Ohio University's Guide to Launching an Analytics Initiative

OHIO UNIVERSITY

March 5, 2020

Presenter

As the Associate Provost for Institutional Research and Effectiveness at Ohio University, Loralyn leads the university's new analytics and decision-support initiative including the implementation of a modern data infrastructure and visualization platform, data governance structure, and end-user data literacy training for student lifecycle data. This initiative will allow OHIO to move from static tables and ad hoc reporting to a self-serve analytics environment where university decision-makers can access the data they need, when they need it.

Previously, Loralyn designed and implemented a comprehensive student success program at Paul Smith's College that won the 2015 University Business Inaugural Models of Excellence Program, the 2013 Lee Noel, Randi Levitz Retention Excellence Award and the Starfish 360 Student Success Award.

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Ohio University Background:

Established in 1804

- First in the Northwest Territory

Doctoral—High Research

- Access mission to Appalachian Ohio
- 5 Branch Campuses, 10 total locations

Over 30,000 students

- 25,000 undergrads
- Over 5,000 grads
- ~1000 medical students

Challenges:

Declining Enrollment

- Approaching demographic cliff

Sustainable business model

- Fixed costs increasing
  (health care, facilities, etc.)

External pressures

- Affordability
- Accountability

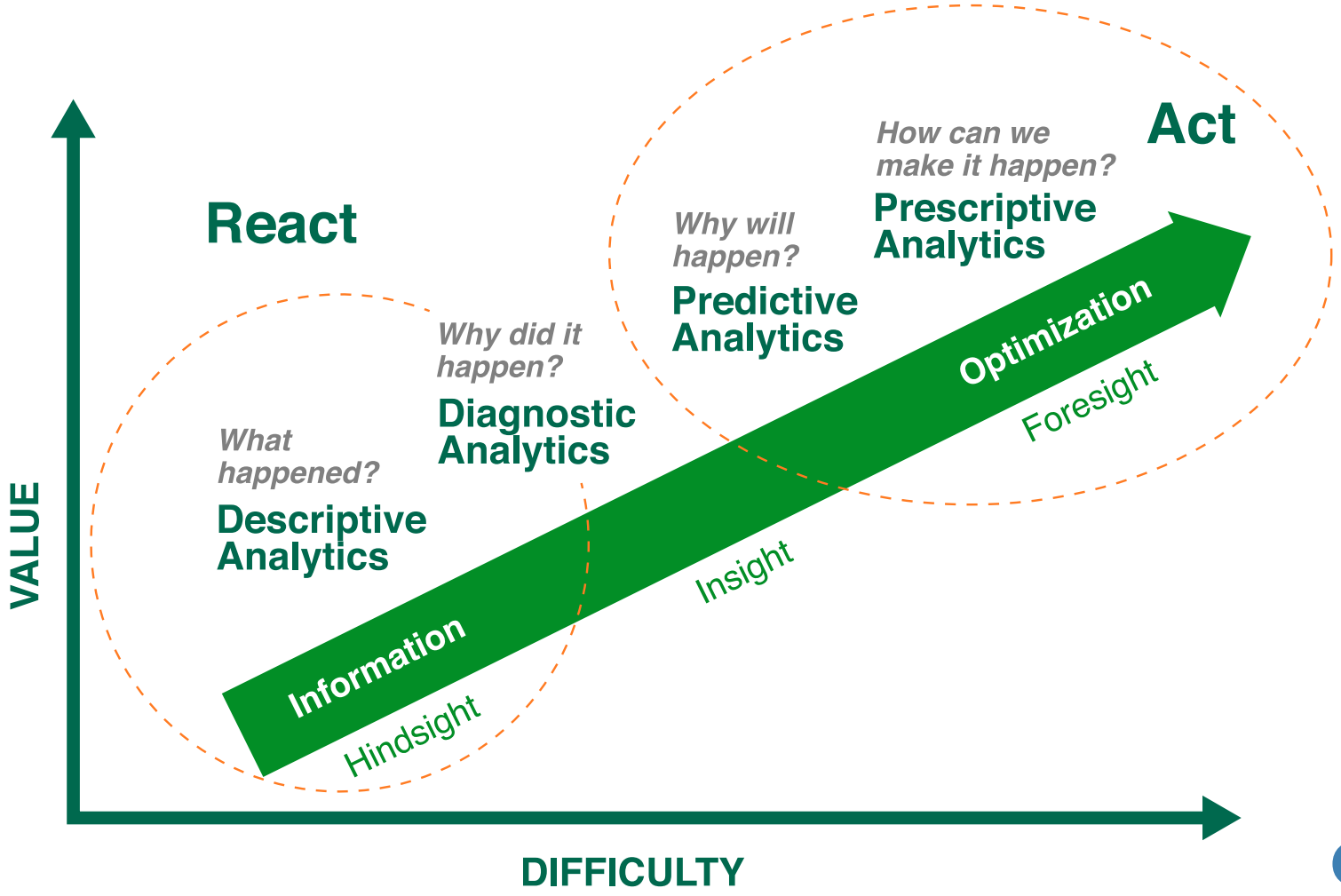
Problem Statement:

Increasing pace of change

- Shifting markets
- Increased competition
- New initiatives
- New external demands

Responsiveness

- All levels
- Alignment


React
Act
What happened?
Descriptive Analytics
Why did it happen?
Diagnostic Analytics
Why will happen?
Predictive Analytics
How can we make it happen?
Prescriptive Analytics
Information
Hindsight
Insight
Foresight
Optimization
VALUE
DIFFICULTY

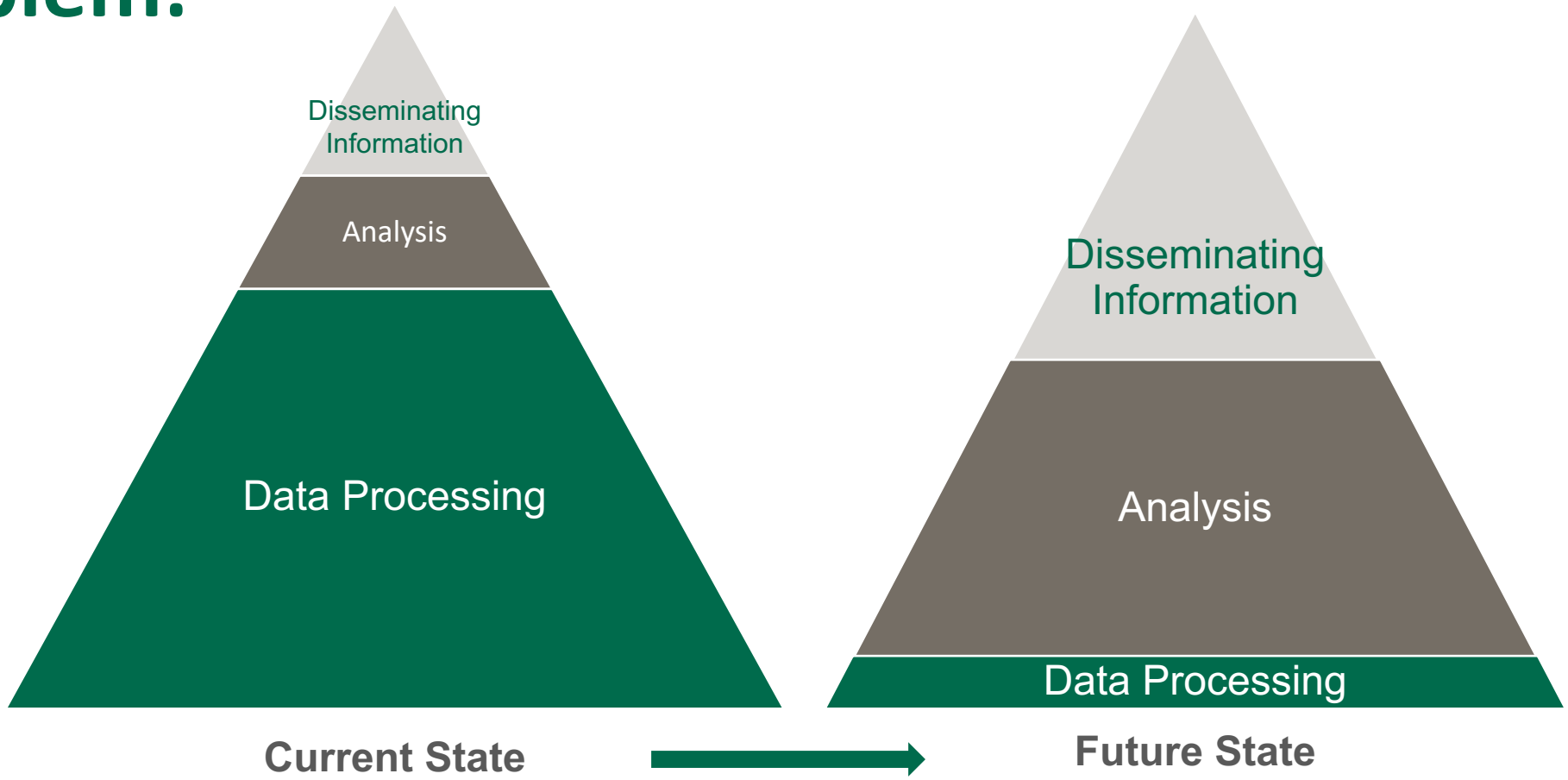
Gartner

Realities:

Data rich, information poor

- Siloed data systems
- Antiquated data infrastructure
- Decentralization
- Increased needs, declining resources
  - Under-investment in IRE

The Problem:


Disseminating Information
Analysis
Data Processing
Current State
Disseminating Information
Analysis
Data Processing
Future State

The Question:

How do we deliver relevant information and analyses to a variety of diverse stakeholders across the university at the right time to inform their decision-making?

Ready, set, analytics

The OHIO Guide

- Chapter 1: Change Management
- Chapter 2: A Plan of Action
- Chapter 3: Building Data Literacy
- Chapter 4: Data Governance Rules
- Chapter 5: Next Steps

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CHAPTER 1

Change Management

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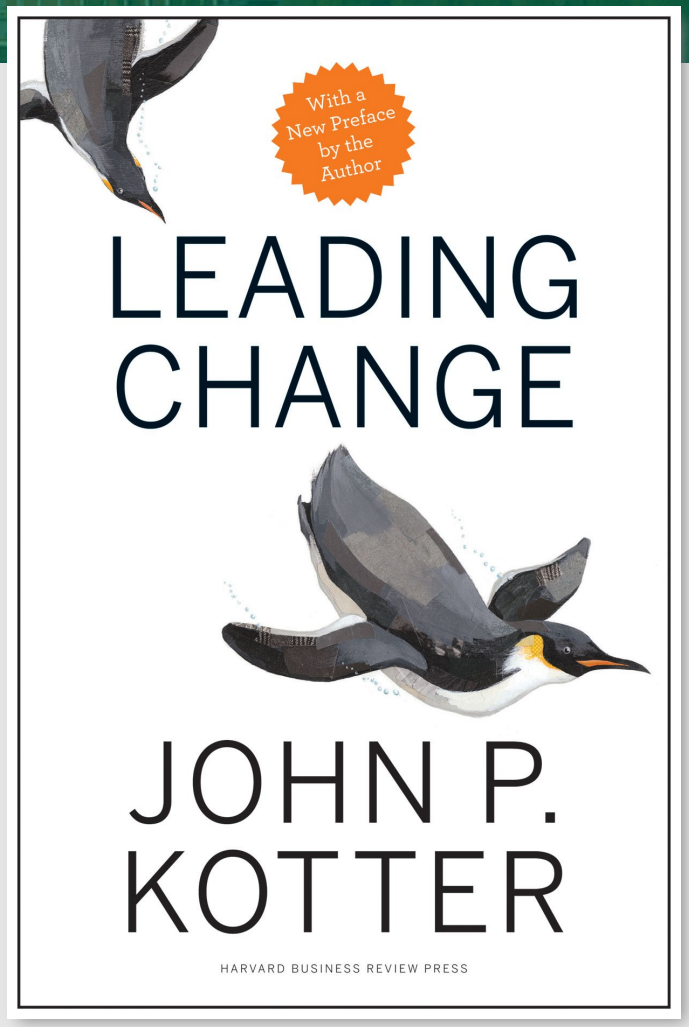
Change Management

Don’t change without it!

(Don’t worry you won’t)



Kotter's Eight Stage Process of Creating Major Change

Creating climate for change	1	Establishing a sense of urgency
	2	Creating the guiding coalition
	3	Developing a vision and strategy
Engaging and enabling the organization	4	Communicating the change vision
	5	Empowering broad-based action
	6	Generating short-term wins
Expanding and institutionalizing the change	7	Consolidating gains and producing more change
	8	Anchoring new approaches in the culture

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CHAPTER 2

A Plan of Action

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Creating a climate for change

1 Establish Sense of Urgency

2 Creating a Guiding Coalition

3 Developing a Vision and Strategy

Creating a sense of urgency:

Challenges:

- Declining Enrollment
  - Approaching demographic cliff
- Sustainable business model
  - Fixed costs increasing (health care, facilities, etc.)
- External pressures
  - Affordability
  - Accountability

Problem Statement:

- Increasing pace of change
  - Shifting markets
  - Increased competition
  - New initiatives
  - New external demands
- Responsiveness
  - All levels
  - Alignment

Creating a Coalition:

Stakeholders

- Who benefits?
- Who does the work?
- Data stewards/managers/owners

Executive Decision-makers

- Who decides?
- Who pays?
- Who will they listen to?

Creating a Vision:

IR Visioning Taskforce

- Executive leaders & partners
  - CIO, HR, Provost Office, Deans, VPEM, Registrar
- Stakeholders
  - Faculty, Research, Data users

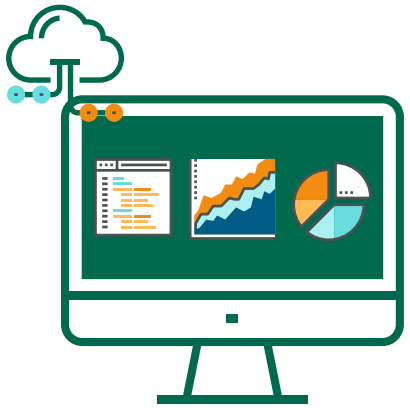
Finding a Partner:

Build vs. Buy

- Expertise
- Time
- Money
- History
- Institutional Attention span

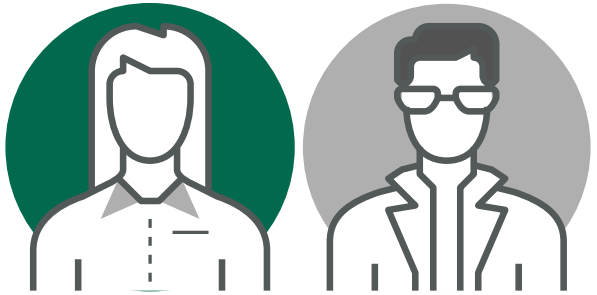
HelioCampus Offering:

Data Platform



Best in class visual analytics deployed rapidly and built on a scalable cloud data infrastructure.

Data Analysis & Data Science



Enabled by experts in analytics and higher education who identify trends to help you inform and act.

Results

Directly impact student success, institutional efficiency and policy.

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Engaging & enabling the organization

4 Communicating the change vision

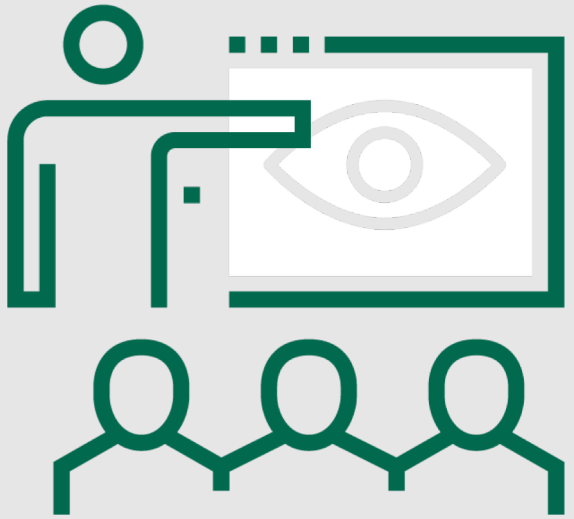
5 Empowering broad-based action

6 Generating short-term wins

Promoting the Vision:

Stakeholder Communication

- Provost Senior Staff
- Deans' Council
- Data & Reporting User Group
- Functional Offices
  - Data validation
  - Dashboard validation
  - Initial roll-out



Concerns:

Self-serve analyses

- Incorrect use
- How can I help

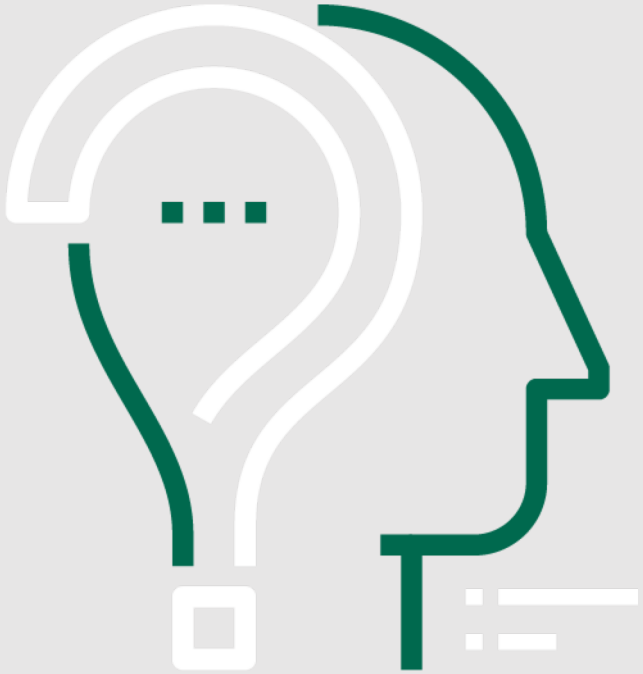
Ask for additional data/analysis

- No resources

Data quality

- Process improvement opportunity

No single source of truth



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CHAPTER 3

Growing Data Literacy

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“Data without insights is meaningless, and insights without action are pointless”

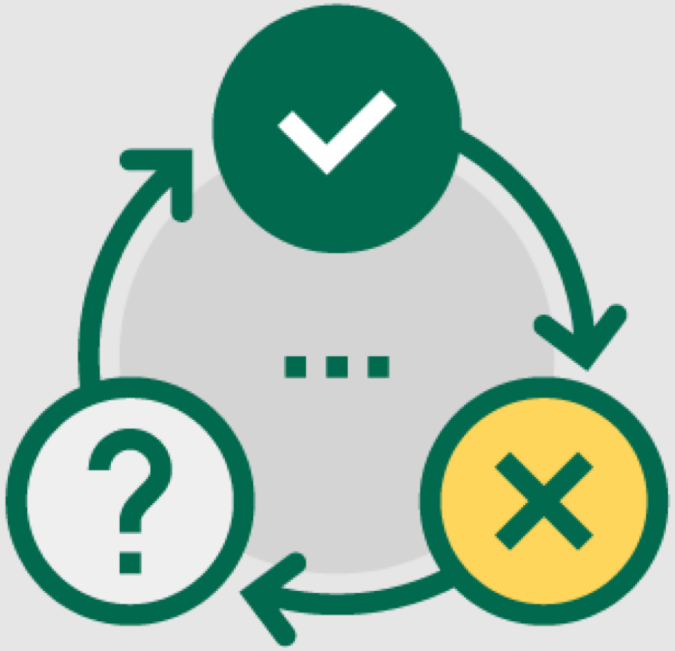
Tomas Chamorro-Premuzic

https://hbr.org/2020/02/are-you-still-prioritizing-intuition-over-data

A Data Literate Culture:

Without, decisions based on:

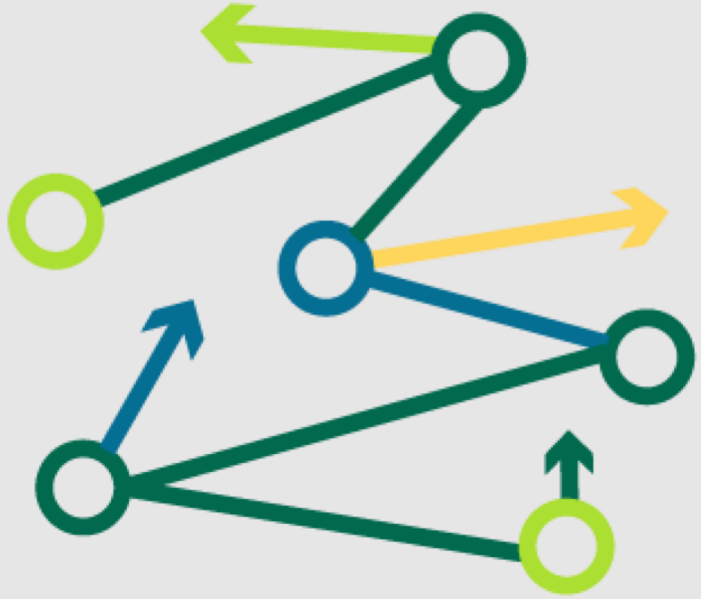
- Incomplete understanding
- Isolated experiences
- Educated guesses
- Anecdotes
- Psychological biases



A Data Literate Culture:

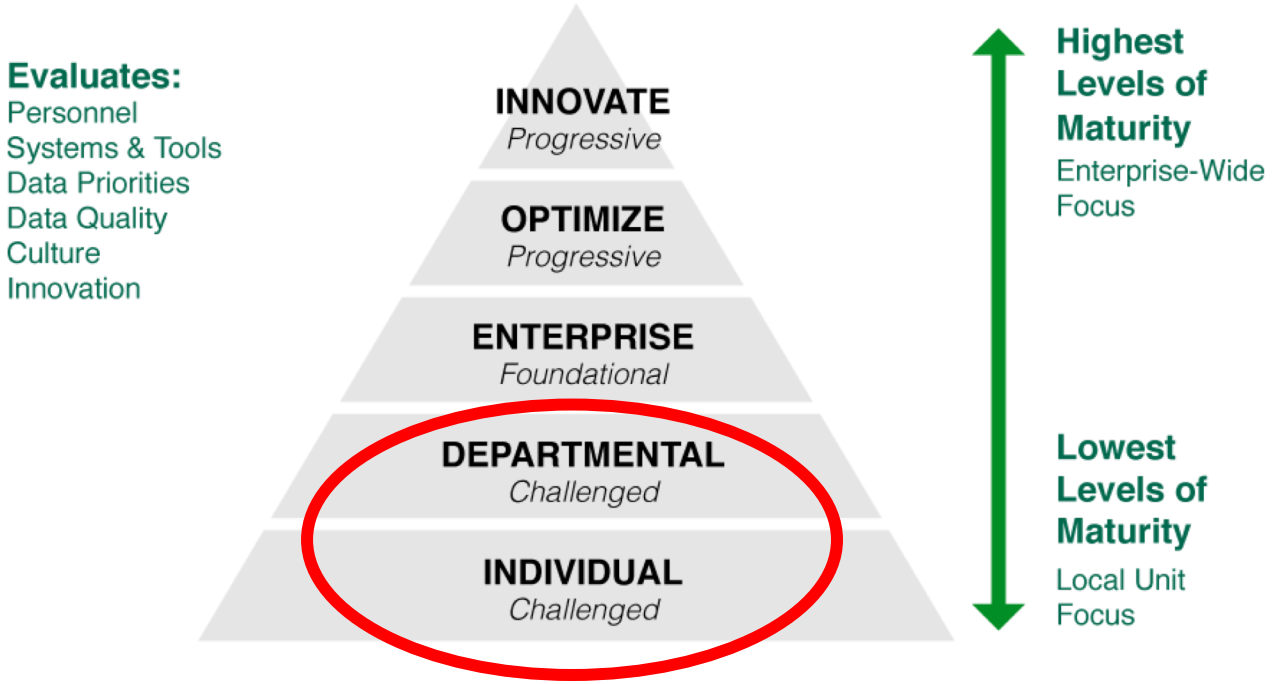
Barriers

- Lack of availability
- Not accurate
- Not timely
- Accountability, not improvement
- Wrong use case
- Leadership doesn’t value



Data Literacy—Institutional

Assessing Campus Data Maturity Categories:
SAS Information Evolution Model and Associated States of Being



Adapted from Zeid (2014) Business transformation: A roadmap for maximum organizational insights.

Cultivating a Data Culture in Higher Education (2018) editors: K. Powers & A. Henderson

Promoting Data Use:

Build Communities of Practice

- Multiple levels

Require data support for decisions

- Review & discuss data

Incorporate into IE Practices

- Program Review metrics

Data Summits

Cultivate Data Champions

Data Literacy — Individuals

Inquire

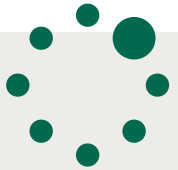
Ask the right question

Inspect

Find/select the right data/report/ dashboard

Interpret

What have I learned?



Iterate

Do I need to look at additional data?

Inform

Communicate results for data-informed decision-making

Promoting Data Use:

Reduce Barriers

- Training
  - Address level and business case
- Be explicit

Continuing Support

- Available

Proactive Communications

- Nudging

Building Data Culture-Tips:

KISS

- Keep your end-user in mind
  - How are you helping?

Focus

- Institutional priorities & initiatives
- Avoid paralysis by analysis
  - What data would change your mind?

Intuitive

- Increased comfort, increased use

Build Communities of Practice

Empowering Data Use:

Standardized definitions

- Common understanding

Consistent vocabulary

- Simple, intuitive

Documentation

- Force multiplier
- Continuity planning

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CHAPTER 4

Data Governance Rules

From Model to Function:

Responsive

- Function over model
- Start small & scale
  - Cohort model

Risk-based

- IRB model

Data Governance:

Vision

To create and maintain a **robust, open, and integrated data environment** which provides the capacity for accurate and timely decision-support to University stakeholders—both internal and external.

OHIO Guiding Principles:

Openness
Owned by the University, open by default

Stewardship
Accurate, available, and well documented

Accountability
Data managers are responsible for accuracy and data quality

Culture of Change
Committed to leveraging our data resources—data literacy and culture of use must be built

Agility
Ever-changing data environment that reflects changing institutional priorities

Consistency
These principles will be consistently followed

DISCLAIMER

Data Governance—Tips:

Get Help!--Librarians

Archive

- Data definitions
- Specifications
  - Reports & Processes

UX

- Entry-level end-user
- Intuitive
- Ease-of-use

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CHAPTER 5

Next Steps

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Next Steps and Analysis Roadmap:

	Mar 2020	Apr – Jun 2020	Jul – Sep 2020	Oct – Dec 2020
Data Model / Platform Enhancements	**Initial Launch** • Admissions data model and Admissions Trends dashboards • Course Registrations data model and Enrollment Trends dashboards • Financial Aid data model and Financial Aid Trends dashboards	• Class Faculty data model and dashboards • Student Success data models & dashboards • Historical Census data	• NSC data (DA and SE) • Slate/CRM integration (explore for prospective student funnel) • Transfer-in course data	**TBD**
Strategic Analysis & Data Science		• Admissions yield modeling • Operationalizing and visualization of yield modeling results	• Retention and student risk scoring to inform targeted interventions • Revenue forecast modeling	• Explore predictive variables in Student Success dashboards • TBD

Think about DATA:

Data

- Accurate, timely, informative

Accountable

- Data Governance & managers
- End-users

Technology

- Data infrastructure

Autonomy

- Support individual action

Adapted from: Pedersen and Ritter

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Expanding and institutionalizing the change

7 Consolidating gains and producing more change

8 Anchoring new approaches in the culture

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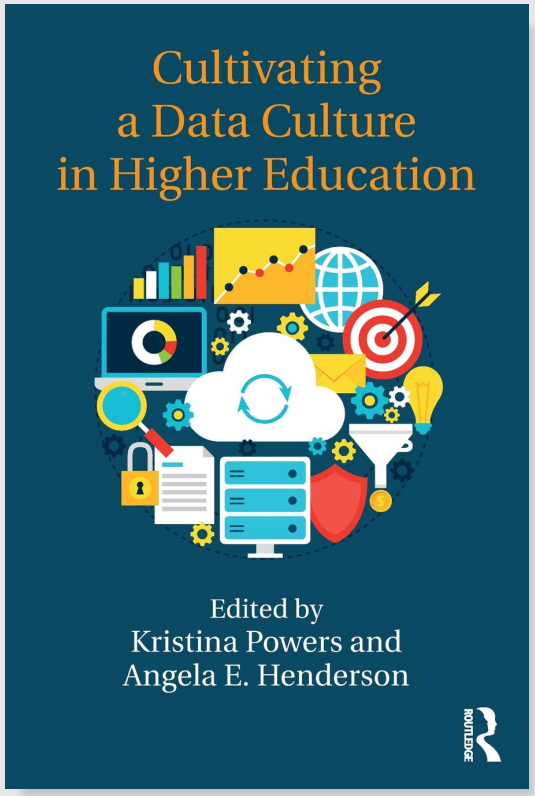

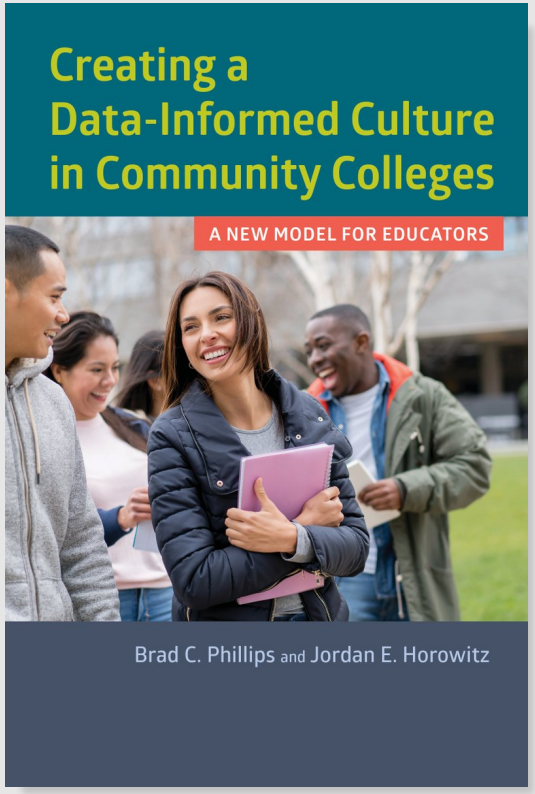

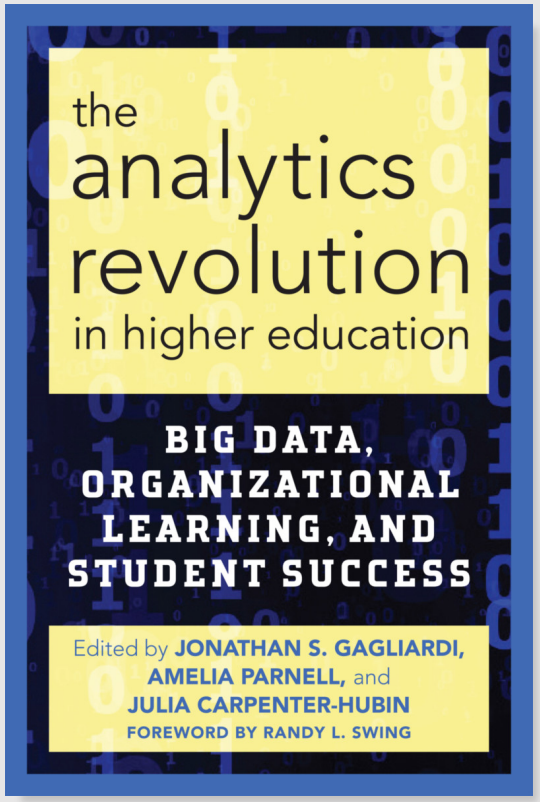

Resources:

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- Making Analytics Accessible, Understandable, and Actionable. Darren Catalano (2016), Educause Review https://er.educause.edu/articles/2016/10/making-analytics-accessible-understandable-and-actionable
- Planting the Seeds of Analytics. Brian Haugabrook (2016), Educause Review https://er.educause.edu/articles/2016/9/planting-the-seed-of-analytics
- Use This Framework to Predict the Success of Your Big Data Project. Carsten Lund Pedersen and Thomas Ritter (2020) HBR https://hbr.org/2020/02/use-this-framework-to-predict-the-success-of-your-big-data-project

Questions?

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