

Data Analytics as an Organizational Innovation

WCET Boot Camp: Building Institutional Readiness for Data Analytics

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Driving change through analytics

*Data-driven
or data-guided?*

How prepared are we for analytics?

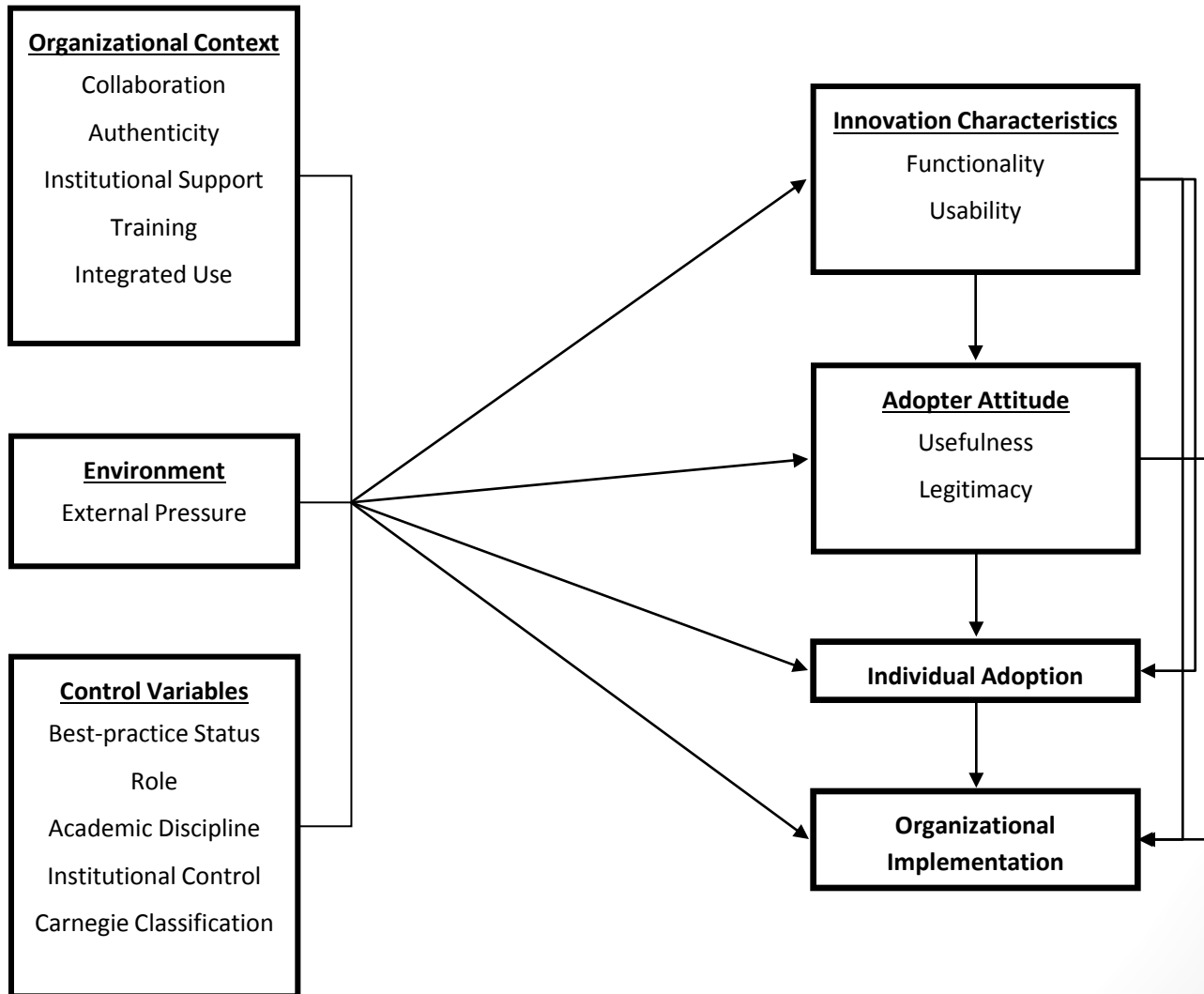
- Analysts to do the work are in short supply
- Investment in IT is in the bottom quintile
- Data on critical operational processes is missing
- Decision making is not data driven

Source: McKinsey Global Institute

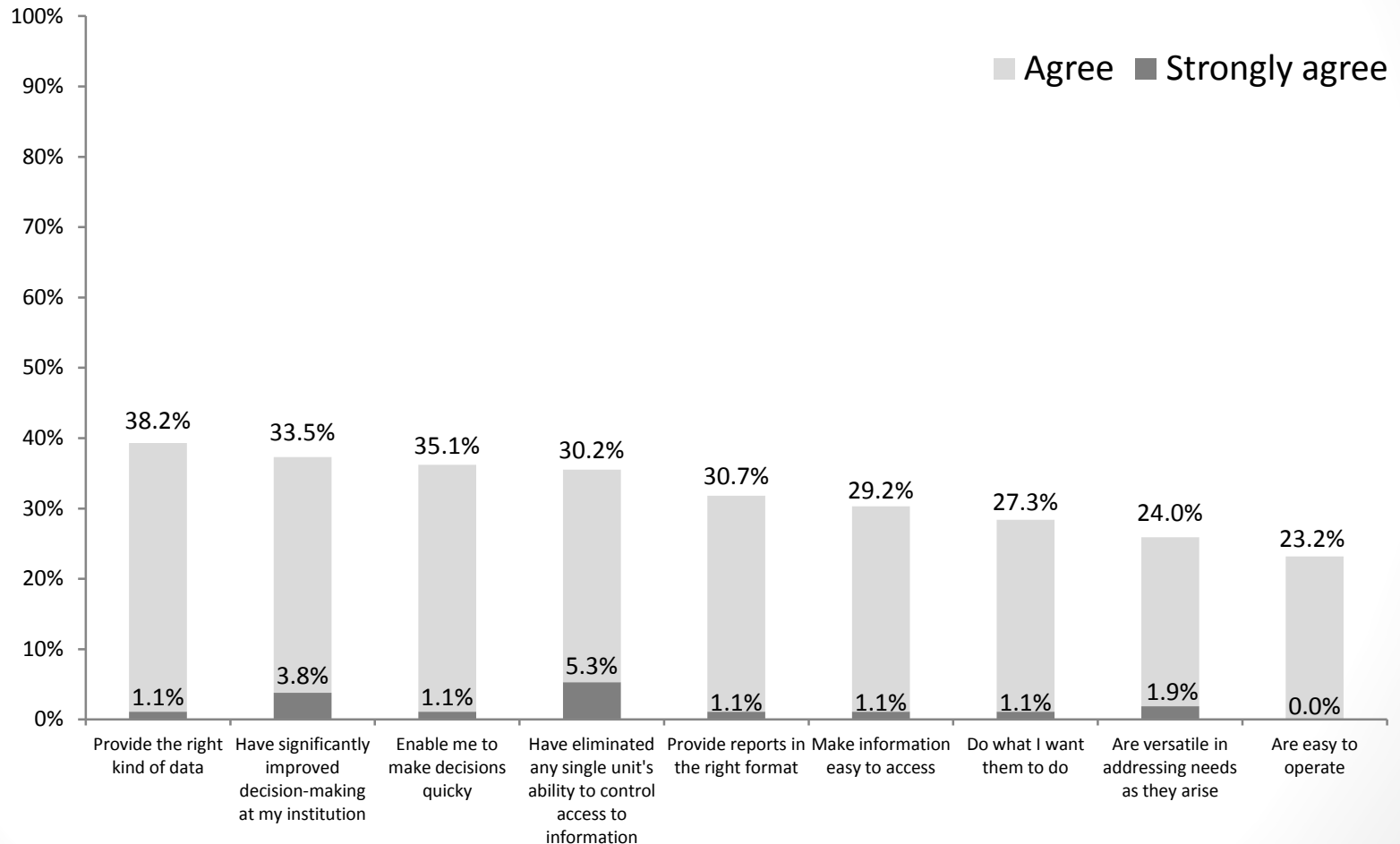
Do we have mature analytics systems?

	Stage 1: Analytically Impaired	Stage 2: Localized Analytics	Stage 3: Analytical Aspirations	Stage 4: Analytical Organizations	Stage 5: Analytical Competitors
Data		2.6			
Enterprise			3.2		
Leadership			3.4		
Targets			3.4		
Analytical Talent		2.4			

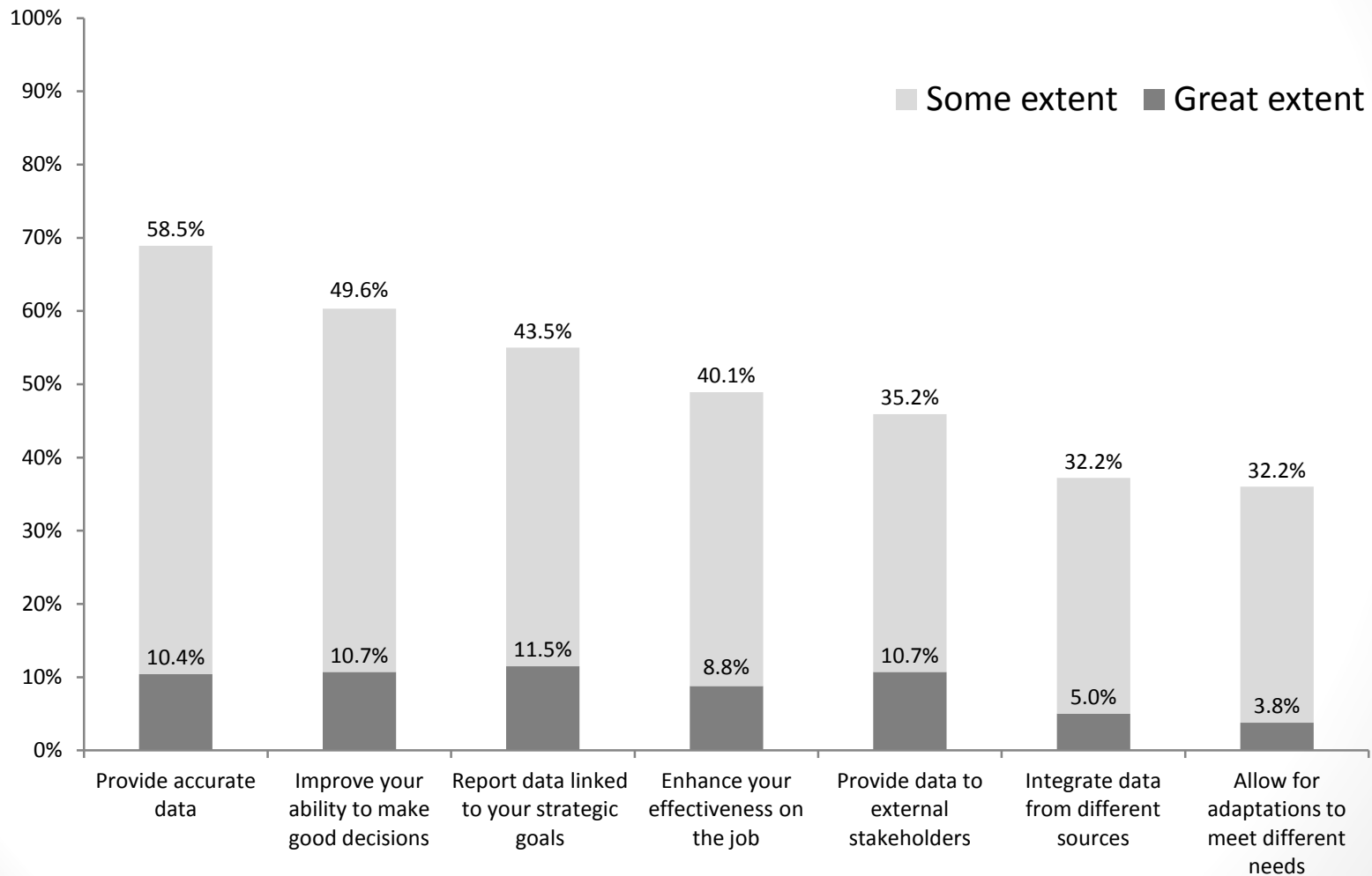
Factors that drive analytics adoption



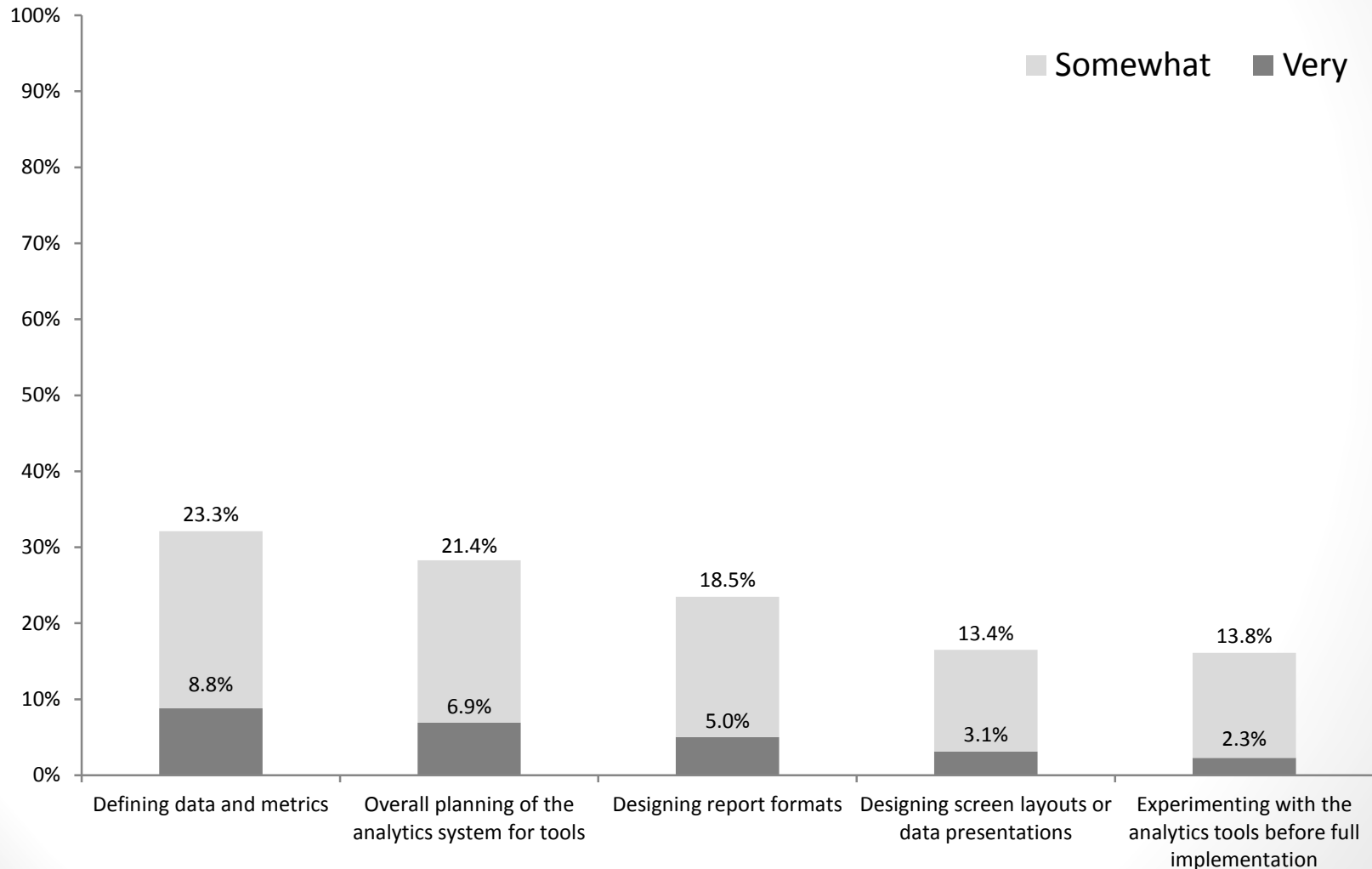
Functionality and usability of data systems



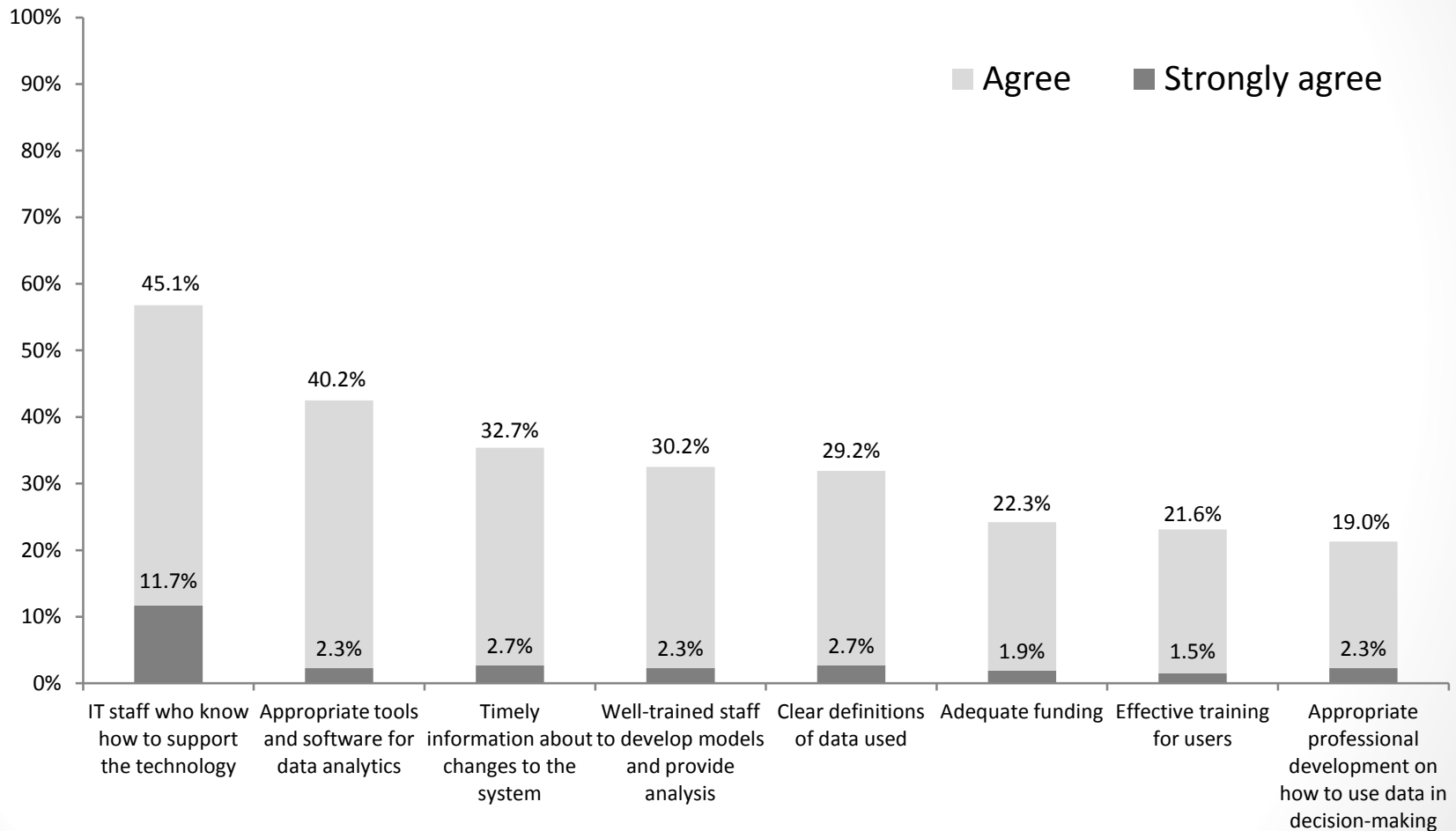
Use and usefulness of data systems



Collaborative development of data analytics



Institutional support for data analytics



Factors that influence organizational implementation

	Organizational Implementation
Legitimacy (Concern with Current Models)	*
Culture of data use	***
External Pressure to adopt analytics	*
R ²	0.547***

Factors that influence individual adoption

	Individual Adoption
Usefulness of data analytics	**
Legitimacy (Potential benefit of data analytics)	*
R ²	0.486***

Factors that influence adopter attitudes

	Usefulness	Legitimacy/ Benefit	Legitimacy/ Concern with Data Use	Legitimacy/ Concern with Models
Functionality	***	**	- *	
Usability	**			
Authenticity	**			
Training				
Integrated Use	**			
External Pressure				**
Academic Discipline		*		
Carnegie Classification		*		
R ²	0.736***	0.329**	0.220	0.203

Factors that influence innovation characteristics

	Functionality	Usability
Collaboration	**	
Authenticity	*	
Institutional support		*
Training	**	**
Integrated Use	**	
R ²	0.609***	0.534***

Implications for implementing data analytics

- **Functionality:** Connection between organizational process, data and the individual adopter's role
- **Usability and usefulness:** Attending to the implementation experience of the end user
- **External pressure:** Translating the pressure for adoption of analytics into a compelling case for use

Implications for implementing data analytics

- **Authenticity and collaborative development:** Develop analytical approaches and techniques that fit your organizational culture and business need
- **Training:** Cultivate analytical skills and competencies among academic leadership
- **Integration:** Develop an integrated approach to data management, analysis, and reporting that allows for an understanding of business, student, and academic processes

Structure of data analytics at SCSU

- Office of Strategy, Planning & Effectiveness
- Dedicated IT Staff
- Client Partner
- Faculty Experts
- Graduate and Undergraduate Students

Approach to data analytics at SCSU

Step 1: Question assumptions embedded in your practice

Step 2: Assemble the team

Step 3: Build the best data set possible

Step 4: Tell the story

Step 5: Be explicit about the action

Example 1: Admissions decision flow

Step	
Question the assumption	Our current admission criteria lead to student success
Assemble the team	Dean, University College; Director of Undergraduate Admissions; Director of Graduate Admission; Professor of Statistics; Data Analyst
Build the best data set possible	Five NEF cohorts and the related student success data including performance indicators (retention, GPA, credit completion rate, credits completed)
Tell the story	Rebuilt Admissions flow process based on the analysis; shared data and issues with strategic planning committee; admissions staff; student success committee; faculty executive committee; and Management Team
Be explicit about the action	Approval to change decision criteria for three admissions pathways (Regular, ACE, CCCP); automate the decision process except on the margins