# *Data Informed Strategic and Operational Planning*
USG Data Workshop
August 6, 2021

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Session Outline

- Philosophical approach to data and decision-making

- Strategies for assessing USG effectiveness

- Assessing USG's core activity – education!

- Opportunities and lessons learned

Data-Informed or Data-Driven?
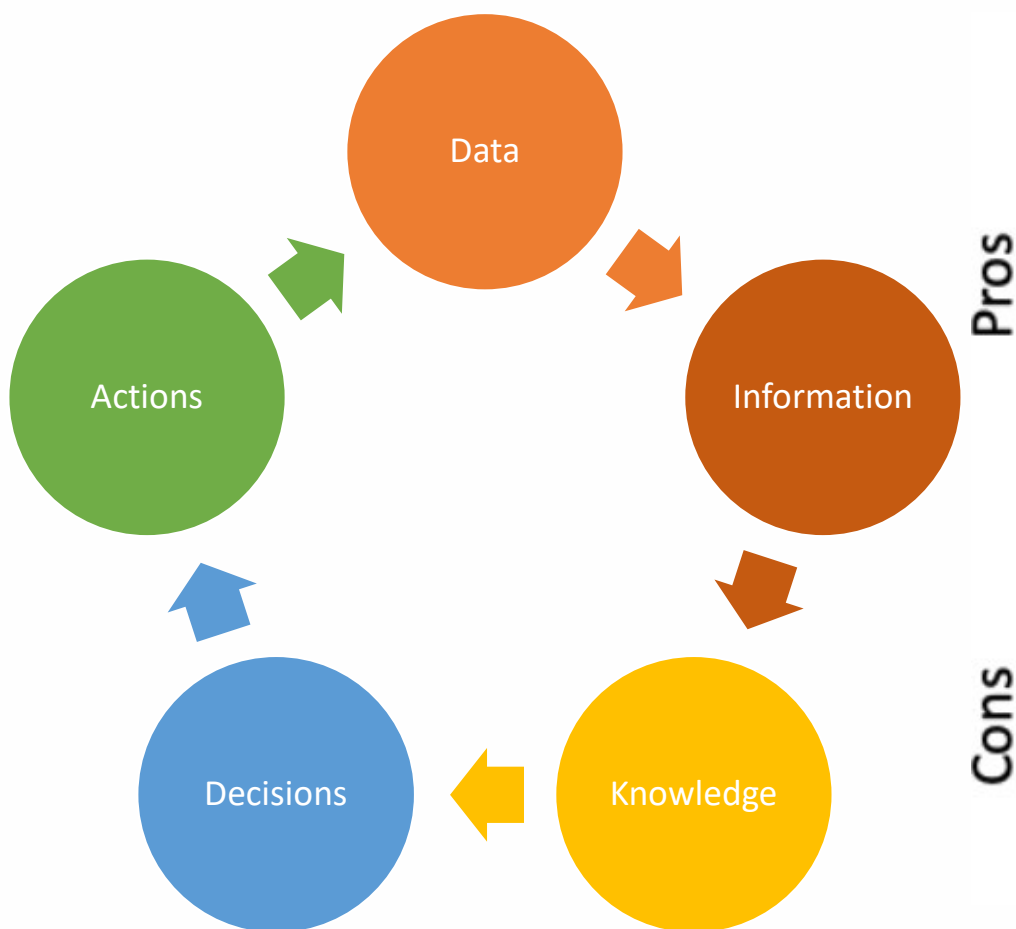
	Data Informed	Data Driven
Pros	Get "big picture" perspective	Automation of decision processes
	Complement data with other decision inputs	Reduce or eliminate partisan influences
	The value of experience in decision making	Reduce decision cycle time
	Creative solutions for complex situations	Capacity for frequent high-volume decisions
	See disruptors not visible in historical data	See disruptors not visible in historical data
Cons	Easy to introduce biases	Missing the big picture
	Influence by most powerful or most vocal	Potential for biases in algorithms
	Cherry picking of data (confirmation bias)	Risks of poor data quality
	Complexity of too many inputs	Risks of unreliable data pipelines
	Difficulty explaining decision rationale	Analytic models may decay over time

https://www.eckerson.com/articles/from-analysis-to-action-data-driven-vs-data-informed

Where does USG fall on this data use scale?

Analytics and Optimizing Student Success

	Type of Reporting, Query & Analytics	Focus	Decision Making & Action Perspective
Analytics	Optimization	What's the best that can happen?	Overall management and orchestration of analysis/query/reporting
	Predictive Modeling	What will happen next?	Embed predictive analytics in processes
	Forecasting/ Extrapolation	What if these trends continue?	Create "what if" capacity
	Statistical Analysis	Why is this happening?	Understand "why"
Query and Reporting	Alerts (Real Time)	What actions/ interventions are needed?	Intervene
	Query/Drill Down (Real Time)	Where exactly is the problem?	Target problem groups, individuals or processes
	Ad Hoc Reports (Real Time)	How many, how often, where?	Conduct special analyses to gain fresh perspectives
	Standard Reports (Real Time)	What happened?	Continuous review, standard metrics

Data Governance and Stewardship Perspective: Improve quality and availability of data for optimizing student success.

Source: Adapted from Davenport and Harris 2007

Suggested data collection strategies

- Collect it once / use it many ways

- Leverage in-direct feedback from stakeholders

- Engage partners in expanded information collection

- Establish a regular and systematic process of environmental scanning (with assistance of a third-party?)

Institutional Effectiveness Example – KPIs & Goals

BOWIE
STATE UNIVERSITY
1865

KEY GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Goal 1. Deliver high-quality academic programs and co-curricular experiences.

Obj. 1.1 Maintain the percentage of new tenure-track faculty with terminal degrees through 2019.

Obj. 1.2 Increase the number of professionally-accredited programs from five in 2015 to seven in 2019.

Obj. 1.3 Maintain the satisfaction level of bachelor's degree graduates with academic preparation for employment and lifelong learning.

Obj. 1.4 Maintain the University System of Maryland (USM) Board of Regents' comprehensive institution goal of seven to eight course units taught by full-time equivalent (FTE) core faculty through 2019.

Obj. 1.5 Increase the number of science, technology, engineering and math (STEM) program students from 680 in 2015 to 750 in 2019 and graduates from 96 in 2015 to 150 in 2019.

Performance Measures	2015 Act.	2016 Act.	2017 Act.	2018 Act.	2019 Act.	2020 Est.	2021 Est.
Percent of new core faculty with terminal degrees	100%	100%	100%	100%	100%	100%	100%
Number of professionally-accredited programs	5	5	6	6	6	6	6
Course units taught by FTE core faculty (per academic year)	7.3	8	7.6	7.6	7.5	8	7.5
Students satisfied with education received for employment (triennial measure)	N/A	N/A	86% N/A		N/A	90%	N/A
Students satisfied with education for graduate/professional school (triennial measure)	N/A	N/A	80% N/A		N/A	90%	N/A
Number of undergraduates in STEM programs	680	653	740	871	894	935	950
Number of degrees awarded in undergraduate STEM programs	96	100	93	114	116	125	140

Institutional Effectiveness Example KPIs

Racing to Excellence
FY19–FY24 Strategic Plan
bowiestate.edu/strategicplan

FY 2019-2024 Strategic Plan Key Performance Indicators

	Fall 2015 / FY 2016	Fall 2016 / FY 2017	Fall 2017 / FY 2018	Fall 2018 / FY 2019	Fall 2019/ FY 2020
Goal 1. Achieve Academic Excellence Supported by Curricular as well as Co-curricular Experiences					
Percent of new core faculty with terminal degrees	100%	100%	100%	100%	100%
Number of professionally-accredited programs	19	19	19	19	19
Number of new academic programs/concentrations	-	1	-	-	2
US News Best College - HBCU Rank				22	25
Credit hours per core faculty				27	355
Faculty Student Ratio	15.1	16.2	17.5	19.7	16.6
Goal 2. Promote a Holistic and Coordinated Approach to Student Success					
Enrollment					
Fall Enrollment Headcount	5,430	5,669	6,148	6,321	6,171
Undergraduate	4,315	4,711	5,188	5,308	5,227
Graduate	1,115	958	860	1,013	944
STEM Enrollment					
Undergraduate	653	740	871	894	935
Graduate	235	193	191	161	148
New Freshmen Avg High School GPA	2.80	2.80	2.87	2.91	2.90
Student Success					
New First-time, Full-time Degree-Seeking Freshmen					
Second-Year Retention Rate	75%	71%	68%	70%	76%
Four-Year Graduation Rate	16%	16%	17%	17%	17%
Six-Year Graduation Rate	37%	40%	42%	43%	43%
Degrees Awarded by Fiscal Year	1,180	1,035	1,036	1,085	1178
Bachelor's	833	713	783	826	871
Master's	337	313	245	252	293
Doctorates	10	9	8	7	14
STEM Disciplines Bachelor's	101	93	114	116	114
Athletic Success					
Number of CIAA Championships	1	1	2	2	
Graduate Success Rate of Athletes	48%	25%	48%	61%	80%

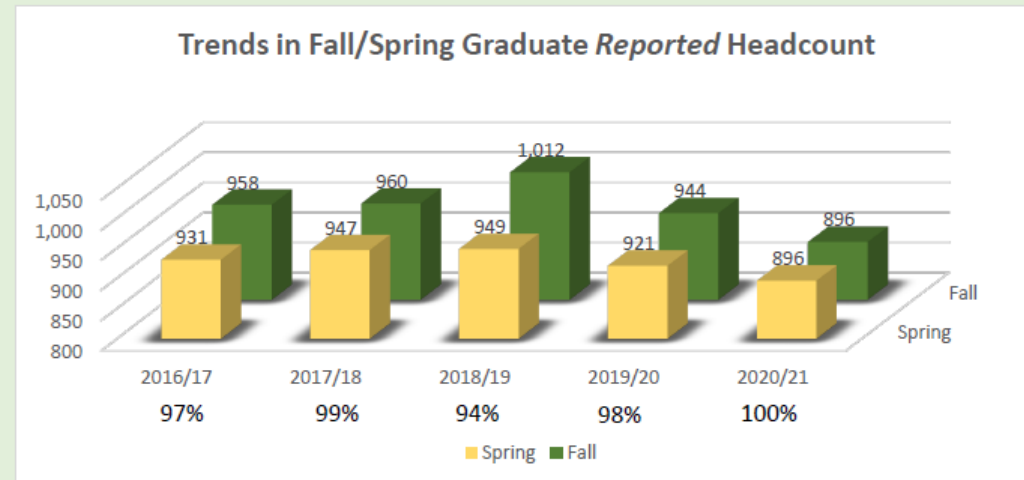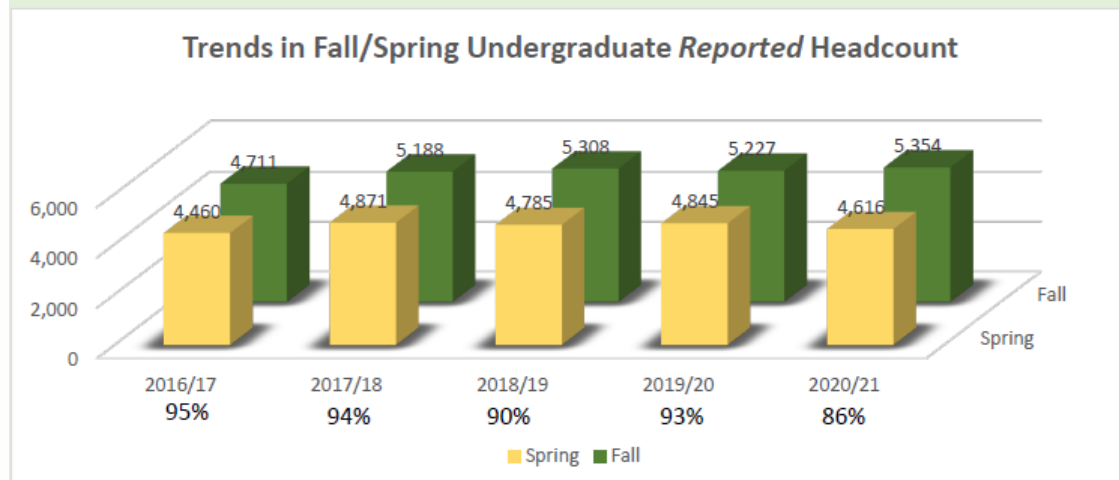# Operational Tracking Example – Enrollment Dashboard

Current Enrollment Levels

Spring 2021 Enrollment Tracking
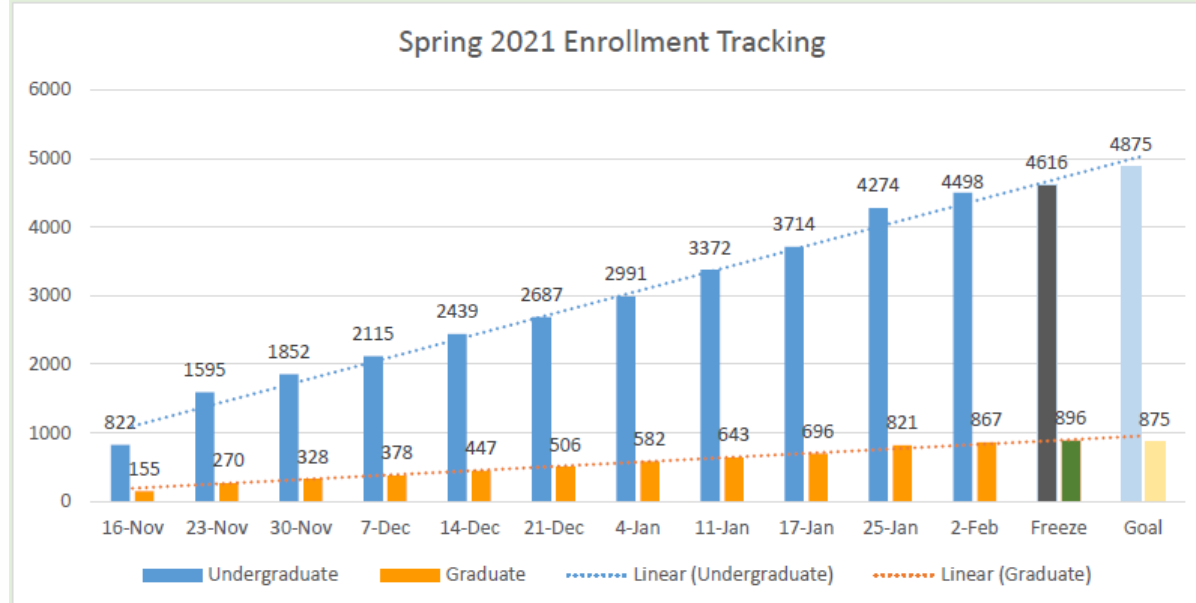
Current Term - Progress Towards Goal

	Enr Freeze	Enr Goal	% Enr Goal
Undergraduate			
New First-time	36	44	82%
New Transfer	169	221	76%
Continuing	4356	4535	96%
CNED - UNG	55	75	73%
Total	4616	4875	95%
Graduate			
New Graduate	126	100	126%
Continuing	758	760	100%
CNED-Grad	12	15	80%
Total	896	875	102%
Total Headcount	5512	5750	96%

Headcount Trends

Trends in Fall/Spring Undergraduate *Reported* Headcount

Trends in Fall/Spring Graduate *Reported* Headcount

Stakeholder Survey Example – "Pulse" Survey

Students:

- Plan on coming back in fall 2021

ANSWER CHOICES	RESPONSES	
Yes, I plan to re-enroll	93.36%	408
Unsure if I will re-enroll	4.12%	18
No, I do not plan to re-enroll	0.00%	0
No, I am graduating this spring	2.52%	11
TOTAL		437

- Prefer to enroll in…

	All face-to-face	Combination of face-to-face and online	All online	Do not plan on attending
Undergraduate	16%	38%	44%	1%
Graduate	5%	24%	65%	6%

Implications…

- Fall course modalities and faculty preparedness
- Monitoring course enrollments
  - Adding F2F sections
  - Adjusting F2F section size
  - Adding online sections

Assessing USG's core activity – EDUCATION!

Are classes being offered over time so that students can complete degree?

Term Classes

Subject	Catalog	Description
EDAD	801	Phil/Hist Found Urban Ed
EDAD	810	Descriptive & Infr Stats
EDAD	814	The History of Higher Educatio
EDAD	820	Human Resources
EDAD	825	Adv School Law
EDAD	835	Research Designs & Meth
EDAD	840	Ldshp/Tech In Global Inf
EDAD	899	Comp Exam-Edad
EDAD	900	Applied Research Seminar
EDAD	901	Prin of Contemp Educatinl Tech
EDAD	903	Critical Technology Issues Imp
EDAD	910	Dissertation I

Educational Leadership Core - 24 semester hours

EDAD 830 - Educational Government and Political Studies

EDAD 845 - Managing Financial Resources in Urban Education

EDAD 825 - Advanced School Law

EDAD 820 - Human Resource Development and Administration

EDAD 801 - Philosophy and Historical Foundations of Urban Education

EDAD 840 - Leadership and Technology in Global Information Age

EDAD 850 - Interdisciplinary Seminar

EDAD 815 - Educational Planning and Evaluation

Research Core - Core 9 credit hours

EDAD 835 - Research Designs and Methods

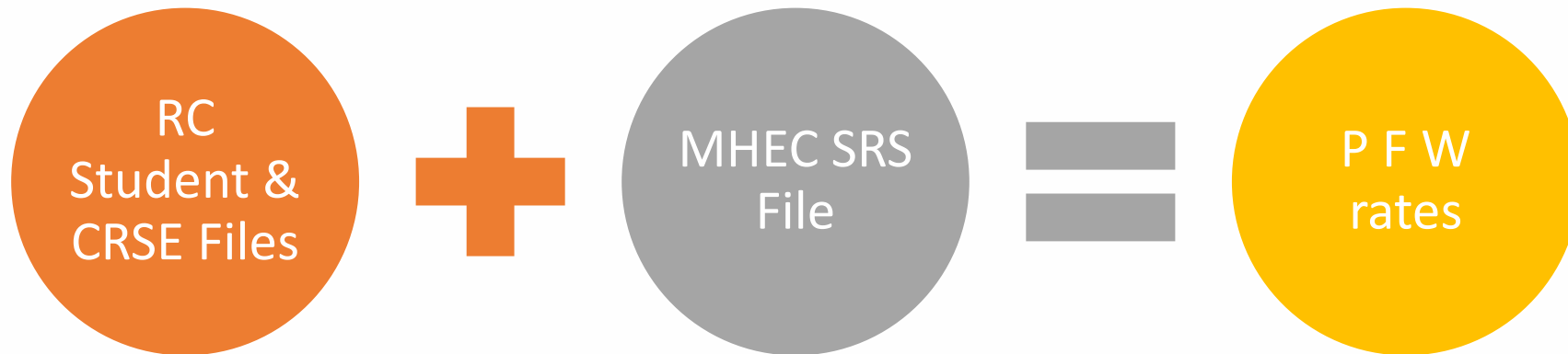EDAD 810 - Descriptive and Inferential Statistics in Education

EDAD 900 - Applied Research Seminar

Externship, Clinical Study - 6 credit hours

EDAD 920 - Advanced Externship in Educational Leadership I

Assessing USG's core activity – EDUCATION!

USM Research Project – Regional Center *Undergraduate* Course Success

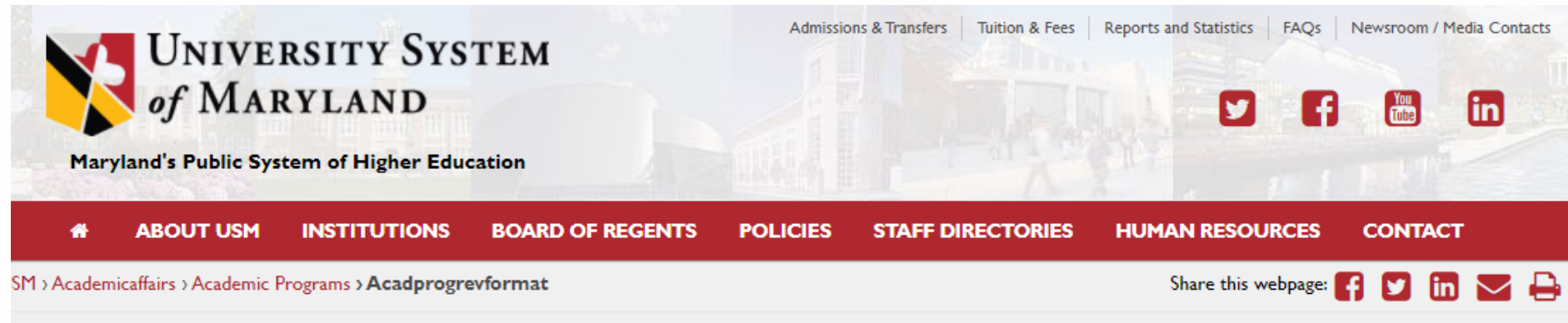# Assessing USG's core activity – EDUCATION!

USM Research Project – Regional Center *Student Retention & Graduation Rates*

RC Student File **+** AIS File **+** EIS Files **+** DIS Files **=** Ret & Grad Rates

Assessing USG's core activity – EDUCATION!

Partner Collaboration – Course / Program Assessment

Periodic Review of Academic Programs

Opportunities and Lessons Learned…

- Deliberately include KPIs in strategic plan goal discussions
  - Operational strategies and tactics are "SMART"

- Start asking – How do you know?
  - Leverage standard reports in multiple ways
  - Share data and survey results with stakeholders
  - Explore strategic planning tracking software

- Be transparent - engage USM and educational partners in student success and programmatic assessment discussions

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