Challenges to Leading and Framing Digital Strategy and Data Governance for Institutional Research and Analytics

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TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER™

Summary

- Digital strategy and data governance are crucial components for institutions aiming to leverage data analytics for enhancing decision-making, promoting innovation, and maintaining a competitive edge. However, leaders in institutional research and analytics face numerous challenges in leading, framing and leveraging digital strategy and data governance to support strategic and operational goals. This presentation will explore these challenges and offer insights into strategies for overcoming them to enhance the overall impact of institutional research and analytics.

Learning Outcomes

- Understanding Key Challenges: Participants will gain a comprehensive understanding of the primary challenges in leading digital strategy and implementing data governance frameworks, including technological, cultural, and ethical issues.
- Strategic Alignment: Learn how to align digital strategies with the institution's overall vision and strategic goals to ensure coherence and maximize impact.
- Improving Data Governance: Discover best practices for establishing robust data governance policies that ensure data quality, privacy, and compliance with legal regulations.
- Stakeholder Engagement: Acquire techniques for effectively communicating and engaging with various stakeholders to foster collaboration and support for digital and data initiatives.
- Building a Data-Driven Culture: Explore methods to cultivate a data-driven culture within institutions, including enhancing data literacy among staff and encouraging data-informed decision-making.
- Innovation in Analytics: Identify opportunities for innovation in institutional research through the adoption of advanced analytics tools and methodologies.
- Overcoming Resistance: Learn strategies to manage resistance to change and address concerns related to digital transformation and data governance.

BLUF: Imperatives for Change

- Institutions can no longer be effective when resources, data, ideas, and people are siloed.
- Institutions need a wholistic perspective of:
  - Institutional functions
  - Platforms, systems, tools and data—the strategic assets
- Institutional leaders must:
  - Breakdown silos
  - Establish a shared language
  - Collaborate across resources and people
  - Formulate Policies, Processes and Practices
  - Standardize key reports, metrics, dashboards, etc.
  - Challenge institutional structures, attitudes, and perceptions to lead change management from an advisory role.

Background: Framing the Why

- The Road to Abilene: Paradox. Harvey, J. B. (1974). "The Abilene paradox: the management of agreement". Organizational Dynamics. 3: 63–80. doi:10.1016/0090-2616(74)90005-9.
  - https://youtu.be/H7m6byv89mc?si=R0_hwH1BGciV3fW3
  - “I didn’t want to go, I only went because everyone else wanted to go, and I wanted to be a team player.”
- The Abilene Paradox: Lessons
  - Frequently take actions in contradiction to what they really want to do and therefore defeat the very purposes they are trying to achieve.
  - Forget the critical questions:
    - Why—are we going to (Abilene)?
    - Where—are we going to (Abilene)? Where do we want to go/be?
    - What—are we going to have/gain/improve (Abilene)?
    - When—are we going to arrive/make progress to (Abilene)?

Background: Framing the Why

- Institutions/Organizations get trapped in:
  - We have to…
  - We can do…
- Institutions/Organizations build structures and practices
  - For tactical and operational execution
  - Support partial, premature, and disintegrated information
- Institutions/Organizations form:
  - An appearance of effectiveness
  - A perception of efficiency

Background: Framing the What

- Data, Data, Data: Data is your strategic asset
- “Water, water everywhere and not a drop to drink”, Samuel Taylor Coleridge in 'The Rime of the Ancient Mariner'
- “It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts” says Sherlock Holmes (Sir Arthur Conan Doyle) in A Scandal in Bohemia.
- “A difference only makes a difference when a difference makes a difference.” Dr. Gerald Halpin, Professor Emeritus Educational Research
- “Nothing is instant, not even instant grits.” Dr. Marvin Powell, Family and Emergency Medicine

Background: Framing the When

- Data is not:
  - Supporting integrated institutional effectiveness
  - Connected to the institution's vision, goals, and plan
  - Decision ready and accessible
- Systems/Platforms proliferate
- Seminal/Sentinel Events
- Accreditation Agencies
- Federal Requirements
- Organizational/Structures
- Individuals/Personal

Background: Framing the Where

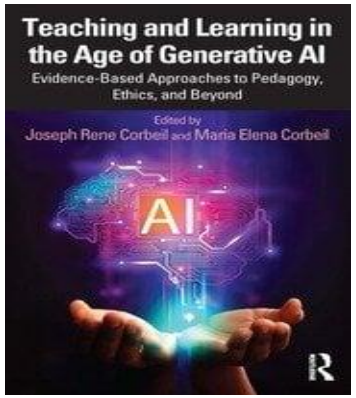
- Data-centric informed decisions
- Data centricity is the concept and practice of positioning data as a core, fixed asset that does not change regardless of the technology that uses it.
- To be truly data-centric, organizations must start with a holistic data framework.
- “A man without a vision is a man without a future. A man without a future will always return to his past.” (P.K. Bernard)
- “The only thing worse than being blind is to have sight without vision.”(Helen Keller)

Facing the Challenges

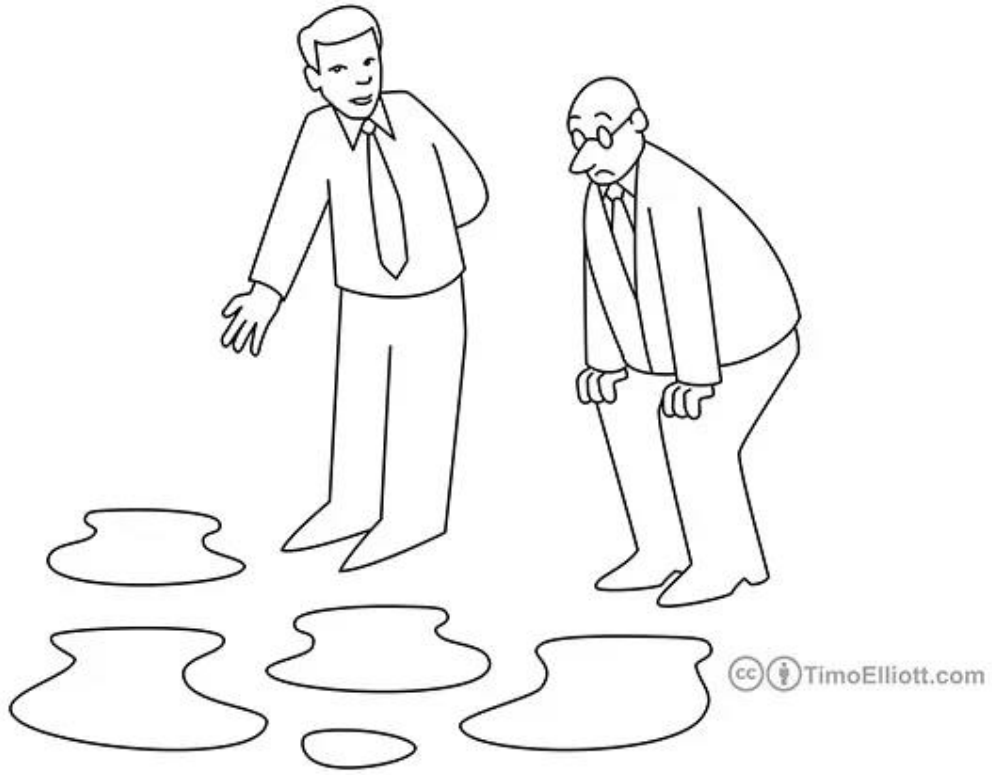
- Align Business Goals and Digital Strategy: Guides analysis, use, and interpretation of data
- Employ Data Governance: Strategy for DG framework, data lifecyle, formal rules/processes for data collection, storage, access, use, archives, retention
  - Challenges:
    - Who are trustees, stewards, functionals, users, and consumers
    - Systems/Platforms documentation
    - Data lifecycle policies
    - Meta instructions for semantics, tagging, labelling and searching. search and tagging
    - Security protocols/controls—access, protection

Facing the Challenges

- Data Science: What we can know, predict, forecast, and measure
- Data Architecture: Aligning systems/platforms to allow use of tools
- Reporting and Visualization: Designing to tell a story
- AI/ML: Exploratory Data Analysis (EDA)--Understand the quirks, tendencies, flaws, bias of your data. GIGO
  - Chapter 7: Developing Institutional Policies for AI in Education



Audit and Business Process Analysis



"We call them our data puddles!"

Audit and Business Process Analysis

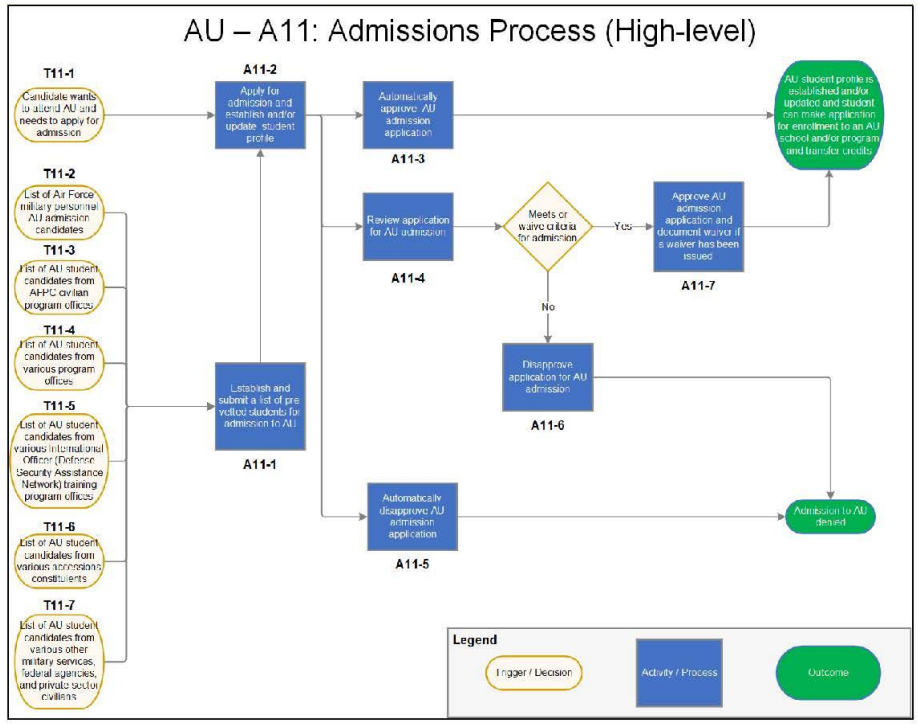
- Institution A: “Fluge of tables”
  - Four GOTS SIS: Shared a common code originally
  - One COTS SIS: Bought the code and customized
  - Failed to maintain/update server
  - Pulled Network Access
- Institution B: “Duct tape and Bailing Wire
  - One GOTS SIS: “Access DB”
  - One COTS SIS: Highly Customized
  - Ten GOTS SIS: Shared a common code originally
  - One GOTS SIS: Repository to pull from others
- Institution C: “Confederation of similar”
  - One COTS SIS
  - Five COTS CRMS: Recruiting/Applications
  - One COTS CRM: Marketing
  - Multiple Shadow Databases

Audit and Business Process Analysis

- External Audit
  - No central pull and review of data
  - Separate pull at school/program level
  - Inconsistent compiled reports resulting in data variances
- Internal Audit
  - Multiple
    - “Reporting” personnel
    - Systems
    - Processes
    - Terminologies, Glossaries, Dictionaries

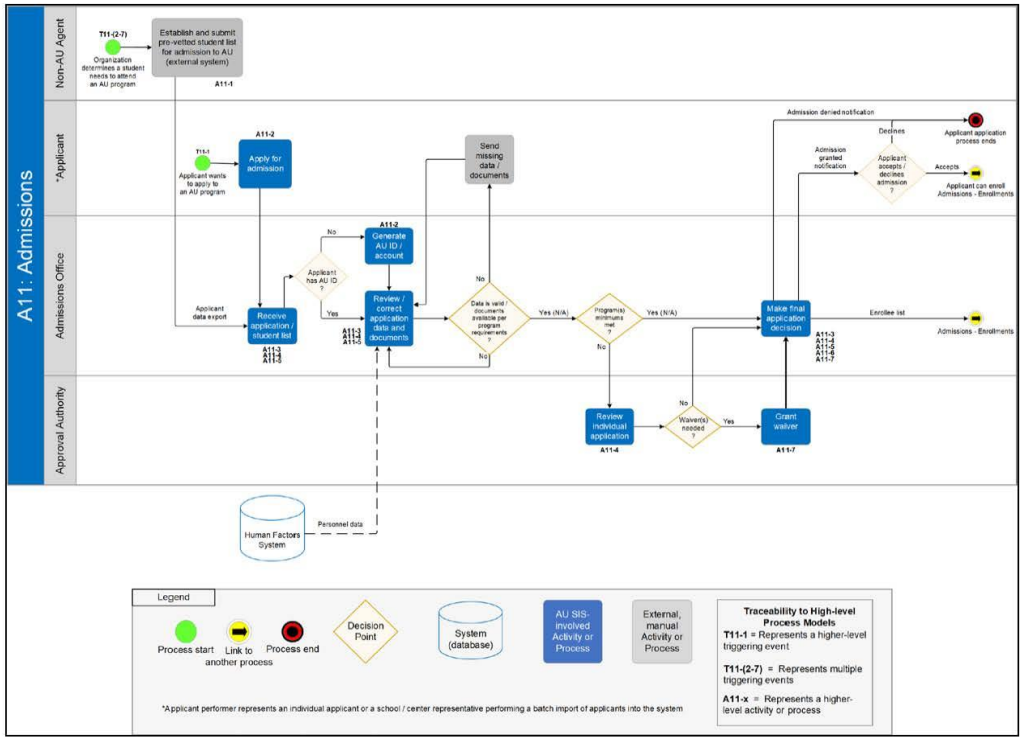
Audit and Business Process Analysis

3.1 Appendix A – Business Process Diagrams & System Functions

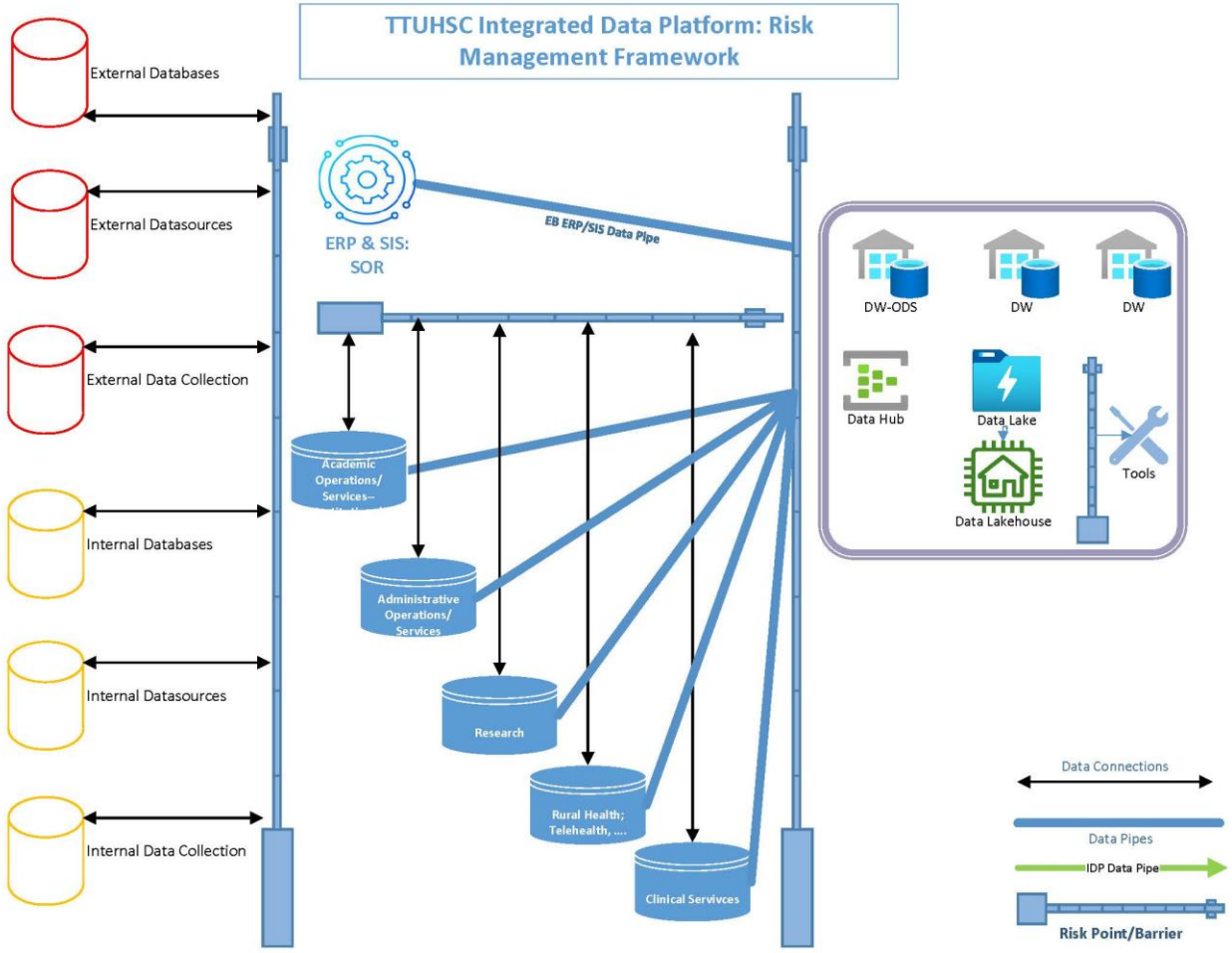


Audit and Business Process Analysis

A11: Admissions (Detailed)



Audit and Business Process Analysis



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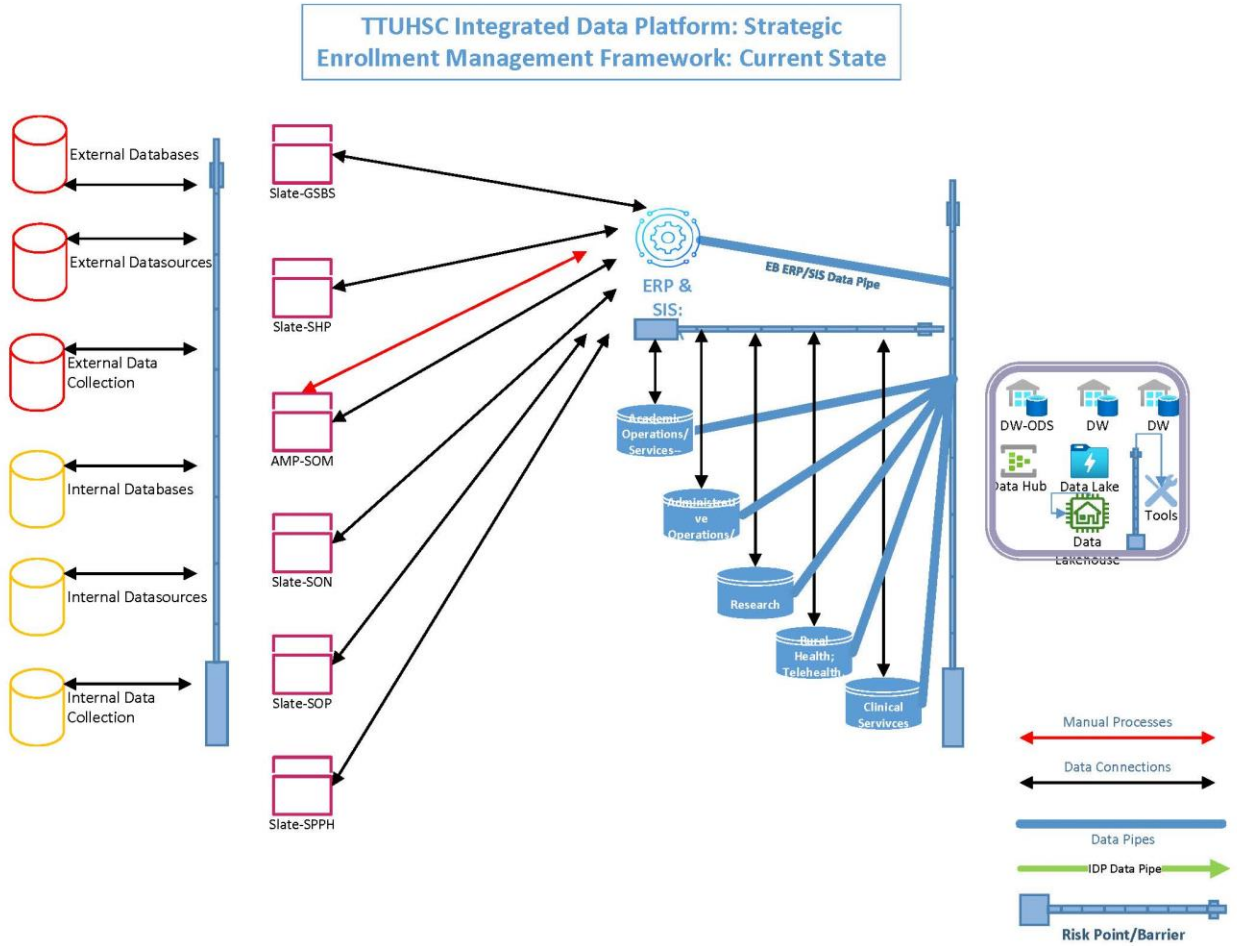

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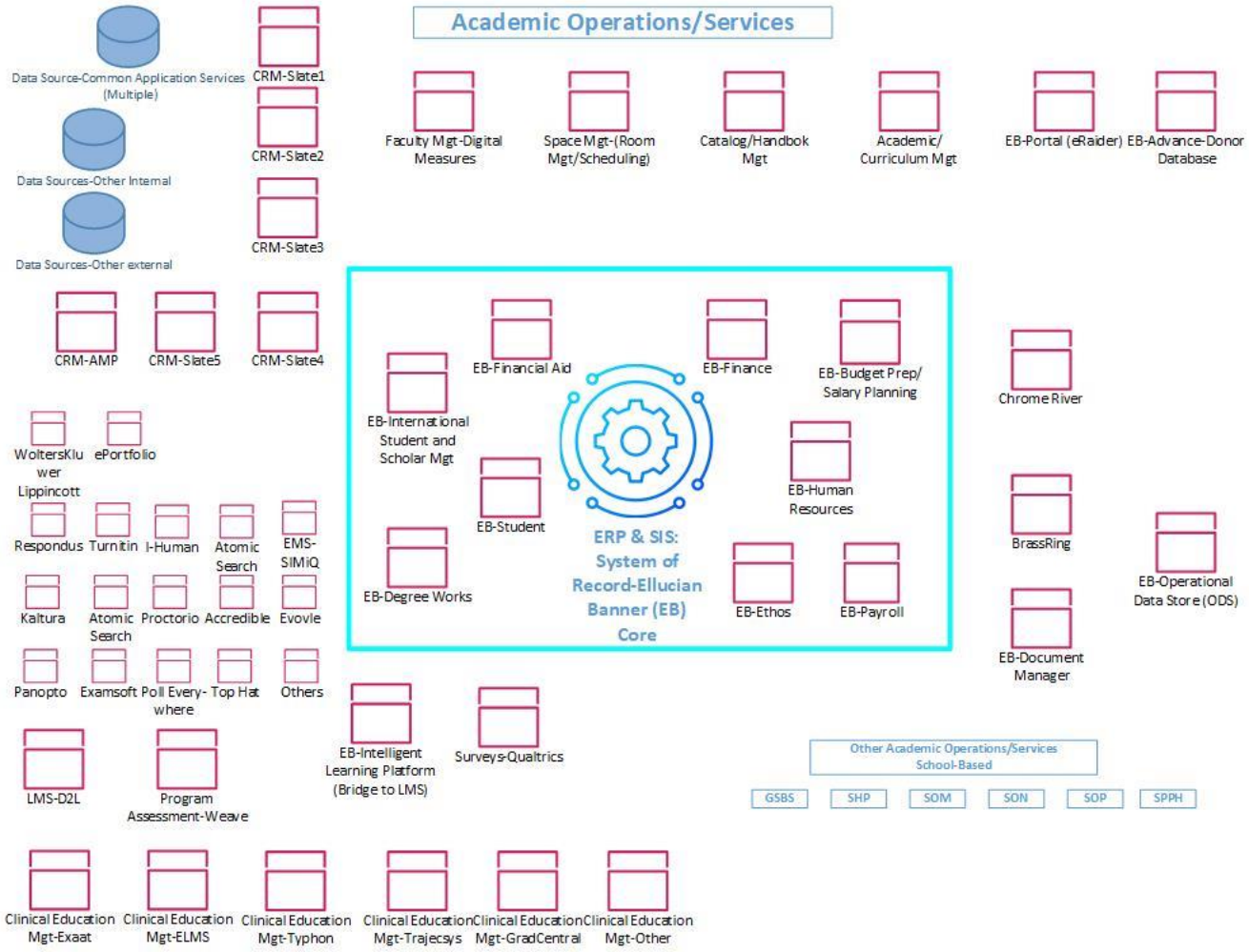
Basic Model: Academic Operations and Services



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Digital Strategy and Data Governance

- Develop Strategy to guide:
  - Digital environment and resources
  - Integrated resources, tools, and data
  - Integrated Decision-centric focus informed by our data, values, and business lines—teaching, learning, operations, research, clinical
- Develop Governance policies/processes to guide:
  - Integrated architectures
  - Shared standards
  - Consistent governance
  - VAULTIS
    - Visible: Make Data Visible
    - Accessible: Make Data Accessible
    - Understandable: Make Data Understandable
    - Linked: Make Data Linked
    - Trustworthy: Make Data Trustworthy
    - Interoperable: Make Data Interoperable
    - Secure: Make Data Secure
- Develop Culture of Insights to guide

Scan the QR code to complete the session survey.

Texas Association for Institutional Research

Annual Conference: February 25-28, 2025
Omni Hotel in Corpus Christi, TX

Backup Slides

Digital Strategy and Data Governance: Initial Focus--Parallel Processes

- Strategic Enrollment Management (Across Student/Professional Lifecycle)
  - **Market** and Advertise (Birth)
  - **Recruit** as TTUHSC and as a School
  - **Admit** into a school
    - Register in a school, Enroll at TTUHSC
  - **Retain** each student
  - Alumni relations (Through retirement)
  - Learn and Teach from every experience
  - Life long learning throughout the Professional Lifecycle
- Clinical Services (Across Patient/Client/Care Lifecycle)

Audit and Business Process Analysis

- Audit of Policies, Practices, Processes and Data
  - Proliferation of policies
    - Institution-wide policies—multiple and conflicting
      - 28 Separate Policies for Academic Affairs
    - Center/School Level policies
      - Decentralization led to each of the Centers/Schools with their own policies
        - Policies duplicating or conflicting with institution-wide and other Centers/Schools.
  - Proliferation of practices and processes
    - Decentralized
    - Inconsistency in documentation practices
    - Cyclical changes with leadership changes
    - A host of “best practices” across organizations
    - Expanding number of disconnected processes across enterprise
  - Data
    - Systems (Software and Technology) not integrated
    - Inconsistency in data types and language
    - Inconsistency in level and types of analysis and reporting at program level across enterprise
    - Variation in the quality and value of data—ex. EOC Surveys—at program level across enterprise
  - Program Review
    - Devovled to “Chamber of Commerce” presentation
    - Inconsistent presentation across Centers/Schools
    - Hindered data informed management and decision-making at the institutional and college level.