

TELLING A STORY WITH DATA

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- 217K students
- 52K degrees
- 37% of all degrees in Texas
- 40% are STEM degrees
- 900 MDs from 4 medical schools
- 2 new medical schools coming online



- \$2.7B in research
- 50% from federal sources
- 2/3 from health institutions



- 8 Nobel laureates
- 47 members of IOM
- 44 members of NAS
- 59 members of AAAS



- 40% hospitals, clinics, prof fees
- 13% state appropriations
- 9% revenues from tuition & fees



- 5 university-owned hospitals
- 1.4M hospital days annually



- 20K faculty
- One of the largest employers in Texas



- A decade of earnings
- Students who left between 2002 and 2013 and entered the Texas workforce

Using Data to Tell a Story

Things to Consider

- Audience
 - How much do they know about the subject?
 - How familiar are they with data?
 - How much time do I have to engage them?
- Story / Message
- Goals
- Data available
- Elements of data presentation

Elements of Data Presentation

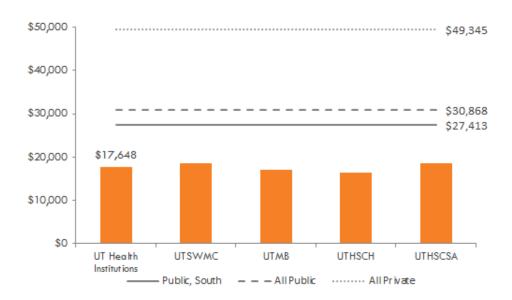
- Data points (measures)
- Breakouts (categories)
- Format
 - counts, percentages/ratios, etc.

- Context
 - benchmarking, write-ups
- Visuals
 - graphs/charts, tables, diagrams, images/logos
- Design
 - layout, colors

Complex is not always better

Medical School Average Tuition and Fees

UT Health Institutions, AY 2015



Best Practices

- Be Data Smart
 - Data is just data
 - Research and analysis transform the data into information
 - Visualization and presentation make that information consumable
- Beware Data Marketing
 - Data should tell a story, but only in the sense that the visualizations presented should accurately reflect underlying patterns
 - Not all data consumers are data savvy
 - Use good data practices and be consistent

Data Visualizations

Data Visualizations

- Facilitate understanding of complex information
- Provide context
- Allow user to interact and select specific data
- Support and inform policy-making decisions
- Evaluate the impact of policies, initiatives

Using Data Visualization to Inform Policy

- Use trend analysis and predictive modeling
- Communicate message to audiences of all levels
- Collaborate with other researchers, educational leaders, visualization experts, and outside agencies
- Provide benchmarks for comparison and/or progress

Example: Initiative Impact

- Presenting multiple data points
- Tracking progress
- Evaluating success



INTERNET TRAFFIC (GOOGLE ANALYTICS)
From Launch (May 14, 2015 - August 31, 2015) and Last 30 Days
Produced: September 1, 2015
The University of Texas System

Influuent Website



38% Returning Users 1,136 SESSIONS LAST 30 DAYS

36% Returning Users



- across all Influuent websites

 1. cancer 6. solar power
- 2. diabetes 7. biofuels
 3. parkinson's 8. plastic coating
- 4. alzheimer's 5. blood
- 9. magnetic resonance 10. epilepsy

MOST VIEWED | FACILITIES _

UT Austin
UTEP
Bioinformatics Computing Core Facility
UTHSCSA
Biomolecular MNR

UTMB Optical Microscopy Core
UT MDA Biospecimen Extraction Facility

RCMI Nanotechnology and Human Health Core Facility

WHERE THE TRAFFIC COMES FROM

TOP FIVE

States: Texas (65%), North Carolina, District of Columbia, Ohio, Pennsylvania

Countries: USA (69%), Russia (17%), United Kingdom, Denmark, India

WEBSITE TRAFFIC (SESSIONS)

F	rom Launch May 2015	Last 30 Days
Influuent Website	5,400	1,136
Health Institutions Portals	73,322	23,852
Academic Institutions Portals	43,090	12,809
Total	121 812	37 797





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What does it mean? <u>Direct</u> - URL is typed into browser <u>Referral</u> - link from another website (e.g., UT System homepage)

<u>Organic Search</u> - via a search engine (any term) <u>Social Media + Email</u> - via a link in social network or emai



How to Make It Happen

Building Capacity in Your Organization

Building a Foundation

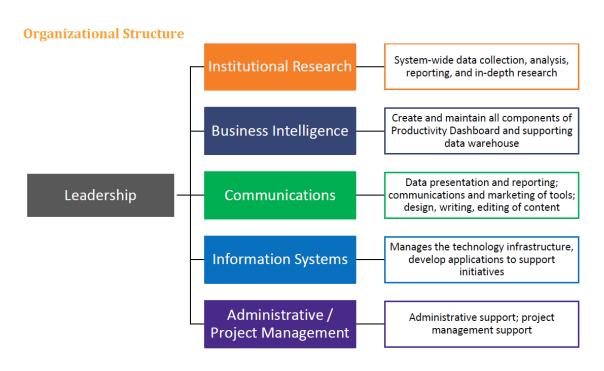
- Customer service
- Timeliness
- Reputation for quality—are you trusted?
- Solid knowledgebase
 - Content experts

Expanding Skill Sets

Expanding skill sets—beyond reporting

- Complex data analyses
- Strong technical writing
- Data presentation (visualizations)
- Communications

OSI's Organizational Structure



Major Initiatives/Projects **OSI Competencies/Functions** Leadership seekUT Research Institutional Research Influuent **Business Intelligence** Research data warehouse **Communications** BI - Dashboard & Reporting **Information Systems Outside Activity Portal Project Management** Ad Hoc Requests **Administrative Support** Consulting This chart shows the relationship between the OSI competencies and the major projects and functions of the office. The chart demonstrates the complexity of the work, a visualization of how each project has many different contributors from our office. OSI uses a multi-disciplinary approach for more creative problem-solving.

Focus on Communication Efforts

- Tell your story
 - Advertise
 - Talk to others about what you are doing (conferences, meetings, etc.)
 - Social media and blogging efforts
- Collaboration w/ external relations (communications/public affairs)
- In-house professionals

Case Study

The UT System Dashboard

Driving Forces

- Board of Regents
- Executive leadership
- State and national trends

Who is the Dashboard for?

Audience: Everyone

- System Administration
- Campuses
- Government; private industry; media
- Public access
- NOT a primary source for students/parents

Finding a Dashboard Solution

End-User Features

- Public-facing (no log-in required)
- User-friendly
- Ability to export
- Web-based custom reporting
- Mobile-friendly

Finding a Dashboard Solution

Internal Requirements

- Data warehouse integration with BI tools
- Streamline processes with automation
- Analyze large data sets
- Conduct robust statistical analyses

Dashboard Version 1

- First launched in December 2011
- Began as online fact book—not a true dashboard
- Started with 10 Core Indicators
- Grew to more than 70 measures
- Included some benchmarking
- Added some interactive data visualizations



User Feedback

- Hard to find what you are looking for
- Long load times
- No context
- Too few outcomes measures

The (r) Evolution of The UT System Dashboard

Responding to User Feedback

- Improve user experience
- Include more outcomes measures
- Create a functioning and highly-focused dashboard
- Incorporate more benchmarking, context, and analysis
- Design to be responsive, and easy to maintain and change

A Collaborative Effort

DASHBOARD ADVISORY GROUP

GROUPS

Focus

- Overarching goals
- Content Areas
- What matters? (metrics)
- •Feedback and guidance

WORKING Metrics Development

OSI staff, System staff, campus IR staff

Responsible for:

- •Metrics Refine and Define
- Data Sources
- •Breakdowns, Drill-down levels
- Benchmarks/Targets

Members

- Executive Leadership
- Campus Vice Presidents/Provosts

Design and Presentation

OSI staff, System staff

Responsible for:

- New design/user interface
- Data presentation
- Technology selection

Primary
Content Areas

Students

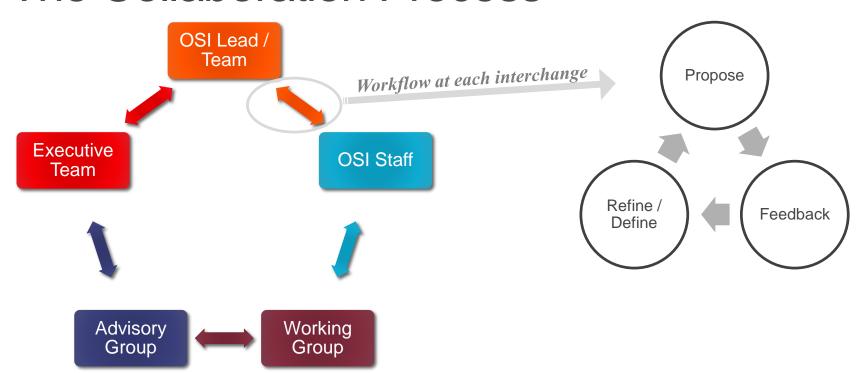
Faculty

Research / Tech Transfer

Finance / Productivity

Health

The Collaboration Process



Enhancements to the Dashboard

- Improved user experience to promote use
- Focused on outcomes measures
- Added context (What? Why?)
- Developed more infographics
- Created data narratives (stories)

Lessons Learned

- Start small—and start where you are
- Change is hard—expect resistance
- Demonstrate success and value and build on that
- Give them what they want—but show them what's possible
- Make the hard sell
 - And then do it again
 - And again

Demo

http://data.utsystem.edu