EDUCAUSE/NACUBO Administrative IT Summit
June 2015
Analytics as a Strategic Asset

At the 2015 EDUCAUSE/NACUBO Administrative IT Summit, IT and business leaders collaboratively discussed analytics as an opportunity to expand the value of administrative systems and services from essential operational infrastructure to key strategic asset. A breakout session allowed attendees to discuss and explore ways to advance the maturity of their analytics strategies. Conversation focused around the six dimensions, or focus areas, of the ECAR Analytics Maturity Index.

This document presents the comments that were gathered on flip charts during the discussion. Comments have not been edited.

CULTURE

Obstacles

Question: Regardless of your score on the index, what is the obstacle that is keeping your institution from being at the next maturity level for this dimension? Are there particular resources (funding, personnel, time, institutional support, etc.) that are needed to advance in this dimension?

- Not well understood
- Analytics not coordinated
- I'm fine, they're a mess
- No culture of measurement - we have a culture of counting
- People are in silos
- IR and Admissions not coordinated
- Culture seems stagnant: slow - almost glacial. Is that okay?
- Students, faculty, staff, administration are the real problem!!
- IT barriers no longer an excuse for delays
- People don't understand the implications of D3M [data-driven decision making]
- Customers still just want operational reporting, don't understand the kind of information they can request
- Aversion to business like approach to data and decisions
- Can't be one by imprimitur
- Fear based decisions / culture can torpedo analytics solutions before they can add value
- People behave with provincial / departmental focus, not the interest of the institution as a whole
- Concern about generating enthusiasm
- How to get the right people involved
- The president makes all the decisions
- Lack of understanding about what this means
- Difference between human systems issues and tech issues—people miss the people system
- Lack of shared governance
- Corrupt data→can it be fixed?
Successes

Question: Regardless of your score on the index, think about where you have had success in this dimension. What were the keys to that success? What helped you get there?

- Recruiting a BI/analytics director for finance
- Getting validation from CFO by bringing him to this conference

Strategies/next steps

Question: To move the needle in this dimension, what are you going to do a) next week, b) in the next 90 days, and c) as part of planning for the future?

- Leverage research-mindedness of faculty
- Demonstrate real capabilities of software and tools
- Socialize "information/data informed, data-empowered" vs D3M [data-driven decision making]. "Decision-making" has negative connotations
- Be careful with how prescriptive analytics are used and described
- Be sensitive to ethical considerations for use of analytics
- Provide faculty [opportunity] to experience success through collaboration
- Building relationships with customers to partner for mutual success
- Help identify common purposes / opportunities for success and improvements
- High value in partnering
- Support an open dialogue
- Listen more than you talk
- Momentum can come through small quick wins that show value to senior management
- Talk about the institutional mission, not technology. Tie your points to this
- "Always be closing"
- Build alliances with faculty as part of gaining buy-in
- Identify your stakeholders - build a RACI chart
- Build relationships - change minds
- Show results of maturity indices as a way to start conversations and influence / change culture
- Allies and advocates - who are they?
- Be reliable and responsive - relationships will follow
- Work through gaps and be transparent about the differences between what is promised and what is delivered
- Are we using similar terms? Using the same language? Agree on terms - then be clear, be consistent
- Establish a baseline understanding so you know what is driving each department
- Avoid leading with IT - focus on culture issues / resolutions and let the Deans / IR / faculty drive
- Encourage codification
- Faculty lead exercise of identifying what information and data they want to see - have them prioritize the data - provide feedback from IT on the time and cost to provide
- Focus on relationships - these are critical in working through new ideas
- Hire a consultant
• Some people don’t see the need—no internal demand
• Look for a win with a partner—IA was the example
• Tie everything to an outcome
• Hiring people that can envision the institution of the future
• Governance, if done right, will facilitate communication
• Stop buying new things—use what you have (leverage)
• Understand what drives the underlying culture—what motivates the individual? (the under current!)
• Build a common language (data dictionary)
• Institutional strategic plan measures—KPIs—are we moving forward with the plan? Roadmap
• Build a sense of urgency for the need of analytics and data driven decisions
• Know your institution’s “story”—where you came from and where you are now and where you are going.
• Make connections with departments like IR - use your influence to bring departments together to create synergies

Other comments from groups discussing culture

• Stop blaming the technology
• Afraid of change—staff, faculty
• Clean up the data
• Issue of privacy—Google
• Cultural difference in the campus
• Perceptions about analytics
• Small steps toward analytics

GOVERNANCE AND INFRASTRUCTURE

Obstacles

Question: Regardless of your score on the index, what is the obstacle that is keeping your institution from being at the next maturity level for this dimension? Are there particular resources (funding, personnel, time, institutional support, etc.) that are needed to advance in this dimension?

• Data silos
• Implementation Roadmap
• Institutional Priority
• Data Quality
• Resistance to change
• Self interest - control the narrative
• Shadow systems
• Misuse of data / Mistrust
• Where to start?
• What should be first?
• Silo/ego/ownership of data
• No chief leadership buy-in
• Need for the insightful moment/level where data informed decisions happen/do not happen
• Disparate systems
• Data definitions/specs (lack of)
• Common tools (lack of)
• Vision/common goals (lack of) integration of data across campus divisions or system system-level integration? Aggregation?

Successes

Question: Regardless of your score on the index, think about where you have had success in this dimension. What were to the keys to that success? What helped you get there?

• Communicating needs/dimensions
• Elevation to analytics rather than reports
• Change institution culture
• Select a set of questions that needs answers and iterate (e.g., data definitions, reports, data models)
• Stewardship council [to] create robust policies
• Encourage deans/leadership to enforce policies
• Emphasize security as a "hook" for compliance

Strategies/next steps

Question: To move the needle in this dimension, what are you going to do a) next week, b) in the next 90 days, and c) as part of planning for the future?

• Executive sponsor committed to change
• Find champions / partners - willing
• Build relationships before you need them
• Small wins
• Watch your language - change your wording
• Partner with IR
• Devoting time
• Work to understand the landscape
• Are there enough resources?
• Ask an answerable question
• Important to remember that the goal is to support timely informed decision making
• What system outputs will best support those decisions?
• Jack's slide - Governance ahead of projects - often reversed
• Key groups: Financial Aid, Admissions, Registrar, Graduate Admissions, IR
• Best practices/cross institutional/cross systems
• Accountability/roles/university outcomes the priority
• Oversight groups
• Federated model: if data definitions can be applied to the extracted data to gain intersection points
• Commodity of definitions
• Define depth of reporting need
  a. Eating whole elephant or just pieces over time
• Fit of players within hierarchy
  a. Define some of their own crosswalk points
• Reach out to EDUCAUSE - re: data dictionary support
• What are the questions? What are we trying to accomplish?

First

• Develop separate governance from IT governance
• Start with something—don’t try to solve everything at once
• Have functional sponsorship at exec level
• Find high visibility quick win
• Work with the willing partner with problem to solve

Second—Outcome or Goal

• People, process, technology
  o *In that order*
  o Aim for consensus

Other comments from groups discussing governance and infrastructure:

Structure
• Data experts vs decision makers
• Components
• Definitions and acronyms
• Gaining commitment and time
• Culture - links to governance
• Committees exist - status unknown

Executive support
• Example - when questions receive different answers

**PROCESS**

**Obstacles**

Question: Regardless of your score on the index, what is the obstacle that is keeping your institution from being at the next maturity level for this dimension? Are there particular resources (funding, personnel, time, institutional support, etc.) that are needed to advance in this dimension?
• Moving beyond operational [to] data-informed decisions
• Silos
• Turf
• Lack of trust
• Strong leadership
• Getting started
• Complexities “too many cooks in the kitchen.”
  o Lack of clarity on who does what going forward
• Priorities at the unit level may not be a priority at the university level
• Institutional priorities
• Time, staff resources, with large organizations
• Getting data in the hands for the right people (adjuncts, counselors, faculty, managers)
• Gaps in subject matter expert across functional areas
  o Student Admin. Integration Team (Campus systems)
  o Banner, PeopleSoft etc. user groups
• New software → data translation and training needed
• Personality of IR leader matters—one person is a risk (turnover)
• Process documentation needs
• Wild west process: process, project, culture
  o Impact is delayed timelines, keep track of timelines, show progress
• Urgent needs supersede analytics, best I can do is descriptive reporting, even though it’s the desire.

Successes

Question: Regardless of your score on the index, think about where you have had success in this dimension. What were to the keys to that success? What helped you get there?

• Start with small success (demo department)
• Bring in an external expert to jumpstart
• True collaboration between IT and IR
• Standardizing definitions
• Share governance / data governance
• Sense of purpose - vision and mission
• Excellent business analytics, excellent progress on student success
• Democratizing data for all staff
• Scholarship analytics
• Process design critical to data stewardship
• Students records are the gateway drug to IR/BI/Analytics
• Cross-functional BI teams using SCRUM (very helpful)
  o Administration learn it also, if only for language

Strategies/next steps

Question: To move the needle in this dimension, what are you going to do a) next week, b) in the next 90 days, and c) as part of planning for the future?
• Talk with closest to project and get clear definition of analytics
• Inventory of additional data resources for students and reporting tool
• Blending business analysis and BI/IT side
• Run reports to identify issues: online classes that have assigned
  o Clean up data
  o Accountability for college resources
  o Pass onto data steward eventually
• Vet the data → talk to each other — have other departments confirm the results
• Be fast and aggressive — but not rude or dangerous

Other comments from groups discussing process

• What are integration challenges?
• What is IR’s role?
• Change control is important, but education is slower to analytics than industry. Yet we can’t be complacent because analytics is a game-changer.
• Capture correct information upfront. Gather as much as possible to use later for analytics
• Rapid insight can help with predictive model inventory sharing. Data mining is also an option.
  “Lost applicant process” helpful from rapid insight

DATA/REPORTING/TOOLS

Obstacles

Question: Regardless of your score on the index, what is the obstacle that is keeping your institution from being at the next maturity level for this dimension? Are there particular resources (funding, personnel, time, institutional support, etc.) that are needed to advance in this dimension?

• Outside my control
• Siloing
• Lack of personnel
• Identifying the ‘right’ tool
• Have reporting tools
• Need analytical tools
• Identifying tool to aggregate data from multiple sources - EWP, CRM, ODS, etc.
• Fear of investing in wrong tool
• Central data warehouse
• Multiple toolsets
• Personnel and training
• Data definitions
• Legacy tools
• Data cleansing
• Siloed use of tools
• Sunk costs
• Tools to fill gaps
• How to move from documenting to analyzing
• When to invest in infrastructure vs. staff vs. services
• Balance self-service with quality of those reports
  o Users must know their data
  o Do you need a data governance/report review process?
• Data dictionary—define the data clearly (data governance)

Successes

Question: Regardless of your score on the index, think about where you have had success in this dimension. What were to the keys to that success? What helped you get there?

• Built our own
• Looking at data allowed changes
• New tools
• Provide tools at no cost
• Data visualization tools
• Row level security
  o Removal

Strategies/next steps

Question: To move the needle in this dimension, what are you going to do a) next week, b) in the next 90 days, and c) as part of planning for the future?

• Better collaboration
• Identify tools
• Stakeholders prioritize list (deans and other high level leaders)
• How to get buy in from senior leaders
  o Show them examples
  o Make it easy and accessible
  o Be prepared to ask for resources when they are excited
  o Gap reports - census #s next to PIT
  o Report specifications - lots of info, definitions, data sources, some ties even SGL
• Investigate new tools
• Define data used in each tool
• Strategic reporting, conversation and approach
• Leverage existing tools
• Identify small win to replace shadow system/excel spreadsheets
• New employees on board and trained
• Look for free tools:
  o Watson Analytics, Microsoft Delve
• Rapid insight—ditto rapid analytics (+VEERA eti)
• Canvas real shift
• Tableau—YES!! Visual data discovery is important
• What utility is EDUCAUSE using for the CDS?
  o (Build your own reports tools)
• Entrinisik informer
• Business objects (SAP—Elucian model on ODS)
• Avgos
• Consider people—culture—need before selecting a specific tool
• Data—how will you measure progress toward your “fuzzy” but critical goals (e.g., outcomes of higher ed @high level—degree vs. @ course level)

Other comments from groups discussing data/reporting/tools

• Communication Successes
  o Communications PR
  o Marketing/PR of IR
  o User champions
  o Standardized metrics for deans
• Communication Failures
  o Lack of belief in the data
  o Culture obstacle
  o Lack of good change management plan
• Much more about reporting / BI, not much analytics
• Challenge moving from old systems to new skills and tools
• People want info on mobile devices
• Hard to keep up with demand
• Should be a vendor issue working with and picking tools
• Small vendors responsive
• Large vendors - you are just another customer
• One tool does not do everything
• Home grown tools are tied to specific people, slower, better fit to institutional needs
• Not enough devoted staff to make progress
• Using an agile methodology with sprint approach - 30 day goals

EXPERTISE

Obstacles

Question: Regardless of your score on the index, what is the obstacle that is keeping your institution from being at the next maturity level for this dimension? Are there particular resources (funding, personnel, time, institutional support, etc.) that are needed to advance in this dimension?

• Available staff time
• Staff and training
• Funding to hire staff
• Retention of key staff
• Knowledge of institution - too much / too little
• Lack of openness/curiosity
• Silos
• Where do you put expertise?
• Buy vs build
• ROI
• Silo’ed experience (need to share knowledge
• Different types of staff
  o (Hiring for new positions)
  o Level & skill set--communication
• Telling story of institution
• Need funding—not just one person
• A lot of expertise related to financials, but not across other domains
• Skills for distribute self service is often inadequate, not enough support in IT organization.
• People commonly misuse tools even though they know data
• Need to have better understanding of how to build data dictionaries
• Often times have tools but don’t know data
• Not enough skill to translate questions into data/dashboard needs
• Silos and lack of shared vision
• Not enough data scientists involved
• Don’t know what expertise to have
• Domain experts in TR (PhDs in cognitive science) need to communicate and engage faculty more
• More qualified people
• More interested people
• Process limits innovation
• Lack of analysts
• Funding
• Training
• Time
• Misconception of what an analyst is
• Roles
• Lack of expertise
• Push from accreditation
• Lack of models (would be great if self-service was available; pre-defined would be great)
• How can we separate ourselves strategically from others
• “Stuff needs staff” Products over People
• Standardization can be a 2-edged sword
• Good people go where money & location is. Invest in someone and they leave. Expensive to train and painful to lose. Lose institutional know. Consultants help but don’t know the institutions.
• Tableau has higher adoption rate and ease of use compared to Cognos. The reporting tool is critical for analytics along with ERP system it hooks into. Adoption is greater with more modern, intuitive interface.
Successes

Question: Regardless of your score on the index, think about where you have had success in this dimension. What were to the keys to that success? What helped you get there?

• Buy in and training of key people in functional areas
• Crisis with major financial impact
• Government intervention with prompt action
• Clear strategic plan
• ‘What if’ tool - small successes helped
• Find people who can help people ask the right questions
• Community of practice - analysts
• Formalized collaboration / discussion BICC
• Partner with academic programs to find talent
• Build talent feeder program
• Incorporate in the fabric of the institutional vision
• Bringing corporate expertise
• Hiring at level you need—rather than retraining staff

Strategies/next steps

Question: To move the needle in this dimension, what are you going to do a) next week, b) in the next 90 days, and c) as part of planning for the future?

• Analytics built into project plans - ERP conversion
• Use Strategic Planning Outcomes
• Collaborate on a strategy with a plan—BI roadmap
• Hub and spoke model for collaboration
• Getting collaboration and communications channels open and share knowledge and expertise
• Develop an in-take process to field inquiries and align-connect to a resource
• Create ability within IT to support ad-hoc requests
• Quick wins—successful project to establish (re-establish) trust
• IR and IT need to be intimately familiar with institution process
  o Strategic plans
• Develop organizational agility
• Develop ‘communities of practice’ across the institution to share
• Engage with faculty and students
• Limited processes—more open processes
• Build expertise where there is interest in solving a problem.
• IR and IT should advocate for resources just ahead of need.
• Consider outsourcing analytics expertise during start up phase (Look to admissions—i.e. Noel-Levitz)
INVESTMENT

Obstacles

Question: Regardless of your score on the index, what is the obstacle that is keeping your institution from being at the next maturity level for this dimension? Are there particular resources (funding, personnel, time, institutional support, etc.) that are needed to advance in this dimension?

• Prioritization at institutional level
• Stakeholder understanding of time and effort
• Reluctance to invest in staff
• Organizational alignment
• Realistic timeline
• Expectation of ROI in real costs
• Is there enough budget?
• Lack of leadership
• Decentralized/federated model does not provide money to central university needs (vice versa)
• If data is an asset, then investments would be made to have clean data leading to less costs for consultants (To clean data, etc.)
• Gartner Report “ROI of Data”
• What is the cost of redundant/shadow systems?
• Culture that doesn’t appreciate data: is the budget invested appropriately?
• Units that don’t have money and skills still attempt to provide analytics but will be suboptimal...haves and have ‘not’s
• Reactive spend to crisis instead of proactive investments in analytics
• Need more personnel with analytics skills
• Leadership; business leaders who know how to bring in people w/expertise (Tools come after expertise)
• Sometimes personnel are not willing or able to learn new analytics skills
• What are good ways to provide training or classes to our personnel?
• Maybe we consultants—staff can see what to do and how to do it
• Are there boot camps for learning skills? AIR summer institutes for IR skills?
  o Probably there is no “analytics boot camp”, but can pick specific topics and find a camp or class
• Central system office might have been data czar; are there ways to spread out skills to the campus?
• On-campus resource: people with skills or knowledge teach others on campus.
• How do we communicate the value of a project or position? Have beneficiaries “testify” to the benefits they received. Difficulty: projects with long development periods e.g. data warehouse. Pick 2 or 3 outcomes which have benefits and point out that there will be additional benefits. Are there comparable schools which have this and benefited?
  • Some offices (admissions especially) hire consultants to do analytics—a clear recognition of value
Successes

Question: Regardless of your score on the index, think about where you have had success in this dimension. What were to the keys to that success? What helped you get there?

- Prioritization framework
- Understand importance
- Invested in good tools
- Investing in right talent
- Keeping up with mainstream

Strategies/next steps

Question: To move the needle in this dimension, what are you going to do a) next week, b) in the next 90 days, and c) as part of planning for the future?

- Share summit knowledge
- Demonstrate ROI
- Show peer BI Success
- Find willing partner: Library
- Develop risk/reward matrix