

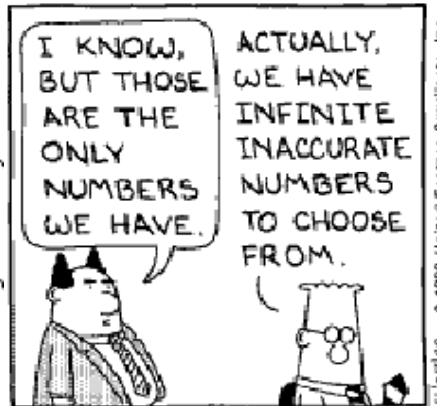
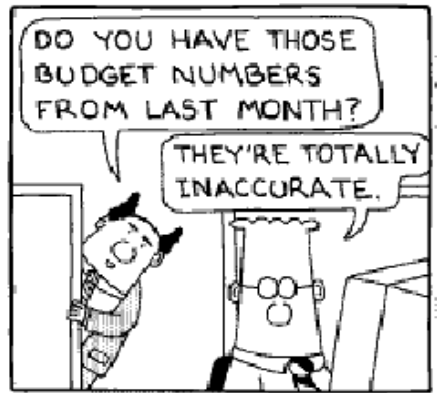


IT Project Portfolio Management with Artemis 7

Mark Bennett

**IT Financial & Asset Management Week
Summit West: October 24th – 27th, 2005**

Who are we?



- **Carl Stumpf, Director & Technology Financial Controller**
- **Mark W. Bennett, Associate Director Project & Financial Controls**
- **Chicago Mercantile Exchange (CME)**
 - ◆ Chicago Mercantile Exchange Inc.® (CME) is the largest futures exchange in the United States and is the largest futures Clearing House in the world for the trading of futures and options on futures contracts.
 - ◆ Became first publicly traded financial exchange in the United States, December 2002
- **Technology Division**
 - ◆ Approximately 650 employees and consultants
 - ◆ More than 300 technology projects per year
 - ◆ Multiple project sponsors within and outside of the Technology Division

What you'll see in this presentation?

- **How to use Artemis 7 as a budget planning and project portfolio management tool?**
 - ◆ At least one-way
 - ◆ The approach we took at CME
- **Tips & Lessons Learned**
 - ◆ Things we learned the hard way
 - ◆ Things that might not be obvious
 - ◆ Thing we thought worked well
- **Examples**
 - ◆ Screenshots
 - ◆ Examples of reports and templates we use at CME
- **Other suggestions and recommendations**
- **Plenty of Q&A opportunities**

Let's dive in: Building a Budget

- **A lot of the steps toward building a budget are common no matter what industry, company, or organization**

Identify Candidate Projects

Select & Prioritize

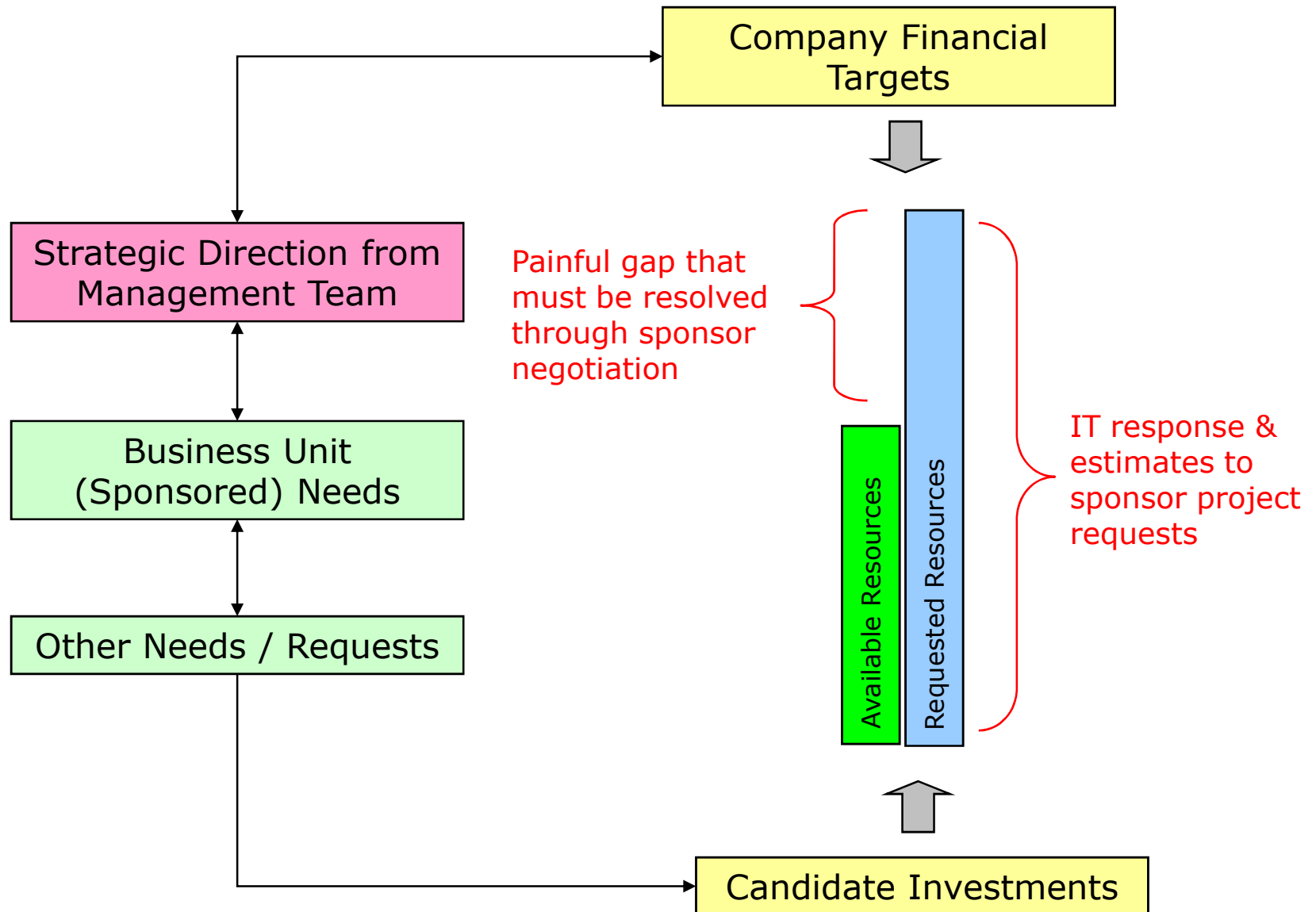
Scope & Estimate Candidate Projects

Negotiation

Budget Approval & Communication

- **Sequence and timing vary**
- **Not necessarily linear**
- **Typically an iterative process**
- **Both qualitative & quantitative analysis play an important role**
- **“Negotiations” between sponsors can be intense**

A Budget from the Bottom-Up at CME



Some of the Budget Challenges we Faced

- **Manual linkage between strategic goals, related projects, and budget commitments difficult to maintain**
- **Multiple sources of budgetary information**
 - ◆ Different levels of granularity
 - ◆ Different formats
 - ◆ Manually intensive to “merge” the information
 - ◆ Difficult stack and compare projects competing for the same resources
 - ◆ Difficult to level resource demands
 - ◆ More prone to human error
- **Frequently shifting priorities need to be reflected in the mix of projects, financial targets, and the budget on an ongoing basis**
- **Management needed frequent ad-hoc reporting throughout budgeting process**
- **Desire for closer integration of planning information with actual project execution (i.e., how are we doing against our plan?)**

Budget Improvement Goals

- **Phase I (2003)**
 - ◆ **Technology Division Only**
 - Technology has the most contention between investment demands and available resources
 - Biggest need for a budgeting and project planning support tool
 - ◆ **Centralize the collection point for budget information for two major cost types**
 - Salaries & Benefits
 - Professional Fees
 - ◆ **Allow *Investment* managers to spend more time thinking about scope and estimates rather than the mechanics of creating the budget**
 - ◆ **Make it easier to negotiate and track changes as the budget evolves**
 - ◆ **Better and faster reporting (primarily using Microsoft Excel)**
 - ◆ **Start small and pilot!**
 - Prove the value to management team, without imposing a lot of change to the existing process
 - Find early adopters and champions

Budget Improvement Goals (cont.)

- **Phase II (2004)**
 - ◆ **Use Artemis 7 for project status reporting – involve more managers directly in the tool**
 - ◆ **Use data captured as part of budgeting process to help monitor and control the budget**
 - Budget vs. Actual
 - Planned, Forecast, and Actual project dates
 - Impact of priority changes during the course of the year
 - ◆ **Capture additional cost-types in Artemis 7 for 2005 budget**
 - Capital
 - SOP98-1 (capitalization of internally developed software)
 - Outside Services
 - ◆ **Centralize the collection of project scopes**
 - ◆ **Involve more managers directly in the tool during the actual budgeting process**
 - ◆ **Improve reporting tools to give our sponsors and managers “one-click” visibility into the budget**
 - ◆ **Ability to export and upload major portions of our budget directly into the Peoplesoft financial system**
 - ◆ **Plan for improvements in 2005**

"Steady State" & Continuous Improvement

- **2005 & Going Forward**
 - ◆ **Primary goals met, look for continuous improvement opportunities**
 - Improve quality and coverage of project status information
 - Increase and improve project status distribution
 - Use "forecast" capabilities to capture revised project estimates
 - Increase granularity of resource planning – better resource balancing
 - ◆ **Increase use of Artemis 7 to help facilitate balancing the level of investment in major programs vs. company financial targets**
 - ◆ **"Demand Management" – look for better ways to manage our ad-hoc work load (e.g., unplanned/minor projects)**
 - ◆ **Simplify our suite of project planning, time tracking, and portfolio management tools**
 - Migrate from ArtemisView's project planning and time tracking modules to Artemis 7
 - ◆ **Explore opportunities to expand use of Artemis 7 and best practices learned in IT to other areas of the company**

How We Got the Ball Rolling

- **Installed Artemis 7 (approximately 2 months before the start of our 2004 budgeting cycle - June 2003)**
 - ◆ Very straight forward installation
 - ◆ Someone with a moderate technical background can get the software up and running in less than a day
 - ◆ **TIP:** Have a Database Administrator handy if you are unfamiliar with configuring Oracle, SQL Server, etc.
- **Spent a few weeks familiarizing ourselves with the tool**
 - ◆ **TIP:** Bring in an Artemis consultant for one-on-one training, to share best practices seen at other client implementations, and explore some of the less obvious capabilities and pitfalls.
- **Setup what seemed to be a reasonable model for capturing our investment information and budget**
 - ◆ **LESSON LEARNED:** We spent far too little time thinking through the details of how the data would be rolled-up, sliced, reported, etc. It forced us to restructure things in the tool well into our budgeting process – a painful process.
 - ◆ **TIP:** This is such an important topic, that I'll spend some time in the later in this presentation and talk a lot more about modeling.

How We Got the Ball Rolling (cont.)

- **Developed templates to help collect information we would need to populate the budget**
 - ◆ Our intent was to keep the number of people who had to directly interact with the tool to a minimum during the pilot phase – reduce the risk of an “another tool syndrome”.
 - ◆ Wanted to avoid any extensive change to the way managers currently developed estimates and supporting documentation for the budget - mostly through the use of offline spreadsheets and Microsoft Word documents
 - ◆ **LESSON LEARNED:** In our desire not to impose too much change into the existing process during the pilot phase, we were not explicit enough about the granularity of the information we required (e.g., some groups provided estimates broken out by Quarter when we really needed it by month). This forced us to do a lot of extrapolation and introduced some estimation errors and confusion.
 - ◆ **TIP:** If you are going to collect estimates offline and later enter them into Artemis 7, then provide a template that matches the way the data will be represented in Artemis (see example on next slide).
 - ◆ **TIP:** Having project managers enter their estimates directly into Artemis 7 is highly desirable – increases their understanding of the tool and gives them greater ownership of the estimates.

Example: Offline Estimation Worksheet

Project Name
Project Manager

1. Estimates should be entered in 0.25 (quarter) increments.
2. Estimates should be entered in terms of Full-Time-Equivalents.
3. Example: entering a 2.5 under Apr-05 next to 605-BSA, means you need the equivalent of 2.5 people from the BSA group in April 2005

Resource Loading (FTEs)	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Avg
IT: Employees													
605 - BSA													
605 - Chief Technology Officer													
605 - Customer Access													
605 - Customer Certification													
605 - Delivery Infrastructure													
605 - Electronic Trading													
605 - Environmental Support													
605 - Floor Trading													
605 - Front-End Systems Team													
605 - Market Data Systems													
605 - Market Dissemination Systems													
605 - Quality Management													
605 - Systems Arch/Adv. Technology													
IT: Consultants													
605 - BSA													
605 - Chief Technology Officer													
605 - Customer Access													
605 - Customer Certification													
605 - Delivery Infrastructure													
605 - Electronic Trading													
605 - Environmental Support													
605 - Floor Trading													
605 - Front-End Systems Team													
605 - Market Data Systems													
605 - Market Dissemination Systems													
605 - Quality Management													
605 - Systems Arch/Adv. Technology													

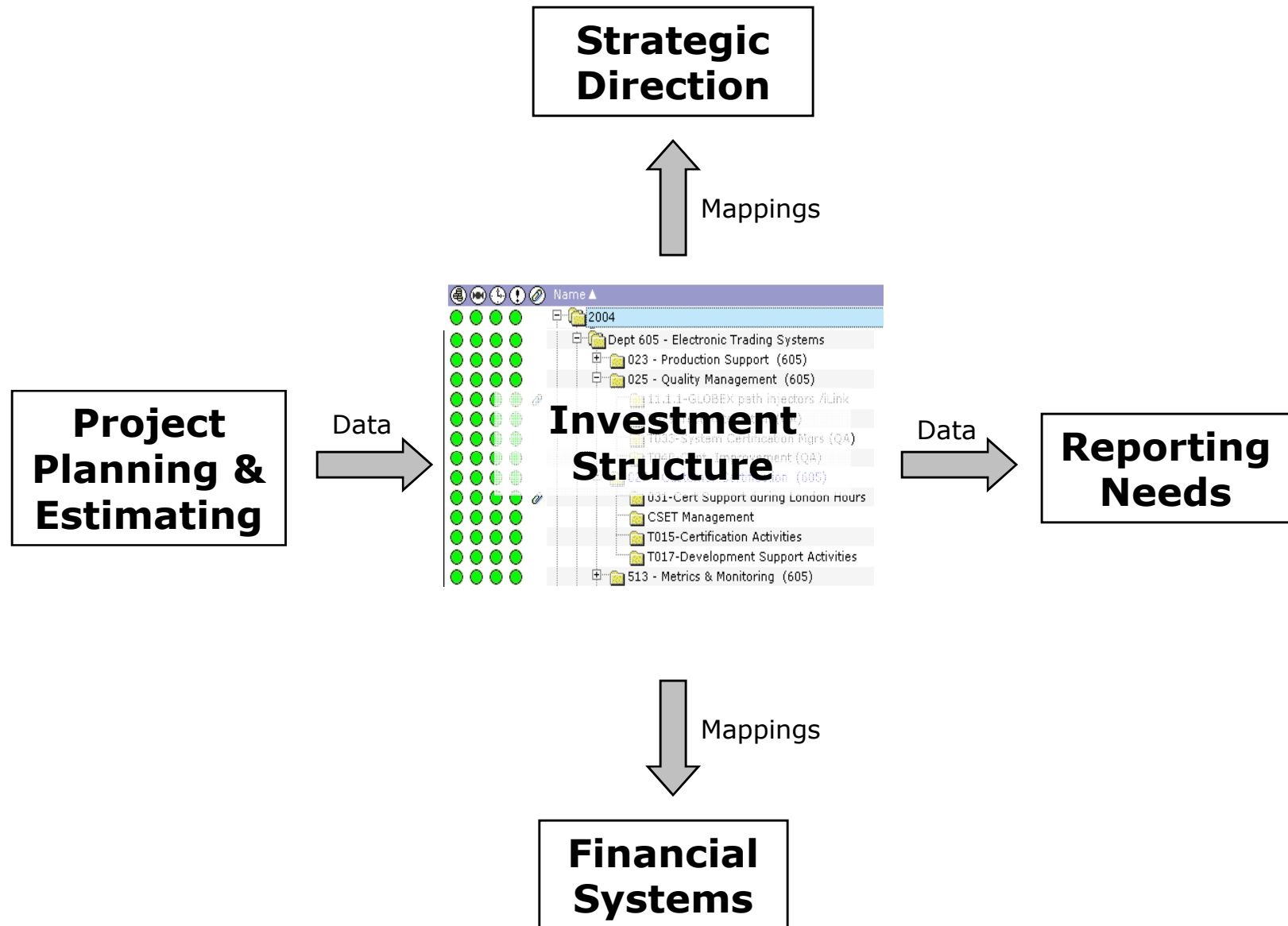
Modeling your Investment Structure

- **Why is it important?**

- ◆ The manner in which you structure your *Investments* has a major impact on how easily you can rollup, slice, dice, and correlate information into reports.
- ◆ Different stakeholders have different reporting needs
- ◆ To effectively facilitate the prioritization and selection of projects, there should be a clear linkage to your organization's strategic goals.
- ◆ How you structure your investments will impact how you to track execution
- ◆ In the end, the budget you build in Artemis 7 must map to your organization's official financial system (e.g., Peoplesoft)
- ◆ Other factors (i.e., this is not an all inclusive list)

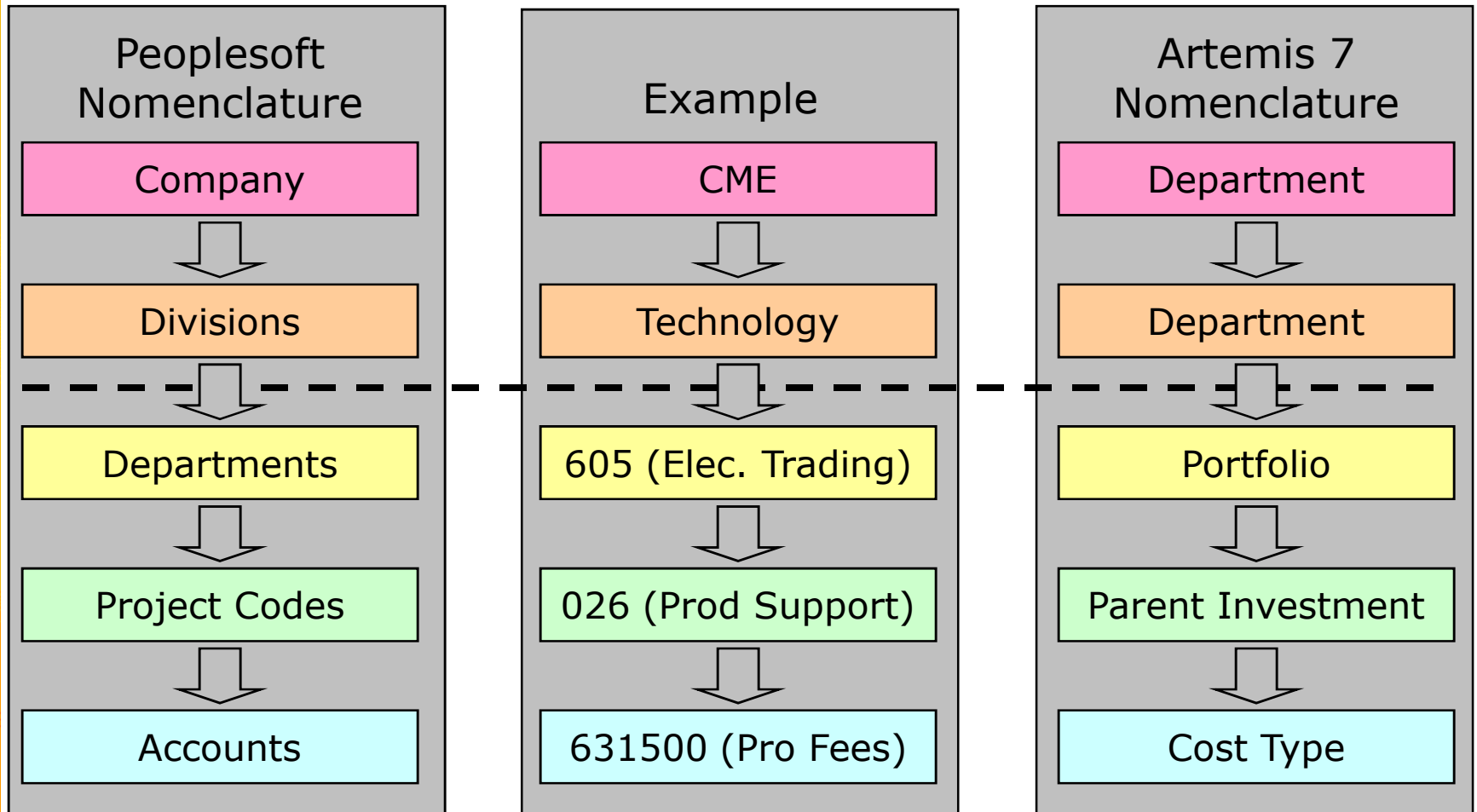
- **If you don't spend a significant amount of time thinking through the above considerations, it is very difficult to make major structural changes later!**

Considerations when Modeling Investments

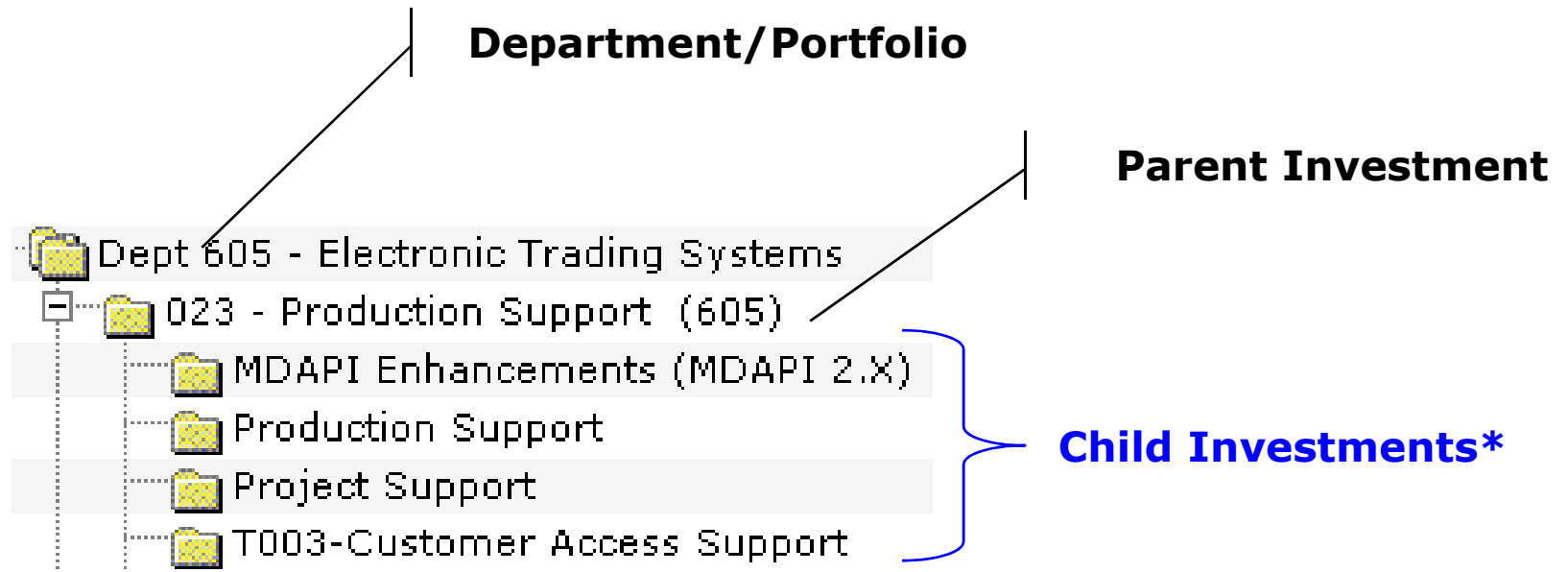


Example: Mapping to CME's Financial System

- We generally think of our financial system in terms of the following hierarchy :

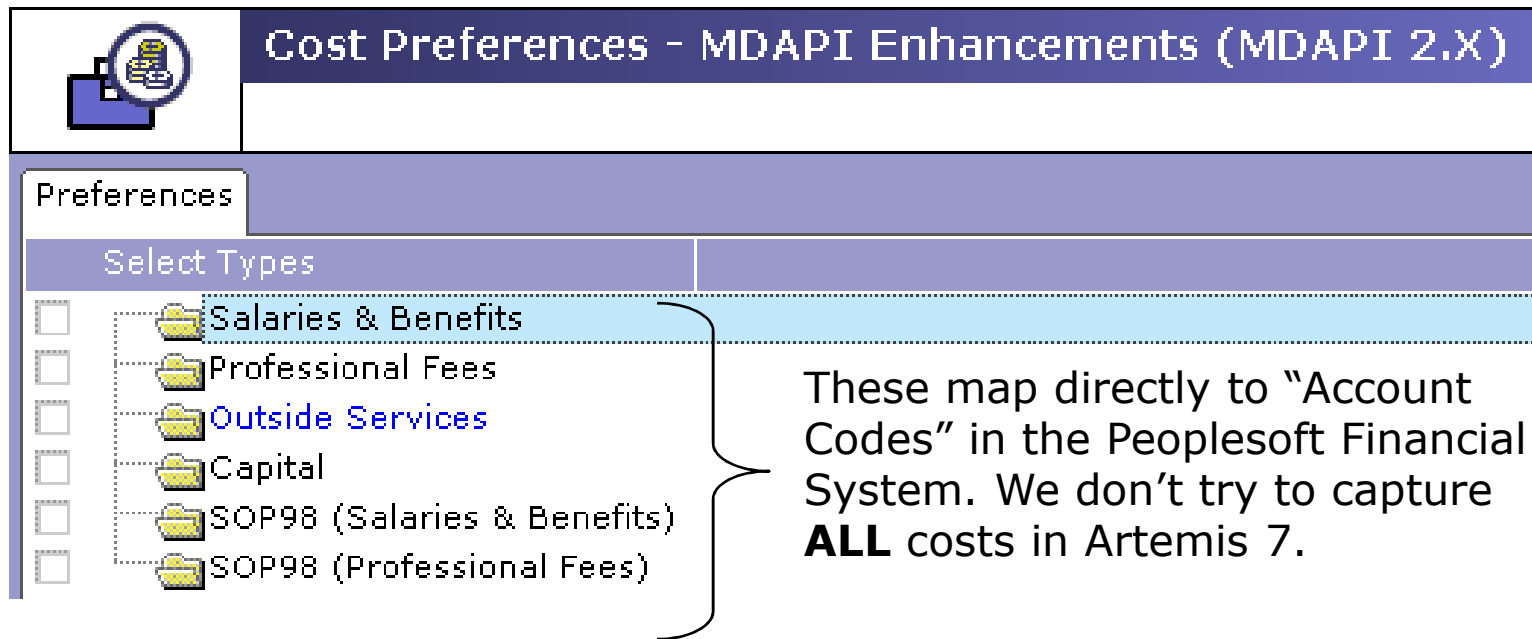


How it looks in Artemis 7



- In our Technology Division we plan and estimate at a lower level of detail than the way the costs rollup into the actual budget.
- We build our budget primarily from the bottom-up and then negotiate with sponsors to resolve gaps between available resources and project demands.
- In this example the costs for the individual child investments would rollup into an overall cost for "023 – Production Support" and that is how it would be reflected in our budget.

Selecting Cost Types



Cost Preferences - MDAPI Enhancements (MDAPI 2.X)

Preferences

Select Types

- Salaries & Benefits
- Professional Fees
- Outside Services
- Capital
- SOP98 (Salaries & Benefits)
- SOP98 (Professional Fees)

These map directly to "Account Codes" in the Peoplesoft Financial System. We don't try to capture **ALL** costs in Artemis 7.

- Some costs are directly entered (e.g., Capital)
- Other costs are calculated by Artemis 7 based on entered head-counts (e.g., Professional Fees) – we'll see examples of this in a few slides.
- **TIP:** Even though at CME we typically think of professional fees primarily in terms of dollars, it is more intuitive for managers estimate professional fees in terms of head-counts. This allows us to do resource leveling between available staff and consultants, which would otherwise not be possible.

Using Existing & Custom Characteristics

- Allows you to map *Investments* to your financial system
- Allows you to map *Investments* to the company's strategic initiatives
- Can be used to "slice" and rollup information for reporting

Ownership	Dates	Characteristics	Notes
Lifecycle Stage		<input type="text" value="2. Proposed"/>	
IT Budget Coordinator		<input type="text" value="(IT) John Harms"/>	
IT Project Administrator		<input type="text" value=""/>	
IT Project Manager		<input type="text" value="(IT) Dennis Genetski"/>	
Funded From		Portfolio	
Parent Investment		023 - Production Support (605)	
Account Code		605023	

The provided "Account Code" field maps investment costs directly to our financial system.

Custom characteristic "Sponsor" allows us to create reports and categorize costs by sponsor (a.k.a. business unit)

The "Initiative" characteristic maps investments to company initiatives.

Capital Type	<input type="text" value=""/>
Initiative	<input type="text" value="Core"/>
3YTP Code	<input type="text" value="N/A"/>
Sponsor	<input type="text" value="Products & Services"/>
Sponsor Contact	<input type="text" value="John Smith, x2513"/>
SOP98	<input type="text" value="No"/>
Project ID	<input type="text" value="TCH030145"/>

Custom Characteristics Used in Reporting

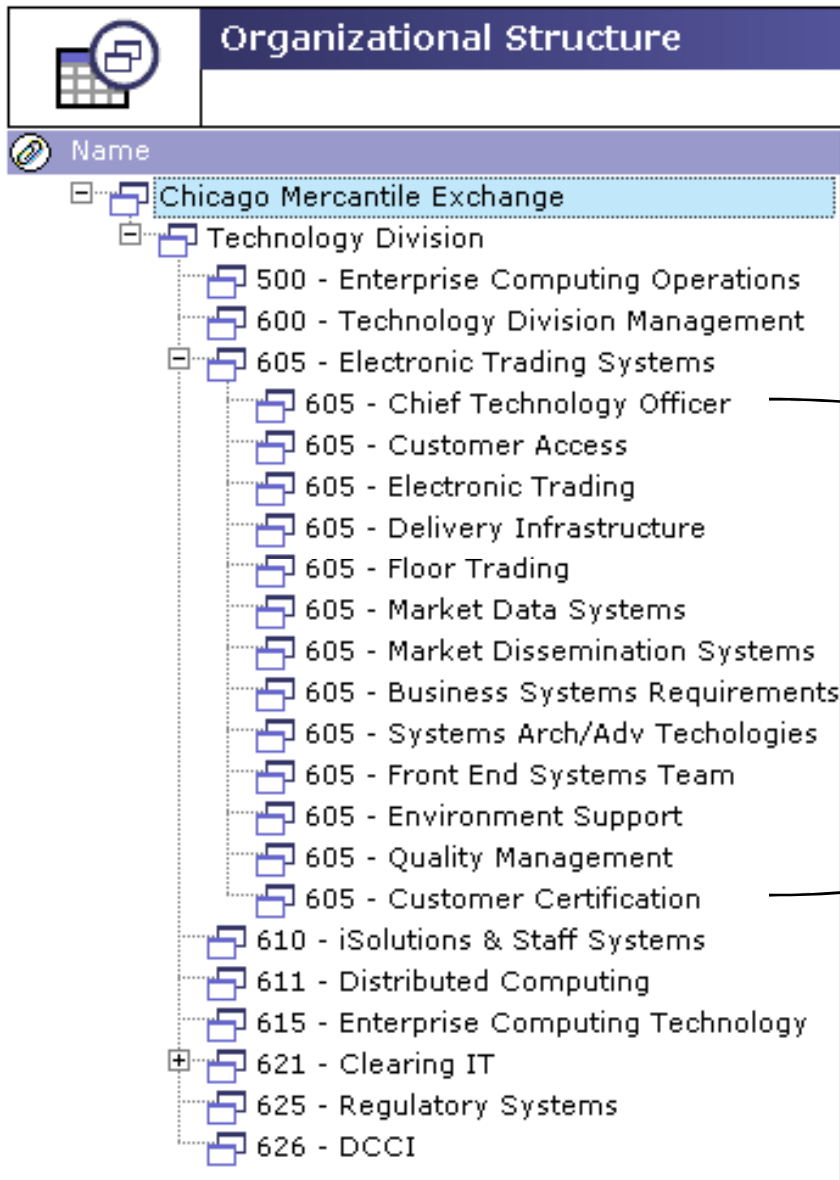
Reporting budgeted dollars by sponsor

Artemis 2004 Project Portfolio
Example Report
by Mark Bennett

BUDGET		Cost Type				Month	Professional Fees Total
SPNOSOR	PROJECT NAME	Professional Fees					
		3 2004	4 2004	5 2004	6 2004		
Operations	T003-Customer Access Support	\$ 29,440.00	\$ 26,880.00	\$ 28,160.00	\$ 28,160.00	\$ 112,640.00	
	T044-PSG Support (QA)	\$ 29,440.00	\$ 26,880.00	\$ 28,160.00	\$ 28,160.00	\$ 112,640.00	
	T041-TOPS Production Support (QA)	\$ 7,360.00	\$ 6,720.00	\$ 7,040.00	\$ 7,040.00	\$ 28,160.00	
	T034-SSF Production Support (QA)	\$ 7,360.00	\$ 6,720.00	\$ 7,040.00	\$ 7,040.00	\$ 28,160.00	
	T018-Firmsoft Support and Maintenance (QA)	\$ 3,680.00	\$ 3,360.00	\$ 3,520.00	\$ 3,520.00	\$ 14,080.00	
Operations Total		\$ 77,280.00	\$ 70,560.00	\$ 73,920.00	\$ 73,920.00	\$ 295,680.00	
Technology	T015-Certification Activities	\$ 14,720.00	\$ 13,440.00	\$ 3,520.00	\$ 3,520.00	\$ 35,200.00	
	916 - Project and Financial Controls (600)		\$ 10,000.00		\$ 10,000.00	\$ 20,000.00	
Technology Total		\$ 14,720.00	\$ 23,440.00	\$ 3,520.00	\$ 13,520.00	\$ 55,200.00	
Grand Total		\$ 92,000.00	\$ 94,000.00	\$ 77,440.00	\$ 87,440.00	\$ 350,880.00	

- **Custom characteristics are very powerful, use them liberally**

Considerations for Resource Leveling



- We use the concept of “sub-departments” in some areas to help managers balance their resources.
- “Sub-departments” roughly equate to functional areas in our model.

Department 605's sub-Departments

- Most projects require resources from multiple sub-departments
- These sub-departments are used when entering resource estimates as shown in the next slide.

Entering Resource Estimates

Entering headcounts by resource type and “Sub-department”

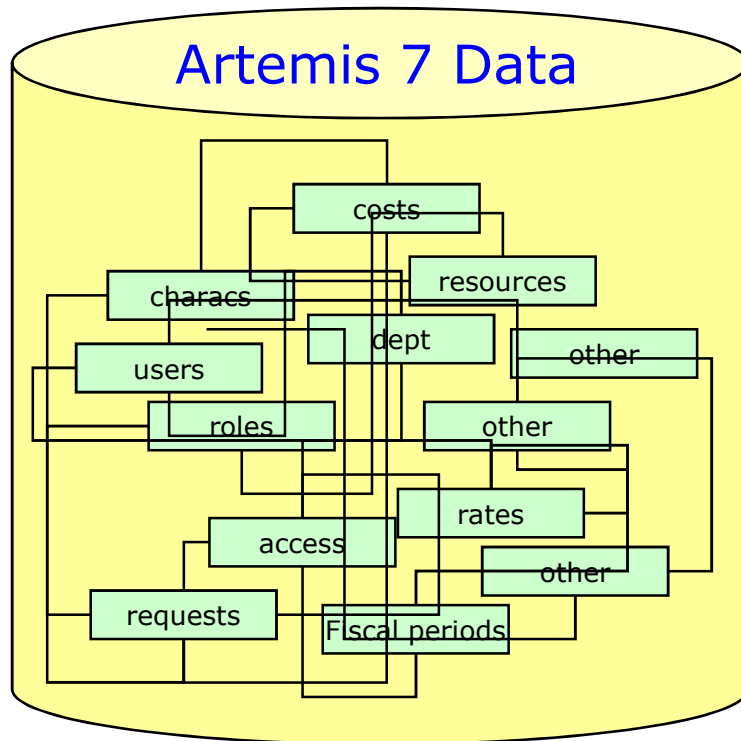
Type	Prev	1 2004	2 2004	3 2004	4 2004	5 2004	6 2004	7 2004	8 2004	9 2004
Headcounts	0.00	0.00	0.00	0.00	2.50	4.00	5.00	5.00	5.50	5.00
605 - Market Data Systems	0.00	0.00	0.00	0.00	2.00	3.50	4.00	4.00	3.50	3.00
IT: Consultant	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
IT: Employee	0.00	0.00	0.00	0.00	2.00	2.50	3.00	3.00	2.50	2.00
605 - Quality Management	0.00	0.00	0.00	0.00	0.50	0.50	1.00	1.00	2.00	2.00
IT: Consultant	0.00	0.00	0.00	0.00	0.50	0.50	1.00	1.00	2.00	2.00

Headcounts translate into costs

Type	Prev	1 2004	2 2004	3 2004	4 2004	5 2004	6 2004	7 2004	8 2004	9 2004
Investment Costs (US\$)	0.00	0.00	0.00	0.00	27.89	48.84	61.42	58.63	73.14	64.42
Salaries & Benefits	0.00	0.00	0.00	0.00	21.17	27.72	33.26	31.75	28.98	22.18
Professional Fees	0.00	0.00	0.00	0.00	6.72	21.12	28.16	26.88	44.16	42.24

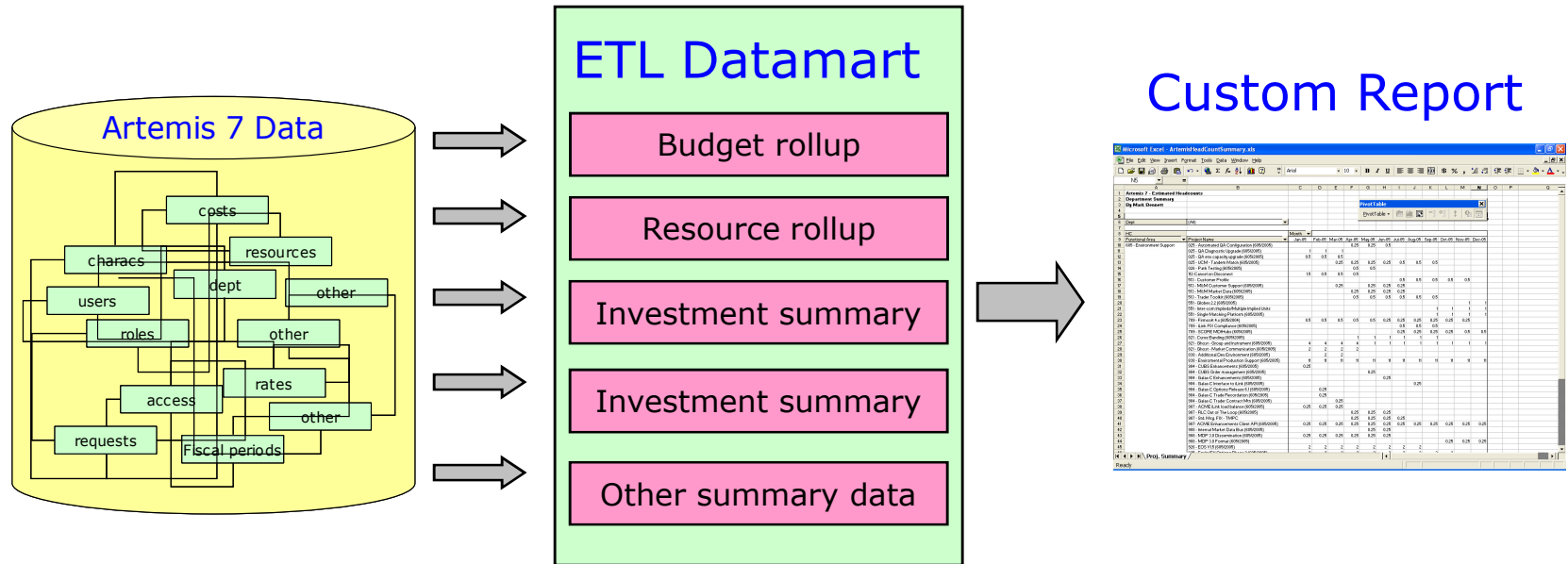
TIP: Use average labor rates – from a budget perspective it’s generally accurate enough and it prevents the data from containing confidential salary information.

Creating your Own Custom Reports



- **LESSON LEARNED:** Trying to build reports from the “raw” data is crazy!
- Yes, you can do it but it’s really **really really** complex and only someone crazy and demented (like Mark) would actually enjoy trying.
- Useful if you need real-time reporting

The ETL Datamart: Your best friend!



- **The ETL Datamart**

- ◆ It summarizes and collapses the data into a series of simple tables that allow you you very quickly generate your own reports.
 - ◆ A "batch process" that you can schedule to run at regular intervals or on an ad-hoc basis
- **TIP:** Using Microsoft Excel, you can create reports that directly connect to the datamart and can be updated dynamically.
- **TIP:** Prior to the budgeting process, develop custom reports that extracts your budget from Artemis in a format that can easily be transcribed into your organization's financial system.
- **TIP:** Learning to use Excel *Pivot* tables can be a life altering experience – well, maybe not that dramatic but they are incredibly powerful in this environment.

Creating a Web-Based Budget Dashboard

The screenshot shows a web browser window titled "CME Technology Division Budget Dashboard - Microsoft Internet Explorer provided by Chicago Mercantile Exchange Inc.". The address bar shows a URL with various parameters. The main content area displays a "2004 Budget Dashboard" with a table of budget items. A "Filtering Options" dialog is open over the table, showing filters for Year (2004), Sponsor, Initiative, Approval State, Department (605 - Electronic Trading Systems), Project Code (1023), Priority (All), and Subtotal By (None). The dialog also includes checkboxes for "Save my filtering options", "Show capital detail", and "Hide deferred or canceled projects", along with "Submit", "Clear", and "Close" buttons.

Status	Priority	Project Name	Start	Stop	Project Manager	Dept	Code	Salaries	Pro-Fees	Capital
Ⓢ	High	MDAPI Enhancements (MDAPI 2.X)	Q2-04	Q3-04						
Ⓢ	High	T019-Firmsoft Support and Maintenance	Q1-04	Q4-04						
Ⓢ	High	Production Support	Q1-04	Q4-04						
Ⓢ	High	Project Support	Q1-04	Q4-04						
Ⓢ	High	T003-Customer Access Support	Q1-04	Q4-04						

- A web-based dashboard is certainly not critical, but helpful
- This example is a custom web-based view of budget information based on the ETL datamart.
- Allows management team one-click access to summary information and basic sorting/filtering capabilities.

Web-Based Project Status Dashboard

2005 Project Status Dashboard
Watch List
Home Filter User Stats Help

Status	Summary	Key Milestones / Risks & Issues																																																																						
Management Information Systems																																																																								
<p>G Data Pilot (IT) Brian Singer</p> <p>Percent Complete: 0%</p> <table border="1" style="font-size: x-small; width: 100%;"> <tr><td>Dollars:</td><td>Salaries</td><td>Pro-Fees</td></tr> <tr><td>Budget</td><td>\$380,428</td><td>\$449,856</td></tr> <tr><td>Revised</td><td>\$380,428</td><td>\$449,856</td></tr> <tr><td>Actual</td><td>\$192,810</td><td>\$301,485</td></tr> <tr><td>Budget Variance</td><td>\$387,618</td><td>\$148,371</td></tr> </table> <table border="1" style="font-size: x-small; width: 100%;"> <tr><td>Hours:</td><td>Employees</td><td>Consultants</td></tr> <tr><td>Budget</td><td>8,245</td><td>6,120</td></tr> <tr><td>Revised</td><td>8,245</td><td>6,120</td></tr> <tr><td>Actual</td><td>2,842</td><td>2,961</td></tr> <tr><td>Budget Variance</td><td>5,403</td><td>3,159</td></tr> </table> <p><input checked="" type="checkbox"/> Budget Code: 6253911 <small>Last edited by: 9/15/2005 BSINGER D05625-015/002 3YTP: STT003</small></p>	Dollars:	Salaries	Pro-Fees	Budget	\$380,428	\$449,856	Revised	\$380,428	\$449,856	Actual	\$192,810	\$301,485	Budget Variance	\$387,618	\$148,371	Hours:	Employees	Consultants	Budget	8,245	6,120	Revised	8,245	6,120	Actual	2,842	2,961	Budget Variance	5,403	3,159	<p>7/22/05 Began process of modeling the Dimensional Schema for the purpose of storing Competitive Exchange Data with an internal CME Oracle Database.</p> <p>7/29/05 Continue to Receive All Futures and Options on Futures Data from Bloomberg and store it on a CME File Server and transfer it into an Oracle Database.</p> <p>Working with Linux team to expand the amount of disk space on the development and QA database servers. Linux team is rebuilding all four development and QA boxes to optimize for Oracle and expanding the hardware. One box is completed and available for Oracle installation.</p> <p>Received the initial draft of the model for Competitive Data and began building ETL scripts to transform competitive data from Oracle Staging Tables into Star Schema.</p> <p>8/5/2005 Finished the logical layout fo the Competitive Data Star Schema and began the implementation of the schema more</p>	<table border="1" style="font-size: x-small; width: 100%;"> <thead> <tr><th>Milestone</th><th>Original</th><th>Revised</th><th>Actual</th></tr> </thead> <tbody> <tr><td>Define</td><td>6/30/2005</td><td></td><td></td></tr> <tr><td>Design</td><td>8/31/2005</td><td></td><td></td></tr> <tr><td>Develop</td><td>11/30/2005</td><td></td><td></td></tr> <tr><td>Deploy</td><td>12/31/2005</td><td></td><td></td></tr> </tbody> </table>	Milestone	Original	Revised	Actual	Define	6/30/2005			Design	8/31/2005			Develop	11/30/2005			Deploy	12/31/2005																						
Dollars:	Salaries	Pro-Fees																																																																						
Budget	\$380,428	\$449,856																																																																						
Revised	\$380,428	\$449,856																																																																						
Actual	\$192,810	\$301,485																																																																						
Budget Variance	\$387,618	\$148,371																																																																						
Hours:	Employees	Consultants																																																																						
Budget	8,245	6,120																																																																						
Revised	8,245	6,120																																																																						
Actual	2,842	2,961																																																																						
Budget Variance	5,403	3,159																																																																						
Milestone	Original	Revised	Actual																																																																					
Define	6/30/2005																																																																							
Design	8/31/2005																																																																							
Develop	11/30/2005																																																																							
Deploy	12/31/2005																																																																							
<p>G Global Registration (IT) Bill Anthony</p> <p>Percent Complete: 75%</p> <table border="1" style="font-size: x-small; width: 100%;"> <tr><td>Dollars:</td><td>Salaries</td><td>Pro-Fees</td></tr> <tr><td>Budget</td><td>\$275,172</td><td>\$187,776</td></tr> <tr><td>Revised</td><td>\$275,172</td><td>\$187,776</td></tr> <tr><td>Actual</td><td>\$192,996</td><td>\$180,153</td></tr> <tr><td>Budget Variance</td><td>\$82,176</td><td>\$7,623</td></tr> </table> <table border="1" style="font-size: x-small; width: 100%;"> <tr><td>Hours:</td><td>Employees</td><td>Consultants</td></tr> <tr><td>Budget</td><td>3,910</td><td>2,550</td></tr> <tr><td>Revised</td><td>3,910</td><td>2,550</td></tr> <tr><td>Actual</td><td>2,751</td><td>1,952</td></tr> <tr><td>Budget Variance</td><td>1,159</td><td>598</td></tr> </table> <p><input checked="" type="checkbox"/> Budget Code: 6253911 <small>Last edited by: 9/14/2005 BANTHONY T05625-086/0061 3YTP: RET002</small></p>	Dollars:	Salaries	Pro-Fees	Budget	\$275,172	\$187,776	Revised	\$275,172	\$187,776	Actual	\$192,996	\$180,153	Budget Variance	\$82,176	\$7,623	Hours:	Employees	Consultants	Budget	3,910	2,550	Revised	3,910	2,550	Actual	2,751	1,952	Budget Variance	1,159	598	<p>9/14 EDB/EFS prototype demo 8/30 EDB/EFS intergration continuing 8/23 EDB/EFS intergration continuing 8/16 De-Dup is completed 8/02 De-dup process has begun. 7/25 Successfully deployed GRD User Interface .IT has identified 100+ Market Participants to de-dup with business approval. Data Librarian functionality as well as EDB & EFS data integration under way. Continuing discussions with Enterprise Data Warehouse team for future integration</p> <p>7/18 New search screen coding. Convert some data to show dept where data created. Removed alpha TIN. 7/11 EDB Standardization complete 6/27 Define firms and customers 6/20 Duplicate identified 6/14 Departments reviewing data 6/7 Reports delivered to business owners. Purchase req for Messila software complete 5/31- Approval of Functional Specifications 5/24 - Functional Documents Complete for: Data St more</p>	<table border="1" style="font-size: x-small; width: 100%;"> <thead> <tr><th>Milestone</th><th>Original</th><th>Revised</th><th>Actual</th></tr> </thead> <tbody> <tr><td>Project Charter complete</td><td>2/22/2005</td><td></td><td>3/16/2005</td></tr> <tr><td>Review final version of GRD Business Requirements</td><td>2/24/2005</td><td></td><td>2/25/2005</td></tr> <tr><td>EDB and EFS data analysis</td><td>4/25/2005</td><td></td><td>4/29/2005</td></tr> <tr><td>Buy Versus Build Data Cleansing Tool</td><td>4/27/2005</td><td>4/25/2005</td><td>4/29/2005</td></tr> <tr><td>GRD - User Interface</td><td>7/8/2005</td><td>7/15/2005</td><td>7/22/2005</td></tr> <tr><td>EFS Registration Enhancements</td><td>7/15/2005</td><td></td><td>7/22/2005</td></tr> <tr><td>Data Standardization</td><td>8/12/2005</td><td>7/8/2005</td><td>7/8/2005</td></tr> <tr><td>Registration Listener (EDB & EFS Integration)</td><td>10/28/2005</td><td></td><td></td></tr> <tr><td>EDB Data De-Dup</td><td>12/31/2005</td><td></td><td></td></tr> </tbody> </table>	Milestone	Original	Revised	Actual	Project Charter complete	2/22/2005		3/16/2005	Review final version of GRD Business Requirements	2/24/2005		2/25/2005	EDB and EFS data analysis	4/25/2005		4/29/2005	Buy Versus Build Data Cleansing Tool	4/27/2005	4/25/2005	4/29/2005	GRD - User Interface	7/8/2005	7/15/2005	7/22/2005	EFS Registration Enhancements	7/15/2005		7/22/2005	Data Standardization	8/12/2005	7/8/2005	7/8/2005	Registration Listener (EDB & EFS Integration)	10/28/2005			EDB Data De-Dup	12/31/2005		
Dollars:	Salaries	Pro-Fees																																																																						
Budget	\$275,172	\$187,776																																																																						
Revised	\$275,172	\$187,776																																																																						
Actual	\$192,996	\$180,153																																																																						
Budget Variance	\$82,176	\$7,623																																																																						
Hours:	Employees	Consultants																																																																						
Budget	3,910	2,550																																																																						
Revised	3,910	2,550																																																																						
Actual	2,751	1,952																																																																						
Budget Variance	1,159	598																																																																						
Milestone	Original	Revised	Actual																																																																					
Project Charter complete	2/22/2005		3/16/2005																																																																					
Review final version of GRD Business Requirements	2/24/2005		2/25/2005																																																																					
EDB and EFS data analysis	4/25/2005		4/29/2005																																																																					
Buy Versus Build Data Cleansing Tool	4/27/2005	4/25/2005	4/29/2005																																																																					
GRD - User Interface	7/8/2005	7/15/2005	7/22/2005																																																																					
EFS Registration Enhancements	7/15/2005		7/22/2005																																																																					
Data Standardization	8/12/2005	7/8/2005	7/8/2005																																																																					
Registration Listener (EDB & EFS Integration)	10/28/2005																																																																							
EDB Data De-Dup	12/31/2005																																																																							

- Provides central location for stakeholders to obtain the status of all active projects
- The Artemis 7 ELT datamart provides an ideal data source to drive web-based status reporting

Key Points and Other Comments

- **Major elements/steps of building a budget are similar at most companies and organizations – though there are certainly many variations.**
- **Spending more time planning how you will use Artemis 7 in your budgeting process will save you a lot of grief down the road.**
- **When setting up your portfolio and investment structure in Artemis, take into consideration how the costs will be rolled-up to your official financial system.**
 - ◆ How will you map *Investments* to strategic goals or initiatives?
 - ◆ How will you map and rollup-costs into your official financial system?
 - ◆ What are the Management Teams reporting needs during the budgeting process?
 - ◆ How do the *Investment* managers develop estimates and balance resources?
- **If you use offline methods to initially collect information (e.g., estimates), make sure you are explicit about the format and granularity of the information you need.**
- **Create and use custom characteristics liberally to help you create reports and summarize costs the way your management team needs to see it.**
- **Well before your budgeting process starts, create summary reports that mirror the way the data is reflected in your official financial system.**
- **Consider how much resource leveling you want to do at what level of detail when setting up departments and sub-departments.**
- **Use the ETL datamart to create custom reports**
- **Every organization is different – understand what “stimulus” you need to apply in order to successfully drive your implementation of a portfolio management solution.**
- **Don’t expect success overnight! But do look for the quick wins!**

Q&A

- **Using Artemis 7 for budgeting?**
- **Using Artemis 7 in general?**
- **Philosophical musings about budgeting and project planning?**
- **Questions about CME?**
- **Any other questions?**

- **How to contact us?**

- ◆ **Mbennett@cme.com**

- ◆ **312-207-2513**

- ◆ **cstumpf@cme.com**

- ◆ **312-930-4581**