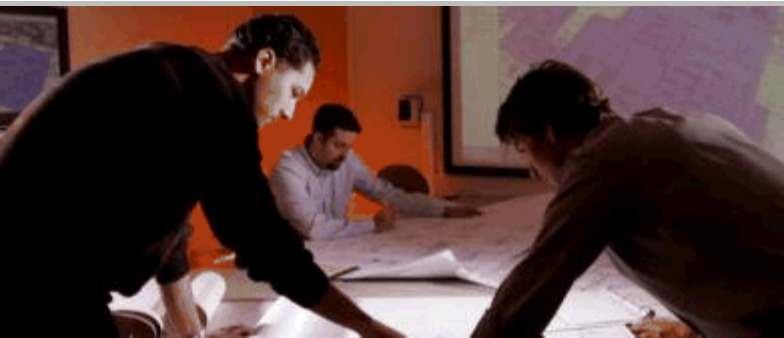


*Exceptional service in the national interest*



# IT Financial Management Reporting Perspectives

*Robert Amdahl, Business Management Professional*

*Danielle DiGregorio, Business Management Professional*



Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000. SAND NO. 2011-XXXXP

# Agenda

- Introduction
- Components for Creating IT Financial Management Report Information
- Historical Overview Perspective
- Focus of IT Financial Management Reporting Efficiencies
- Example of an IT Financial Management Reporting Process and Model

# Background & Introduction

- Title: **Business Management Professionals**
- This role includes activities such as:
  - **Budget Formulation**
    - Cost Estimating
    - Budget Sizing
    - Future Year Estimates
    - Cost and Recovery Forecasting
  - **Budget Management**
    - Projections
    - Reporting to customers
    - Analysis
    - Recommendations
    - Accounting Transactions
    - Procurement Support
  - **Data Calls**
    - Answer requests for information various sources; internally and externally

# Background & Introduction cont.

- Work for **Sandia National Laboratories** in Albuquerque, New Mexico
- Provide financial management support for the **Computing and Network Services Center**.
  - Provides the production IT environment for the Laboratories
  - Responsible for research, development, evaluation, testing, deployment and maintenance of the information infrastructure
- The Infrastructure consists of the data and voice networks, scientific and administrative computing servers and applications, desktop computing platforms and services and computer security services.

When I first started, I used to hear things like

*“Oh, you’re the new bean counter”*

*“You don’t do anything creative, you just work with numbers”*

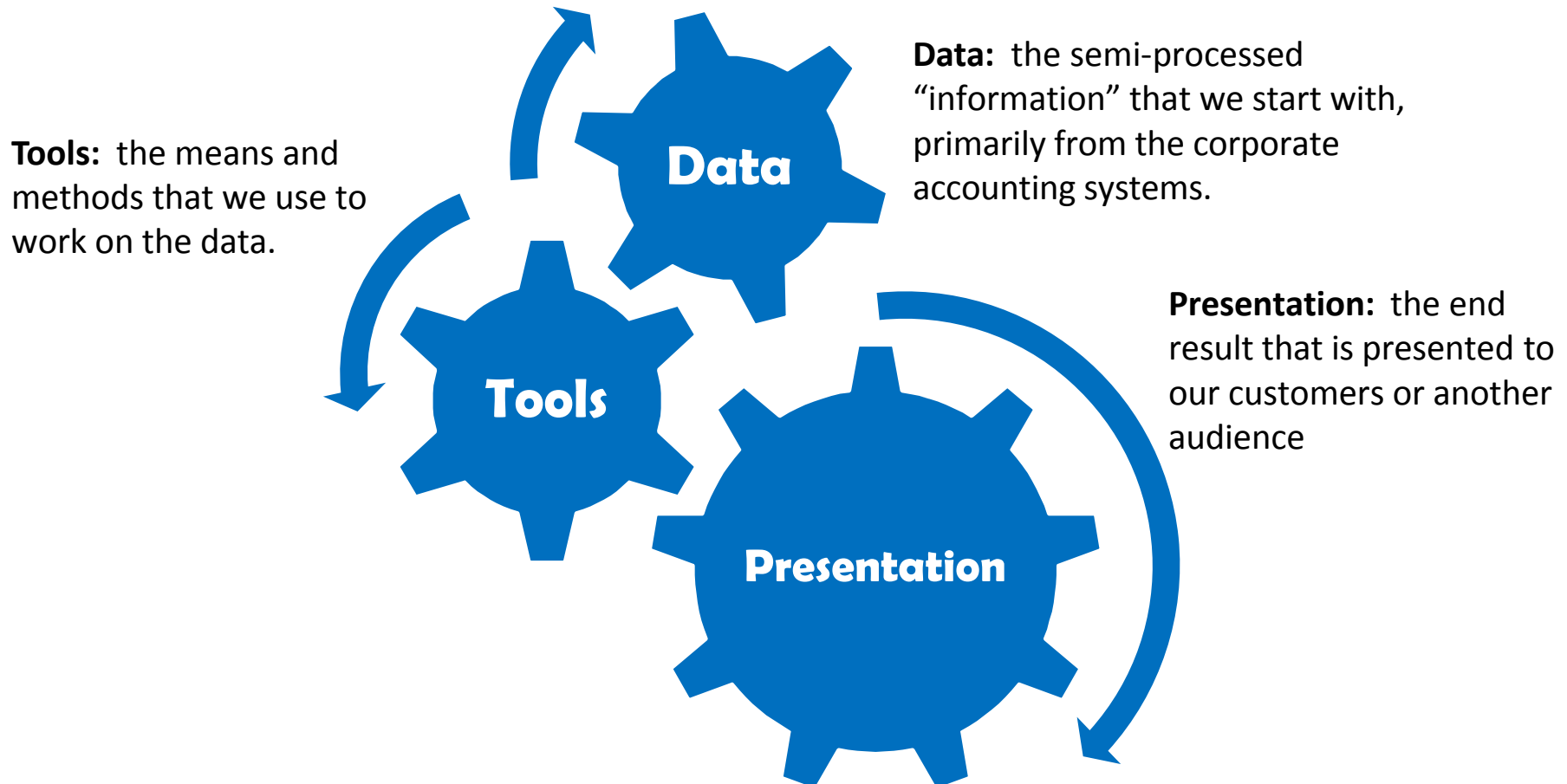


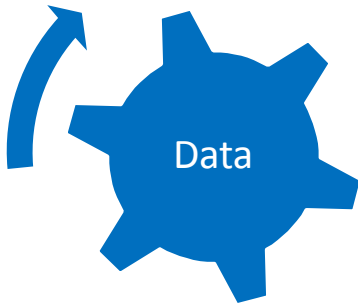
**They were wrong!**

**Our job is to create useful, meaningful and valuable  
information from data.**

# This is what we work with to do that.

These components are interdependent and each is crucial for success

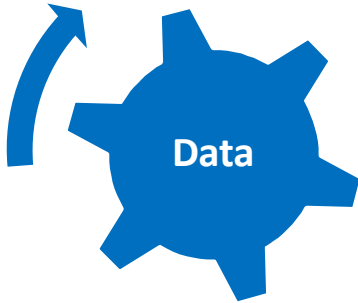




### Learn and understand your data

- **What's in it?**
- **Where do you get it?**
- **When is it available?**
- **Is there structure?**

- Often, it has cost/budget information, such as:
  - FTEs – Full Time Equivalents (like people)
  - Cost data for Labor, Purchases, Chargebacks, Travel
  - Spend Plan/Budget information for the above
  - Commitment information
  - MTD and YTD Costs
  - Various levels of transaction detail – depending on which reports are accessed
- Usually from some corporate accounting system
- Data from financial rollups are now available on a weekly basis – used to be only monthly.
- Work Breakdown Structure – Project/Task Structure



***Conceptualize your data and provide structure to it. Use the elements of the WBS that are available to begin giving meaning to the data.***

## WBS

Program

Sub-program

Sub-sub-program

*Project*

*Task*

*Sub-Task*

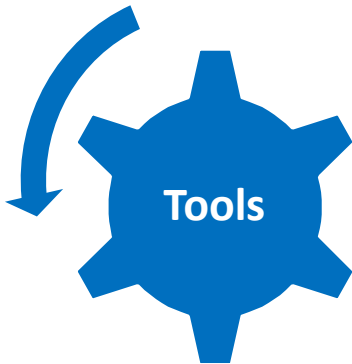
*Sub-sub Task*

*. . . down to nine levels*

## Reporting Categories

FTEs	Labor	Purchases	Chargebacks	Travel	Totals
------	-------	-----------	-------------	--------	--------

**Also, only use the level that you need to get what you need.**



### Learn and understand your tools

- What's provided by corporate?
- What levels of detail are available
- Are they "canned" reports?
- Are they customizable?
- Can they be downloaded and made "local"?
- What "local" tools are available?

- Variety of tools available, both corporate and local.
  - Corporate tools provide both canned and customizable financial data reports.
    - Past canned reports were printed reports.
    - Newer reports are mostly Adobe-based financial reports or on-screen type reports that require copying and pasting into excel spreadsheets.
- Customizable corporate reporting require some level of programming
  - *Business Objects*
    - Enable download of financial report data to the desktop. This enables better manipulation of the data via local tools.
- Local tools (at the desktop) provide a better way to create customized reports from the data; such as excel spreadsheets, pivot tables, PowerPivot, database tools, etc.

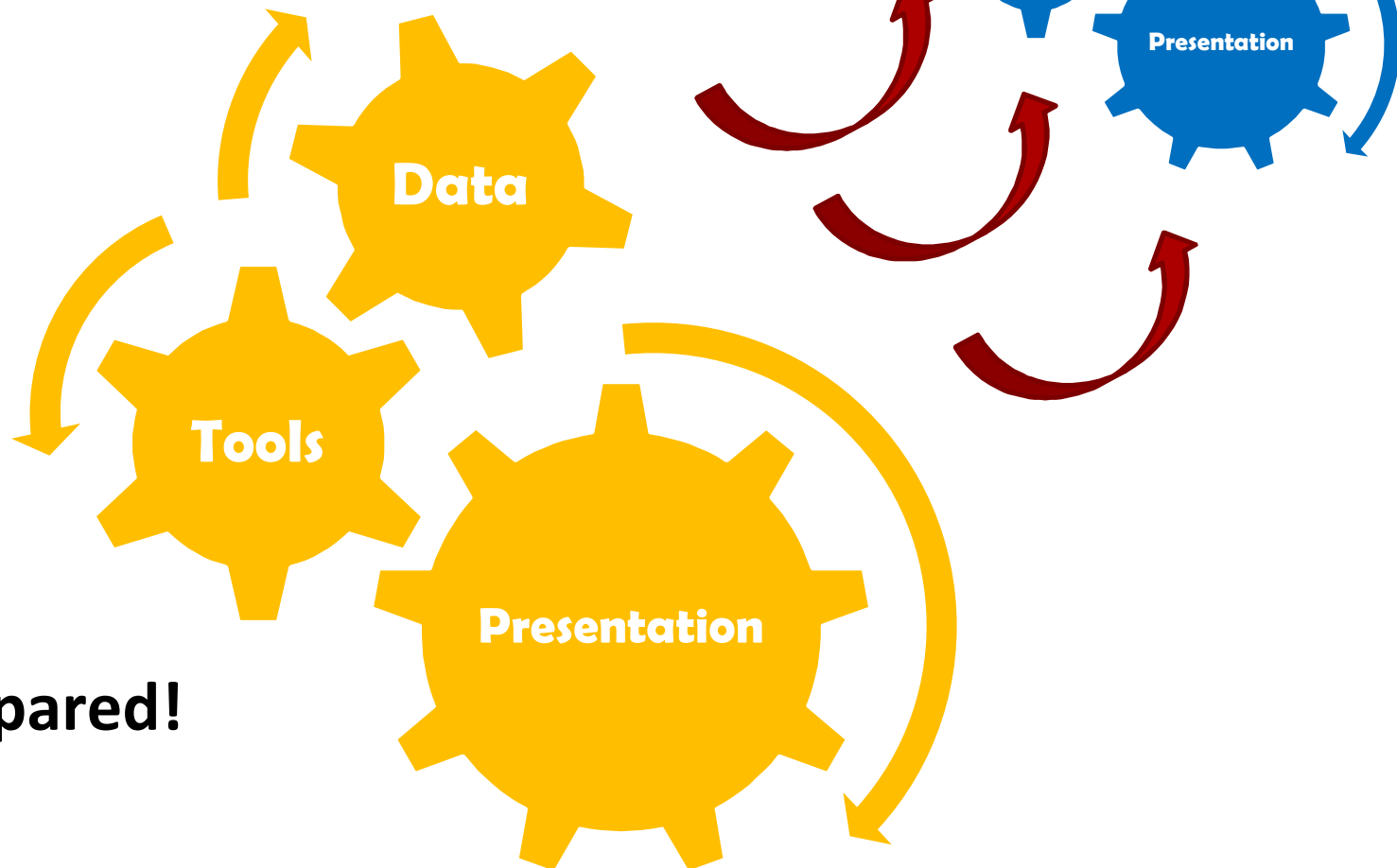


### Understand and think critically about the presentation:

- Who is your audience/customer?
- What are you showing them?
- What do they want to see?
- What do you want them to see?
- How is it presented?
- How often is it to be presented?
- Ad hoc/data call report?

- The needs of the audience/customers have changed significantly over the years
  - Initially, it had been project managers and leads wanting status updates on their project costs vs. budgets. Also, reports were only available monthly
    - “Am I in trouble or not? If I’m in trouble, fix it. If not, see you next month.”
- Now, reports are available weekly and the demands for better and quicker data analysis (presentation) have increased.
  - Need for quick turnaround
  - Increased validity
  - Increased detail
  - Easily understood
- The audience has also expanded to include others with often disparate requirements.
  - Internal and external sponsors
  - Oversight groups

By the way, whatever you are using now will be gone, replaced and/or upgraded in a few years!

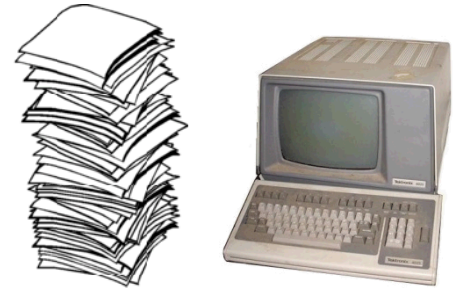


**Be prepared!**



## And now, a brief trip through time . . .

In the beginning, there were monthly printed reports and a terminal connected to one of the mainframe computers.



Analysis and reporting consisted, primarily, looking through the report, copying numbers onto lined paper and looking for patterns and potential problems.

Learned two important rules:

**Structure the data (WBS)**

**Look for the “big rocks”**

But, discovered a new tool while working on another project: ISSCO Graphics TELL-A-GRAF.

This software ran on the mainframes and provided graphing capability

Now, the monthly reports became charts showing costing by month.

Spreadsheet application: SaturnCalc - running on a VAX

Entered data and produced computer generated reports to support the graphic charts.



**Then along came PCs . . .**

**Better spreadsheet and database applications**

Lotus-123

Windows with Excel

Still enter data by hand, but better formatting for reports and some graphic capability



**Major leap forward came with the introduction of a new corporate tool: Business Objects**

Primarily, “canned” reports

But provided the ability to produce customized reports through programming

Could download customized reports/data to the desktop

Offered weekly reporting

**Allowed for the use of Excel Pivot tables.**





## Things start moving quickly . . .

- Pivot tables provide the capability to look at data in a variety of different ways.
- You can “pivot” the data and look at it from different angles and perspectives.
- A logical outgrowth of this is to conceptualize the data as a cube.

## ARC and the Data Cube

### ARC – Analytical Reporting Capability

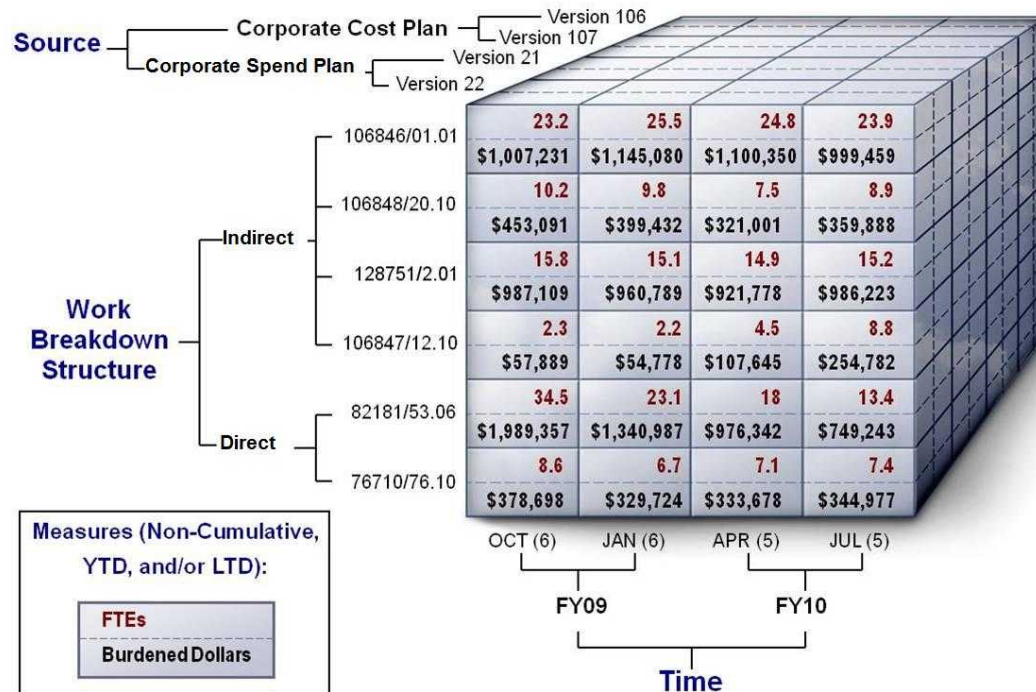
- Focus is on performing ad-hoc analyses and rapid current data refresh of established reports while eliminating data gathering activities
- Allows for rapid “slicing, dicing, and rollup” of project financial information
- Provides for quick modification of data views to facilitate answers to evolving questions as information is presented and analyzed
- Easily modifiable presentation layouts to accommodate unique display requirements of information consumers
- Provides summary level detail

## Even quicker . . .



ARC uses OLAP (Online Analltical Processing)

- OLAP “Cubes” are a special type of reporting database
  - Great at rolling up and drilling down into hierarchical, numeric data



## Simplified Visualization of a Data Cube Model

Pivot tables provide the tools for accessing the cube, retrieving the data, analyzing and creating reports



Until now . . .

### Our current tool-set now includes:

**Reportville** – corporate canned report

**ARC and the Data Cube** – using pivot tables

**SSA using PowerPivot** – new this fiscal year

**PowerPivot** extends the capabilities of pivot table features with new features such as expanded data capacity, advanced calculations and the ability to *import data from multiple sources*

### SSA – Self Service Analysis

This capability provides transaction level detail data for projects, programs and organizations.

Uses the latest **Microsoft Business Intelligence** technologies (e.g. Excel pivot tables, PowerPivot)

Provides for both Corporate provided templates and customizable reporting

**Hopefully, this has provided a brief history of my experiences in IT financial management.**

**Also, I hope that it has provided a perspective and some information that can be used.**

**Thank you!**

**Danielle can now get to the good stuff with some examples.**



# An Efficiency Focused Mindset

- How can I use tool to lessen the amount of time it takes me to do a task?
- How can I use the tool to create more valuable information?
- What capabilities does the tool have that I'm not currently utilizing?
- How can I use the tool to make my job easier?
- If I think of my ideal report, it would have "these" certain attributes... Can the tool do this for me?

**Just because the tool couldn't do it before, doesn't mean it can't do it now...**

# Effects of Efficiency

- **Lessening** the amount of time it takes to complete a task
- Creating **more valuable information** in the same amount of time it takes you to do a task
- Tailoring reports to **meet specific customer needs**
- **Exceptional Customer Service!!**

# Understand your Cost Drivers



- What factors cause your costs to fluctuate throughout the year?
- Where is cost driver data/information stored?

Determine Your Data Source(s)	
Pre-Populated	Create Your Own
<p><b><u>Source:</u></b> Corporate Financial Tools</p> <p><b><u>Data:</u></b> General/Basic Financial Information</p> <ul style="list-style-type: none"><li>■ Labor</li><li>■ Purchases</li><li>■ Chargeback</li><li>■ Travel</li></ul>	<p><b><u>Source:</u></b> Variable</p> <p><b><u>Data:</u></b> Customer Specific Information</p> <ul style="list-style-type: none"><li>■ Maintenance/Licensing Renewals</li><li>■ Lifecycle Management Information</li><li>■ New technology implementation</li></ul>


The goal is to determine what combination of data you need to transform financial data into **valuable information...**

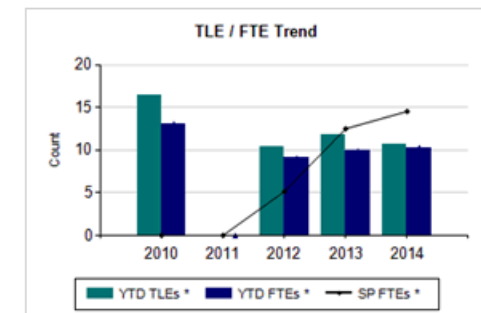
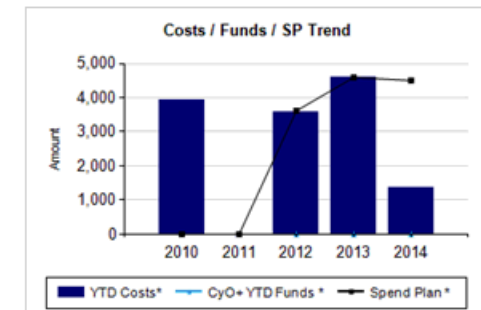
# Corporate Financial Tools

Analytical  
Reporting  
Capability  
(ARC)

Column Labels 				
+ 2013				
Row Labels 	Cost Burd Amt	Cmt Burd Amt	Total Cost Burd Amt	Total Cmt Burd Amt
+ 15	\$2,479,325.66	\$115,675.67	\$2,479,325.66	\$115,675.67
+ LABOR	\$1,402,394.36		\$1,402,394.36	
+ ODC	\$1,076,931.30	\$115,675.67	\$1,076,931.30	\$115,675.67
Grand Total	\$2,479,325.66	\$115,675.67	\$2,479,325.66	\$115,675.67

Reportville

Chart Visibility 					
Trend Five-Year Max >>	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010
* YTD TLE	10.7	11.8	10.3	-	16.4
YTD FTEs	10.3	9.9	9.1	-	13.1
SP FTEs	14.5	12.5	5.2	-	-
YTD Labor	758,768	1,844,446	1,539,070	-	2,295,382
YTD Purchases	141,802	1,302,352	1,328,177	-	888,301
YTD Travel	7,840	35,184	8,259	-	18,585
YTD Chgbks	446,951	1,431,951	713,656	-	713,307
Total Costs YTD	1,355,362	4,613,933	3,589,162	-	3,915,575
Spend Plan (SP)	4,500,970	4,592,999	3,616,000	-	-
% Costed	30.1%	100.5%	99.3%	-	-
Uncosted SP	3,145,609	(20,934)	26,838	-	(3,915,575)
CFY Cmts	295,016	352,898	122,934	-	54,166
SPY Cmts	-	-	-	-	-
Total Cmts	295,016	352,898	122,934	-	54,166
% Costs & Cmts	36.7%	108.1%	102.7%	-	-
Carryover	-	-	-	-	-
YTD Funds	-	-	-	-	-
CyO + YTD Funds	-	-	-	-	-
Uncosted Funds	-	-	-	-	-
CFY Uncostd Funds	-	-	-	-	-
Total Uncostd Funds	-	-	-	-	-
- Expired Funds	-	-	-	-	-
= Remaining Available Funds	-	-	-	-	-



# Customer Specific Information

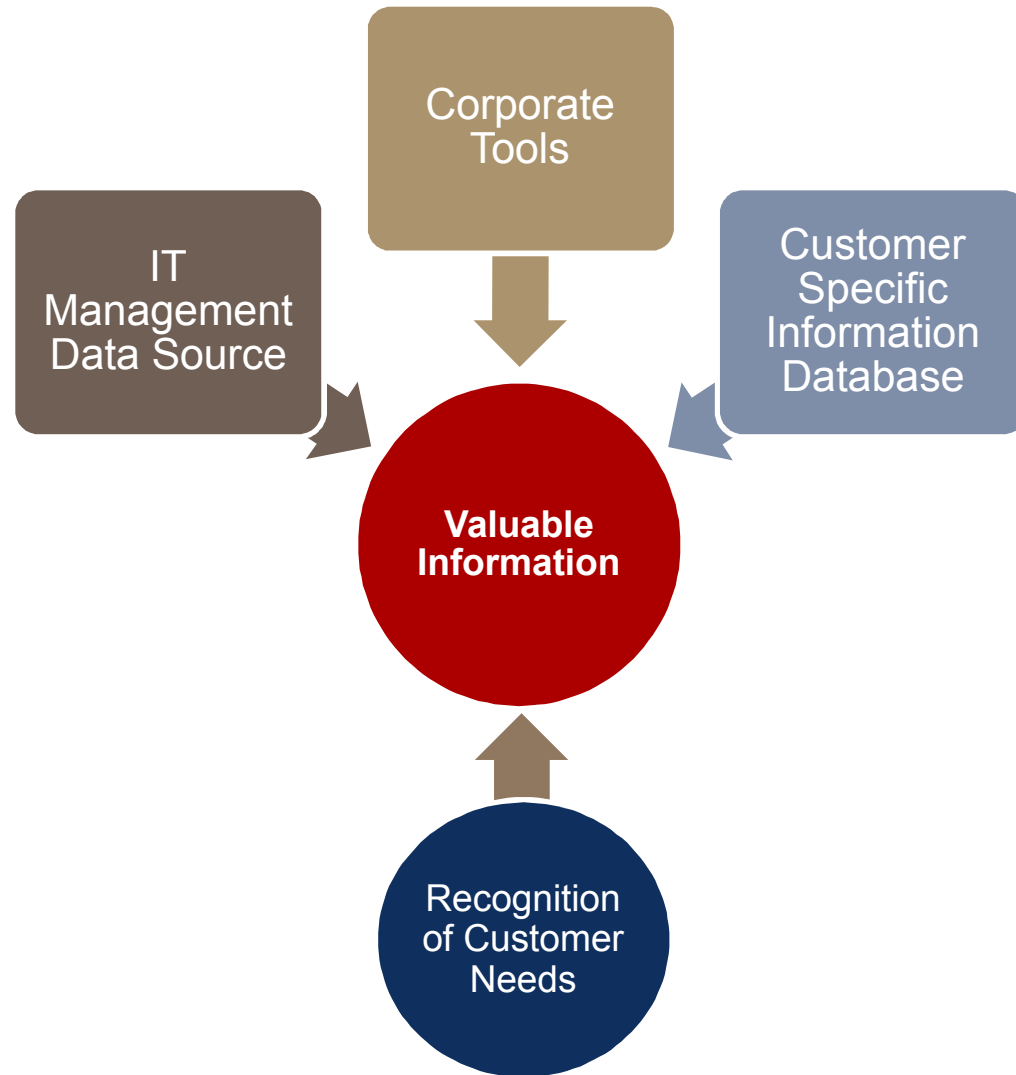
- Sources
  - Sharepoint Forms
  - Non-financial (ITSM) databases
  - Native spreadsheets

Requestor	<input type="text"/>
Item to be Purchased	<input type="text"/>
Product Hyperlink	<input type="button" value="Click here to insert a hyperlink"/> If possible please include a link to the product.
Cost in Dollars	<input type="text"/>
Reason for Purchase	<input type="text"/>
Deferrable:	Yes <input type="button" value="v"/> Can this item be purchased at the end of fiscal year?
Month of Purchase	<input type="text"/> The month the item is to be purchased in.
Approving Manager	<input type="text"/>
Project and Task	<input type="text"/>
Delivered To	<input type="text"/>
Delivery Location	<input type="text"/>
Property Owner	<input type="text"/>
SDR	<input type="text"/>
Attachments	<input type="button" value="Click here to attach a file"/>
<input type="button" value="Submit"/>	

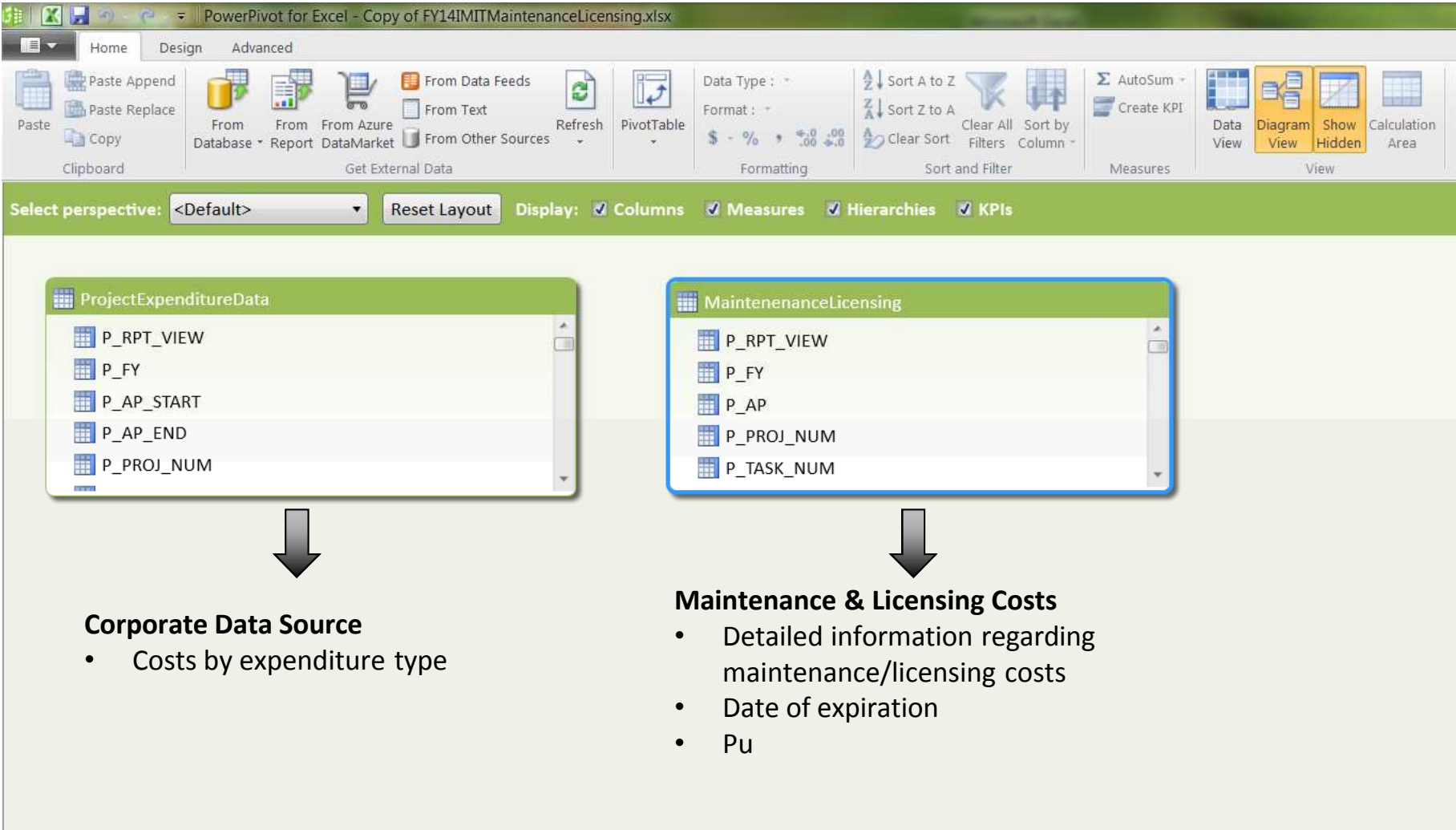
**Determine what's available... if what you're looking for is not there, make it on your own!**

# The Art of Transformation:

Turning Financial Data into Valuable Information



# Microsoft PowerPivot



The screenshot shows the Microsoft PowerPivot for Excel interface. The ribbon includes tabs for Home, Design, and Advanced. The Home tab contains groups for Clipboard (Paste, Paste Append, Paste Replace, Copy), Get External Data (From Database, From Report, From Azure DataMarket, From Text, From Other Sources, Refresh), PivotTable, Formatting (Data Type, Format, currency symbols), Sort and Filter (Sort A to Z, Sort Z to A, Clear Sort, Clear All Filters, Sort by Column), Measures (AutoSum, Create KPI), and View (Data View, Diagram View, Show Hidden, Calculation Area). Below the ribbon, the 'Select perspective' dropdown is set to '<Default>', and the 'Display' section has checkboxes for Columns, Measures, Hierarchies, and KPIs, all of which are checked. Two data source lists are shown: 'ProjectExpenditureData' and 'MaintenanceLicensing'. The 'ProjectExpenditureData' list includes P\_RPT\_VIEW, P\_FY, P\_AP\_START, P\_AP\_END, and P\_PROJ\_NUM. The 'MaintenanceLicensing' list includes P\_RPT\_VIEW, P\_FY, P\_AP, P\_PROJ\_NUM, and P\_TASK\_NUM. Arrows point from each list to its respective description below.

**ProjectExpenditureData**

- P\_RPT\_VIEW
- P\_FY
- P\_AP\_START
- P\_AP\_END
- P\_PROJ\_NUM

**Corporate Data Source**

- Costs by expenditure type

**MaintenanceLicensing**

- P\_RPT\_VIEW
- P\_FY
- P\_AP
- P\_PROJ\_NUM
- P\_TASK\_NUM

**Maintenance & Licensing Costs**

- Detailed information regarding maintenance/licensing costs
- Date of expiration
- Pu

# Forecasting Principles

## ■ Labor

- Straight-line calculation based on spending throughout the year
  - Is only accurate if labor spend rates are steady
- Historical calculation based on previous year trends

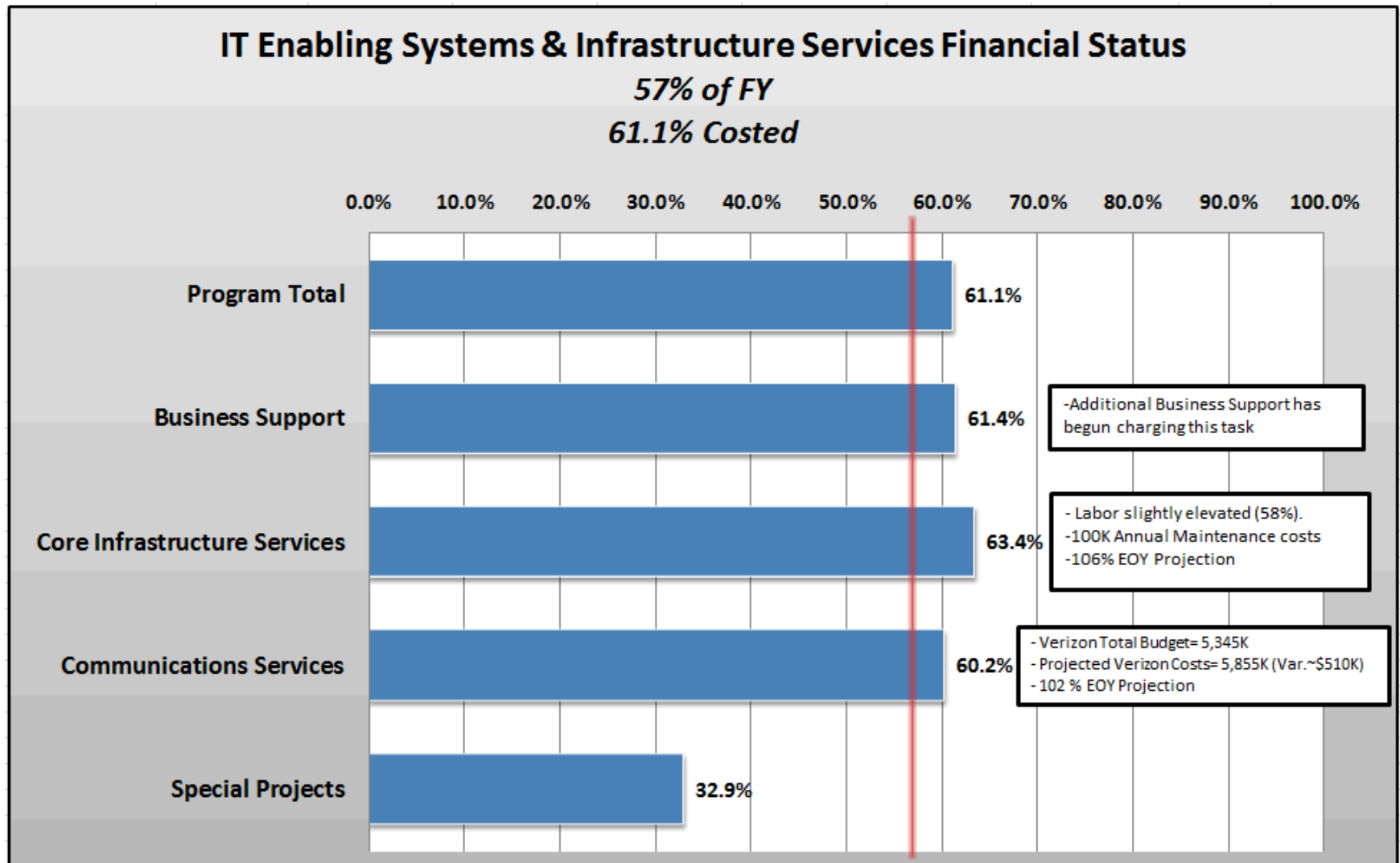
## ■ Purchases & Chargebacks

- Modified straight-line projection
  - Subtract large one-time purchase costs from total purchase costs before performing straight-line calculation
    - Calculates average purchase cost per week with increased accuracy
  - Multiply weekly average by number of weeks remaining in the fiscal year
  - Add large one-time purchase costs that will occur in the future

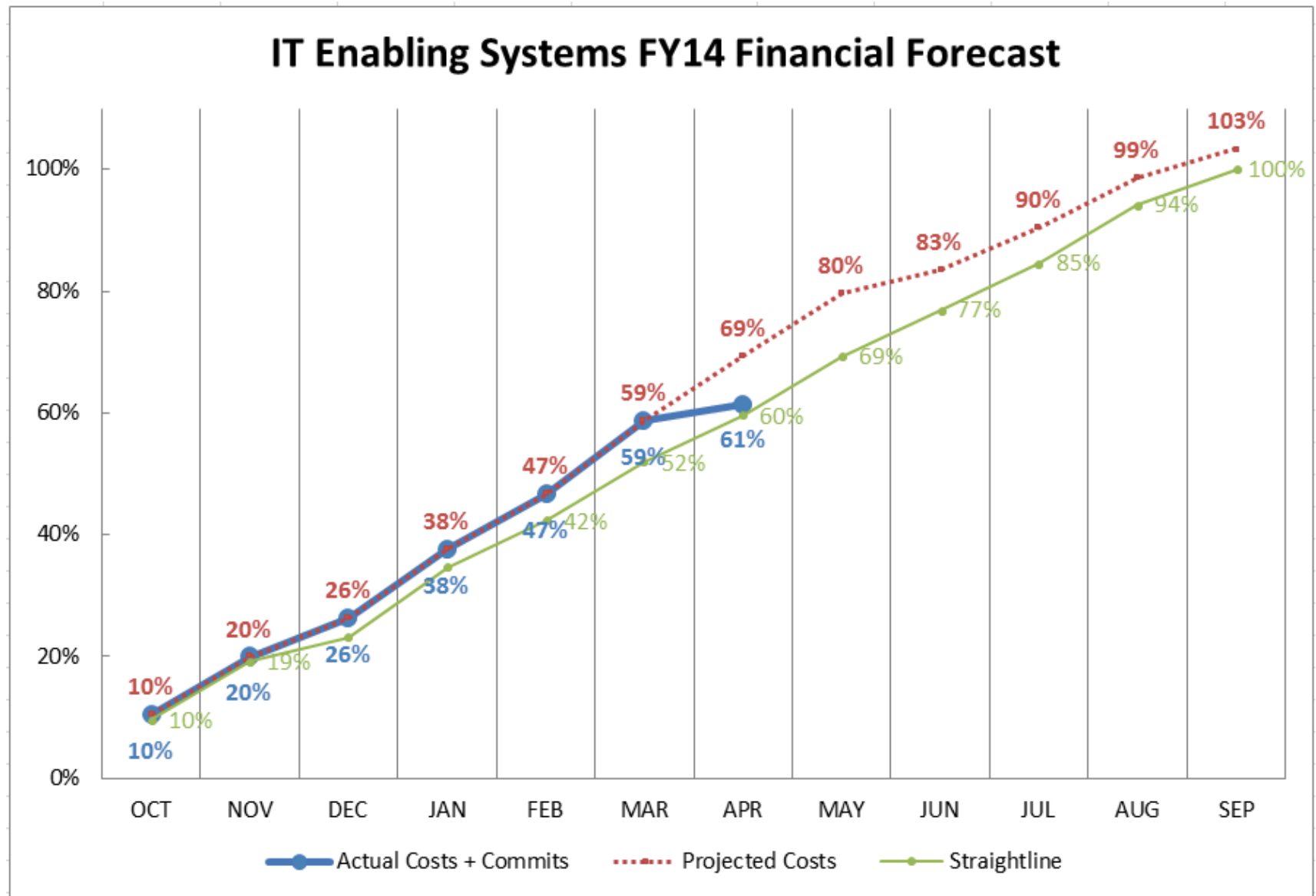
## ■ Travel

- Straight-line
- Based on best known information

## Current state of funding example



## Future State of Funding example



# Risk

# Mitigation

**More data  
manipulation  
means more  
room for  
error**



**Ensure proper  
training of  
employees and  
grant access to  
manipulation  
capabilities only  
when skills have  
been obtained**

**Automated  
tools have the  
ability to  
replace us**



**Ensure financial  
analysis is being  
provided, not  
financial data. Add  
your own insight  
into analysis that  
cannot be  
replicated by a  
computer**

**QUESTIONS???**