Achieving the Dream
Data and Analytics Summit
Leveraging Analytics to Optimize Student Success
#ATDSAS16
Approach and Strategy to Maximize the use of Analytics in Community Colleges

Aiman Zeid
Head of SAS Global Business Consulting
CURRENT STATE OF OUR JOURNEY

Destination

- Driven to create a “student-focused culture”
- Emphasis on the value of “data” to drive our destiny
- Visible focus on using “analytics” to guide decisions
- Many efforts to launch and sustain “institutional change”

Are we effective in maximizing the value of our effort ??
Are we evolving as “analytically-driven institutions” ??
CURRENT STATE OF OUR JOURNEY
Let’s examine our journey requirements

Destination

- Driven to create a “student-focused culture” – Cultural Changes
- Emphasis on the value of “data” to drive our destiny – Evolved Info. Infrastructure
- Visible focus on using “analytics” to guide decisions – New Resources & Talents
- Many efforts to launch and sustain “institutional change” – Changes Operating Model

How are we evolving ??
SEVEN CAPACITY AREAS

- Processes
- Skills
- Domain Experience
- Vision, alignment
- Supporting Info.
- Info. Mgmt.
- Skills
- Data Gov. - Processes
- Culture
- Information
- Processes
- Information
- Domain Skills
- Information
- Culture - collaboration
- Processes
- Culture
- Alignment
Definitions
GENERATING BUSINESS INSIGHT

INFORMATION FLOW ACROSS OUR INSTITUTION

ANALYTICS
- The application of the science of Statistics and Math to glean forward-view of our Institutional performance

BUSINESS INTELLIGENCE
- BI is an umbrella term that refers to a variety of technology applications used to analyze organization data – Rear View
- Examples: querying, reporting, dashboards, business performance KPIs

DATA MANAGEMENT
- Data Stewardship
- DATA GOVERNANCE
- DATA MANAGEMENT
- INSTITUTION BUSINESS DRIVERS

DATA (INTERNAL & EXTERNAL)

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Discover relevant themes and relationships in social media, call notes and email for deeper insights and improved business management.

Understand and find relationships in data to make accurate predictions about the future.

Leveraging historical time series data to drive better insight into decision-making for the future.

Make appropriate business decisions by understanding dynamics and utilize resources the best way.
Challenges to the use of Analytics – *Market Perspective*
DO WE HAVE THESE SYMPTOMS?

- High investment in technology and resources and still struggling with data management, business silos and many versions of the truth
- Business return on technology investment is not visible or quantifiable
- Can’t figure out right balance between tactical and strategic priorities
- Unable to produce comprehensive view of the “Student Journey”
- Too many repetitive or redundant processes
- Can’t always rationalize different competing priorities
- Use of critical resources and talents is not optimized
SOUNDS FAMILIAR??

CHALLENGES

BUSINESS PROBLEM

Preparing to solve the problem

BUSINESS DECISION

Solving the problem

80% 20%

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“Poor quality customer data – just customer data alone – costs U.S. businesses over $600 billion a year.”

“Up to 40% of all failed business initiatives are a result of poor data quality.” — Gartner

Due to poor Data Management “83% of consumers are unlikely to do business again with a company when problem resolution falls below expectations.” — Forrester
CHALLENGES

BARRIERS TO IMPROVEMENT

TOO MUCH DATA
in too many places

POOR QUALITY DATA
cannot be trusted

INCONSISTENT DATA
across multiple sources

The **data strategy is not able to support the institution strategy**
BETTER, FASTER DECISIONS DEPEND ON GETTING DATA ….

IN THE RIGHT PLACE
efficiently move data between systems

IN THE RIGHT FORM
structure, cleanse data for operational systems or analysis

AT THE RIGHT TIME
support all data delivery latencies and architectures

TO THE RIGHT PEOPLE
govern data use, apply business semantics, deliver training
WE MUST CHANGE THE EQUATION...

CHALLENGES

BUSINESS PROBLEM

Preparing to solve the problem

20%

Solving the problem

80%

BUSINESS DECISION
CHALLENGES

BIGGEST SKILL GAPS ARE NOT QUANT RELATED

Translating analytics into business strategy or specific actions: 51%

Asking the right questions: 30%

Knowing what data to analyze: 28%

Analytics “translation” is by far the biggest deficiency

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IN SUMMARY, WE HAVE TWO TYPES OF CHALLENGES

**Information**
- Growth & Complexity
- Quality & Consistency
- Security & Access
- Information Silos
- Infrastructure scalability

**Organizational**
- Competing Priorities
- Business Unit Alignment
- Information Processes
- Skills and Culture
- Innovation

We need an institution-wide approach to address both to achieve organization alignment.

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WE NEED TO RECOGNIZE THE NEED FOR A NEW OPERATING MODEL

Because

- We need new skills – very different than what we are used to
- New information environment – very agile, comprehensive, scalable
- New decisions – what decisions and who makes them and when
- New culture – different culture to approach the decision making process
The Approach Matters
- **Analytics strategy** is a key component of success
- Maintaining momentum is critical
- Analytics & intuition are blended, not balanced
- Executives are both proponents & users
Successful Approach must..

- Take into account organizational components/pillars
- Be phased to allow for institutional change & adoption
- Comprehensive and NOT limited to BI, Analytics, Data Management, Data Governance, ……

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Ad-hoc Approach:

- Launch many independent projects
- Duplication of efforts – many common tasks
- Project-mentality vs. institution-wide ongoing program
- High cost for the overall effort – higher than it should be
- Takes too long – missed opportunities
- Little impact on institutional culture
THE APPROACH MATTERS

HOW SHOULD WE STRUCTURE OUR JOURNEY?

Institution-wide Ongoing Program Approach:

- Focuses on identifying & removing obstacles
- Establishes institution-wide information foundation to support analytics
- Minimizes duplication of efforts
- Ensures accuracy of information across the institution
- Reduces time-to-intelligence – faster value
- Evolves our capabilities in each organizational pillar
1. Clear strategic objectives (use destination to identify objectives)
2. Current and desired competencies and capabilities
3. Approach to achieve strategic objectives
4. Initial set of institutional initiatives to achieve objectives
5. Clear performance management KPIs agreed to by all stakeholders
COMPONENTS OF A TRANSFORMATION STRATEGY

1. Clear strategic objectives (use destination to identify objectives)

2. **Current** and **desired** competencies and capabilities

3. **Approach** to achieve strategic objectives

4. Initial set of institutional **initiatives** to achieve objectives

5. Clear performance management **KPIs** agreed to by all stakeholders
Organization Maturity Model
SAS’ IEM Model
How to identify current & desired competencies in a comprehensive way?

Think strategically about the institution vs. meeting urgent needs from individual groups

How to make sure we are not focusing on symptoms vs. the root causes of lack of capabilities?

Need to establish institution-wide foundations and not only focus on project deliverables
We need to use a *structured approach* that

- Objective & tested
- Comprehensive – covers all *organizational Pillars*
- Can be based on our institutional priorities
ORGANIZATIONAL PILLARS

DEVELOPMENT & MATURITY

People
Information Processes
Technical Infrastructure
Culture

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SAS’ ORGANIZATIONAL MATURITY MODEL - IEM

Five Levels of Evolution

5: Innovate - Expand top line
4: Optimize - Optimize bottom line
3: Integrate - Enterprise view
2: Consolidate - Departmental silos
1: Operate - Individual focus

Four Organizational Pillars

- People / Skills
- Knowledge Processes
- Infrastructure
- Culture
Why a model is important?

Before you can go forward, you must first:

• Know where you are
• Identify landmarks
• Understand how organization pillars work together
• Chart your course
Five Levels of Evolution

1: Operate - Individual focus
2: Consolidate - Departmental silos
3: Integrate - Enterprise view
4: Optimize - Optimize bottom line
5: Innovate - Expand top line
FOUR CRITICAL PILLARS

**Human Capital**
- Analytical, Technical & Interpersonal Skills
- Training, Career Advancement to Attract and Retain Talent

**Technical Infrastructure**
- Relevant, Accurate, Consistent & Timely Enterprise information
- Mature and Capable Enterprise Information Infrastructure

**Information Processes**
- Well defined set of Processes to identify, prioritize and address Analytical Requirements
- Coordinate support from IT, Analytical Resources & Computing power

**Organizational Culture**
- Understand, Value and Demand Fact-based Decisions & Strategies
- Communicate Value of Analytics, Fund Staffing, and Reward proper use
Business Analytics Skills & Resources

- Analytical, Technical, Domain & Interpersonal Skills
- Training, Career Advancement to Attract and Retain Talent
Percent who describe their organization as...

- Clearly prioritizing analytics projects: 52% (52%) vs. 22% (22%)
- Having a formal analytics strategy: 48% (48%) vs. 18% (18%)
- Measuring the effectiveness of analytics projects: 42% (42%) vs. 20% (20%)
- Recruiting analytics talent differently than other talent: 31% (31%) vs. 19% (19%)
Information Environment & Infrastructure

- Relevant, Accurate, Consistent & Timely Enterprise information
- Advanced, Scalable and Capable Enterprise Information Infrastructure
Internal Processes

- Well defined set of processes to identify, prioritize and address Information & Analytical Requirements
- Coordinate support from IT, Analytical Resources & Computing power
Organizational Culture

- Understand, Value and Demand Fact-based Decisions & Strategies
- Communicate Value of Analytics, Fund Staffing, and Reward proper use
LEVEL 1: INDIVIDUAL

- Focus on the individual
- Information is personal power
- No information standards
- Personal productivity tools
- Legacy information tools
- Questionable data quality
- No benefit to enterprise
- No Centers of Excellence
LEVEL 2: DEPARTMENTAL SILOS

- Functional group focus
- Information = political power
- Departmental standards
- Departmental tools
- Silos of information
- Business Unit Centers of Excellence
LEVEL 3: ENTERPRISE

- Enterprise focus
- Enterprise standards
- Enterprise information architecture
- Informed view of operations
- Enterprise-wide info access
- Clear core business processes and *value chain*
- Enterprise Centers of Excellence
**Bottom Line Focus**

- Market alignment
- Incremental improvement
- Information to measure, align and improve processes
- Fact-based decisions
- Adaptive information infrastructure
- Alignment/efficiency drives market leadership
- Enterprise Centers of Excellence
**Top Line Focus**

- Leverage value chain in new business areas
- New markets, products and business models
- Continuous innovation - process and culture
- Prototyping ideas; driving best to market
- Enterprise Centers of Excellence
SAS’ Methodology

How to use the Model
SAS’ APPROACH & METHODOLOGY

**Discovery Workshop**
- Discuss and document business and organizational requirements & expectations with the executive team / sponsors
- Discuss & agree on starting point & scope
- Clearly define & document “project scope”, deliverables, expectations & required resources
- Produce detailed “Project proposal”

**Assessment**
- Understand Vision, business objectives and priorities of the executive team
- Assess “current” environment & identify “target” environment capabilities including Infrastructure, People, Process and Culture using SAS’ IEM Model

**Gap Analysis**
- Analyze target capabilities vs. current capabilities
- Analyze Gaps between target and current capabilities in each of the four organizational pillar
- Identify root causes for capability gaps

**Recommendations**
- Develop detailed recommendations, initiatives, and roadmap to achieve the desired capabilities
- Identify potential BA CoE role
- Develop role, structure, required skills, processes, roadmap, training, change management, etc.

**Ongoing Support**
- Support client in the implementation & operation phase
- Monitor and make adjustments if necessary
- Provide enterprise best practices

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Questions