Course #: EDP 362
 Course Title: 4-MEXICAN AMERS IN SCHOOL PROC
 Section Unique: 9365
 Enrollment: 20
 Total SCH: 60
 Primary Instr: VALENCIA, RICHARD
 Offering Dept: DEPT OF EDUCATIONAL PSYCHOLOGY
 Offering College: EDUCATION
 Funding Dept: DEPT OF EDUCATIONAL PSYCHOLOGY
 Funding College: EDUCATION

Meeting Info:

Section Unique	Meeting Days	From Time	To Time	Building	Room	Room Capacity	All Sections Enrollment
9365	TTH	1100AM	1230PM	S2B	416	40	39
34050	TTH	1100AM	1230PM	S2B	416	40	39

Meets - With:

Section Unique	Course Number	Course Title	School Title
9365	EDP 362	4-MEXICAN AMERS IN SCHOOL PROC	EDUCATION
34050	MAS 374	8-MEXICAN AMERS IN SCHOOL PROC	LIBERAL ARTS

Instructor(s) of Record:

Name	% Credit	Section Unique	CCYYS	Section Unique Enrollment	All Sections Enrollment
VALENCIA, RICHARD	100	9365	20049	20	39
VALENCIA, RICHARD	100	34050	20049	19	39

How has UT Austin Developed IQ to this point?

Guiding Principles:

- Crawl, Walk, Run
- Strong, Stable Legacy Systems
- Spend time to correctly define Audience/ Customer Needs
- Build for Long-Term, not just an answer for a specific day's question

Key Resource Dependencies:

- Trusted, Talented Staff
- Dedicated, Undistracted Team
- Availability of Audience/ Customers being served
- Clarity of Business Questions to be answered, and data needed to address broadly

How the State Might Proceed?

- Establish & Equip Database – This is primarily a technical need that will need to contemplate dozens of decisions in building, but that should be fairly straightforward to put in place
- Establish Data Collection Processes – This will be very challenging due to the different systems used around the state, the different technological tools and personnel available to help, and the different ways that agencies define and use systems/data

How the State Might Proceed (continued...)

- Establish Common Definitions Pertinent to Key Questions – This is challenging but UT Austin benefitted from its decisions to limit the audience to specific leaders and specific questions/data areas
- Establish Targets for Deliverables – This is a scoping exercise that will be challenging because of the limited time of the audience being served and the differing priorities on what each feels should be addressed first

Other practical challenges that will translate to similar challenges at state-wide level

- Different Granularity of Data Collected – Some state entities have systems have been developed and/or modified to collect more information at a deeper level of detail
- Keeping Data Up-to-Date & Accurate as State-wide system grows, and different source system evolve
- Security / Sensitivity of Data – Appropriate use and access will be delicate issues to address at some point

**Other practical challenges that will translate
to similar challenges at state-wide level
(continued...)**

- Remaining Capacity / Margin for Trusted,
Talented State Resources – Seeing this as an ongoing and evergreen process as opposed to a project with a definitive beginning and end will require an ongoing talent pool and consistent leadership approach.

UT Austin's data collection systems to improve efficiency and integrity of information

- College-centric data systems
- Met with colleges to come up with common data and reports that they all agreed would serve them
- Established ongoing enhancement group to accommodate changes in data needs as time goes on

Various higher-Ed, state, & other organizations UT Austin has given IQ briefings

- Texas A&M University
- All Other Big XII Universities
- Louisiana State University
- University of Florida
- UT Arlington, UT San Antonio, UT El Paso, UT System Administration
- University of Houston
- UT HSC - San Antonio, UT Permian Basin, UT Tyler, UT Dallas
- State University of New York – Buffalo
- University of North Texas
- Hosted International Higher Education Data Warehousing Forum in 2007, and will host again in 2012.

**Various higher-Ed, state, & other organizations
UT Austin has given IQ briefings
(continued...)**

- Texas Health and Human Services Commission
- Texas Education Agency
- Joint Senate and House Higher Education Committee
- Governor's and Lt. Governor's Office
- Legislative Budget Board
- Texas State Comptroller's Office
- Gates Foundation
- And Many, Many More...

Thank You Very Much

Q & A

