Proposal for a CU Denver Decision Support Toolkit and Working Group

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In light of the academic and fiscal planning challenges facing CU Denver and the ongoing budget model implementation, data-informed decision making in order to increase revenues, contain costs, and reallocate resources is critical. As units face these challenges, we recognize the need for consistent, timely, actionable, and easily interpreted information available through streamlined points of access. These data must be flexible enough to serve campus, school/college, department, and program leaders through varying levels of detail. At the same time, data must be consistent across these levels of detail to promote a common information vocabulary among all users.

To this end, we propose the formation of a working group and data requirements gathering process to build a CU Denver Decision Support Toolkit to promote data-informed planning and decision-making. The development of the toolkit is a bottom up approach and will focus on the unique needs and “story” of each specific School and College rather than a one size fits all platform. This project will bring together new and existing data tools into a single platform providing guidance, context, and easier access.

To increase user adoption and promote shared understanding, the toolkit will include a user-friendly narrative describing key questions addressed by the toolkit and guiding the user to relevant answers. It will also provide a comprehensive dictionary of data definitions and guides to appropriate usage of each type of information.

The initial key stakeholders for the toolkit (and major contributors to defining its content) include:

- Associate Deans
- School/College Senior Business Administrators
- Department chairs
- Central administrative units tasked with assisting school/college decision makers (e.g., the Budget Office).

While the full scope of the project will be informed by the working group, initial goals for the toolkit include data-driven decision making focused on increasing revenues, containing costs and reallocating resources. Some specific modules of the toolkit may include:

- Academic program review (including incorporating existing data resources)
- Budget resource allocation within schools/colleges
- Course offering efficiency/curriculum management
- Instructional workload planning
- Scenario and forecasting insight

The toolkit should provide insights in at least the following areas:

- Program enrollment and completion trends
- Student credit hour production and teaching to majors vs. non-majors
- Student in-flows and out-flows (recruitment, internal program transfers, retention, completion)
- Course offering patterns, including instructor assignments, day and time, and room utilization
- Course section demand including fill rates, waitlists, section additions/closures, and completion rates
- Estimated program tuition revenue generation
- Cost productivity measures
- Other areas identified by the working group

Where relevant, information should be available both for long term planning (based on historical trends) and for near-term intervention (based on near-real-time updates for the upcoming semester). Where appropriate for setting context, users should be able to compare their own unit to other departments and schools/colleges within the campus.
Given these areas of emphasis, we plan to absorb and expand upon the information provided by EAB’s Academic Performance Solutions (APS) tool. An in-house solution will provide additional flexibility for users and greater integration with existing campus data analytics provided through Tableau and other mechanisms. We hope to sunset the APS contract by May 2020. This timeline allows us to integrate feedback from current APS users into the Toolkit’s development.

The goals of the Decision Support Toolkit and absorption of the APS tool align with the institutional Data Strategy proposed by the Office of Information Technology (OIT). As outlined above, the Toolkit will promote the goals of accessible, accurate, clearly defined, and carefully communicated information resources that are tailored to the needs of CU Denver. It will pull together information from historically disparate sources (e.g., financial transactions and student enrollment) to create new analytic opportunities. At the same time, data quality will improve as the tools expose information to a wide array of end users with intimate knowledge of their own data and business processes.

To further these goals, we will collaborate with key staff from OIT’s data infrastructure team to take advantage of growing centralized data warehousing capacities wherever possible.

The Toolkit will be the initial project for the working group. Over time, it is our hope that this group becomes a broader point of collaboration for decision support questions posed by the campus within the Schools/Colleges and Administration.

With the collaboration of the working group members, we believe the Toolkit can be developed using existing staff and technical resources. Prioritization by the working group and stakeholders will be key to ensuring that the project can deliver high impact tools throughout the implementation but has enough runway to produce a functional and internally coherent final product.

**Proposed Working Group Structure**

- **Executive Sponsors:** Linda Bowman, Terry Potter, Jennifer Sobanet, Vice Chancellor for Faculty Affairs (vacant)
- **Co-Chairs:** Tobin Bliss (Fiscal Planning), Dave Deffenbacher (OIRE)
- **Initial Membership:**
  - Budget and Finance: Tobin Bliss and David Doig
  - Office of Institutional Research and Effectiveness: Dave Deffenbacher, Paula Dickson, Ian Whitman, and Melanie McLaren
  - Office of Analytics for Enrollment and Retention: Irma Peralta
  - Student Success: Erika Larson
  - Human Resources: Paul Joyce
  - Office of Information Technology: David Thomas, Nicky Rucker, and Crystal Gasell
  - Office of Digital Education: Jeremy Lingle

**Timelines**

**Summer 2019**

- Requirement gathering through meetings with school/college Senior Business Administrators, Assistant/Associate Deans, and other school/college representatives.
- Launch project web page.

**Fall 2019**

- Prioritize toolkit component development based on school/college feedback.
- Mock up Version 1 of toolkit deliverables and begin building components. Gather additional feedback from school/college representatives.

**Spring 2020**

- Deliver Version 1 of toolkit.
- Note: some individual tools may be delivered earlier as stand-alone components, dependent on prioritization.