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Why are my Costs Changing? Analyzing Cost Drivers

Your Guides:

Kylie Knowles & Penjor Ngudup

Your Guides

Kylie Knowles :

- Principal TBM Consultant
- 5+ years of TBM/Apptio Experience
- Books, Dogs and Travel

Penjor Ngudup:

- Principle Strategic Advisor
- 10 years of TBM/Apptio Experience
- Soccer, Skiing, Photography and Camping

Agenda

- Introduction
- Scenarios
- TBM Framework
- Design Philosophy
- Tools & Troubleshooting

Introductions

- Take 5 Minutes
- Turn to a Person Near You
- Introduce Yourself
- Business Cards



Scenarios

- An Application Owner reaches out to understand why the costs of their Application grew by 30% from March to April.
- An End User is looking to understand what are the drivers behind the number they are looking at within IT Resource Towers.
- A Project Owner wants to know how much of their costs are for growth and how much of that cost can be saved.

Quick Poll

- What types of questions do you usually get about your reports?
- Have you had questions that ask about what makes up a cost or challenge you about a certain cost?

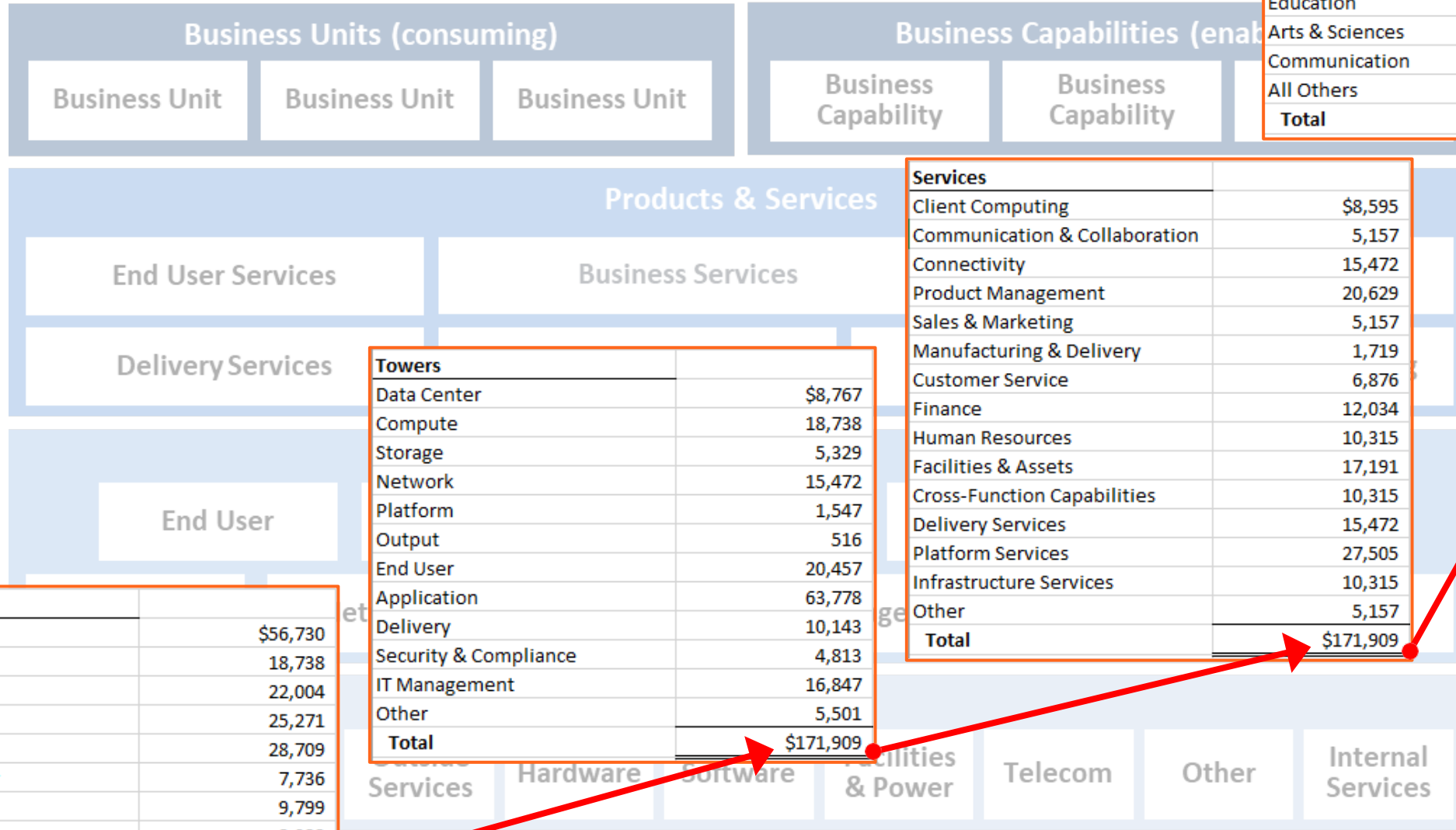


Do your customers understand TBM Framework?

- ATUM and TBM Layers
- Total Cost
- Conceptual Model
- Model Maturity Assessment

A Dollar In, A Dollar Up (Ideally)

Business Units	
Medicine	\$37,820
Engineering	30,944
Business	24,067
Education	18,910
Arts & Sciences	12,034
Communication	10,315
All Others	37,820
Total	\$171,909

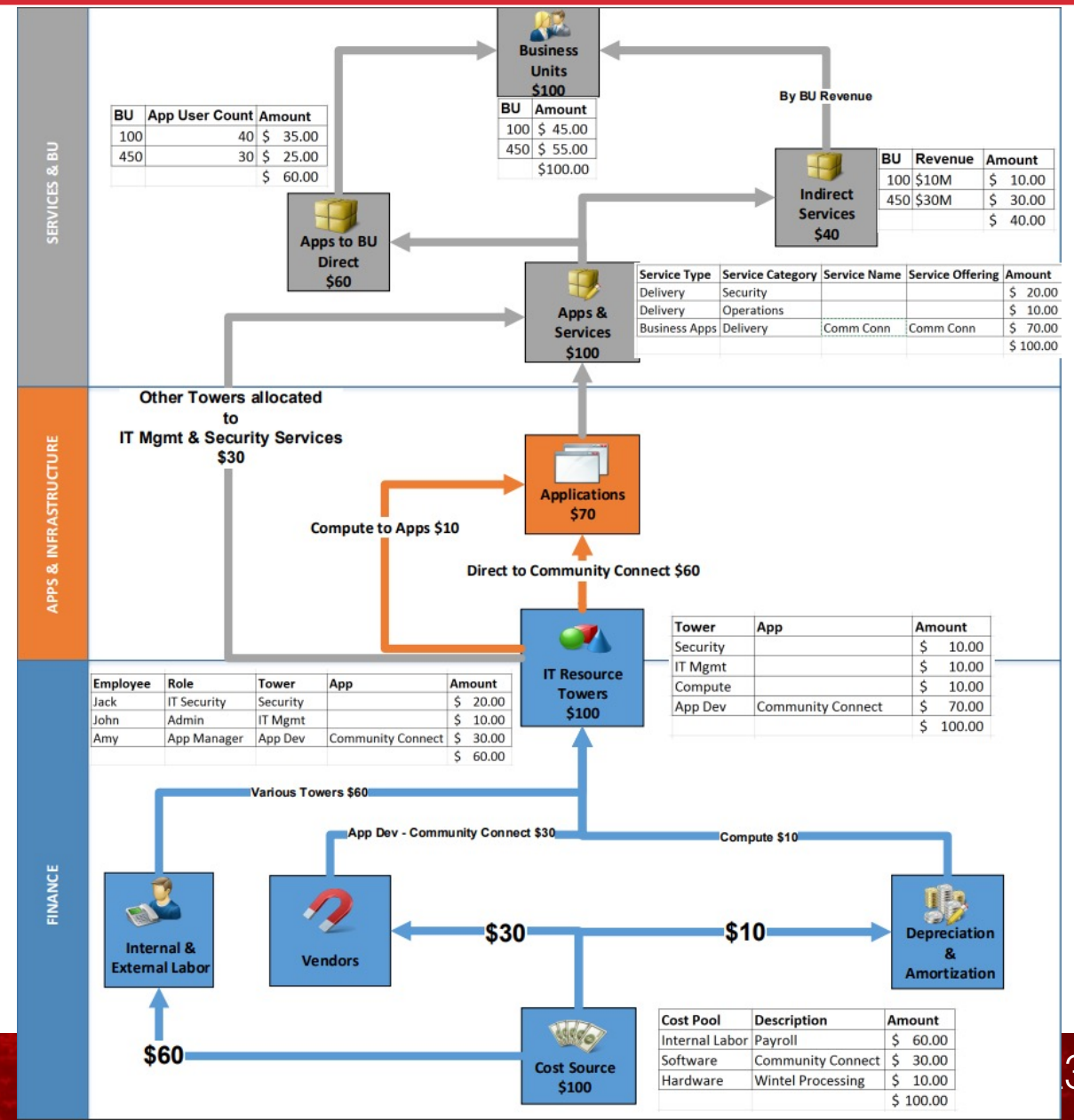
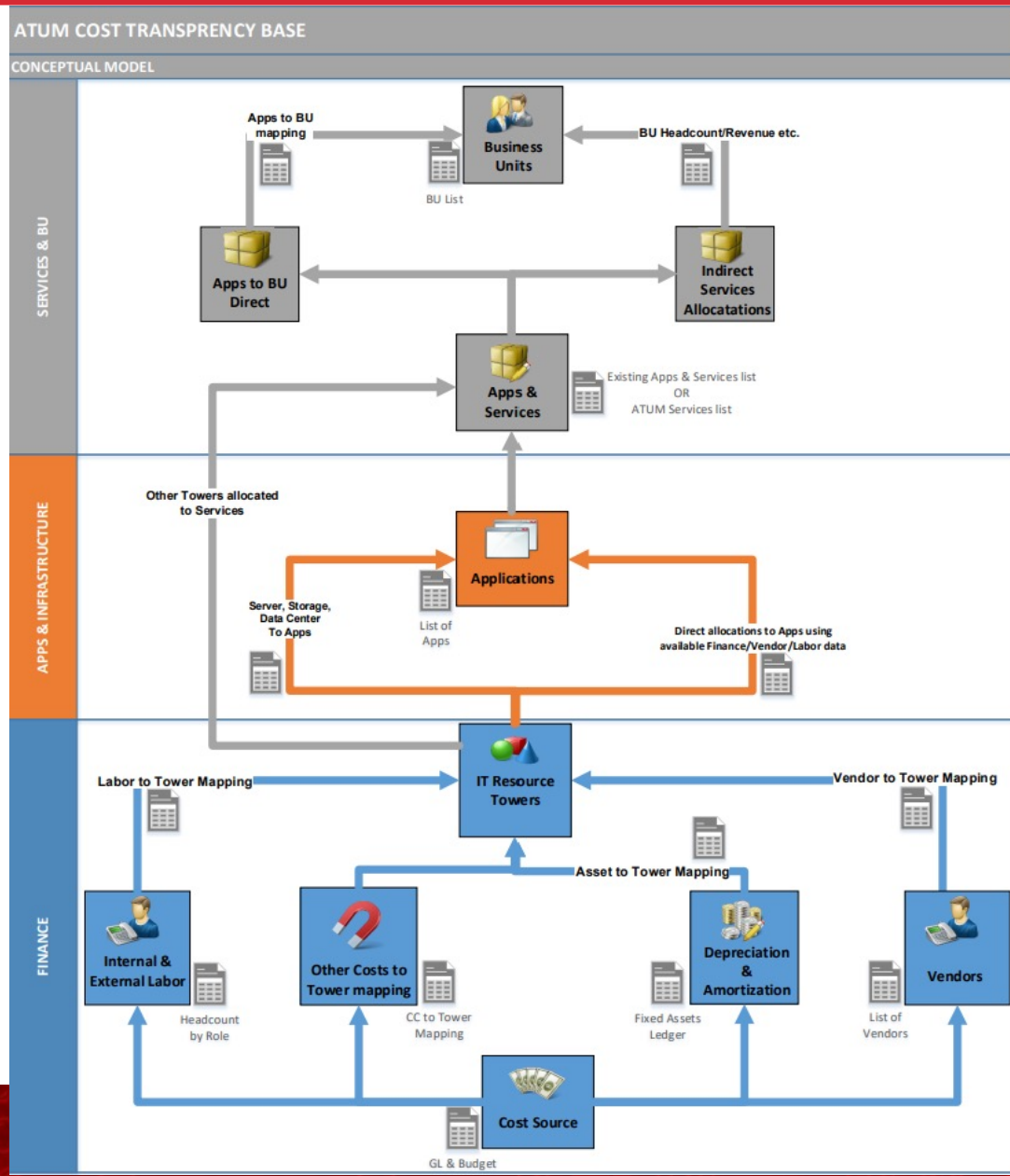


Cost Pools	
Internal Labor	\$56,730
External Labor	18,738
Outside Services	22,004
Hardware	25,271
Software	28,709
Facilities & Power	7,736
Telecom	9,799
Other	2,922
Total	\$171,909

Towers	
Data Center	\$8,767
Compute	18,738
Storage	5,329
Network	15,472
Platform	1,547
Output	516
End User	20,457
Application	63,778
Delivery	10,143
Security & Compliance	4,813
IT Management	16,847
Other	5,501
Total	\$171,909

Services	
Client Computing	\$8,595
Communication & Collaboration	5,157
Connectivity	15,472
Product Management	20,629
Sales & Marketing	5,157
Manufacturing & Delivery	1,719
Customer Service	6,876
Finance	12,034
Human Resources	10,315
Facilities & Assets	17,191
Cross-Function Capabilities	10,315
Delivery Services	15,472
Platform Services	27,505
Infrastructure Services	10,315
Other	5,157
Total	\$171,909

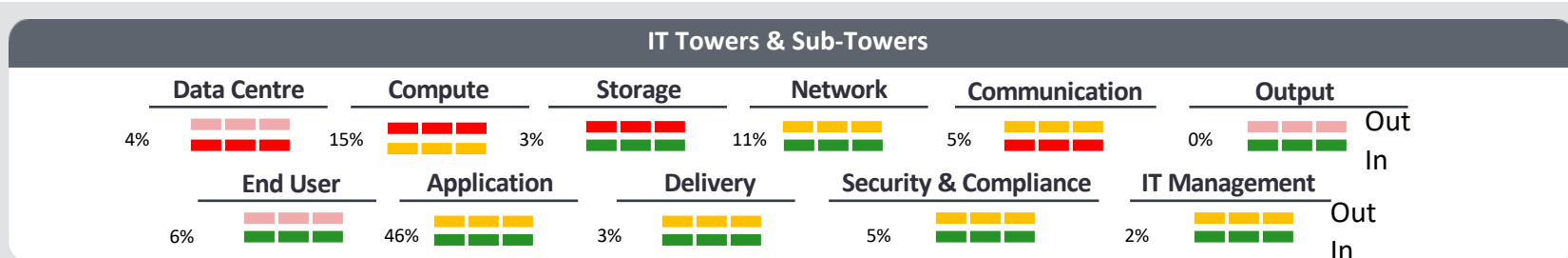
Conceptual Model Examples



Model Maturity Assessment Example

Status of the TBM Model – IT Towers

@ 06-July-23

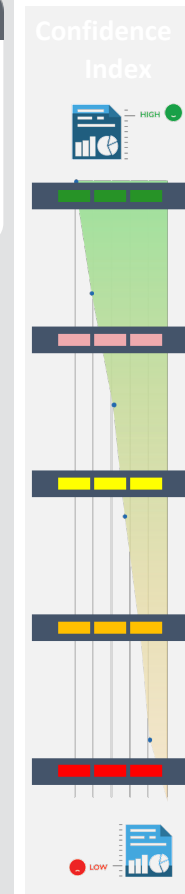


Data

- Data for IT Towers needs to be improved
 - Storage currently using an old dataset that does not align to applications
 - Compute refinement in place to align compute to applications and fill data gaps (CPU, etc.)

Allocations

- Allocation confidence level in the model is low for the following areas
 - Data Center – Costs are being allocated based on space, not a relative cost factor for high cost sites.
 - Storage – weighting factors are not sufficient and currently all DAS is being ignored, leading to lower storage cost for applications only supported by DAS/



Do you have a Design Philosophy?

- Build with the user experience in mind
- Models are built bottom up but consumed top down



Troubleshooting Approach

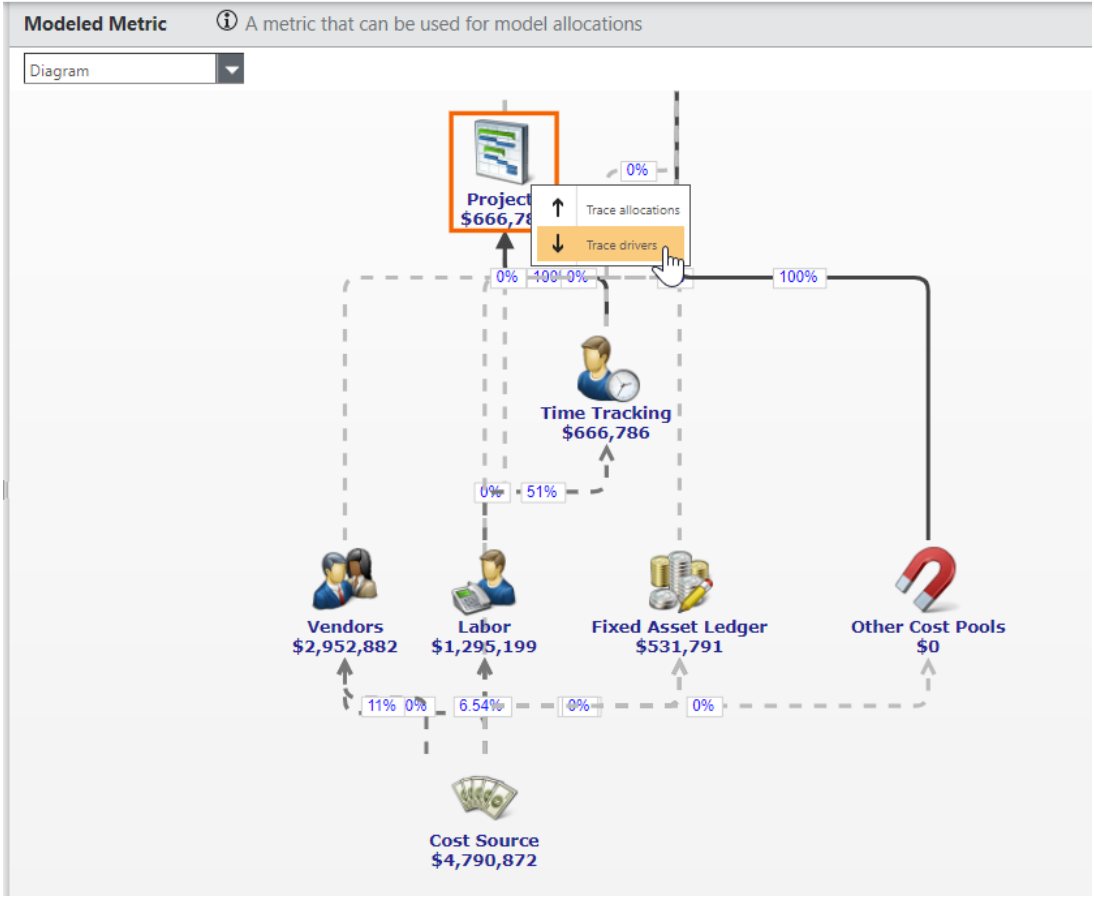
- Identify the where and expectation
 - Affected Reports
 - Time
- Leverage the reports to identify or communicate back when possible
 - Financial Analysis
 - Vendor Portfolio
 - IT Towers Composition
 - Application Overview
- Identify the object(s) involved
- Confirm within TBM Studio
 - Changes within the data
 - Related allocations
 - Tracing within Model Metric

Quick Poll

- How do you answer questions from end users about discrepancies in the reports?



Model Trace



Modeled Metric ⓘ A metric that can be used for model allocations

Diagram Tracing Projects drivers (clear)

Labor Master Data.Labor Name	Cost
Charles Cruz	\$7,639
Frankie Ertel	\$4,598
Todd Malone	\$7,639
Beth Davidson	\$7,639
Phyllis Milks	\$6,804
Clayton Lamb	\$6,804
Joaquin Taite	\$7,639
Pearl Lingel	\$7,639
Tricia Carson	\$7,639
Levi Richards	\$6,804
Daisey Cavallaro	\$7,639
Gordon Arnold	\$6,804
Gwen Ross	\$6,804
Russel Hew	\$7,639
Lakeshia Celis	\$8,925
Josue Mittelsteadt	\$6,652
Kym Sundstrom	\$6,804
Total	\$666,786

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Labor Financial

Labor Master Data.Unique Identifier

Filters: No filters have been specified.

The diagram shows the tracing of costs from a **Cost Source** (\$666,786) through **Labor** (\$666,786) to **Time Tracking** (\$666,786), which is then allocated to **Projects** (\$666,786). Other categories like Vendors, Fixed Asset Ledger, and Other Cost Pools are shown but have no flow.

Model Trace Recap

- Tool for users with access to TBM Studio
- Can identify objects a cost driver is from
- Available only in Development

Allocation Trace

Model ⓘ Allocate costs and other values.

Select a metric: Cost > Applications

ALLOCATION FROM: SERVERS ⓘ **Servers**

- From** Servers where App Consumer Is Not Null Complete
- Allocate** All except AWS Charges, Agile Activity, ... Complete
- Using** Weighted Value Complete
- To** Applications Complete
- Distributing** Evenly (within Application ID = App Co... Complete

Weight By

When a value is split across multiple rows in the destination table, a weight determines the proportion of the value that will be placed on each row.

Data Relationship

Use a data relationship to keep related values together, similar to how you may use a SUMIF function in Excel™.

Source Column	Destination Column
SERVERS MASTER DATA App Consumer	APPLICATIONS MASTER DATA Application ID

Add relationship

Notes

Source	Destination	Servers Master Data							Cost	Allocated
App Consumer	Application	Environment	Location	OS	Object Identifier	+	Cost	Allocated		
100%	App - 5278	Acme.com	Production	us-west-2a		Amazon Web Se...	\$28,621	\$28,621		
100%	App - 754	Oracle CRM	Production	us-west-2a		Amazon Web Se...	\$24,080	\$24,080		
100%	App - 5278	Acme.com	Production	us-west-2c		Amazon Web Se...	\$22,028	\$22,028		
100%	App - 754	Oracle CRM	Production	us-west-2c		Amazon Web Se...	\$18,987	\$18,987		
100%	App - 5278	Acme.com	Development	us-west-2a		Amazon Web Se...	\$16,448	\$16,448		
100%	App - 1508	Aspect eWorkfor...	Production	us-west-2a		Amazon Web Se...	\$14,246	\$14,246		
100%	App - 754	Oracle CRM	Development	us-west-2a		Amazon Web Se...	\$13,670	\$13,670		
100%	App - 5278	Acme.com	Development	us-west-2c		Amazon Web Se...	\$13,332	\$13,332		
100%	App - 754	Oracle CRM	Test	San Francisco, CA	Unix	QUXDHRPS302 -...	\$13,103	\$13,103		
100%	App - 8671	SAP Order Mana...	Production	San Francisco, CA	Unix	PWADAALB003 -...	\$13,103	\$13,103		
100%	App - 5278	Acme.com	Production	us-west-2a		Amazon Web Se...	\$12,898	\$12,898		
100%	App - 1508	Aspect eWorkfor...	Production	us-west-2c		Amazon Web Se...	\$12,455	\$12,455		
100%	App - 14326	Applicant Tracking	Production	us-west-2a		Amazon Web Se...	\$12,369	\$12,369		
100%	App - 754	Oracle CRM	Development	us-west-2c		Amazon Web Se...	\$12,223	\$12,223		
100%	App - 754	Oracle CRM	Production	us-west-2a		Amazon Web Se...	\$12,060	\$12,060		
100%	App - 14326	Applicant Tracking	Production	us-west-2c		Amazon Web Se...	\$11,031	\$11,031		
100%	App - 5278	Acme.com	Test	us-west-2a		Amazon Web Se...	\$10,941	\$10,941		
100%	App - 5278	Acme.com	Development	us-west-2a		Amazon Web Se...	\$9,347	\$9,347		
100%	App - 1508	Aspect eWorkfor...	Development	us-west-2a		Amazon Web Se...	\$9,004	\$9,004		
100%	App - 5278	Acme.com	Test	us-west-2c		Amazon Web Se...	\$8,912	\$8,912		
Total								\$1,497,075	\$1,464,511	

Allocation Trace

ame LPARs

Complete	Source	Destination		Cost	Allocated	%
ges, Agile Activity, ...	Complete	Mainframe LPARs Master Data				
	Complete	Object Identifier				
pplication Type = '...	Complete	FA0015-1		\$29,204	\$29,204	100%
	Complete	FA0015-3		\$19,812	\$19,812	100%
	Complete	FA0015-2		\$18,090	\$18,090	100%

Destination rows for FA0015-1

Applications Master Data		
Object Identifier	Actual Units	Cost
App - 37323 - TS-05	331308	\$25,369
App - 5278 - BAS-14	24677	\$1,890
App - 1131 - BAS-12	20382	\$1,561
App - 4901 - BAS-23	3445	\$264
App - 24128 - BAS-07	1431	\$110
App - 21866 - BAS-19	108	\$8
App - 13195 - BAS-22	46	\$4
Total	381397	\$29,204

Allocation & Drivers View

Home Project Build

This document is read only - check it out to m

Model Allocate costs and other val

Select a metric: Cost

OBJECT: IT Resource

Object: IT Resource Towers

Rows

Tier for System Generated Overviews:

System generated model overviews will automatic categorize this object into the following tier. This affect the default metric overview, and traces from model overview reports.

IT Resources New

Use object identifier

It is possible to explicitly specify the columns that uniquely identify rows for modeling purposes.

Object Identifier

Add row filter

Show/Hide Columns

Tables Filter:

IT Resource Towers Master Data

Filter:

Select: All / None Revert All

- Annual Unit Cost Target
- Asset_Resource Key
- Asset_Resource Key Metafield
- Benchmark Annual Unit Cost Target
- Benchmark Avg Unit Cost
- Benchmark Enabled
- Benchmark FTE Efficiency
- Benchmark FTE Efficiency UoM Lookup
- Benchmark IT Resource Tower Quantity
- Benchmark Lookup
- Benchmark Mapped Sub-Tower
- Benchmark Mapped Tower
- Benchmark Sub-Tower Lookup
- Benchmark Tower Lookup
- Benchmark Towers
- Benchmark UoM
- Benchmark UoM Lookup
- Benchmark UoM Mapping

Metric Fields

Filter:

Select: All / None Revert All

- Cost
- Allocated
- %
- #

Drivers

Allocations

Show/Hide Columns

Tables Filter:

IT Resource Towers Master Data

Filter:

Select: All / None Revert All

- Annual Unit Cost Target
- Asset_Resource Key
- Asset_Resource Key Metafield
- Benchmark Annual Unit Cost Target
- Benchmark Avg Unit Cost
- Benchmark Enabled
- Benchmark FTE Efficiency
- Benchmark FTE Efficiency UoM Lookup
- Benchmark IT Resource Tower Quantity
- Benchmark Lookup
- Benchmark Mapped Sub-Tower
- Benchmark Mapped Tower
- Benchmark Sub-Tower Lookup
- Benchmark Tower Lookup
- Benchmark Towers
- Benchmark UoM
- Benchmark UoM Lookup
- Benchmark UoM Mapping

Metric Fields

Filter:

Select: All / None Revert All

- Labor People Tower Mapping
- Cloud Service Provider
- Other Cost Pools.Other Cost Pools_1
- Other Cost Pools.Other Cost Pools
- Fixed Asset Ledger
- Vendors
- Time Tracking.Time Tracking to IT Resource Tower
- Time Tracking.Time Tracking

Allocations

Show/Hide Columns

Tables Filter:

IT Resource Towers Master Data

Filter:

Select: All / None Revert All

- Annual Unit Cost Target
- Asset_Resource Key
- Asset_Resource Key Metafield
- Benchmark Annual Unit Cost Target
- Benchmark Avg Unit Cost
- Benchmark Enabled
- Benchmark FTE Efficiency
- Benchmark FTE Efficiency UoM Lookup
- Benchmark IT Resource Tower Quantity
- Benchmark Lookup
- Benchmark Mapped Sub-Tower
- Benchmark Mapped Tower
- Benchmark Sub-Tower Lookup
- Benchmark Tower Lookup
- Benchmark Towers
- Benchmark UoM
- Benchmark UoM Lookup
- Benchmark UoM Mapping

Metric Fields

Filter:

Select: All / None Revert All

- Applications.Indirect Application Dev & Supp...
- End User Devices
- Storage Devices
- Physical Server.Servers
- Mainframe Storage
- Mainframes
- Communications.Usage
- Data Centers.Enterprise Data Centers
- Physical Server.Unix
- Network Devices
- Servers
- Tickets
- Storage.IT Resource Towers_1
- Storage.IT Resource Towers_2
- Applications.IT Resource Towers
- Business Services

OK

OK

Cancel

Benchmark UoM Mapping

OK

Cancel

Allocation & Drivers View 2

Model ⓘ Allocate costs and other values.

Select a metric: Cost > IT Resource Towers

OBJECT: IT Resource Towers

Object: IT Resource Towers

Table

IT Resource Towers Master Data

Object Identifier	Labor People Tower Mapping	Vendors	Fixed Asset Ledger	Time Tracking to IT Resource Tower	Other Cost Pools_1	Indirect Application Dev & Support Allocation	Servers	Storage Devices	End User Devices	Cost	Allocated	%
Compute - Unix	\$44,696	\$0	\$37,375	\$0	\$0	\$0	\$0	\$0	\$0	\$82,071	\$82,071	100%
Network - Voice	\$29,167	\$35,837	\$0	\$11,343	\$0	\$0	\$0	\$0	\$0	\$76,347	\$76,347	100%
Compute - Servers	\$64,029	\$61,792	\$179,483	\$17,013	\$0	\$0	\$322,317	\$0	\$0	\$322,317	\$322,317	100%
Network - LAN/WAN	\$27,000	\$58,760	\$0	\$13,500	\$0	\$0	\$0	\$0	\$0	\$99,260	\$99,260	100%
Compute - Midrange	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Compute - Mainframe	\$0	\$0	\$206,088	\$0	\$0	\$0	\$0	\$0	\$0	\$206,088	\$206,088	100%
Network - Transport	\$16,633	\$386,625	\$0	\$12,097	\$0	\$0	\$0	\$0	\$0	\$415,354	\$415,354	100%
End User - Workspace	\$48,554	\$240,928	\$0	\$0	\$0	\$0	\$0	\$0	\$289,483	\$289,483	\$289,483	100%
Application - Database	\$0	\$44,042	\$29,692	\$15,797	\$0	\$89,532	\$0	\$0	\$0	\$89,532	\$89,532	100%
Output - Central Print	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
End User - IT Help Desk	\$30,946	\$31,147	\$0	\$32,646	\$0	\$0	\$0	\$0	\$0	\$94,738	\$94,738	100%
Application - Middleware	\$8,506	\$0	\$29,165	\$0	\$0	\$37,671	\$0	\$0	\$0	\$37,671	\$37,671	100%
Storage - Online Storage	\$8,119	\$0	\$23,754	\$10,937	\$0	\$0	\$0	\$0	\$0	\$42,810	\$42,810	100%
End User - Mobile Devices	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Network - LAN/WAN - Zones						\$0	\$0	\$0	\$0	\$36	\$36	100%
Storage - Offline Storage	\$7,200	\$37,333	\$15,836	\$10,937	\$0	\$0	\$0	\$71,306	\$0	\$71,306	\$71,306	100%
IT Management - IT Finance	\$32,898	\$0	\$0	\$9,870	\$0	\$0	\$0	\$0	\$0	\$42,768	\$0	0%
End User - Deskside Support	\$89,275	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$89,275	\$89,275	\$89,275	100%
End User - Network Printers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Network - Voice - PROJ-0005					\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Network - Voice - PROJ-0048					\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Delivery - Client Management	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Delivery - Operations Center	\$49,919	\$23,178	\$0	\$81,299	\$0	\$0	\$0	\$0	\$0	\$154,397	\$0	0%
End User - Conferencing & AV	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
End User - End User Software	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Total	\$807,956	\$1,468,202	\$521,392	\$1,024,914	\$0	\$1,186,439	\$322,317	\$71,306	\$378,758	\$3,843,043	\$3,281,388	85%

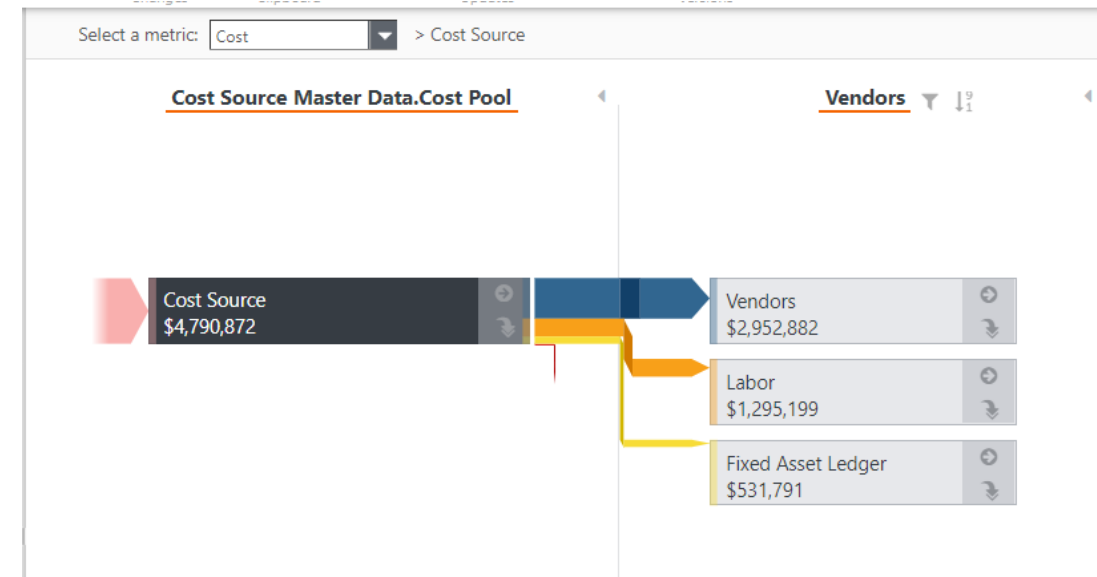
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Allocation Trace Recap

- Are there rules set for the From and To allocation origination and destinations
- What is the weighting factor
- What is the data relationship
- When you click on an allocation, is it allocating to the expected destination

Model Report

- Create reports leverage the objects in TBM Studio and surfacing to the reporting layer
- Use to identify fallout
- Can filter on individual dimensions within the objects similar to model tracing
- WARNING!! Use sparingly. Calc intensive, can slow down STG calc.



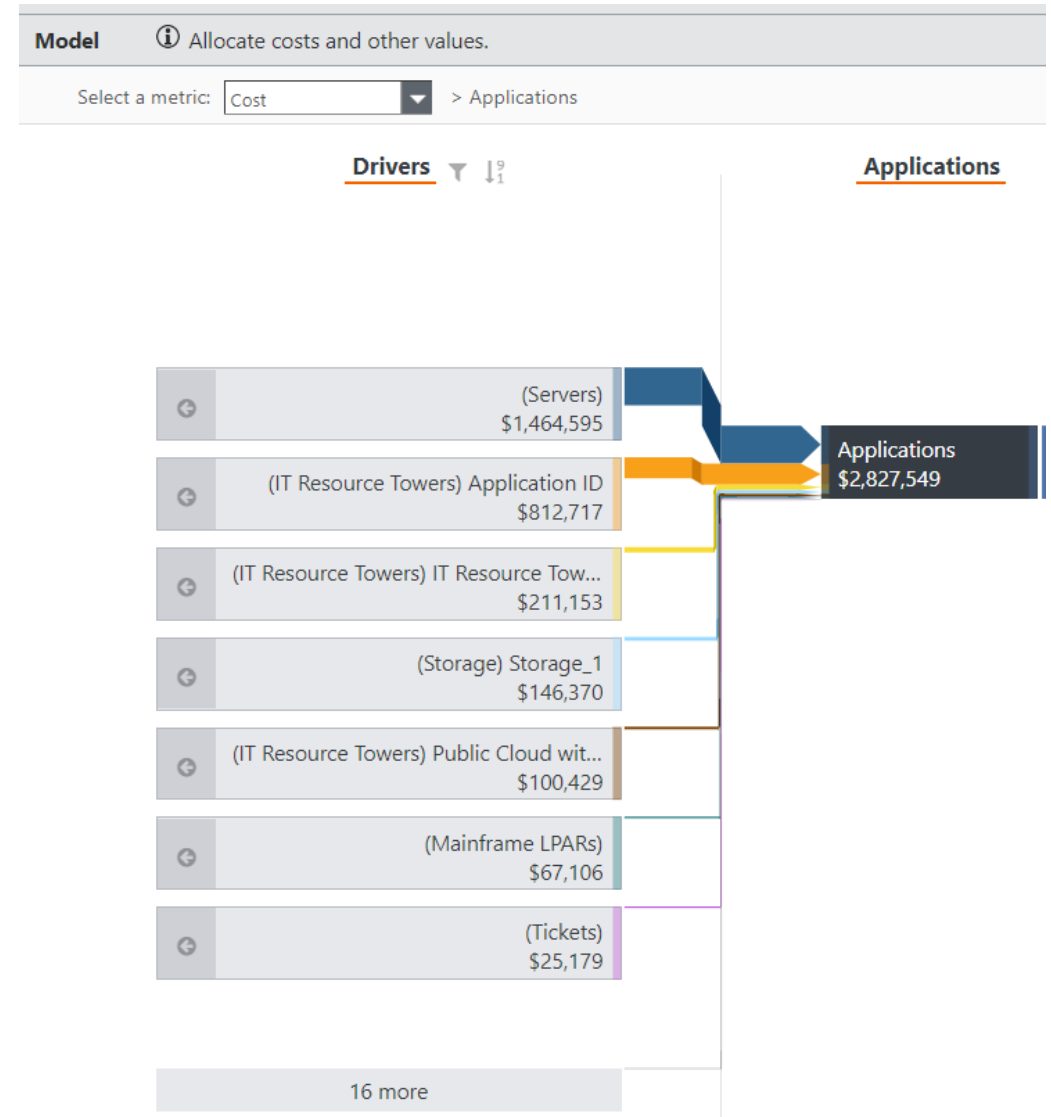
Quick Poll

- What has your experience been if any with driver reports?



Model Driver Report

- Look at your costs as addressable and non-addressable
- Group the drivers together
- Allow end users to easily see how much of their costs are within their control



Model Driver Report

Edit Column
✕

Name:

Enter
Formula:

Text Value
Value:

Numeric Value
Value:

Modeled Value
Value:

Time Tracking (Cost) ▼

- Cost Source (Cost Source- Variable)
- Cost Source (Cost)
- Cost Source (Fixed)
- Cost Source (Testing Modeled Metric)
- Cost Source (Variable)
- Time Tracking (App Dev_CapEx)
- Time Tracking (App Dev_Cost)
- Time Tracking (CapEx)
- Time Tracking (Cost)
- Time Tracking (Fixed)
- Time Tracking (Testing Modeled Metric)
- Time Tracking (Time Tracking- App Dev_CapEx)
- Time Tracking (Time Tracking- App Dev_Cost)

Format:

Type:

Summable:

Project Name	Labor	Vendor Support	Total ▼
Oracle Shop Floor Ph 2	\$119,296	\$35,228	\$154,524
SAP Fin/HR Upgrade	\$52,270	\$88,070	\$140,340
Build to Order Project	\$108,811	\$17,614	\$126,425
Sales Pipeline Analytics	\$76,761	\$17,614	\$94,375
Inventory Turn Reduction Initiative	\$0	\$52,842	\$52,842
Eloqua Marketing Automation	\$34,240	\$17,614	\$51,854
Workday HR Replacement	\$31,630	\$17,614	\$49,244
Troux Implementation	\$27,282	\$17,614	\$44,896
IT Service Transformation	\$27,282	\$17,614	\$44,896
CMDb Upgrade	\$26,986	\$17,614	\$44,600
Server 2014 Upgrade	\$26,686	\$17,614	\$44,300
San Francisco Data Center Expansion	\$18,459	\$17,614	\$36,073
BI Analytics 2014	\$0	\$35,228	\$35,228
Security & Data Privacy Protection	\$15,485	\$17,614	\$33,099
Boston Data Center Expansion	\$15,120	\$17,614	\$32,734
Total	\$625,814	\$704,564	\$1,330,378

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Questions?



Surveys

Please take a few moments to fill out the class survey.
Your feedback is extremely important for future events.



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- Click on **Visit CCR's** button under the **Report PDU's**
- Click on **Report PDU's**
- Click on **Course or Training**
- Class Provider = **Rego Consulting**
- Class Name = **regoUniversity**
- Course **Description**
- Date Started = **Today's Date**
- Date Completed = **Today's Date**
- Hours Completed = **1 PDU per hour of class time**
- Training classes = **Technical**
- Click on **I agree** and **Submit**



Let us know how we can improve!
Don't forget to fill out the class survey.



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