Actionable Data for Advisors: Supporting a Data Culture

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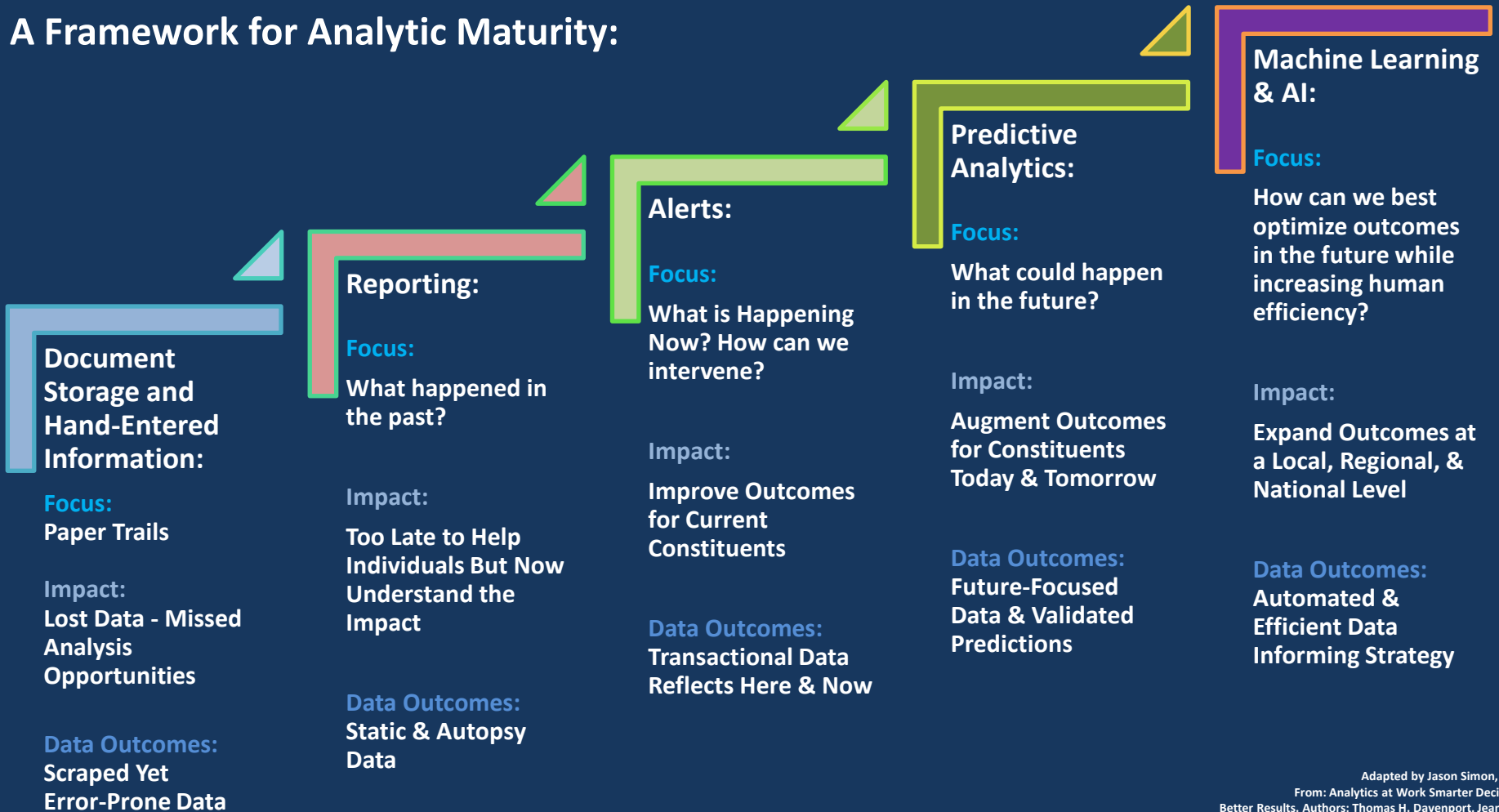In one word, what is your biggest challenge to leverage data to inform your work?

DATA AND ANALYTICS MATURITY

Assessing Your Institutional Culture Around Data Maturity

INDIVIDUAL	DEPARTMENTAL	ENTERPRISE	OPTIMIZE	INNOVATE
Focus is on immediate and tactical needs	Focus on individual department metrics - "looking good"	Balance between department and enterprise needs	Automating of insight-driven decision making	Proactive and focused on continuous improvement
Focus is on here and now	Entire departments are savvy with data	Enterprise drives focus - KPIs established	Value chain ethos drives out waste to reduce costs	Fosters and rewards innovation at all levels
Supports day-to-day operations	Follow solid processes to govern data	Information is a critical asset. Internal and external data integrated	Heightened focus on external market conditions-foresight is easier	Exceptional at incorporating external data sources
Narrow "Stovepipe" applications and transaction systems	Data structures and analytics work in silos. not institution wide. Multiple versions of truth	Institution understands business value chain. Data quality is appreciated	Unstructured data analysis is the new norm-driving additional insights	Analytics-driven product and service decisions & dominates in industry
Decisions after the fact	Teams aware of future possibilities, unequipped to breakdown silos	Enterprise-wide use of data drives growth and goals.	Expansion of operations as better data reduces risk	Groups formed leveraging competencies

Zeid (2014). Business Transformation: A roadmap for maximum organizational insights

A Framework for Analytic Maturity:

Document Storage and Hand-Entered Information:

Focus:
Paper Trails

Impact:
Lost Data - Missed Analysis Opportunities

Data Outcomes:
Scraped Yet Error-Prone Data

Reporting:

Focus:
What happened in the past?

Impact:
Too Late to Help Individuals But Now Understand the Impact

Data Outcomes:
Static & Autopsy Data

Alerts:

Focus:
What is Happening Now? How can we intervene?

Impact:
Improve Outcomes for Current Constituents

Data Outcomes:
Transactional Data Reflects Here & Now

Predictive Analytics:

Focus:
What could happen in the future?

Impact:
Augment Outcomes for Constituents Today & Tomorrow

Data Outcomes:
Future-Focused Data & Validated Predictions

Machine Learning & AI:

Focus:
How can we best optimize outcomes in the future while increasing human efficiency?

Impact:
Expand Outcomes at a Local, Regional, & National Level

Data Outcomes:
Automated & Efficient Data Informing Strategy

What is your current analytic maturity?

Document storage and hand-entered information (Focus: paper trails)
████████████████████ 22%

Reporting (Focus: What happened in the past?)
██████████████████████ 26%

Alerts (Focus: What is happening now? How can we intervene?)
██ 43%

Predictive Analytics (Focus: What could happen in the future?)
████████████ 10%

Machine learning and AI (How can we best optimize outcomes in the future while increase human efficiency?)
█ 0%

What is Data Agency?

Data Agency involves the ability to access and create utility from data.

Do higher educational professionals depend on others (individuals or offices at their institution) to retrieve data for them?

Do higher education professionals have access to technologies needed to aggregate data, create reports, and confirm assumptions?

Do higher educational professionals feel empowered to make critical decisions based on data?

High levels of data agency will positively impact your ability to use data to influence and empower your work.

Various Dimensions of Data Agency

Access to Accurate Data	Dependence on others to obtain data	Dependence on others to conduct analyses	Access to interactive dashboards
Access to metrics needed to inform my work	Attend meetings where there are no conflicting data points	Feel empowered to make decisions based on data	Empowered by supervisor to act on and use data

I have the data agency I need to be successful in my job.

Strongly Disagree
14%

Disagree
37%

Agree
42%

Strongly Agree
7%

DEVELOPING A RUBRIC: STUDENT RETENTION INDEX

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THIRTEEN INSTITUTIONS. UNLIMITED POSSIBILITIES.

What is the Retention Index?

- The retention index is a composite score indicating a student's likelihood of being retained in the 2nd Fall semester.
  - Two retention indices have been developed using 2014-2019 data:
    - Fall FTIC students
    - Transfer students
  - The score is composed of pre-matriculation variables only.
    - Student characteristics
    - High school (or prior institution) characteristics
  - The FTIC and Transfer retention indices have some different variables.

Methodology

- Retention rates for Fall 2014 through Fall 2019 FTIC (and Transfer) cohorts were calculated for each student and high school characteristic.

- An index value was then assigned for each category within the characteristic, based on the historical retention rate.

- Higher values represent a higher likelihood of being retained.

High School Percentile	Top 5	6-10	No Rank	11-20	21-30	31-40	Below 40
Retention Rate	93.2	89.1	88	87.8	85.5	84.6	79.1
Index Value	3	2	2	2	1	1	0

Methodology (cont.)

- Students were assigned a total index score by summing their index values for each characteristic.
- To test the scaling of the index, retention rates were then calculated by total index score.

Total Index Score	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Retention Rate	100	98.8	97.9	95.8	93.8	91.6	88.4	84.7	74.8	73.6	61	54.2	45.8	39.3	0	0

Institutional First-Year Persistence Rate = 90%
(2019 FTIC Cohort, THECB)

Transfer Students - Components of the Dashboard

Demographics

- Gender
- Race/Ethnicity
- Age
- First-generation status
- Completed an early application
- Received need-based aid
- GPA from prior institution

Prior Institution Information

- Prior institution name
- Prior institution city and state
- Out-of-state or in-state prior institution
- Retention rate of prior institution's students who attend the institution

Institutional Information

- Institutional student ID
- First Fall semester GPA quartile
- Student school
- Student major
- Fall to fall retention rate

STUDENT PROGRESSION

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PREDICTIVE MODELING

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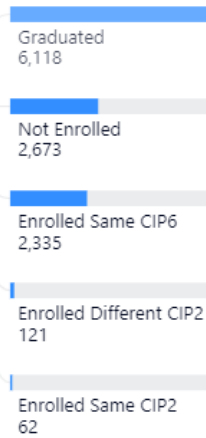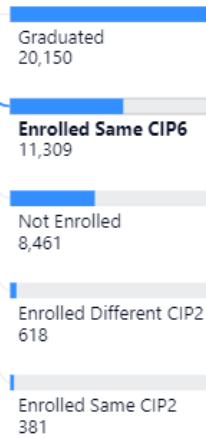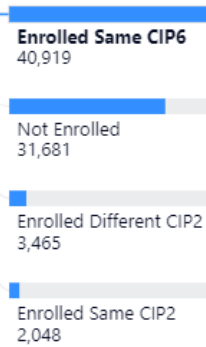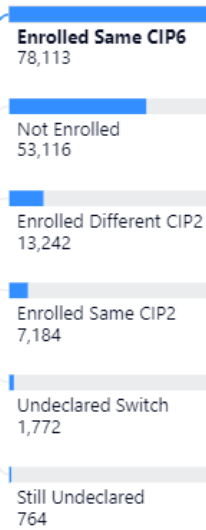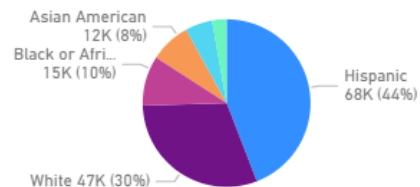
Factors Significantly Impacting Retention

- GPA (First Year)
- Work Study Flag
- Classification: Junior
- Classification: Sophomore
- Plus Loan Flag
- Transferred In 2017
- Race/Ethnicity: African Ameri...
- Other Grants And Scholarshi...
- Institutional Grants and Scho...
- Race/Ethnicity: Hispanic
- Transferred In 2016
- Transferred In 2013
- Transferred In 2014
- Gender: Male
- Loan Flag
- Credits Earned Before Transfer
- Transferred In Spring Term
- Major: Health
- Major: Other
- Major: Arts
- Major: Biology And Life Scien...
- Major: Agriculture And Natur...
- Transferred In Summer Term

1.00

0   5   10

Effect ● Negative ● Positive

Institution

- ○ UT Austin
- ○ UTA
- ○ UTD
- ○ UTEP
- ○ UTPB
- ○ UTRGV
- ● UTSA
- ○ UTT

Shared Factors: Those Factors that have a significant impact (in the same direction) on BOTH Retention and Graduation

Effect	Variable
Positive	Classification: Junior
Positive	Classification: Sophomore
Positive	Credits Earned Before Transfer
Positive	GPA (First Year)
Positive	Institutional Grants and Scholarships Flag
Positive	Other Grants And Scholarships Flag
Positive	Race/Ethnicity: African American
Positive	Race/Ethnicity: Hispanic
Positive	Transferred In 2013
Positive	Transferred In 2014
Positive	Work Study Flag
Negative	Major: Agriculture And Natural Resources
Negative	Major: Arts
Negative	Major: Health
Negative	Major: Other
Negative	Transferred In Spring Term
Negative	Transferred In Summer Term

Factors Significantly Impacting Graduation

- Classification: Junior
- Classification: Senior
- Classification: Sophomore
- GPA (First Year)
- Work Study Flag
- Institutional Grants and Scho...
- Major: Communications And ...
- Transferred In 2014
- Other Grants And Scholarshi...
- Concurrent Enrollment Flag
- Transferred In 2013
- Plus Loan Flag
- Major: Law And Public Policy
- Race/Ethnicity: African Ameri...
- Transferred In 2012
- Race/Ethnicity: Hispanic
- Credits Earned Before Transfer
- Gender: Male
- Pell Grants Flag
- Transferred In Spring Term
- Major: Humanities And Liber...
- Transferred In Summer Term
- Race/Ethnicity: Other Races
- Major: Architecture And Engi...
- Major: Computers/Statistics/...
- Major: Physical Sciences
- Major: Health
- Major: Other
- Major: Arts
- Major: Agriculture And Natur...

1.00

0   5   10

Effect ● Negative ● Positive

CAREER INSIGHTS

Common pathways for UT Austin graduates with degrees in
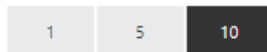
Accounting - BBA ⌄

TEXAS — The University of Texas at Austin

In order to preserve student privacy, some fields may be blank when there are too few records.

ⓘ Select Year After Graduation

1 | 5 | 10

Select Comparison Year

1 | 5 | **10**

career insights by seekUT

Most UT Austin graduates stay and work in Texas ⓘ

$50,391 Median
$32,648 Bottom 25%
$63,114 Top 25%

Earnings reported for UT Austin graduates found working full time in Texas one year after graduation ⓘ

% of UT Austin graduates found working in Texas one year after graduation ⓘ — **81.0%**

Top Industries in Texas Where Graduates Are Found Working ⓘ

Accounting, Tax Preparation, Bookkeeping, and Payroll Services
Colleges, Universities, and Professional Schools
Management, Scientific, and Technical Consulting Services
Employment Services

$139,721 Median
$106,396 Bottom 25%
$176,318 Top 25%

Earnings reported for UT Austin graduates found working full time in Texas ten years after graduation ⓘ

% of UT Austin graduates found working in Texas ten years after graduation ⓘ — **68.1%**

Top Industries in Texas Where Graduates Are Found Working ⓘ

Accounting, Tax Preparation, Bookkeeping, and Payroll Services
Employment Services
Other Financial Investment Activities
Oil and Gas Extraction

Some leave Texas and work ⓘ

Data in this section is for ALL majors in this area of study, 2001-2015
Business, Management, Marketing, and Related Support Services

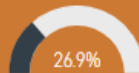% of UT Austin graduates found working outside of Texas one year after graduation — **20.5%**

Top 3 Industries Outside Texas

Professional, Scientific, and Technic...
Finance and Insurance
Information

Top 3 Regions Outside Texas ⓘ

Middle Atlantic Division
Pacific Division
East North Central Division

% of UT Austin graduates found working outside of Texas ten years after graduation — **26.9%**

Top 3 Industries Outside Texas

Professional, Scientific, and Techni...
Finance and Insurance
Information

Top 3 Regions Outside Texas ⓘ

Pacific Division
Middle Atlantic Division
South Atlantic Division

Some continue their education ⓘ

Education status of UT Austin graduates one year after graduation

Status	Percent
Enrolled	6.6%
No Additional Degree/Not Enrolled	32.3%
Received Master's	61.0%

Education status of UT Austin graduates ten years after graduation

Status	Percent
Enrolled	1.3%
No Additional Degree/Not Enrolled	85.1%
Received 2nd Bacc	0.1%
Received Master's	9.1%
Received Professional	4.3%