



Rensselaer

Rensselaer Data Warehouse

Orientation Meeting
April 1, 2003

Agenda

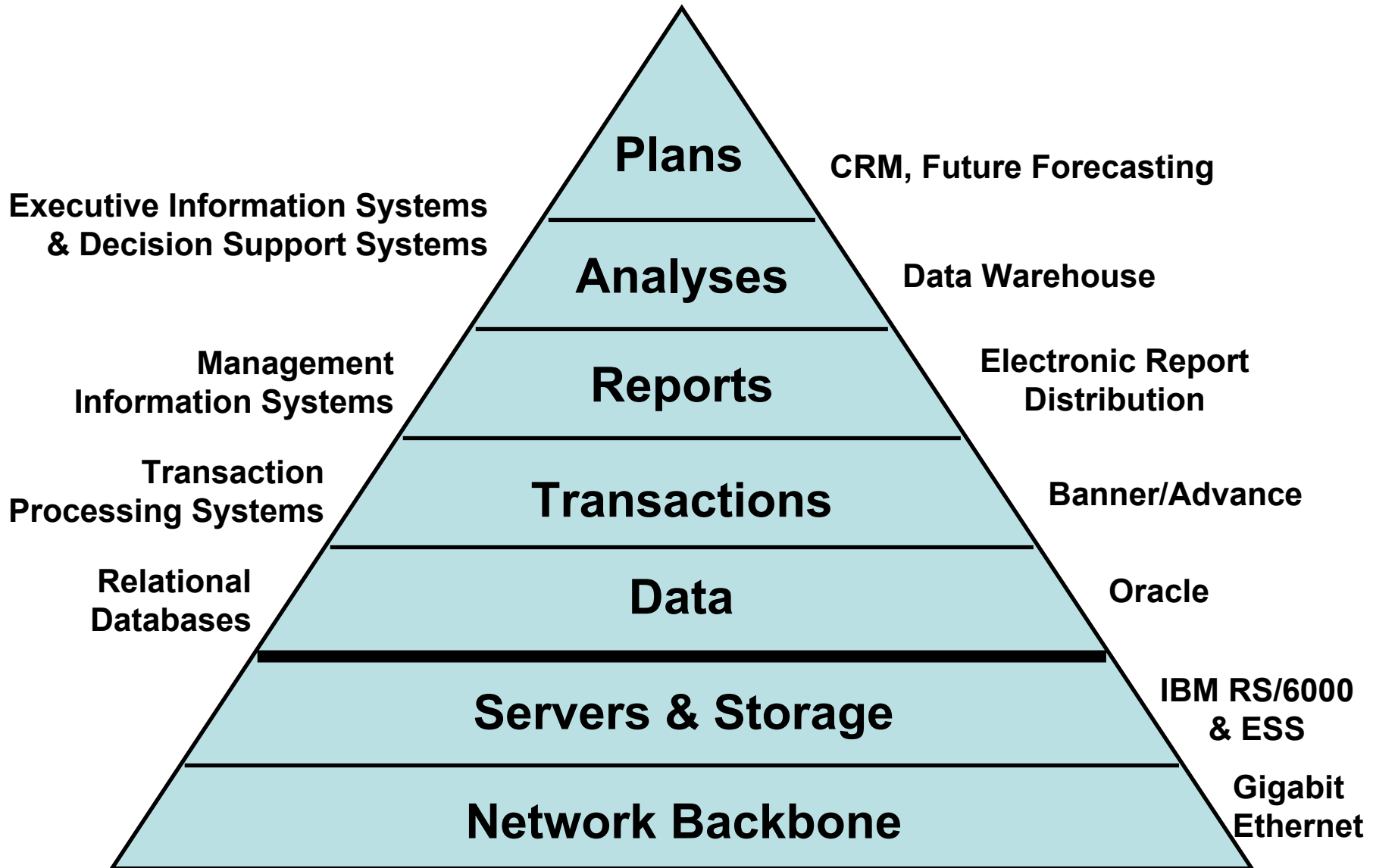


- **Overview**
- **Demonstrations of the Financial Analysis Data Mart**
 - *A look at executive information systems.*
 - *Demonstration of how the offices of Vice President of Research, Budgeting, and School of Engineering are using financial data from the Data Warehouse on a daily basis.*
- **Data Security Policy**
- **Data Warehouse - Rollout Strategy**
- **Q & A**

Overview of the Data Warehouse Initiative at Rensselaer

- Goal
- Plan
- Structure
- Status
- Benefits

Administrative Systems Architecture



Goal of the Data Warehouse

Direct access to relevant information for purpose of decision making

*The data warehouse is a collection of data that is pulled together primarily from operational business systems and is structured and tuned for easy access and use by information consumers and analysts, especially for the **purpose of decision making**.*

BUSINESS PROCESSES	School/Deans	Dep't Chairs	Registrar	Institute Adv.	Provost Office	Research	Finance	Gov't Relations	Presidents Staff	HR	Enrollment Mgmt	Student Life	President
Enrollment Analysis	X	X	X	X	X				X		X	X	X
Student Pipeline Analysis	X	X			X						X	X	X
Faculty Workload Assessment	X	X			X				X	X		X	X
Financial Analysis	X	X					X		X				X
Contract and Grants Analysis	X	X				X		X	X				X
Proposal Pipeline Analysis	X	X				X			X				X
Financial Analysis - Research	X	X				X	X	X	X				X
Graduate Financial Aid	X	X				X							X
Alumni Demographics and Tracking	X	X		X	X			X				X	X
Alumni Contact Management	X			X									X
Human Resources	X				X		X			X		X	X
Facilities Management	X				X	X							X

Dark Green

– Completed

Bright Green – Partially complete or in progress

Light Green

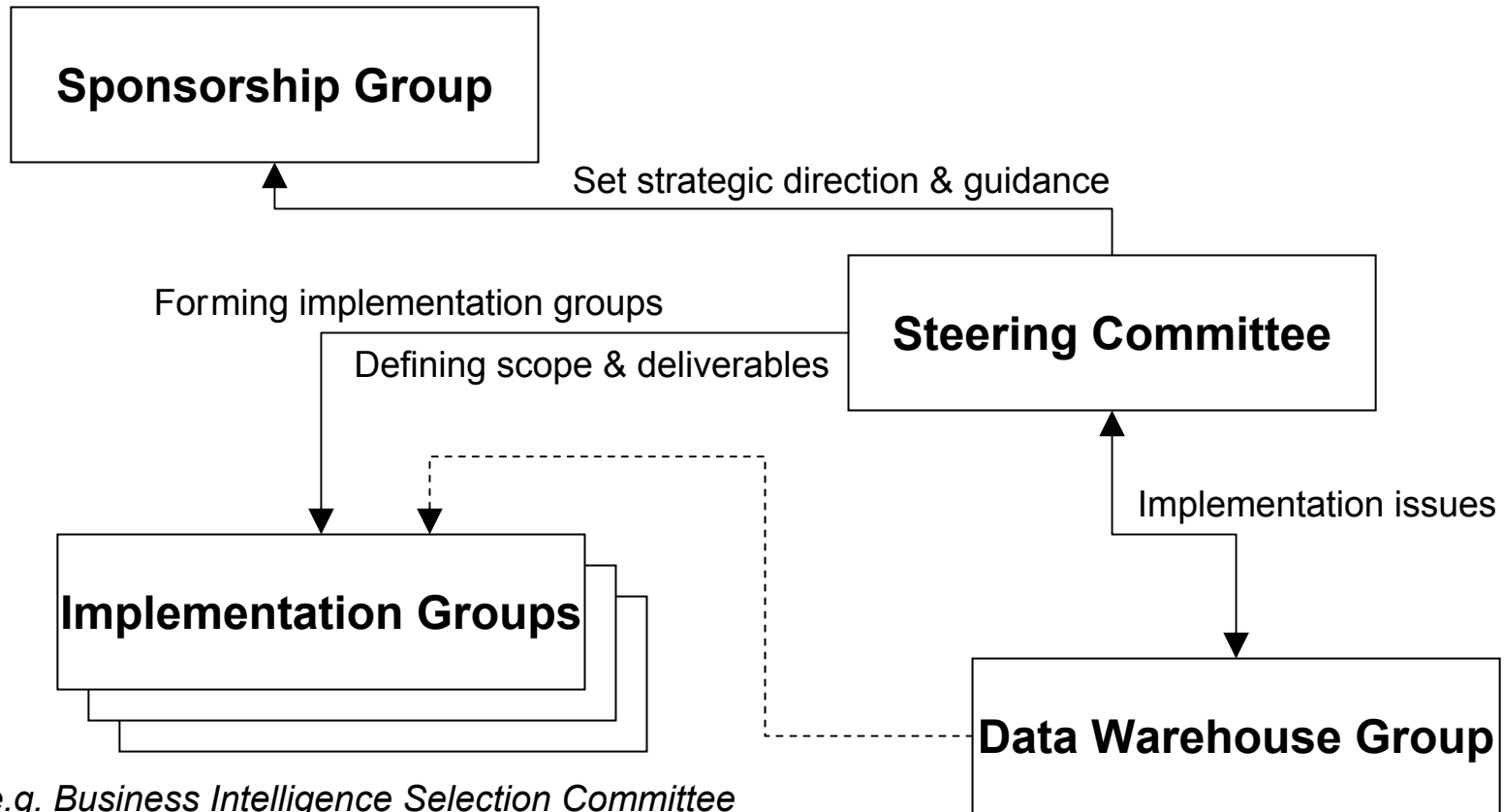
– Planned next areas

Potential Opportunities

- Endowments
- Capital Project Tracking
- Budget Forecasting
- Finance Enhancements



Data Warehouse Implementation Structure



*e.g. Business Intelligence Selection Committee
Financial Analysis Implementation Group
Financial Analysis Reviewer Group
Data Policy Group*

Status



- **Financial Analysis**
 - Released in October '02
 - Currently is being rolled out to the campus
- **Human Resources (Position Control & Labor)**
 - In testing
 - Delivery to campus will start in early June '03
- **Graduate Financial Aid and Student Enrollment**
 - In Development
 - Delivery to campus by August '03

Benefits Envisioned

- **Empowers decision-makers**
- **Redirects costly personnel hours**
- **Enhances institutional effectiveness**
- **Improves integrity and conformity of campus-wide information**
- **Promotes the “no walls” culture. Improves data quality over time.**



*Kirsten M. Volpi,
Assistant VP/Controller*

“...There has been analysis that we have not been able to get at before because the data was not retrievable in a fashion conducive to perform analytics. For instance, we have begun utilizing the warehouse to **analyze** the indirect cost yield on our research grants. This data was not readily available before.”

“We are also using the warehouse not only for analytics but for **reports** to assist with monitoring compliance with internal policies, assisting with data gathering for external surveys, as well as assisting with automating certain processes (encumbrances for graduate financial aid).”

Eileen G. McLoughlin, Director of Financial Planning & Budget

- “The Budget material was consolidated **two weeks sooner** than the previous years. Many factors contributed to the success, however a significant contributor was the data warehouse allowing the Budget Office to provide data and analysis of the data to decision makers faster than in the past.”
- “...reinforces the “no walls” culture – i.e. as the warehouse becomes known as the one and only data source – this will contribute towards individuals recognizing that we are one organization with **one version of the truth.**“
- “...**Improved quality over time**, integrity, conformity – as data is viewed and questioned issues have and will come to the surface on processes that impact data. This has occurred in the budget office, accounting practices have been simplified so the resultant data is more easily interpreted”

Diane Veros,

Director Research Accounting

“The Data warehouse along with the BRIO software has proven to be an extremely useful tool for providing information for reporting, monitoring and analysis. BRIO queries and pivot tables have definitely helped to make some of our work more **efficient and effective**. We have developed queries for monitoring reports, verifying data integrity, and analysis that before would have required days, weeks, or even months working with IACS to program and develop. Once developed, those older reports (and/or the data in them) would have allowed limited access to campus, and another user might have started from scratch to produce a similar report. The data warehouse provides a consistent data stream that allows **all campus users to view and analyze the same information** in many alternative ways.”

*Jeff Tanis,
Manager of Financial Operations
School of Science*

“The time it has taken me to gather information has been cut by at least half. I now query the warehouse--where previously I had to initiate many e-mails and phone calls to collect what I needed. Last month while doing a research expenditure analysis, it took me a matter of **hours**--where in the past it took **days** to get what I needed.”

“While doing a research expenditure analysis last month I identified a substantial amount of research expenditures on other schools grants using School of Science Orgs. I could not have **identified** and subsequently corrected these **errors** without the use of the Data Warehouse.”

Helen Grzymala,

Associate Director Budget

“As we roll the Finance Data Mart out to all Portfolio Financial Managers, the Budget Office will be providing more and more reports via the Data Warehouse. Portfolios will be able to see the various reports that are prepared on an **Institutional level** for the data. We will be able to have ongoing, **meaningful discussions about the data**, rather than how to get the data and how to manipulate it.”

“The Data Warehouse will result in a change in job expectations for both the Budget Office and the Portfolio Financial Managers. The forecast and budget process will evolve to a more analytical review of history and a fact-based projection of the future. Users will move from simply ‘crunching the numbers’ because they will have more time and because more data is actually available. Once the Contracts and Grants information is available, the research units will be able to track activity right from the pre-proposal stage thru the award close out. Using this data, trending and other analysis will follow, leading to **more accurate forecasts and budgets.**”

Benefits

User Name	Task Performed	Pre Data Warehouse Implementation	Post Data Warehouse Implementation
Sandra Redemann Butcher	Portfolio YTD Analysis	Half Day to retrieve and compile information manually.	Seconds to retrieve information from the Data Warehouse.
Gina Ricci	Report Analysis	Multiple Truths existed across campus. Multiple information sources existed, which destroyed data integrity and conformity.	One Truth exists. One information source promotes a common understanding of the data and allows users to derive at the same conclusions.
Tanya Struzinsky	Available Balance Report	2 Weeks to retrieve and compile information manually.	30 Minutes to build the report in the Data Warehouse, which can be refreshed daily in Seconds .
Donna Tomlinson	Org 3 Year Comparison By Account Group	Not Readily Available	Readily Available on demand.

Benefits

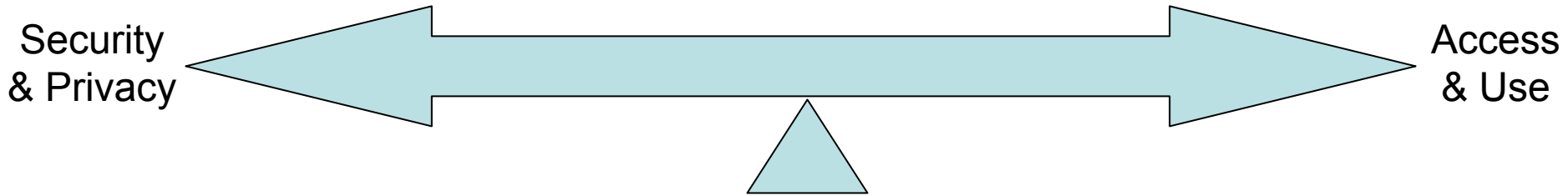
User Name	Task Performed	Pre Data Warehouse Implementation	Post Data Warehouse Implementation
Jeff Tanis	Research Expenditure Analysis	Multiple Days to retrieve data from multiple sources and compile information manually.	Few Hours to retrieve information from the Data Warehouse.
Diane Veros	Data Integrity Verification	Days, Weeks or Months to develop reports to ensure data integrity or to perform analysis.	Few Hours to develop reports in the Data Warehouse to ensure data integrity or to perform analysis.
Tanya Struzinsky	Credit Card Transaction Reconciliation	2-3 Hours to compile, review and verify credit card transactions for each user.	5 Minutes to retrieve, review and verify credit card transactions for each user.
Sandra Redemann Butcher	Month-End Report	2 Days to retrieve and verify program and activity codes in order to ensure accurate results.	2 Hours to retrieve information from the Data Warehouse. No data manipulation required.

Data Warehouse Demonstrations

- Eileen G. McLoughlin,
Director of Financial Planning & Budget
- Donna Tomlinson,
Manager of Fin. Operations, School of Engineering
- Tanya Struzinsky,
Financial Manager, VP Research
- Helen Grzymala,
Associate Director of Financial Planning & Budget



Data Security, Privacy and Access Policy



- Can be defined as striking the “right” balance between data security/privacy and data access
- Value of data is increased through widespread access and appropriate use, however, value is severely compromised by misinterpretation, misuse, or abuse
- This policy considers security and privacy paramount
- Key oversight principle:
 - Cabinet members, as individuals, are responsible for overseeing establishment of data management policies, procedures, and accountability for data governed within their portfolio(s), subject to cabinet review and CIO approval

Nuts and Bolts of the Data Base Security

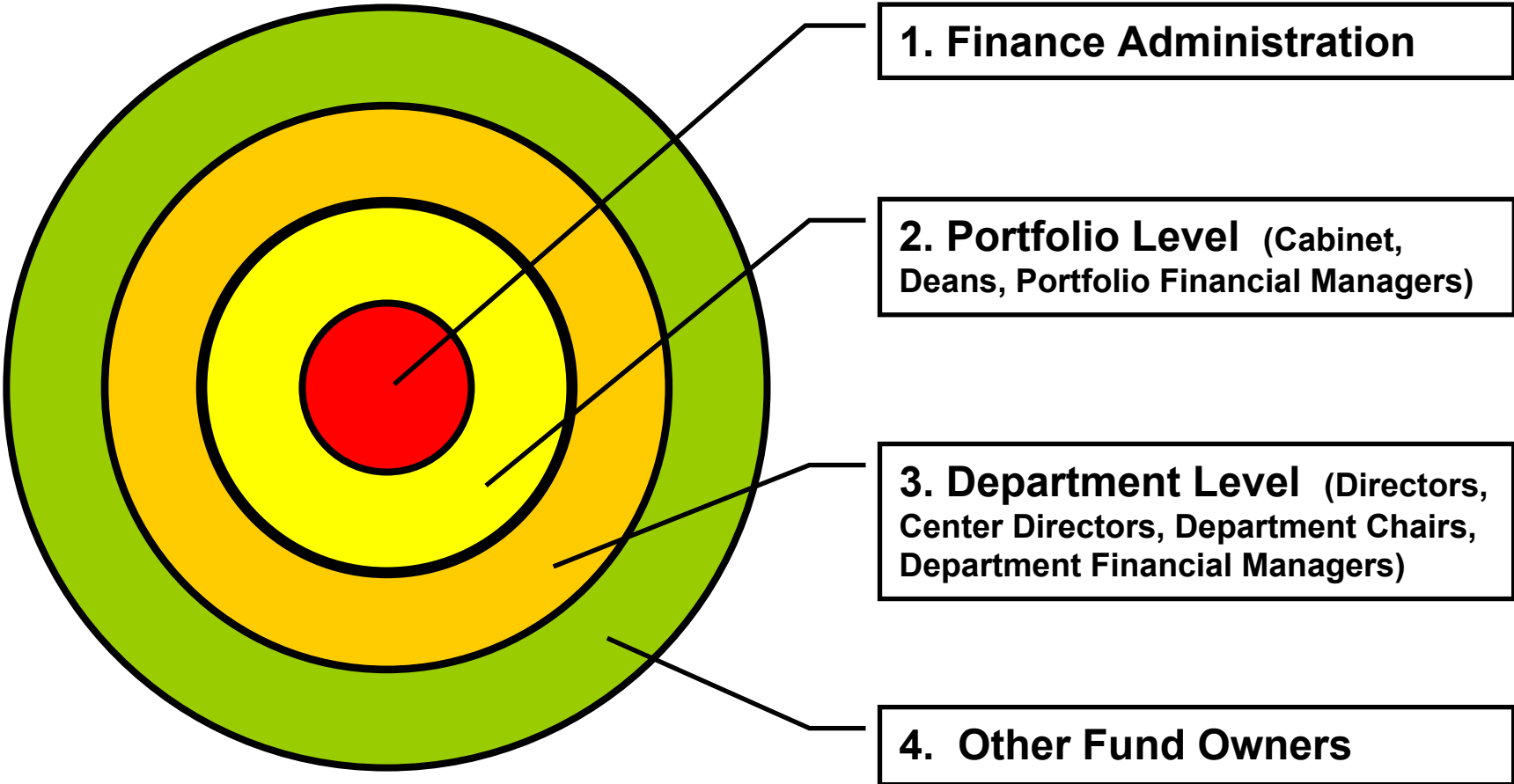


- Data Base security applies to all individuals given either direct access to the warehoused data or given permissions to process Brio dynamic reports
- Organization Managers And Financial Managers will have access to the warehoused **financial** data based on the following criteria
 - All financials posted against that Org
 - All funds listing that Org as a home Org (*in cases of research funds, this defines where the research is brought into*)
 - All funds listing the PIs (or the Financial Manager) associated with that Org as fund financial managers. (**Resolves the Multi-disciplinary issue**)
 - All funds and orgs listing that Org as a predecessor in either one of the above three cases.
 - Administrative role: Individuals might be granted **access** to additional funds and org based on **their needs and their role within Rensselaer**.

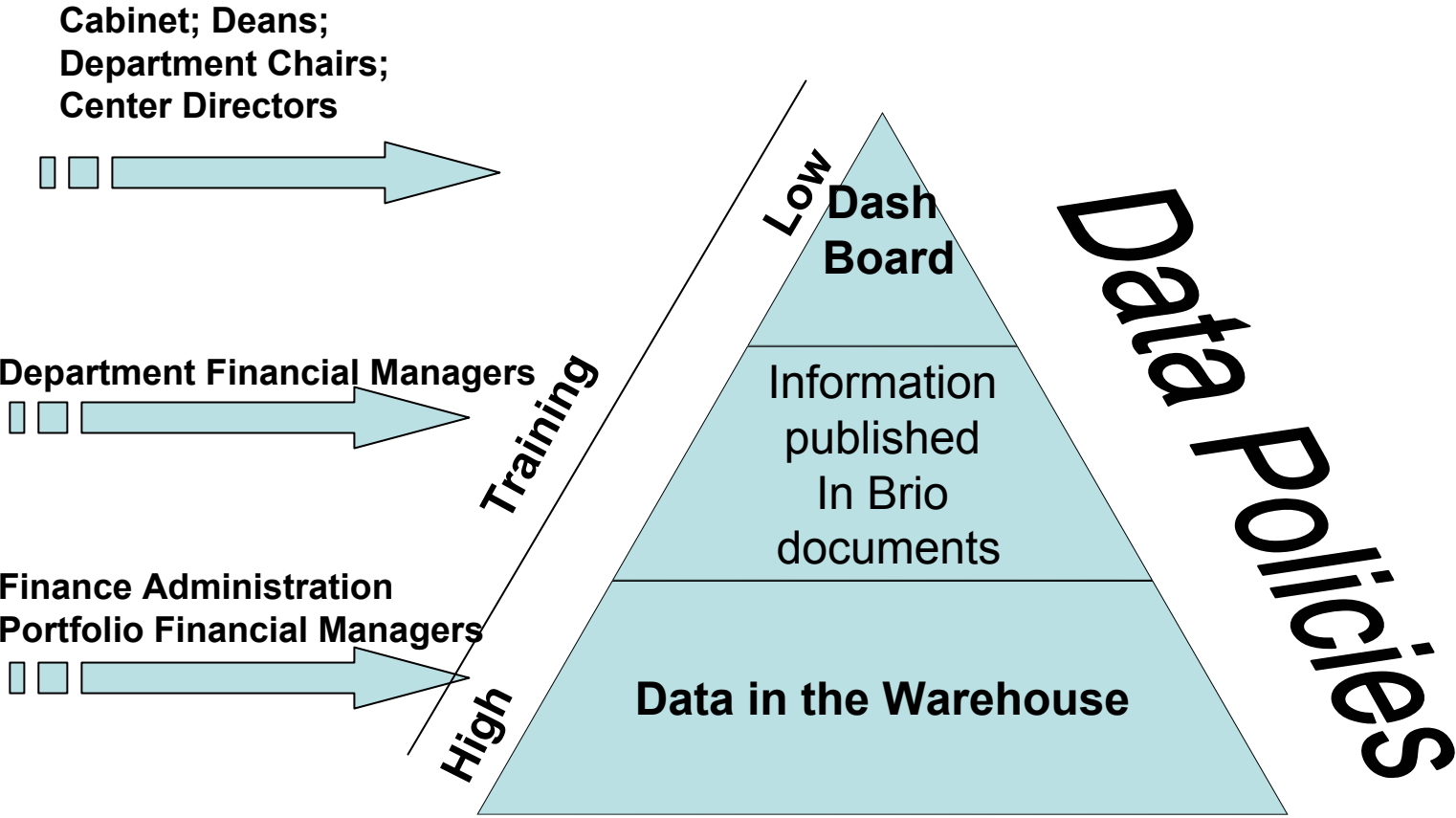
Campus Rollout Assumptions

- Who will have access to the Financial Data Mart:
 - Cabinet, Deans, Center Directors, Department Chairs, Portfolio Financial Managers, Department Financial Managers, Finance Administration, other interested Fund owners.
- Training is mandatory at all levels.
 - Several levels of training will be offered to campus in Brio tools, Data, and Data Policies.
 - Joint effort between DW Group and Finance
- Portfolio Financial Managers responsibilities:
 - Rollout within Portfolio
 - Training within Portfolio

Data Warehouse Cascaded Rollout Strategy



Initial Tiered Access – Who will have access to what



Data Mart Rollout Training Plan

A

Brio 101 Training

Required for Data Training; Tracks 1 or 2. This course covers the Brio concepts and mechanics that are necessary for data training. The course is taught with sample data.



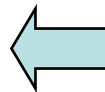
B

Track 1

In Track 1, users learn to create queries on actual data from published star schemas and meta topics.

Training includes multiple data exercise sessions (e.g., Level 1, Level 2, etc.) and a business case session. Note that content from Tracks 2 and 3 will be covered in Level 1.

These sessions will be led by the Portfolio Financial Manager and/or the DW Team.

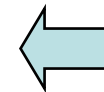


Track 2

In Track 2, users learn to work with published BQYs. Most of these BQYs are Department-specific, while others may be Institute-wide.

There will be 1 to 3 sessions (Level 1, Level 2, etc.), depending on the number of BQYs. Content from Track 3 will be covered in Level 1.

These sessions will be led by the Portfolio Financial Manager and/or the DW Team.



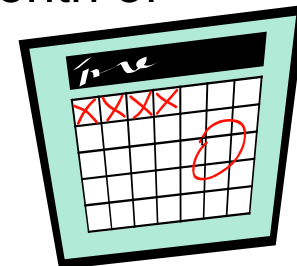
Track 3

Track 3 is intended for executive users. In this track, users will learn to work with the interactive charts and graphs that are presented in the Data Mart. In addition, users will learn basic Brio Portal navigation.

Track 3 sessions are delivered by the DW Team in a one-to-one format and may be customized as needed.

Training & Usage

- Training
 - 54 people have been trained
 - 10 Executives accessing financials via Dash Boards
 - 16 Portfolio Fin. Mgrs have either completed full DW training or started the training
 - 10 Department Fin. Mgrs have either completed full DW training or started the training
 - More than 158 additional people are expected to be trained in Financial Analysis Data Mart:
 - Track 1 – 30 individuals
 - Track 2 – 85 individuals
 - Track 3 – 43 Executives & Managers
- Web Usage:
 - Total utilization over Web 978 times during month of February & March
 - 847 queries build & processed over the Web
 - 131 times Dash Boards were accessed



Who are the People



Questions & Answers ???