August 31, 2022

MEMORANDUM

TO: M. Katherine Banks, Ph.D.
             President

FROM: Joseph P Pettibon II
             Working Group Chair

SUBJECT: Implementation Memo – Working Group # 28

Recommendation to be Implemented: Implement a matrix management structure to leverage Financial Services by integrating Academic Affairs' Business Services, Data and Research Services (DARS), and Enrollment Management. The following modification was added and became primary: Establish a performance analytics culture.

Strategic Considerations: The primary charge of the working group was to address the need for the university to develop a stronger data-driven culture for strategic decision-making using performance analytics. Secondarily, with the enrollment management functions existing in differing divisions at the university, there is a need to leverage a matrix management model to ensure appropriate collaboration in the enrollment services of the university. The following factors were considered in the working group:

- Identify strategic priorities and appropriate university level metrics indicating performance
- Identify key data sets throughout the university that should be accessible by data analysts
- Research appropriate structures of institutional research and planning functions at peer institutions
- Research and identify tools that should be available for the university to access data
- Identify and make available more broadly existing data and reports for strategic decision making

Finally, the creation of a matrix management structure should be handled by the vice presidents and their respective leadership teams meeting to address enrollment related issues around admissions, financial aid, and changes to processes and targets.

Logistical Issues Addressed: There were four logistical issues addressed during the working group process: (1) organizational structure for DARS/Performance Analytics, (2) access to more data for deans and department heads, (3) survey of deans and vice presidents on current data needs and key performance metrics, and (4) integration of other efforts on campus for data access and improvements that were already underway.

The most significant issue addressed was the organizational structure to support a performance analytics culture as the current DARS staff is insufficient to elevate the culture by making data

more accessible. The organizational chart (see attachment) shows a recommended new structure with additional resources needed to implement. The structure calls for five new positions with new salaries of $500,000 plus benefits of $145,000, or a total of $645,000 in new base budget. In addition, it is recommended that DARS be renamed to reflect its role in supporting performance analytics with the unit name of Office of Academic & Business Performance Analytics (ABPA), reporting to the AVP – Faculty Affairs & Analytics.

The second issue was driven in large part by Faculty Affairs and DARS to provide immediate access to performance metrics, now known as TAMU by the Numbers. Additional data and metrics will need to be added, particularly as it relates to any new budget model or key university performance metrics.

The survey of deans and vice presidents regarding data needs highlighted the gaps in data integration and availability and the need for identification of university level metrics for units to build off of for their own priorities.

Finally, prior to the formation of the working group, another committee had been charged with looking at data availability around student success metrics. The chairs of that committee were members of this working group. Rather than duplicate efforts, their recommendations have largely been incorporated below, and their full recommendations are attached to this submission as well.

Major Challenges Encountered and Resolutions:

While there was consensus that the university needs to develop 3-4 high-level metrics, the finalization of those metrics should only be done when the President lays out her strategic vision for the university. The working group believed that the high-level metrics in the current strategic plan were sufficient until the Path Forward process was completed on September 1, and the President shared her strategic vision for the university. Therefore, it is recommended that the working group or another group be convened in October to define the 3-4 university metrics based on the President's strategic vision expected to be laid out in her State of the University address on September 28, 2022. It was suggested that the areas for those metrics include: (1) a measure of enrollment and student success, (2) a measure of research and its impact, and (3) a measure of quality service by units across campus. Further, these measures also need to be considered in any new budget model based on performance.

A second major challenge is the significant volume of data available on campus, but not readily accessible through a single office, let alone a single data warehouse or data lake that brings together the student, financial, research, personnel, and facilities data. Some steps were taken to improve access to data by DARS, but the university needs to launch an effort through IT for a more integrated and long-term solution that can solve some of these long-standing challenges, including the need for a data governance process.

Key Logistical Issues to be Completed and Timeline:

In addition to funding the additional personnel in DARS/Performance Analytics and changing the name of the office, the following recommendations are being made:

1. Convene a committee co-chaired between ABPA and the Division of IT that engages with key stakeholders across the university, but particularly in Academic Affairs, Student

Affairs, and Faculty Affairs, and is charged with identifying data governance principles, data access levels, and strategies for prioritizing and defining data to be included in the data warehouse.

2. Task the Division of IT to work with ABPA and other data owners to enhance the current data warehouse capabilities to integrate data from multiple sources with the initial focus on student success and budgetary related metrics.

3. Task ABPA with providing training on current data management tools, data classification and security for individuals on campus needing to access analyze, and display data from the data warehouse

4. Task ABPA with developing a data analytics community to identify data priorities, collaborate, and disseminate common or requested reports.

5. Require each Vice President and Dean to identify their 3-5 metrics for their unit that align with the university performance metrics once defined. This should be completed by January 15, 2023.

The final and sixth recommendation is to address the matrix management structure, a monthly meeting has been initiated that brings together the enrollment services units and associated VPs to address enrollment related issues around admissions, financial aid, and changes to processes and targets. This group includes the Vice President of Academic & Strategic Collaboration, the Vice President for Finance & CFO, the Vice President & Deputy CFO as well as the leaders of the Admissions, Scholarships & Financial Aid, Registrar, and Aggie One Stop offices.
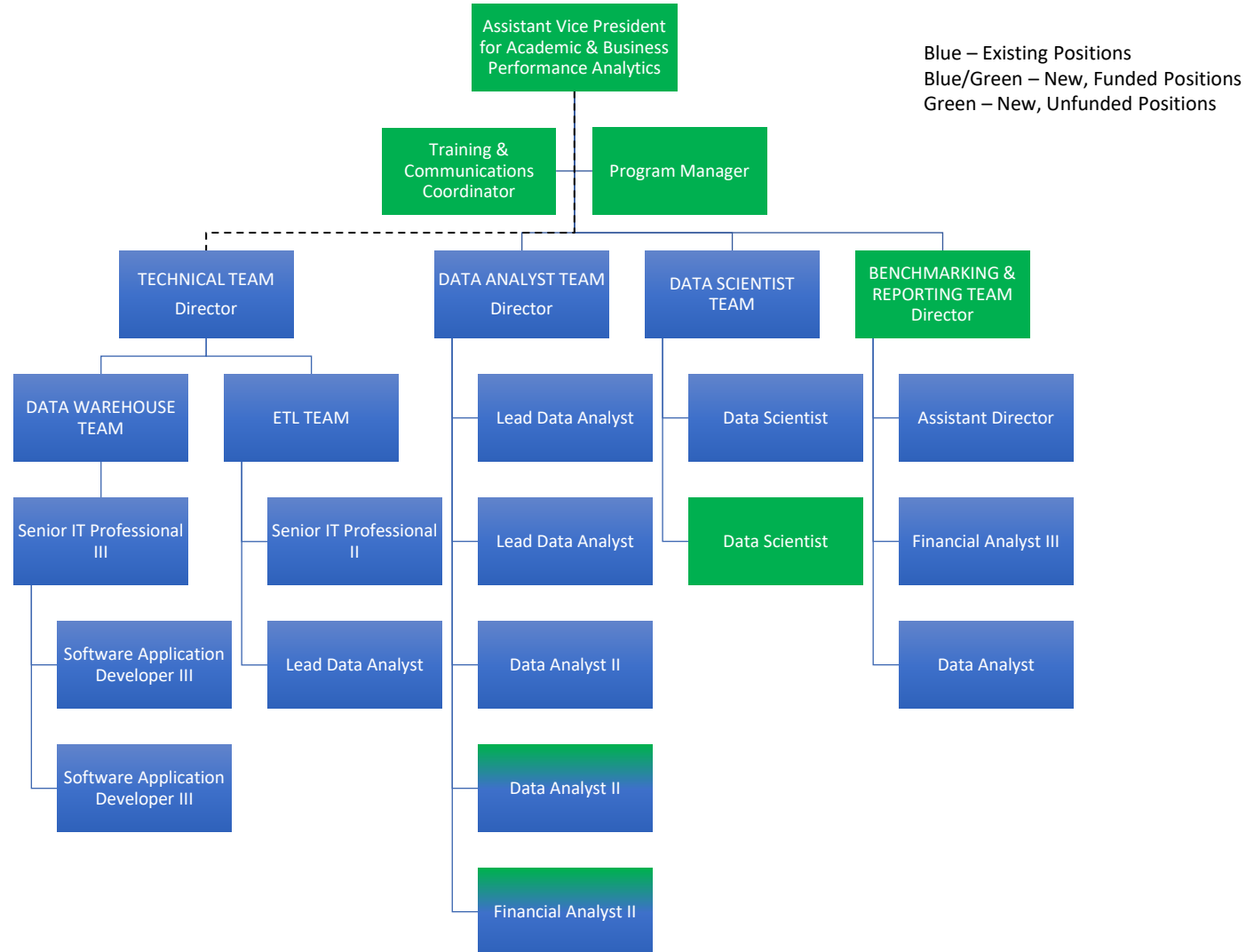
Approved:

_____   ___September 10, 2022_____
M. Katherine Banks, Ph.D.   Date
President

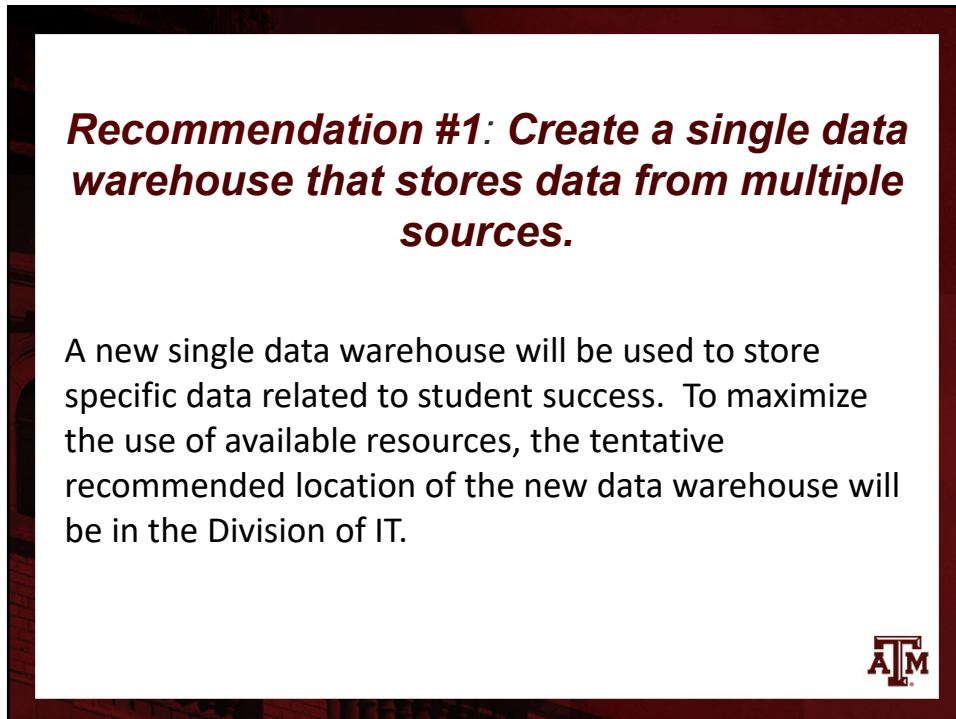# Academic & Business Performance Analytics Organization Chart

Student Success Data Management & Strategy Committee

Recommendations

May 25, 2022

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UNIVERSITY.

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***Recommendation #1**: Create a single data warehouse that stores data from multiple sources.*

A new single data warehouse will be used to store specific data related to student success. To maximize the use of available resources, the tentative recommended location of the new data warehouse will be in the Division of IT.

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Recommendation #2: *Identify and document all specific relevant data sources to include in the new single data warehouse.*

- There should be a complete list of data sources that includes source, system, owners, managers, custodians, intended users. The list of sources and any included data should be accurate, reliable, and current at all times.

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Recommendation #3: *Classify all data to be included in the new single data warehouse.*

- Document all individual data from sources to be included in the data warehouse. All data should be classified according to TAMUS policies to help allocate resources, prioritize the selection and placement of security controls, and ensure that the new data warehouse meets baseline security standards.

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Recommendation #4: **Identify and list all stakeholders who will access the new data warehouse.**

- Identify all individuals (stewards, managers) who will evaluate and authorize (or deny) requests for access to assigned datasets and document individuals (custodians, users) that should have access to data that is being collected.

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Recommendation #5: **Invest in a robust secure data management tool that can be used to access, analyze, and display data from the new single data warehouse.**

- Key stakeholders should be actively involved in the Identification, testing, and recommendation of a robust tool (Tableau, Business Objects, Power BI, Crystal Reports, etc.) to implement that provides for adequate access, display, and analysis of data.
- There should be ongoing training on use of identified data management tool(s).

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Recommendation #6: ***Provide training on data classification and security for all individuals authorized to access the new single data warehouse.***

- Data classification provides a framework for categorizing information and information resources according to the impact of loss and sensitivity of data they contain. Mandatory training should be provided for managers, custodians, and users of the new single data warehouse.

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Recommendation #7: ***Establish a dedicated team to curate and manage the data warehouse within the Division of IT.***

This would necessitate the active engagement of key stakeholders across the university (refer to recommendation #8).

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Recommendation #8: Convene a committee charged with identifying data governance principles, defining data access levels, and strategies for prioritizing and defining data to be included in the data warehouse.

- This group could lay the foundation for or select others for an ongoing governance group and working alongside and truly collaborate with the dedicated team (see recommendation #7) while the data sources are added to the warehouse.

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Recommendation #9: Strengthen dedicated support and resources to promote data literacy.

- Data literacy will be important for all stakeholders, including individuals responsible for analyzing data, those frequently requesting or consuming data, and the dedicated team (see recommendation #7) supporting the infrastructure of the warehouse. Context matters and the data are nuanced.

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Recommendation #10: Develop a data analytics community to identify data priorities, collaborate, and disseminate common or requested reports.

- Once the data warehouse is up and running, individuals like those who served on this subcommittee and possibly others, would be ideal starting places to begin designing on-demand reports and continue promoting data-informed decision making across the campus.

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Based on a review of peer institutions' practices, the following are recommended for consideration:

- <u>Ongoing</u> governance, including consistent engagement with and between data stewards.
- <u>Ongoing</u> technical *AND* content support for the data warehouse.
- Metadata integration with reporting.

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