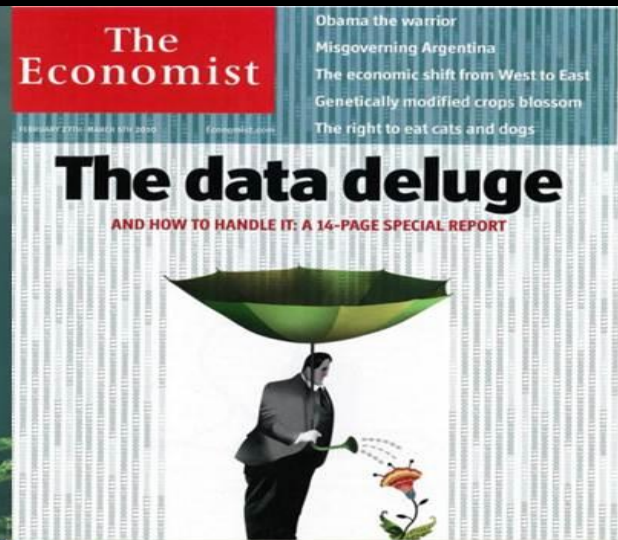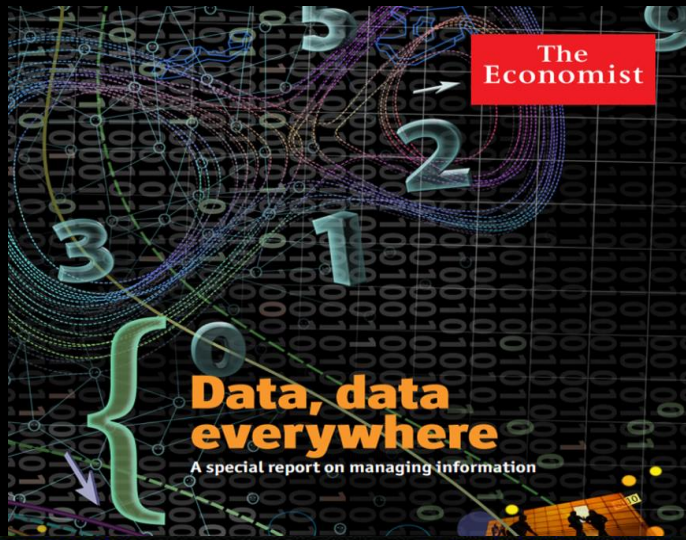# Data
Is Integral
To Our
Culture

In the news

On the streets

Progress Update

Recommendation #3 of
ITSM Top 5 Service Recommendations
from February 2013

Enterprise Data & Analytics

Recommendation #3 summary

Expand the Enterprise Data Warehouse (EDW) by creating additional reports; including additional data elements; and providing a credible, consistent, and reliable data environment to allow users flexible methods to access information, with an emphasis on "self-service" and ad-hoc analytics.

Agenda

Progress on expanding the Enterprise Data Warehouse via

- self-service and ease of use

- more reports and ad-hoc analytics

- data consolidation and mash-ups

- more data faster

- credible, consistent, and reliable data environment

- services, roadmap and what's next

"self-service
& ease of use"

Innovation

Helping users make better decision faster

Business Intelligence Portal

Intuitive

Flexible

Informative

Socialized

Customized

BI Portal: http://biportal.uw.edu

Online demo: http://decisionsupport.washington.edu/BIPortalTour.html

Innovation

Lowering the barrier to entry for self service analytics

Students by Geographic Origin

Tableau Data Visualization Implementation

- UW purchased 175 Tableau Desktop licenses
  Nearly 150 people now using Tableau Desktop to develop visualizations

- Rolled out Tableau Server initially in support of UW Profiles
  Campus-wide Tableau rollout from Nov 2013 through March 2014

Major Achievements
  - Tableau Desktop training for all faculty and staff
  - Tableau User Group
  - Several outreach road show events
  - Setting up Single-Sign-On using SAML 2.0
  - Automating server management
  - Number of publications on/off campus

Innovation

New methods to gain insight from the data we collect

Data Science - Notify Analytics

- Course demand and "Needed Spaces" helps plan for courses

- Shown to Deans, Chairs, UW-IT Town Hall, and UW Regents

- Released in August 2014

- A great example of cross-team collaboration (ACA and EDA)

- Leap Forward Day innovation

Needed Spaces by Course
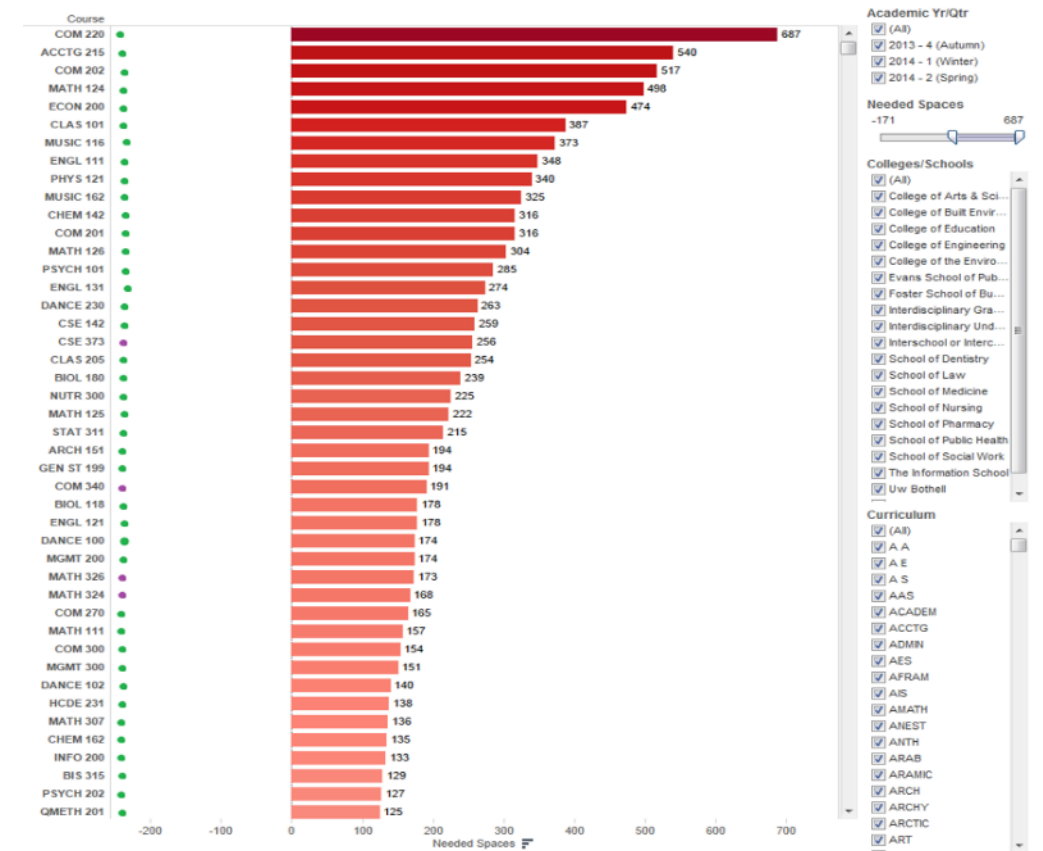
"more reports &
ad-hoc analytics"

Impact
The fruits of our efforts

By the numbers

Enterprise Data Warehouse

5 billion
records

36 thousand
columns

1.7 thousand
tables

36
databases

Enterprise Business Intelligence

280 SSRS reports
14 thousand runs/month

7 SSAS cubes
20 thousand runs/month

26 Tableau dashboards
800 runs/month

6,300 users
1.1 million direct queries/month

Impact
Growth in report utilization

Reporting

- Steady usage growth continues

- Top Users
  - School of Medicine
  - Finance and Facilities
  - College of Arts & Sciences
  - College of Engineering

- Financial Reports most popular

Report Users
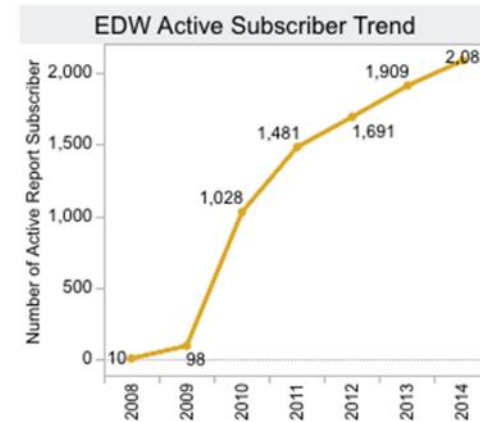
Report Usage
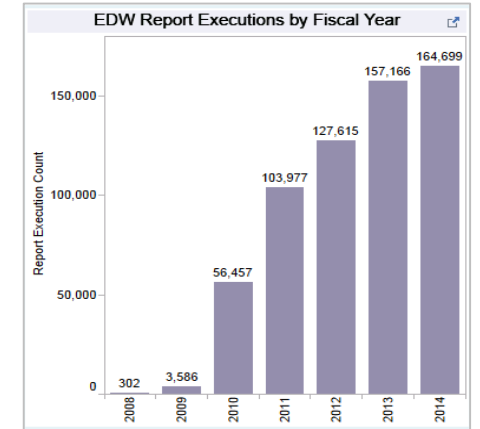
Usage by Subject Area
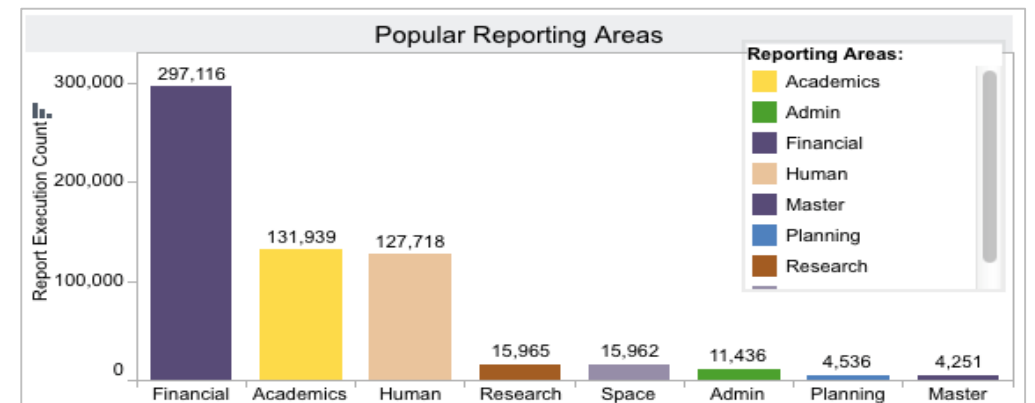
Impact
Explorative analytics and power tools

Release of Financial Cube 2013
with Account Groupings and State Codes

- Higher usage as compared to previous year/same quarter: ~250% more traffic from F2
- Positioned us well for state audit

Research Awards Cube

- Usage up by 22% in 2014, but it is on the decline (quarter-over-quarter)
- Addition of Proposals data coming soon

Cube Users

Cube Usage

INFORMATION TECHNOLOGY
UNIVERSITY of WASHINGTON
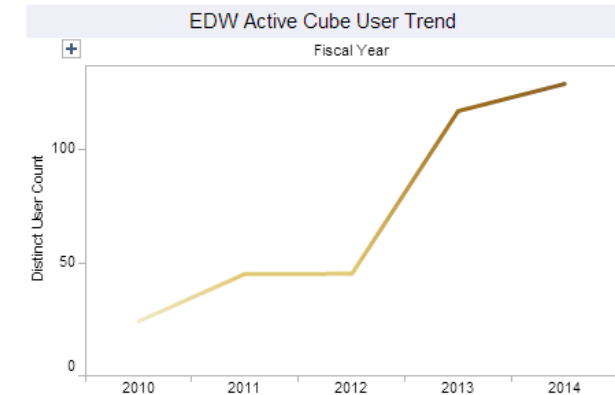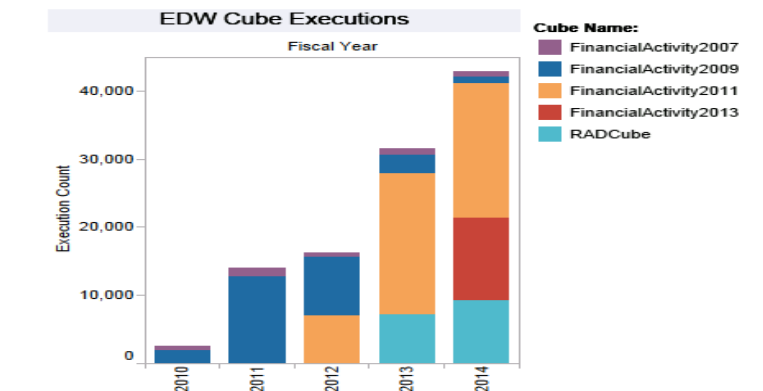
Impact
Explorative analytics and power tools

UW Profiles

- Released in Fall 2013

- 1100 Users have access to Profiles

- Viewed by 40+ people daily

- Highest usage by IR in Seattle, Tacoma, Bothell

Course Demand

- Released August 2014

- Daily visibility into unmet course demand

Visualization Users
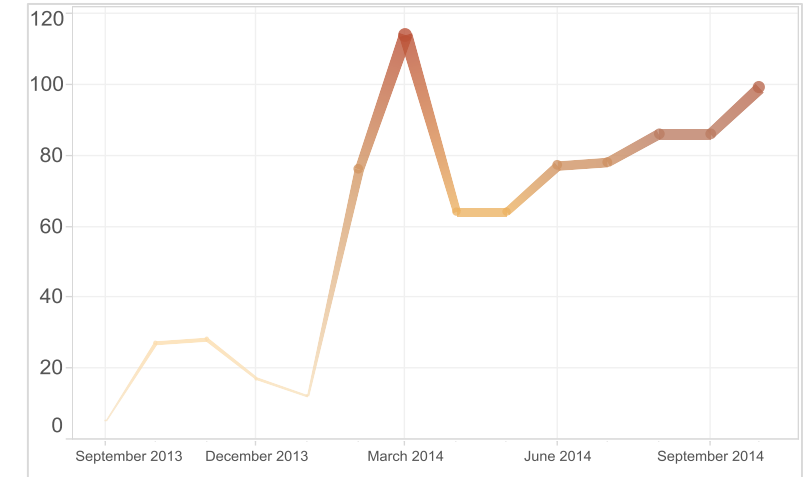
Visualization Usage

INFORMATION TECHNOLOGY
UNIVERSITY *of* WASHINGTON
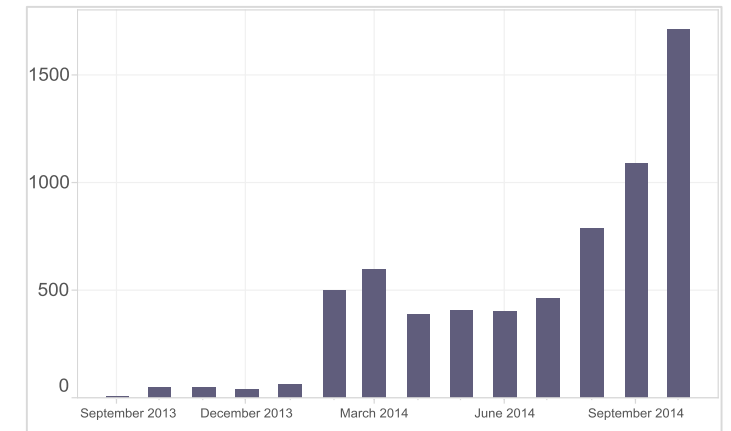
Tableau for students, teaching, faculty & staff

- ## Tableau for Students
  Free to full time students
  http://www.tableausoftware.com/academic/teaching

- ## Tableau for Teaching
  Free to faculty teaching with Tableau
  http://www.tableausoftware.com/academic/teaching

- ## Tableau for Faculty & Staff
  A fee to create, free to interact
  http://decisionsupport.washington.edu/tableau.html

Tableau for Students downloads

1,720

UW is #1 worldwide
in higher education downloads

Tableau for Teaching downloads

1,915   **61**

students using in classes   instructors teaching

UW is #1 worldwide

Tableau for staff & faculty

135   **500**

Tableau Desktop users   Tableau Server users

INFORMATION TECHNOLOGY
UNIVERSITY of WASHINGTON

"combine local with central data"

Data Consolidation
Filling gaps and supporting mashups

Data Consolidation

- Tableau supports mashups

  Users can merge departmental data with central data

  Data Management Committee supports publishing mashups on the Tableau Server

- EDDIE tools incorporates non-source system master data

  e.g. Crosswalk between Academic and Financial organization

Local Data   Mashup   Central Data

E.D.D.I.E.
Enterprise & Departmental Data Integration Editor
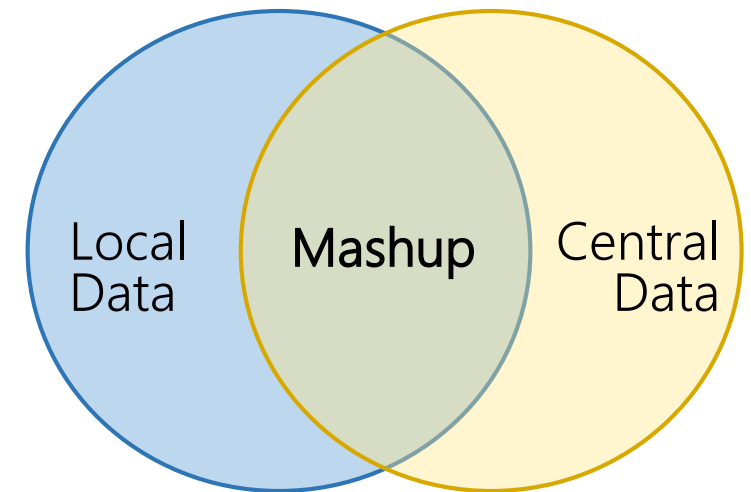
Analytics for all, using local & central data

Visualizations use EDW
data, local data, or both

Share and collaborate

Access controlled by owner

Web-based, mobile-friendly

Tableau Server

Specific group

Entire university
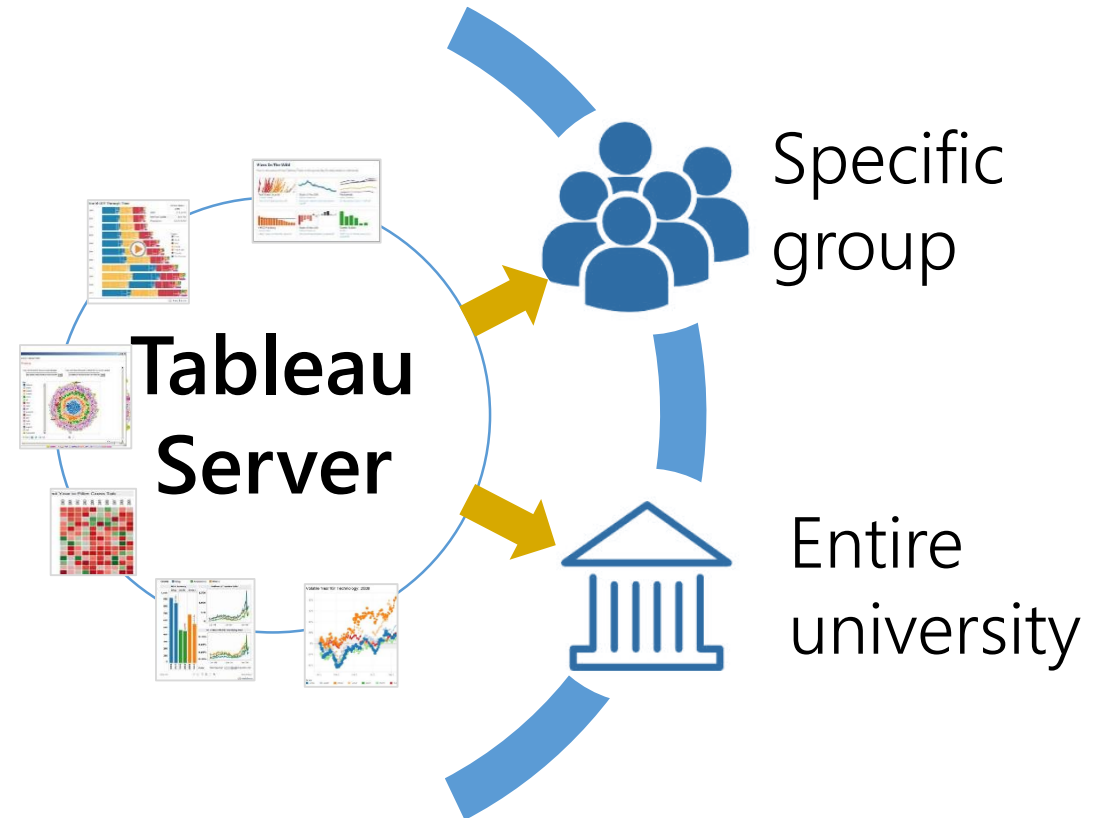
"additional data faster"

Impact
Targeted delivery

INFORMATION TECHNOLOGY
UNIVERSITY *of* WASHINGTON

Expanding EDW

Student Application History

- "... expanded access to appl_histroy to more analysts via EDW improved job efficiency and accelerated reporting delivery"

  - *Tieming Lin, Director, Market Research/Director, Outreach Reporting Services*

CIP to STEM

- "We can now track our production of graduates against state and federal benchmarks and commitments, are better positioned to receive funding for STEM programs, and can better serve students whose visas are affected by their enrollment in STEM programs"

  - *Office of Planning & Budgeting*

State Conversion Attributes

- "THANK YOU to everyone who worked so hard on this project and partnered with us to add some desperately needed functionality to the cube. Really outstanding work done by all!"

  - *Dan Schaaf, Director of Financial Accounting*

Rapid Delivery

Weeks spent on EDW data build out projects
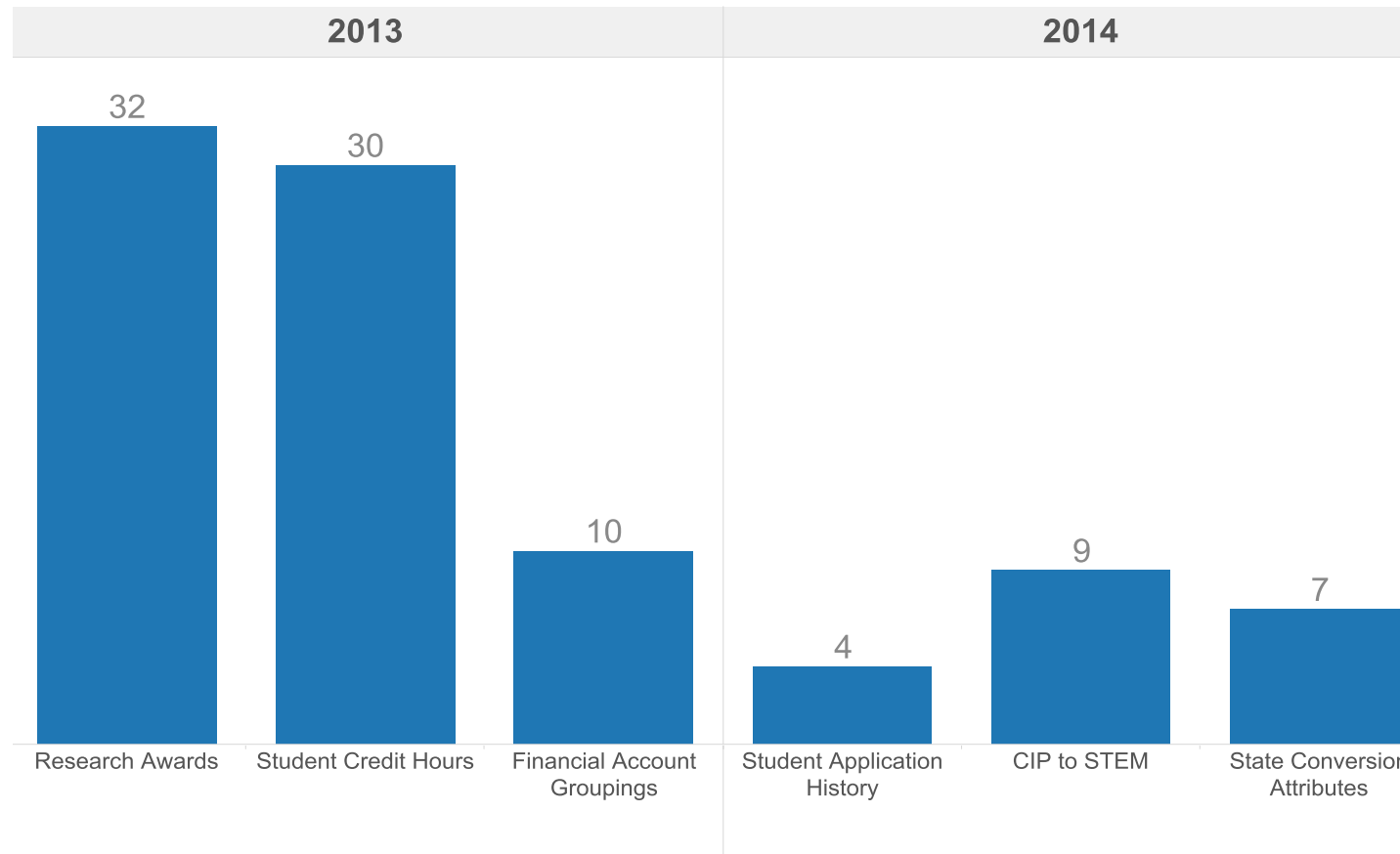
Focused scope allowed delivery with FY14 priorities, including:

- Business Intelligence Visualizations
- EDW Technology Renewal
- HR/P Modernization

EDW Technology Renewal

Results

- Completed in Aug 2014

- Smooth transition for EDW customers

- New hardware & software

- Faster BI and queries

- Ready for future projects (HRP/Finance)

Scale and Impact

- 5000 People with EDW Access

- 700 power users

- 15 servers

- 40 databases

- 2000 tables (5 billion records)

Roadmap & What's Next

Strategic Direction

Enterprise Data & Analytics Vision

WHY

➤ Advancing the Data-Driven Decision Making Culture

➤ Satisfied and empowered data users

WHAT

➤ Easy Integration

➤ Fast & Easy Delivery

HOW

➤ Prioritize Analytics

➤ Manage Risks & Security

➤ Innovate

Strategic Plan

Prioritize Analytics 4 cards
- Increase BI Products ☰ 💬2
- Reduce Operational Reporting ☰ 💬3
- Reduce Data Feeds (Outputs) ☰ 💬1

Add a card...

Fast & Easy Delivery (Velocity) 7 cards
- Increase Automation ☰ 💬4
- Metadata – fast & easy creation of... ☰ 💬2
- Can Easily Leverage co-located data – semantic layer ☰

Add a card...

Easy Integration 7 cards
- Clear, shared data definitions published / consumed ☰ 💬2
- Clear decision making process for defining integration architecture ☰ 💬2
- Integrations easily operationalized ☰ 💬1
- Build abstraction layer(s) based on unified definition(s) (i.e. Data Marts) ☰ 💬2

Add a card...

Managed Risk & Security 3 cards
- Implement Risk mitigation (Team education & Plan development) ☰ 💬2
- Clear governance for data access across UW ☰ 💬1
- Develop a semantic DAC ☰ 💬3

Add a card...

Satisfied & Empowered Customers 6 cards
- Grow and evolve training & communication program ☰ 💬2
- Define and understand target customers ☰ 💬3
- Define metrics / survey to measure customer satisfaction ☰ 💬1

Add a card...

Data Driven Decision Making 7 cards
- Invest in innovation of new delivery methods ☰ 💬3
- Influence / Align with Master Data Management Strategy – determine role ☰ 💬1
- Increase reputation with users & develop success stories ☰ 💬1

Add a card...

Innovation 3 cards
- Clear process to evaluate innovations (go / no-go) ☰ 💬2
- Clear process to operationalize innovations ☰ 💬3

Add a card...

What's Next

Describing Our Services

Service Catalog Approach

Service Offering	Services Offered
Enterprise Data Warehouse & Analytics	Enterprise Data Warehouse
	Reports/Cubes/Visualizations
	Tableau Licensing
	Education & Training

Capabilities Approach

"Information for Decision Making"

Category	Capability	Description
Administrative Systems	Access and find enterprise data & analytics	Business Intelligence Portal, UW Profiles Portal, Website
	Explore and analyze enterprise data	Reports, cubes, visualizations, Tableau license and user management
	Understand enterprise data	Training and education, metadata repository
	Produce enterprise data	Master data, metadata
IT Management	Consulting	Information design, analysis and architecture, security & data access; extract, transform, and load data

Appendix

INFORMATION TECHNOLOGY
UNIVERSITY *of* WASHINGTON

Administrative Policy Statements

University Organization Chart

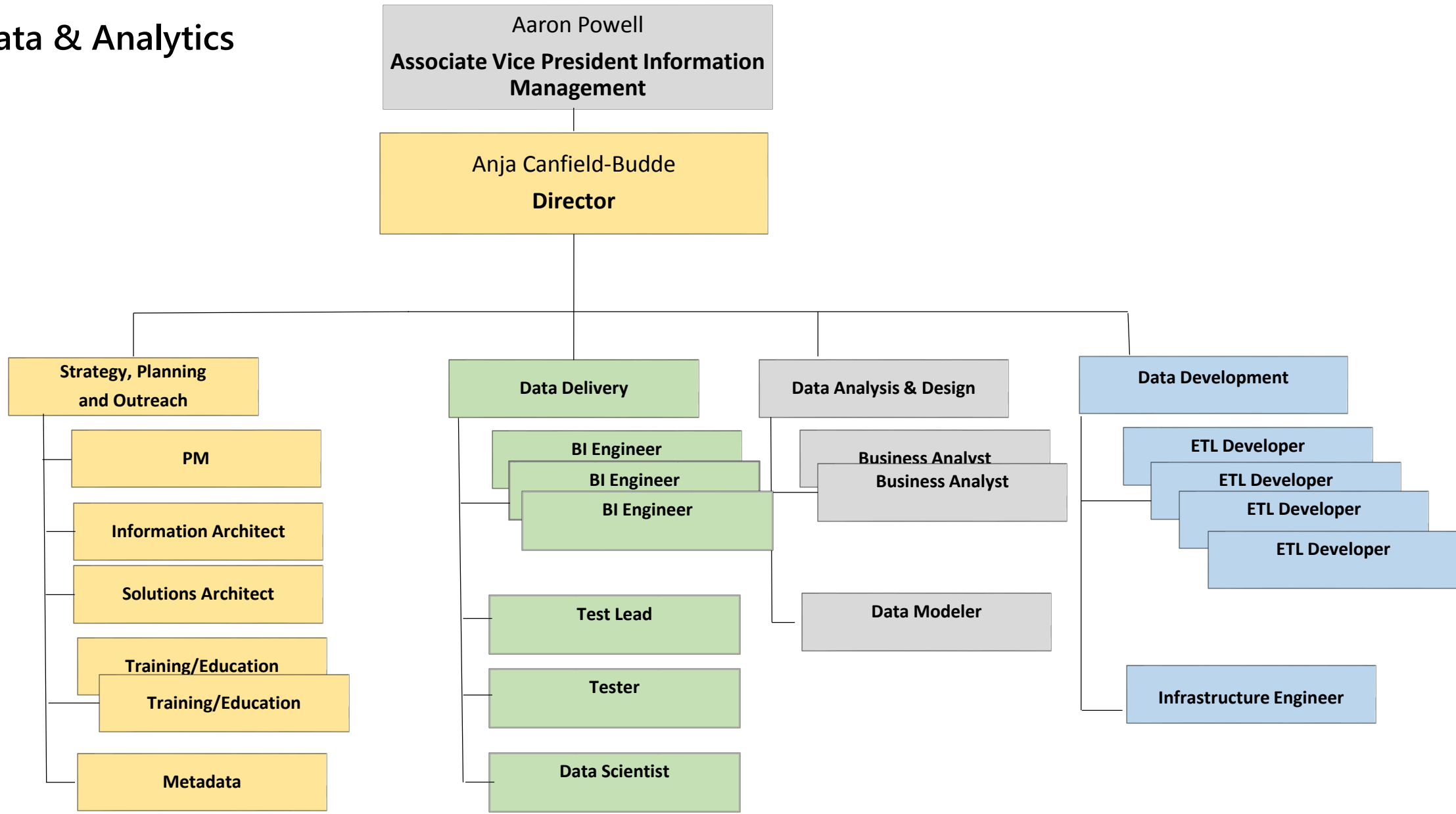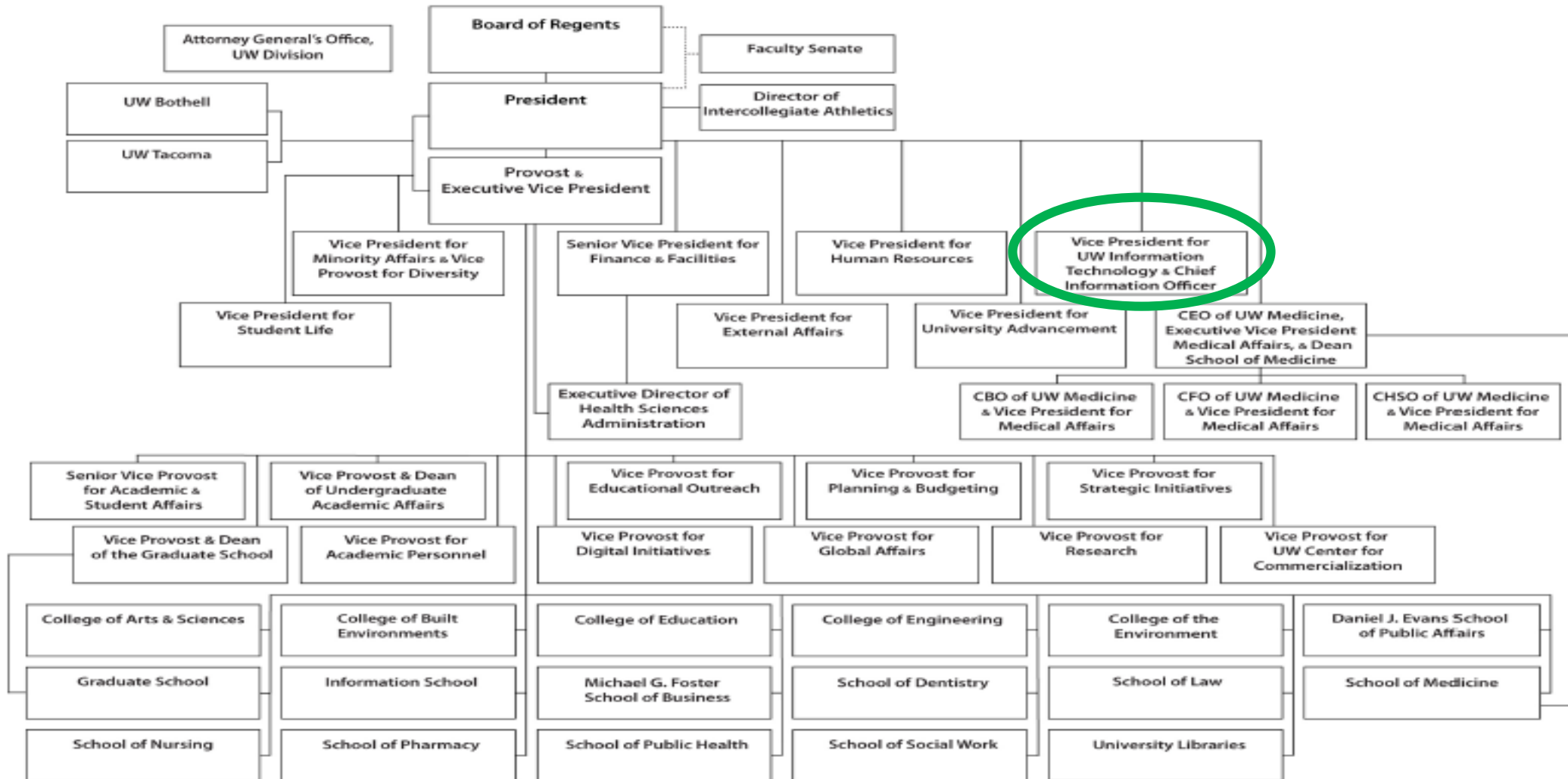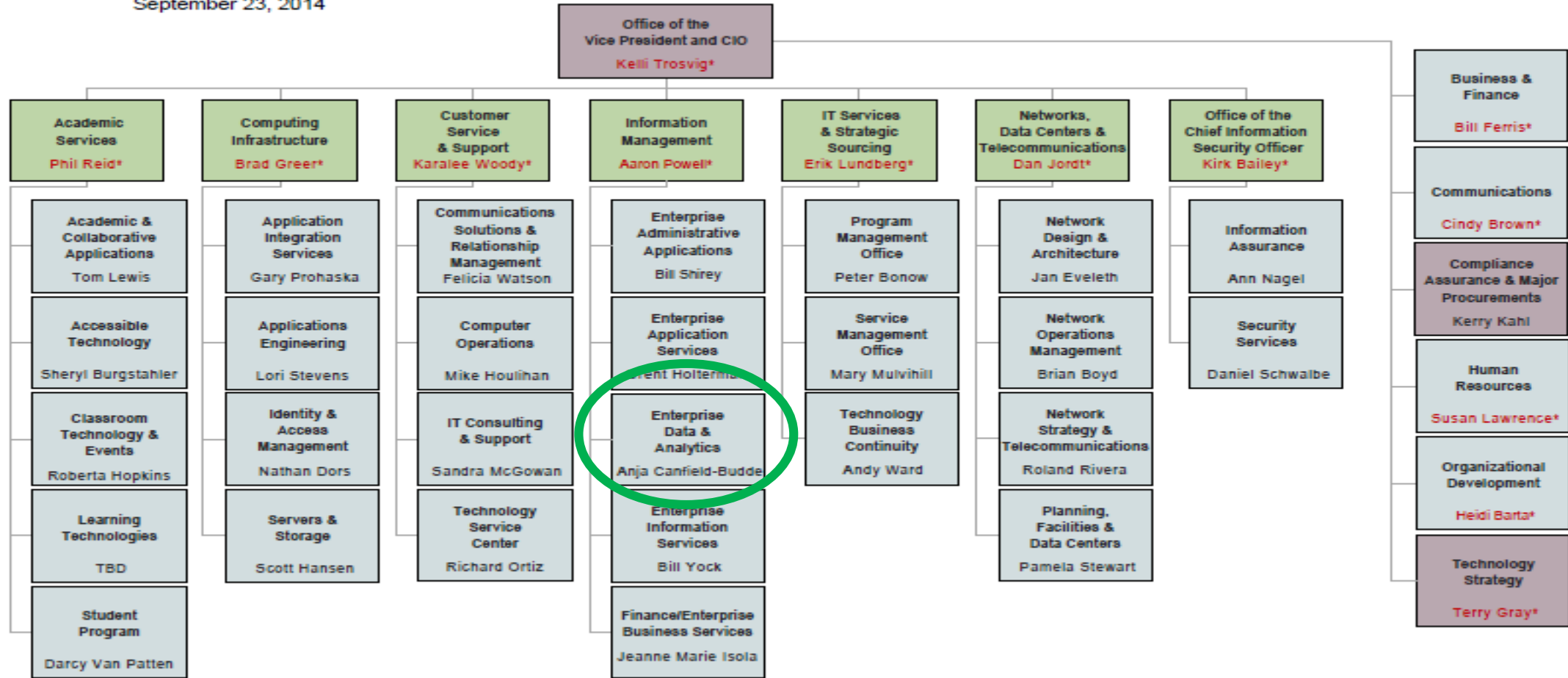(Approved by the President by authority of the Board of Regents Governance, Standing Orders, Chapter 1)

This chart reflects the reporting relationships within the University of Washington. Select any box on this chart to link to more detailed information in APS 1.2, University Wide Leadership List.

Board of Regents

Attorney General's Office, UW Division

Faculty Senate

President

Director of Intercollegiate Athletics

UW Bothell

UW Tacoma

Provost & Executive Vice President

Vice President for Minority Affairs & Vice Provost for Diversity

Senior Vice President for Finance & Facilities

Vice President for Human Resources

Vice President for UW Information Technology & Chief Information Officer

Vice President for Student Life

Vice President for External Affairs

Vice President for University Advancement

CEO of UW Medicine, Executive Vice President Medical Affairs, & Dean School of Medicine

Executive Director of Health Sciences Administration

CBO of UW Medicine & Vice President for Medical Affairs

CFO of UW Medicine & Vice President for Medical Affairs

CHSO of UW Medicine & Vice President for Medical Affairs

Senior Vice Provost for Academic & Student Affairs

Vice Provost & Dean of Undergraduate Academic Affairs

Vice Provost for Educational Outreach

Vice Provost for Planning & Budgeting

Vice Provost for Strategic Initiatives

Vice Provost & Dean of the Graduate School

Vice Provost for Academic Personnel

Vice Provost for Digital Initiatives

Vice Provost for Global Affairs

Vice Provost for Research

Vice Provost for UW Center for Commercialization

College of Arts & Sciences

College of Built Environments

College of Education

College of Engineering

College of the Environment

Daniel J. Evans School of Public Affairs

Graduate School

Information School

Michael G. Foster School of Business

School of Dentistry

School of Law

School of Medicine

School of Nursing

School of Pharmacy

School of Public Health

School of Social Work

University Libraries

Enterprise Data & Analytics