BI ADVISORY COMMITTEE

April 2022

PURDUE UNIVERSITY®

Agenda

Staffing Update

BICC Roadmap

Transformative Education 2.0

Data Governance

Motio CI

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Staffing Update

Staff Member	Area	Position
Natasha Ervin	BICC	System Analyst
Justin Hollins	BICC	System Analyst
Syed Talha	BICC	Solutions Engineer
Andrea Pluckebaum	IDA+A	Assistant Director, Analytics
Theresa Martin	IDA+A	Assessment System and Specialized Accreditation Lead
Ramesh Madiraju	IDA+A	Database Engineer
Michelle Lewis	FP&A	Senior Data Analyst
Michael Wakolbinger	Grad School	Data Analyst

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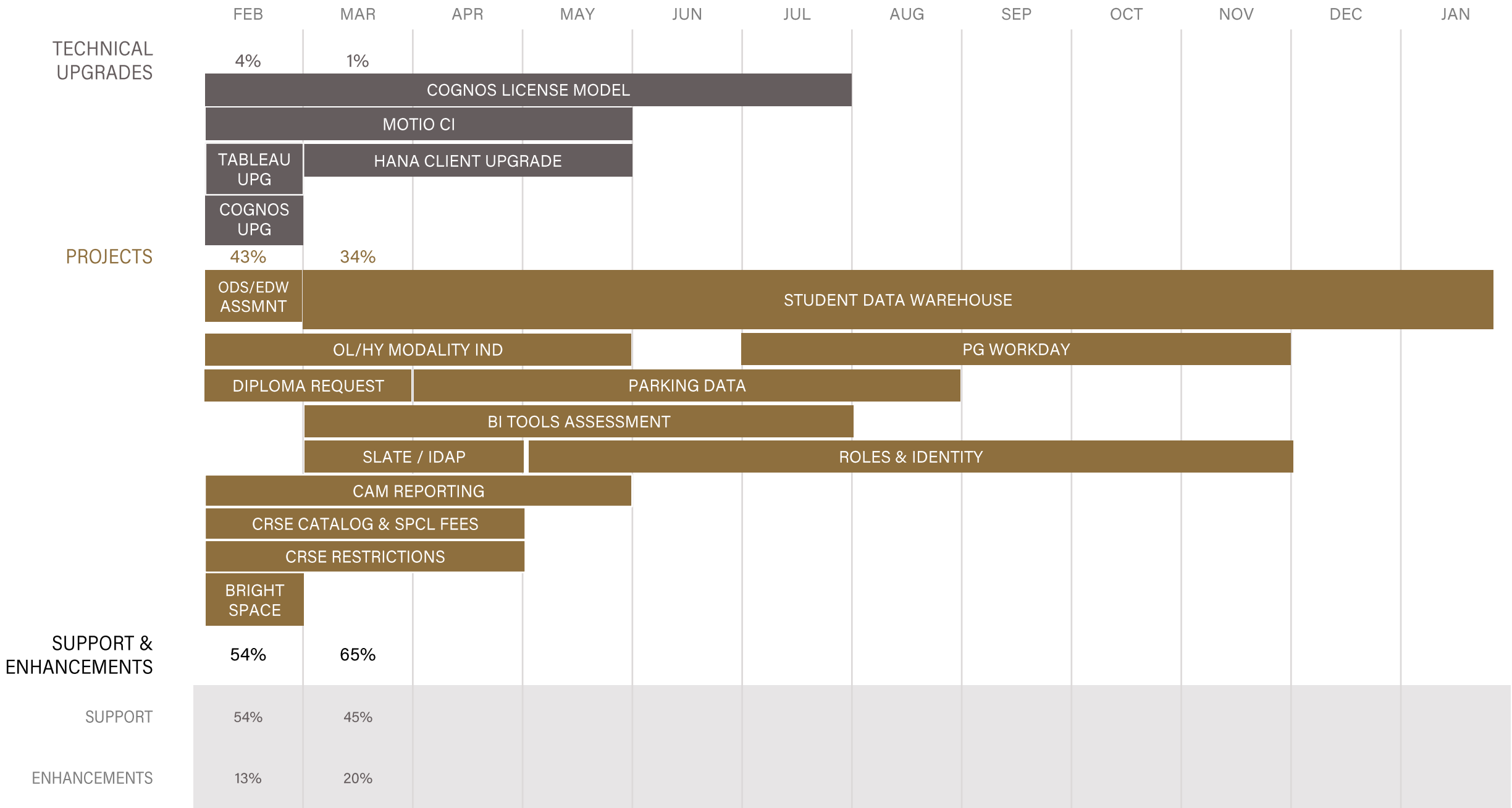
BICC ROADMAP

UPDATED
04-07-2022



BICC INVESTMENTS

UPDATED
04-07-2022

	Size (IT Hours)	% Complete	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23
Support (includes scheduled work)			343	510										
Enhancements			157	226										
Non-Project Work Total			**500**	**736**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Projects														
Cognos Upgrade Feb 2022	150	100%	22											
Cognos license rationalization	250	90%	4	1										
MotioCI Implementation	80	50%	0	0										
Tableau Upgrade Feb 2022	60	100%	6											
Upgrade BI HANA Client 2022	80	30%		14										
Add Diploma Request Banner Table to the ODS	50	100%	18	5										
Banner ODS/EDW Assessment	1000	100%	79											
BI Reporting and Visualization tools assessment	500	100%	2	4										
Brightspace Data Warehoused (IDA+A)	2500	100%	40											
CAM Reporting	500	60%	127	65										
Correct PWL Course Catalog package & Special Fees Course View	200	85%	0	7										
Course Restrictions Fix	500	85%	0	0										
Create ind to notate the mode of instruction based on -OL/-HY prog code	TBD	N/A	46	20										
Enhance Automate the refresh of Slate data in IDAP	105	75%	8	6										
New Beginners Flag in the ODS	275	CANCELLED	69	28										
Parking Data from Multiple Systems to BI	TBD	NA												
Purdue Global Historical Workday Data (HR)	TBD	N/A												
Purdue Student Data Warehouse Build	20000	2%		250										
Roles and Identity Star (HR)	TBD	N/A												
Other (Including Non-BI Projects)	N/A	N/A	2	1										
Total Project Hours			**423**	**401**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Productive Hours (excludes Admin/PTO/etc.)			**923**	**1,137**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
"Radar" - non-approved or scoped projects														
Assessment of Regional Campus Access to LMS Data														
AssetWorks Assessment (AO)														
Electronic Research Administration reporting (COEUS replacement)														
Excel over SQLServer Assessment														
IT 2010 Time Star (HR)														
Move Perceptive Content Data to BI														
Purdue Online Salesforce Data Warehousing and Reporting														
QM4 Phase Out Project: Cost Distribution Star Project (HR)														
QM4 Phase Out Project: Q4 2021 Payroll Results (HR)														
SMAS User Interface Assessment														
SPS GM Billing Data														
SPS Grant Master data for Cybersecurity Maturity Model Certification														
PDW Project Releases														

Jun-23

S4, SF, or ECP Changes

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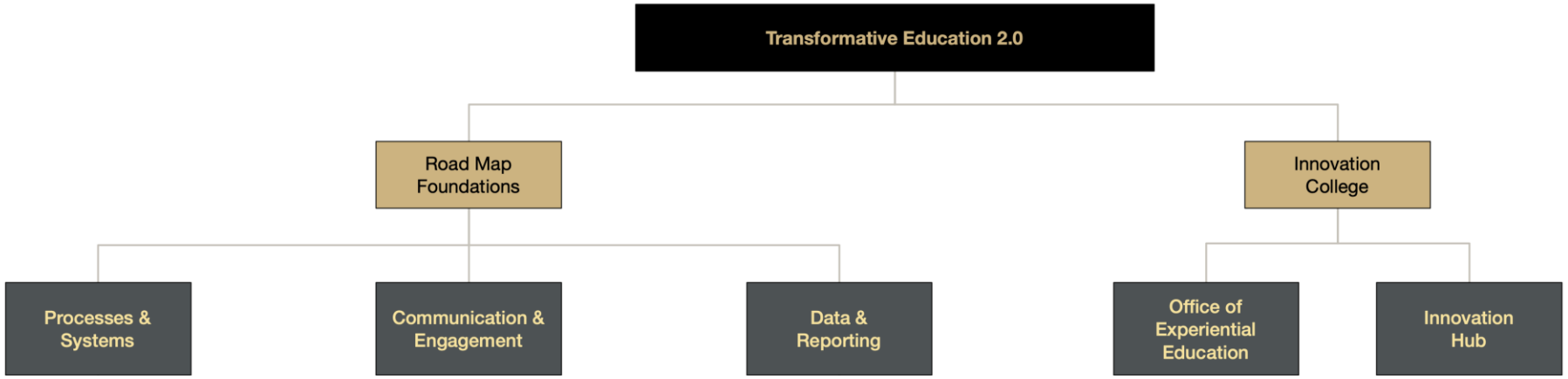
TRANSFORMATIVE EDUCATION 2.0

2022 Strategic Update

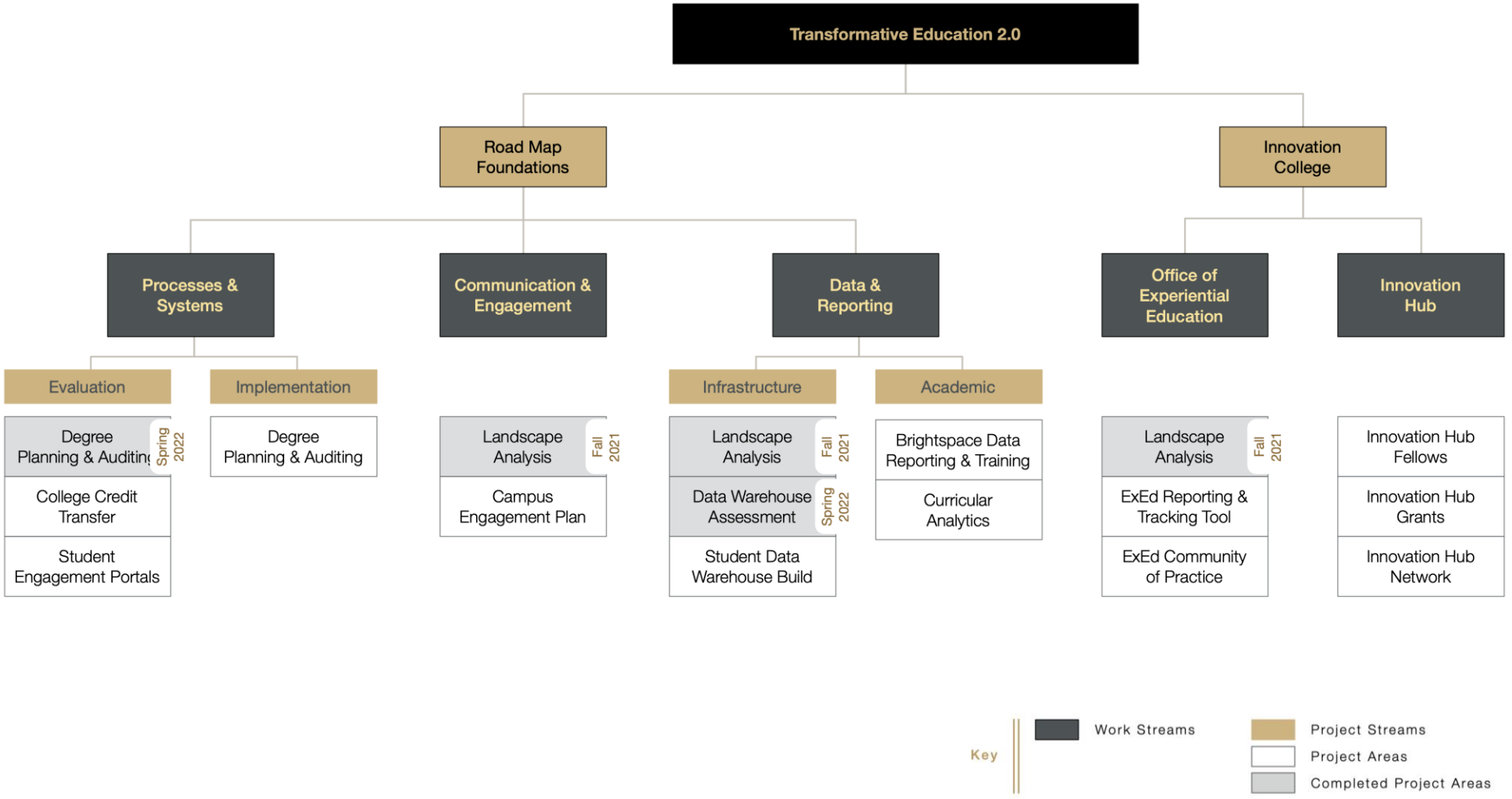
Spring 2022

2022 Strategic Update

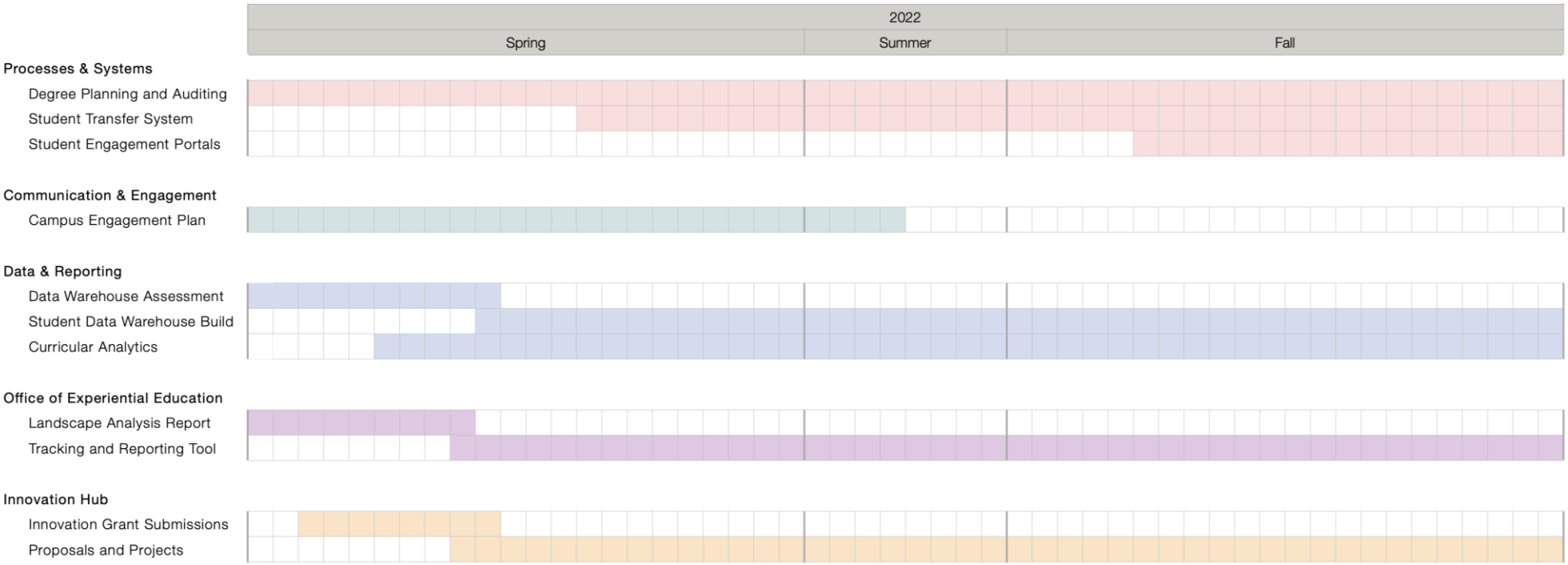


Key — Work Streams

2022 Strategic Update



2022 Strategic Update

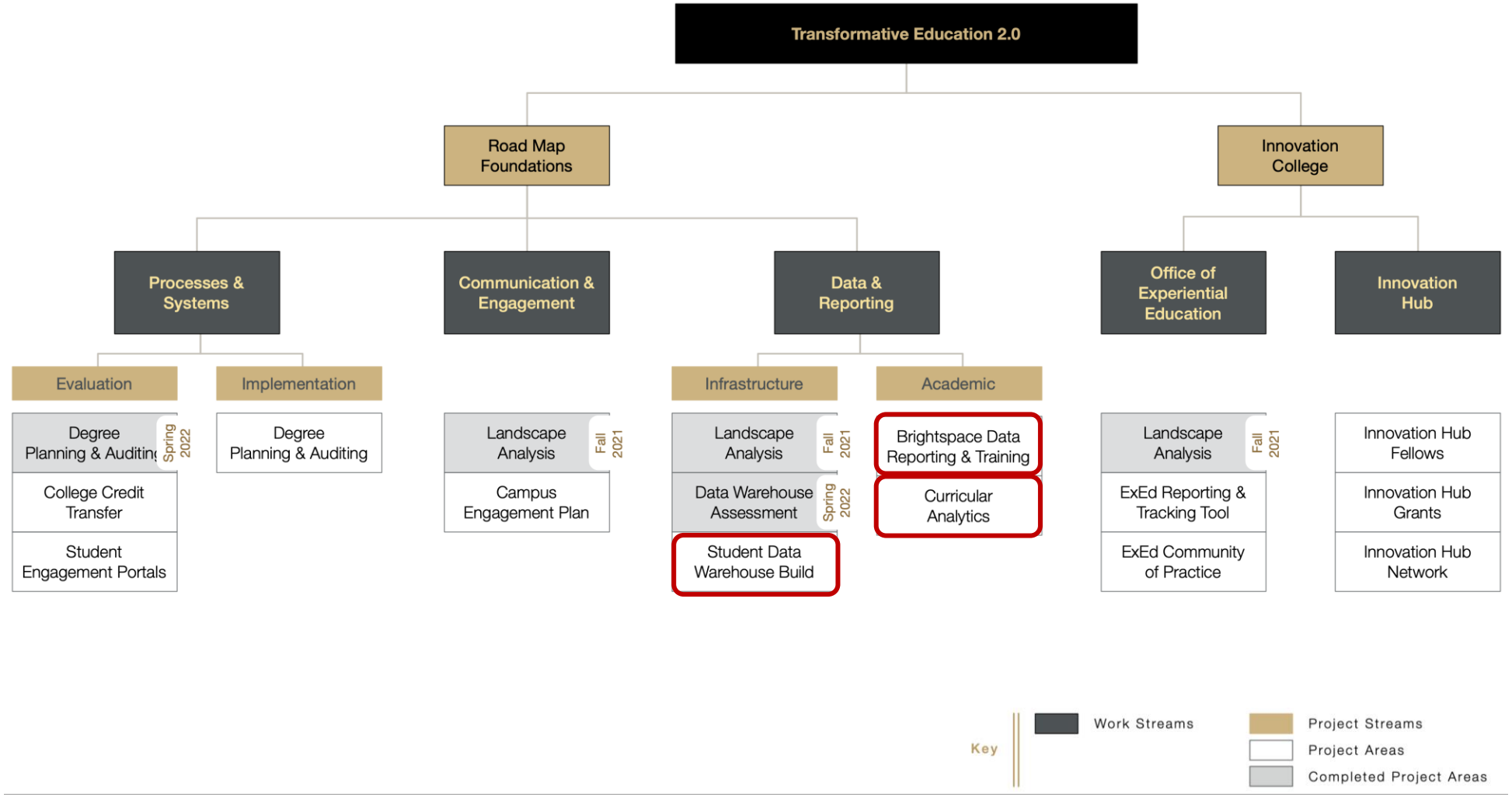


2022 Strategic Update

Near-Term Institutional Decisions

- Staying with current institutional systems:
  - Banner (Student Information System)
  - Brightspace (Learning Management System)
  - Degree Works (Degree Coding and Requirements ONLY)
  - Purdue Data Analytics Platform
- Contracting with EduNav as new tool for degree planning and enhancing student progression to graduation
- Building new Student Data Warehouse and integrating data sources

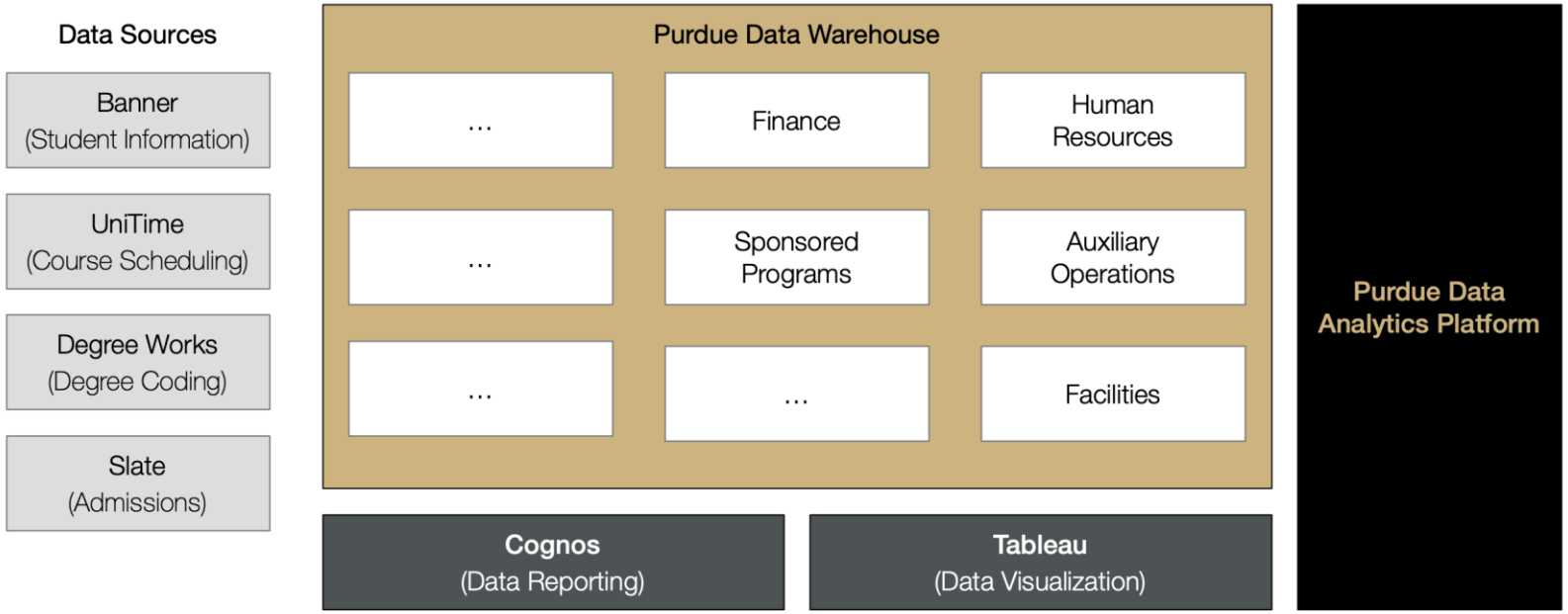
2022 Strategic Update



STUDENT DATA WAREHOUSE BUILD

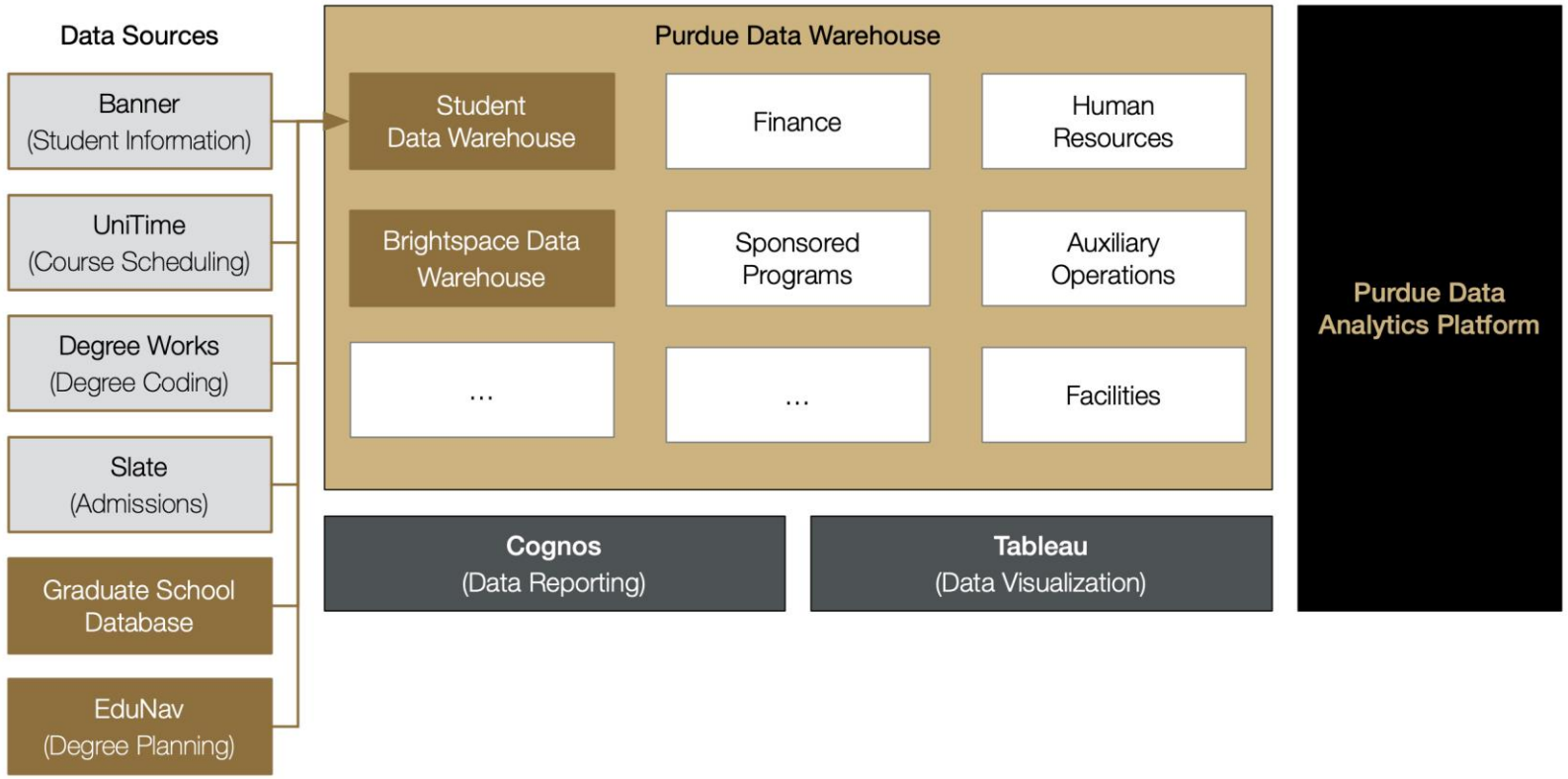
Data & Reporting

Data Ecosystem // Current State



Data & Reporting

Data Ecosystem // Future State



Student Data Warehouse - Scope

- In scope: ODS, Frozen ODS, EDW, Grad School Database
- Star models and datasets in Boiler Insight (PDW database) – estimated:
  - 57 fact tables
  - 149 dimension tables
- 11 project release cycles

Student Data Warehouse - Effort and Timeline

- Official kickoff on April 5th
- 3 years (April 2022 – April 2025)
- Doing design, development, and report writing in parallel
  - Gradual transition of old Cognos content over the duration of the project
  - Project includes end user training

Hours By Area			
Area	Hours	FTE (in total)	FTE (per year)
BICC	17,924	10.8	3.6
EMAR	10,896	6.5	2.2
IDA+A	8,711	5.2	1.7
GRAD School (IMA)	3,801	2.3	0.8
ITaP - PMO	1,872	1.1	0.4
Totals:	43,204	26	8.7

Hours By Workstream	
Data Warehouse Build	19,168
Data Mart QA Work	1,650
Report & Dashboard Development	14,154
Report Writer, End User Training & Rollout	1,635
Frozen ODS & EDW Data Conversions	2,250
Production Support	2,475
Project Management	1,872
Totals:	43,204

BRIGHTSPACE DATA REPORTING AND TRAINING

Brightspace - Background

- Brightspace supplies standard data exports – refreshed daily.
- An IT project has recently been completed to load these exports into Purdue's data warehouse.
- The next giant leap is ensuring data is available and accessible for university stakeholders.
- Requirements gathering meetings:
  - TLT
  - Purdue Online
  - Department Heads
  - Head Advisors
  - Undergrad Curriculum Council
  - Polytech Statewide

Brightspace – About the Data

- Brightspace data may be used to meet a variety of needs across campus, such as:
  - understanding the impacts of student and instructor activity
  - tracking learner progress and performance
  - analyzing assessment effectiveness
  - developing effective course content
  - meeting institutional reporting requirements
  - providing data for research on the scholarship of teaching and learning

Brightspace – Next Steps

- Timeline
  - Spring 2022 – requirements gathering and planning
  - Summer 2022 – report and dashboard development
  - Fall 2022 – deploy content to be used for the fall term

CURRICULAR ANALYTICS

Curricular Analytics

- Project 1: Plan of Study Exceptions Reporting
  - As part of the process of migrating programs to EduNav during the implementation phase, we share and discuss with participating advisors the exceptions data for each Plan of Study. By looking at the distribution of exceptions, we can pull out for further examination the points where there seem to be a higher number of exceptions than elsewhere in the program. This will also inform areas where SmartRules may need to be applied because the program is complex rather than misaligned.

- Project 2: Course Level Enrollment Projections
  - Create a more nuanced estimate of course demand and encourage unit adoption of using this data to make program decisions. This will be achieved by pulling together multiple sources of course enrollment information and applying new data logic programming. With a small pilot group, we will create and implement practices for understanding, interpreting and utilizing data to inform decisions about right-sizing course offerings in order to meet student course demand and mitigate institutional barriers to graduation.

Processes & Systems

Degree Planning and Auditing

- Degree Works
  - Continue to use for degree requirements coding ONLY
- Course Catalog
  - 8,000+ Courses
  - 250+ Majors
  - 130+ Minors
  - 225+ Unique Concentrations

Processes & Systems

Degree Planning and Auditing

- EduNav Platform
  - All students are guaranteed to have a plan that is personalized, goal-oriented, and represented in a visual pathway to degree completion
  - Plans are designed to identify optimal pathways to graduation, alerting students if they make a choice that would require additional time
  - Degree plans are based on both official requirements and advisor institutional knowledge, codified into "Smart Rules"
  - Plans are updated automatically as students adjust their goals and course registrations, saving time and ensuring that plans are always valid
  - Information on students' plans is aggregated and provides support for course demand and institutional course planning
- Strengthening institutional processes (e.g., curricular workflows)

Processes & Systems

Example: A General Education Requirement Representation in one major

21 credits?

Represented in My Purdue Plan

General Education Requirement	Catalog Term: Fall 2021	Credits Required 21
	GPA: 0.00	Credits Applied: 0

Unmet conditions for this set of requirements: You have taken 0 credits but still need 21 more.

27 credits?

Oral Communication	Still Needed:	1 Class in required. Click here for a list of courses that meet this requirement.
Humanities	Still Needed:	1 class is required. Click here for a list of courses that meet this requirement.
Behavior/Social Science	Still Needed:	1 class is required. Click here for a list of courses that meet this requirement.
Science, Tech & Society	Still Needed:	1 class is required. Click here for a list of courses that meet this requirement.
General Education Electives:Introductory or Non-Introductory Level - 9 Credits	Still Needed:	You have taken 0 credits but still need 9 more. Click here for a list of courses that meet this requirement.
General Education Electives: Non-Introductory Level - 6 Credits	Still Needed:	You have taken 0 credits but still need 6 more. Click here for a list of courses that meet this requirement.

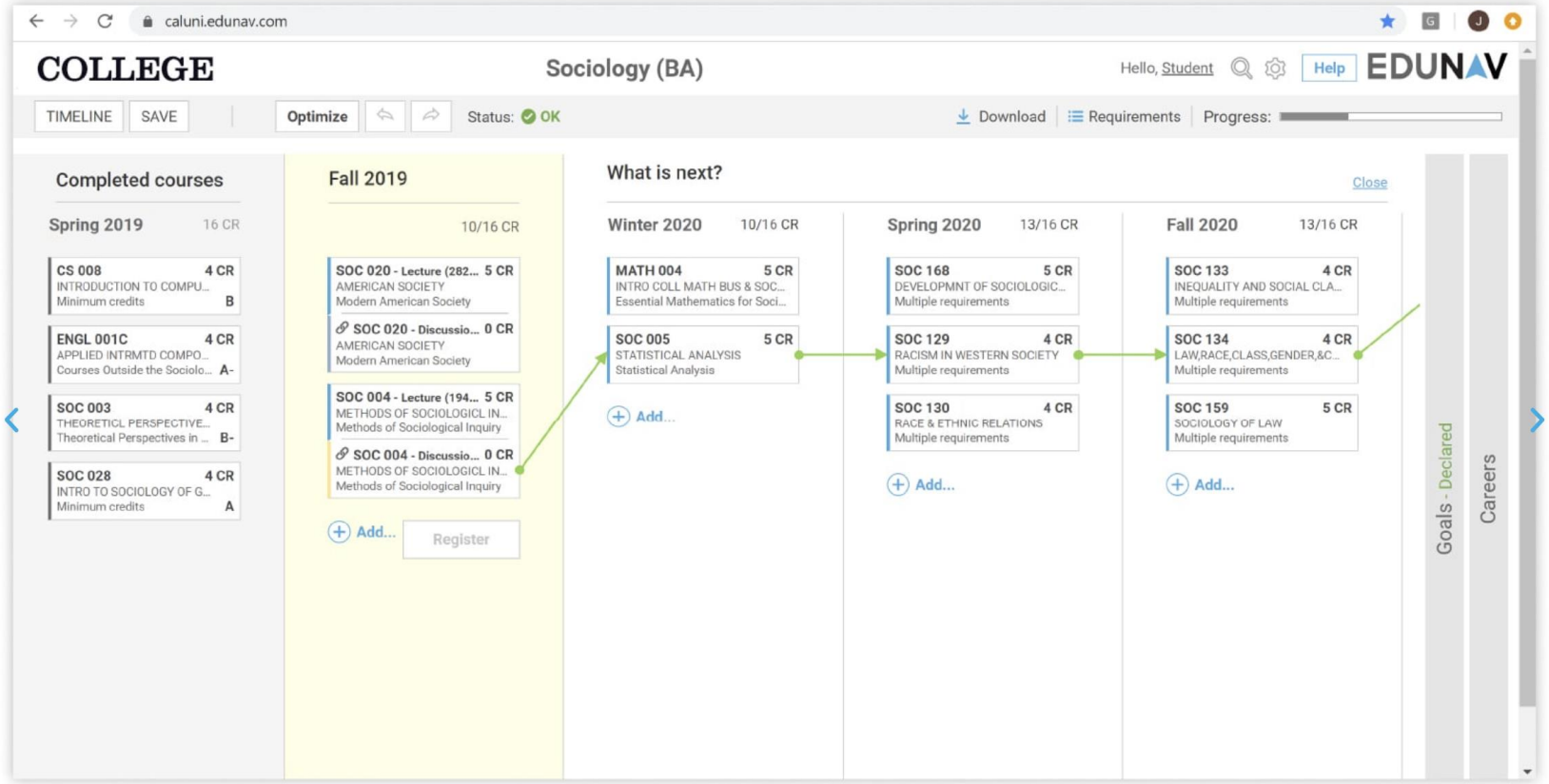
Represented in Catalog

- General Education Elective I - Credit Hours: 3.00 (satisfies Human Cultures: Humanities for core)
- General Education Elective II - Credit Hours: 3.00 (satisfies Human Cultures: Behavioral/Social Science for core)
- General Education Elective III - Credit Hours: 3.00 (satisfies Science, Technology & Society for core)
- General Education Elective IV - Credit Hours: 3.00 (satisfies Information Literacy for core, if needed)
- General Education Elective V - Credit Hours: 3.00
- General Education Elective VI - Credit Hours: 3.00

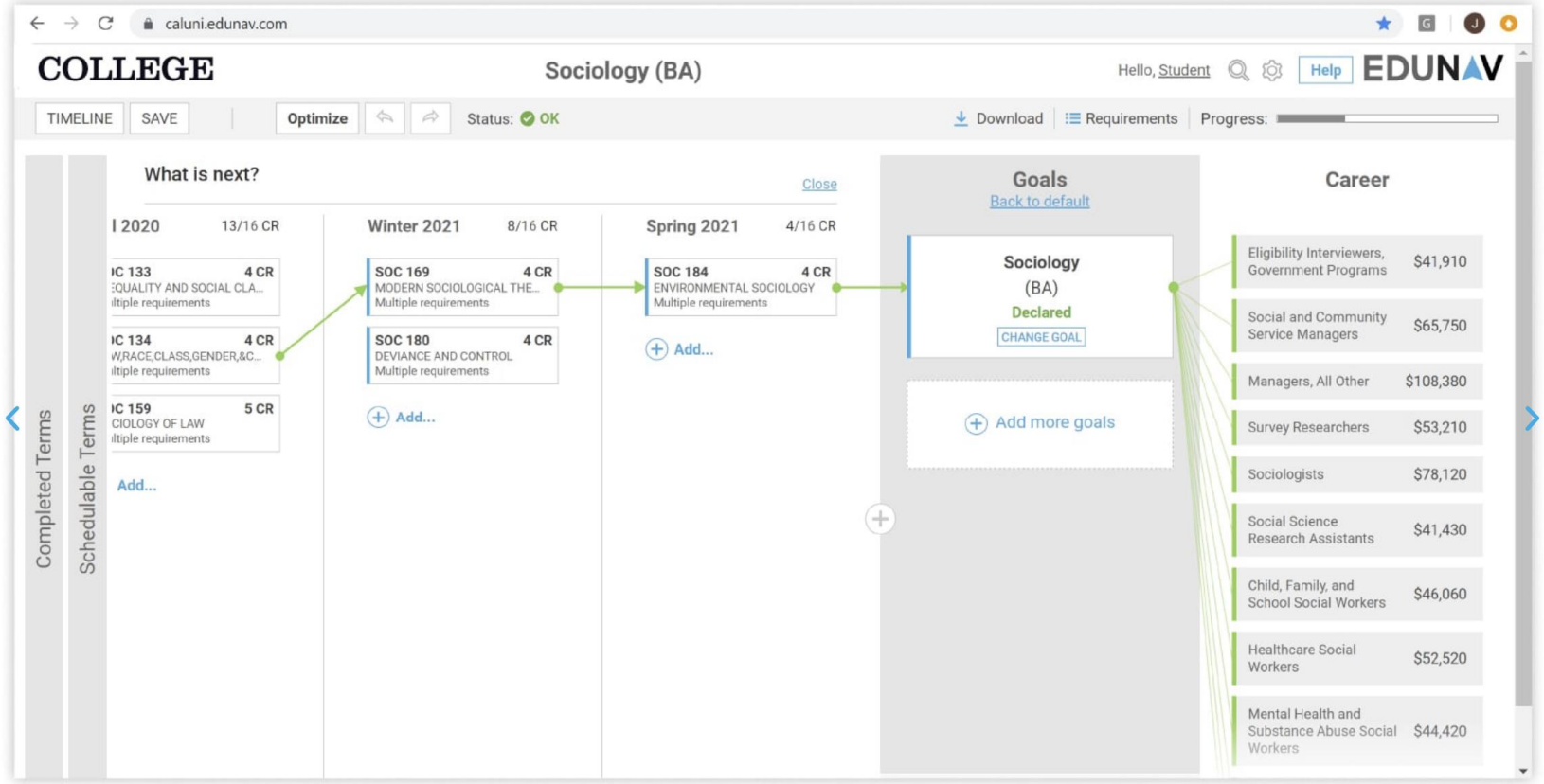
18 credits?

EduNav

Planning. Progressing. Graduating!



Student Goals: Majors, Minors, Certificates, and Career



Communication & Engagement

Campus Engagement Plan

- Analyzing the communication and student engagement landscape to develop recommendations for a Campus Student Engagement Plan
- Multiple project teams working with students as partners
  - Inventory communication tools used at Purdue
  - Benchmark peer and aspirational institutions' practices, tools, and structure for campus communication.
  - Complete a market analysis of major campus communication tools and vendors

Next Steps

- Compile findings of inventory, benchmarking, and market analysis
- Develop recommendations for Campus Engagement Plan

Experiential Education

Landscape Analysis // 350+ Programs

- The most common types of ExEd are project-based learning, service-learning, and field work
- > 95% say students gain career-relevant knowledge, skill, and abilities
- > 70% of programs have defined structure with students learning outcomes and engage students in reflections
- 90% of Purdue program leaders engage with students throughout the entire experience with leaders including faculty, staff, AND students

Next Steps

- Investigating a tool(s) to enable campus reporting and tracking of ExEd

Innovation Hub

Grant-funded Projects and Fellows; Research Development

- Established funding framework for individuals and teams to pursue innovative projects emphasizing transdisciplinary experiences for students for scaling both size and across disciplines/settings
- Launched mentored proposal writing program (co-sponsored by EVPRP) focused on large federal grants for research on teaching and learning
- Butler partnership focused on innovation and knowledge sharing via co-convening of events and leadership among Indiana institutions

Next Steps

- Focusing on the development and expansion of innovations, with a secondary outcome on the scholarship of teaching and learning (SOTL)
- Scheduling transdisciplinary convenings across campus

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Future Project Areas

- College Credit Transfer
  - State-wide initiative for XML transcript standardization
  - Will investigate college credit transfer tools, systems, and solutions

- Student Engagement Portals
  - Will synthesize findings and recommendations from Campus Engagement Plan
  - Will investigate common student portals (e.g., myPurdue)

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DATA GOVERNANCE STRUCTURE

BIAC – 4/13/2022

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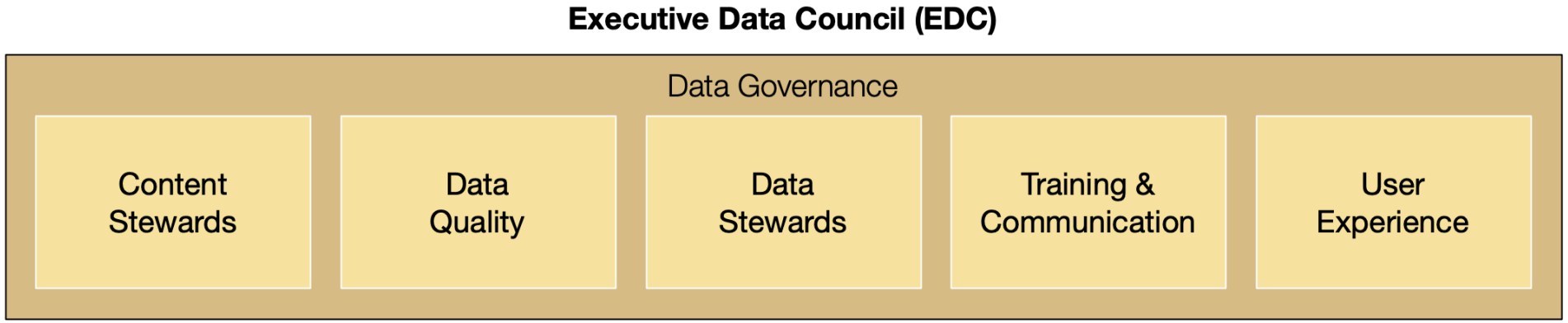
Data Governance Structure



- Committee chairs will be non-voting members of the EDC, attending all scheduled meetings with a standing agenda item – sharing committee updates, elevating discussion topics, and requesting decisions, as needed.
- In partnership with the Data Governance Program Manager and the Chief Data Officer, chairs of each committee will convene on a regular cadence in order to ensure coordination across committees.
- Data Governance committee notes and documents will be shared broadly with the data community.

Responsibilities & Chairs

Committee	Chair	Responsibilities (abbreviated)
DG – Content Stewards	Andrea Pluckebaum (IDA+A)	Recommend standards, validation, ongoing maintenance, and common navigation for Cognos and Tableau content
DG – Data Quality	Steve Lipps (EM)	Build upon current processes to create a shared repository of data quality issues, mitigation, and resolution of data issues
DG – Data Stewards	Robert Oxender (IT-Security)	Renewed focus on data access, security, classification, and handling
DG – Training & Communication	Cindy Moscrip (HR) Sarah Bauer (IDA+A)	Establish data training and communication standards, templates, best practices.
DG – User Experience	Zach Yater (BICC)	Ensure consistency and usability for the presentation layer for standard content (Cognos and Tableau)

Staying Realistic

- NOT REINVENTING THE WHEEL: significant work to be done, but lots of knowledge and processes from individual units to build upon
- WORKLOAD: committee participation needs to be distributed so as not to overly burden any individual or unit; CDO and DG Program Manager will be resources for groups as they develop
- ACCOUNTABILITY: transparency of the work being done to be shared with the data community; responsibility of committees to the EDC for delivering on their goals; responsibility of committees to stay in their lane, but also be collaborative; responsibility of EDC to make decisions, provide guidance and support
- ALIGNMENT: individuals from across units are looking forward to working together to streamline processes, definitions, metrics, standards, user experience, and communications in ways previously not done

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Next Steps

MARCH

- Executive Data Council (EDC) approval

APRIL-MAY

- Meet with each chair / co-chair(s) to discuss:
  - Membership
  - 1-Year Goals
  - Charter
  - First Agendas

JUNE

- Memberships finalized
- Chairs schedule meetings
- Shared work area set up

JULY

- Committees begin meeting

6-Month; Annual

- Review progress
- Set goals
- Assess membership and resources

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CALL TO ACTION

mamstutz@purdue.edu

If you are interested in participating in one of these committees, please talk with your supervisor and reach out to me via email.

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Promote Content

Broadcast Messages

Versioning

Check In/Out

Testing

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Versioning

- Compare versions to see differences
- Revert to previous version

Check In/Out

- Limits editing to one user at a time
- Comments for revisions (can link to footprints tickets)
- Run tests on check-in

Testing

- Upgrades
- DQM vs CQM
- Assertions
  - Data
  - Performance
  - Visual/Formatting

THANK YOU

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