

The Largest Independent Gathering  
of the Microsoft User Ecosystem



# #414: A Real-World Data Journey with PBI & AX/D365: A Client Story



Decrease Complexities,  
Deliver Results.

- Michael G. Simms – VP Strategy and Change
- Columbus US – Strategy and Change

*#ItsAllAboutTheData #TheDataIsTheData*

# Columbus at a glance



**8,600**

Business applications implementations



**29 years**  
of business



**45**

countries with clients running our business applications & services



**1,700,000**

hours of consultancy every year

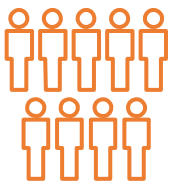


**50+**  
award winning solutions



**4,200**

Customers world-wide



**1,750+** employees  
across the world



**5X**  
Microsoft Global  
Partner of the Year



**24/7**  
global support

Decrease Complexities,  
Deliver Results.

@ 2022 Dynamic Communities

 **COMMUNITY  
SUMMIT**

For Users, By Users

# 9 Doors to Digital Leadership

A gateway to innovation with digital solutions and services



Business  
Innovation



Enterprise  
Resource  
Planning



Team &  
Business  
Productivity



Analytics &  
Business  
Insight



Business &  
Application  
Integration



Customer  
Experience



Compliance &  
Business  
Continuity



Application  
Management



Cloud &  
Infrastructure  
Management

# | Agenda

- Introduction
- Background
- Problem Statement
- Vision
- Architecture
- Power BI
- D365 Integration

The Largest Independent Gathering of  
the Microsoft User Ecosystem



Decrease Complexities,  
Deliver Results.

# Introduction & Background



For Users, By Users

@ 2022 Dynamic Communities

- Michael Simms
  - VP - Strategy and Change at Columbus Global
  - [MGS@columbusglobal.com](mailto:MGS@columbusglobal.com)
  - Linked  
In: [www.linkedin.com/in/michaelgsimms](http://www.linkedin.com/in/michaelgsimms)
  
- Carol Wills – In Memory of
  - Controller for CymSTAR, LLC
  - MTax, CPA, CMA.
  - At CymSTAR over 13 years.
  - Quickbooks, Deltek, AX now D365

# Introduction

The Largest Independent Gathering  
of the Microsoft User Ecosystem

- CymSTAR Companies
  - Repairs, Modifies, Upgrades and Builds Flight & Other Simulators for the US Military.
  - In 2006 we were \$1m Revenue, 15 people using QuickBooks
  - Now two companies with combined Annual Revenue of about \$75m and about 250 people.
  - Long time customer

# Introduction

The Largest Independent Gathering  
of the Microsoft User Ecosystem

- CymSTAR had a failed AX2012 Implementation in 2013-2014. Michael & team at CSG came into rescue.
- Many customizations to AX that were buggy. Some areas never worked properly.
- Over time we moved Payroll to ADP, Expense Reports to Concur, and Timesheets to Journyx.
- Quarterly reporting involved large, complicated, spreadsheets and hours of duplicate manual entry.
- As company grows this is not sustainable without hiring an army of accountants. Yet we must be good stewards of taxpayer dollars. (The proverbial \$500 hammer.)

# Background

The Largest Independent Gathering  
of the Microsoft User Ecosystem

# Architecture - Past

## Systemic Issues

- Bad underlying data
  - Lack of system understanding = bad processes
  - Bad configurations
- Customization Issues
  - Business logic wrong
  - Hard coding data
- Limited Reporting
  - Data dump to Excel
  - Pivot Tables & Lookups

Decrease Complexities,  
Deliver Results.

@ 2022 Dynamic Communities



For Users, By Users

# Data Chaos

## Data Chaos can lead to

- Intangible and tangible costs (which can be difficult to quantify)
- Lack of trust in reporting
- Inefficient usage of resources
- Manual corrections
- Information delivery can become time consuming and tedious with error potential
- Bottom line: Data Chaos creates RISK in the organization

Decrease Complexities,  
Deliver Results.

@ 2022 Dynamic Communities

Decrease Complexities,  
Deliver Results.

# Problem



For Users, By Users

@ 2022 Dynamic Communities

- Quarterly reporting involved large, complicated, spreadsheets and hours of duplicate manual entry.
  - Each active project & high probability bid has a forecast done in a spreadsheet by Program Management staff.
  - Each low probability bid requires Accounting to apply “templates” to high level data to create a forecast.
  - Accounting transfers to a massive Excel breaking set of spreadsheets for financial forecasting. It takes 2 ½ weeks, 3 people to create financial statement forecasts every quarter. (300 man-hours ~\$70k/year)
  - Engineering Management transfers again to another set of Excel spreadsheets for planning staffing needs. Weekly Manual Updates.
  - No Time to Analyze & Recommend Improvements

# Problem

The Largest Independent Gathering  
of the Microsoft User Ecosystem



- What-if Analysis takes 2 – 3 days for any change.
- Manual entries are opportunity for errors.
- Data is actionable, but not timely.
  - 6 weeks after the end of the quarter.
  - Never implemented Budgets Module – Budget to Actual reporting is quarterly only.
- Users lacked confidence in AX data because of historical issues.
- New AX reports are SSRS
  - Michael is not cheap!
  - Reports should not be code-changes.
- Multiple disparate databases each with its own data & reporting.

# Problem

The Largest Independent Gathering  
of the Microsoft User Ecosystem

# Data Chaos

## Projects Cube v1

- Fixed setups
- Fixed Processes
- Better business logic
- Built Projects Cube
- Built SSRS Reports
  - Reliable, accessible reports
- System Understanding improves over time

Decrease Complexities,  
Deliver Results.

@ 2022 Dynamic Communities



For Users, By Users

Decrease Complexities,  
Deliver Results.

# Vision



For Users, By Users

@ 2022 Dynamic Communities





- SES
- GC
- PMS Select
- Dept Mgrs
- Select/Perm Email

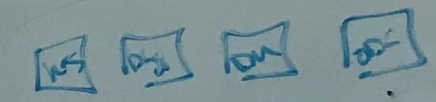
Snapshot  
Capabilities  
Comp to date.

PM Data  
Reporting

QPR - Space  
Work Proj

Bid  
Spans/Plan

Not Bid  
Profile  
Bid  
BID - Submitted



Live FNE  
Data XCube

MANloading

MODIFICATION

ATS - Prime  
ATS - sub

Projects Cube -  
ACTUALS for AX  
Bubb type in 1x  
ETC's updated Qtrly

Inair  
Budgets

FIS  
S/B/E/C/KS/CB/ET/WT  
Calculation SS

AX

- Bid
- QPR Reports
- FNE
- FIS Accs

Actuals  
Monthly FIS - GL  
Reports

QPR/SSO  
Presentation

\* QPR  
Data  
Actuals

# Carol's Hallucination Vision



Seamlessly integrate disparate data from ERP, Timesheets, Expense Reports



Eliminate triplicate data entry (PM, Accounting & Engineering Mgmt)



Eliminate as many spreadsheets as possible – Automate!



Real time actual data reporting



Rapid What If Analysis



Agility to react to changes



Minimize dependency on Michael & Co for reporting needs

Decrease Complexities,  
Deliver Results.

# Digital Transformation

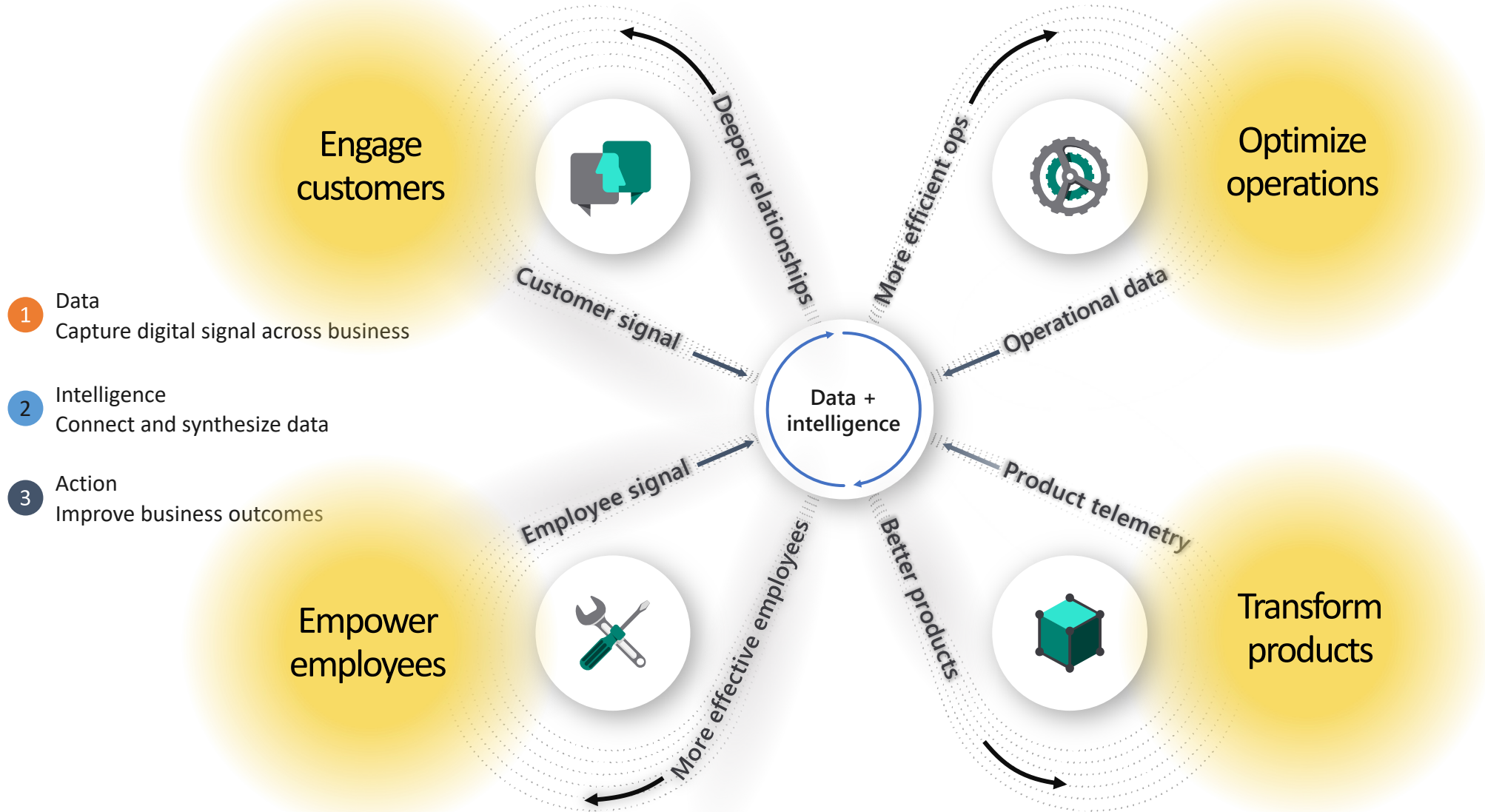


For Users, By Users

@ 2022 Dynamic Communities



# Digital Feedback Loop



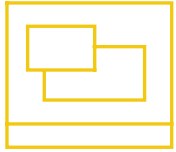
# Power Platform

One connected platform that empowers everyone to innovate



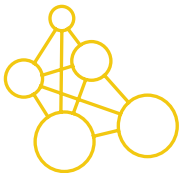
## Analyze

Make sense of your data through interactive, real-time dashboards and unlock the insights needed to drive your business forward



## Act

Build apps in hours—not months—that easily connect to data, use Excel-like expressions to add logic, and run on the web, iOS, and Android devices



## Automate

Include powerful workflow automation directly in your apps with a no-code approach that connects to hundreds of popular apps and services



Power BI



Power Apps



Power Automate

Microsoft Power Platform



# The Evolution of BI

1st wave  
Corporate BI

2nd wave  
Self-service BI

3rd wave  
End user BI



Everyone



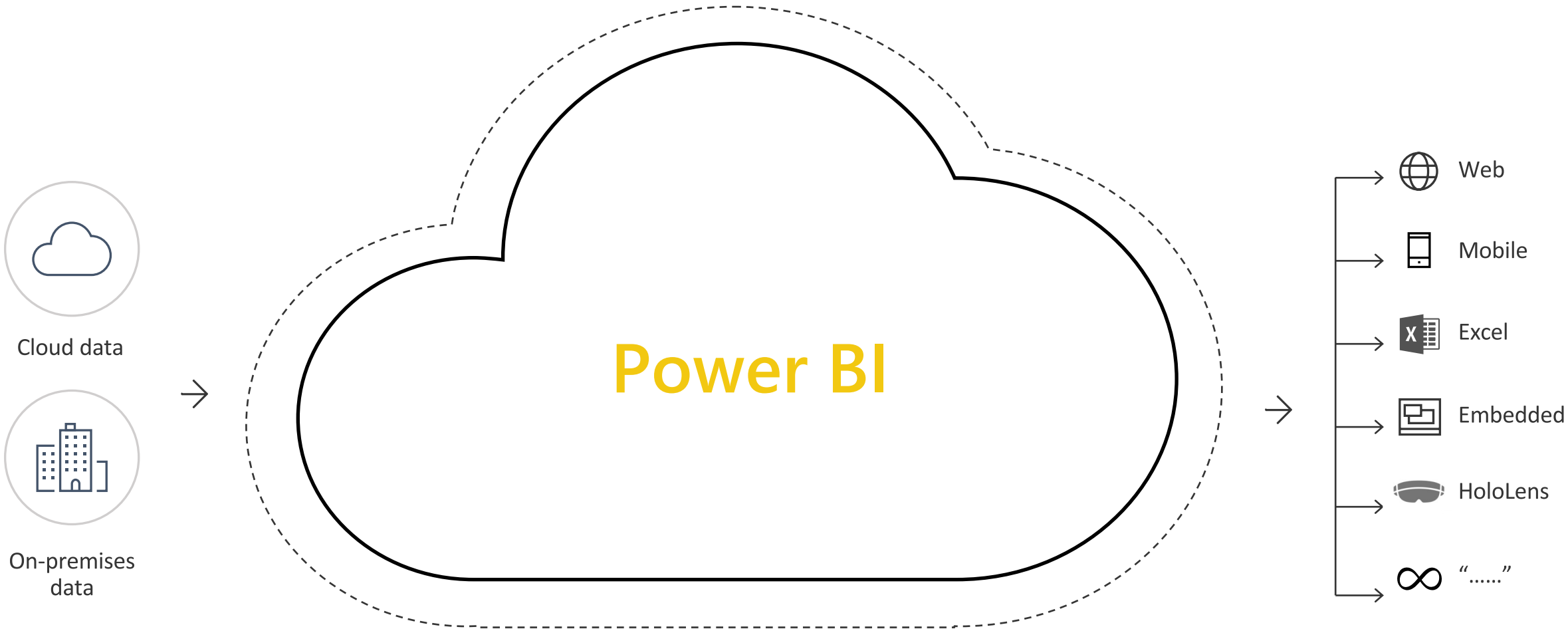
Analyst to end user



IT to end user

# Power BI: experience your data

## Any data, any way, anywhere



# Data sources



## SaaS solutions

*e.g. Marketo, Salesforce, GitHub, Google Analytics*



## Organizational

*Corporate data sources or external data services*



## On-premises Data



## Azure services

*Azure SQL, Stream Analytics...*



## Excel files



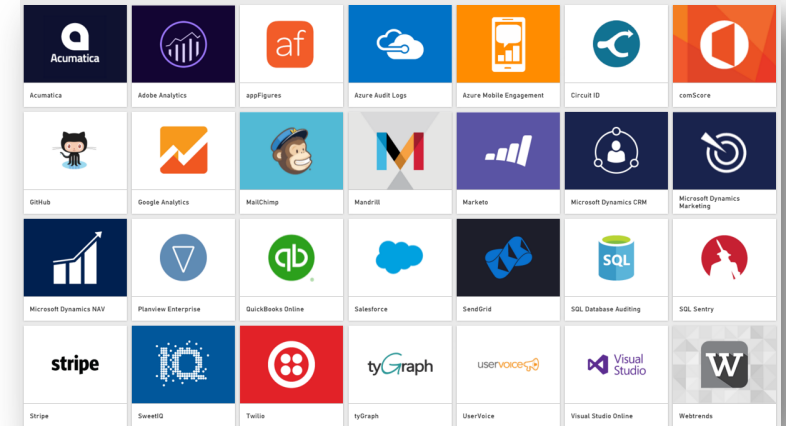
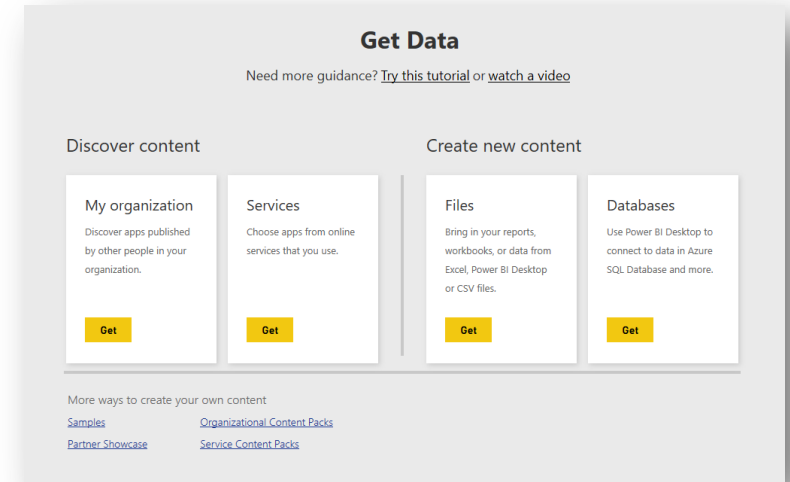
## Power BI Desktop files

*Data from files, databases, Azure, and other sources*

# Access all your DATA

Connect to 115+ data sources, both on-premises and cloud

- Data from Applications
  - SaaS services that you already use
- Data from your organization
  - Content published by others in your org (Datasets and Dataflows)
- Big data and more
  - Azure data services, e.g. SQL DW, ADLS.
  - On-premises data sources, e.g. Oracle & SSAS
- Data from files
  - Import data from Text, CSV, Excel and Power BI Desktop files



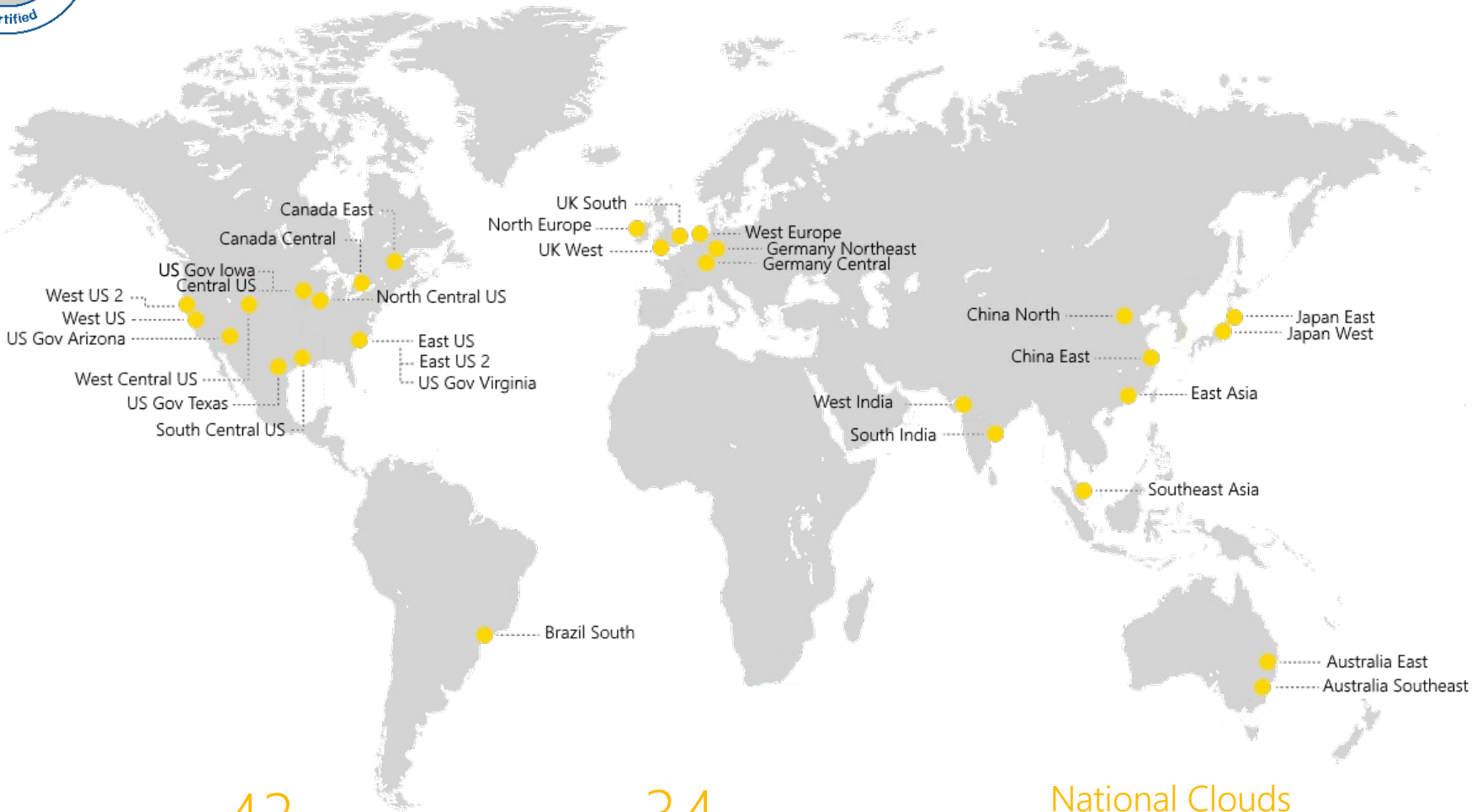
# Largest Global Footprint



EU Model Clauses



China GB 18030



43 Languages

34 Primary and backup datacenters worldwide

National Clouds  
US Government  
China  
Germany



# Gartner®

## Magic Quadrant for Analytics and Business Intelligence Platforms 2022

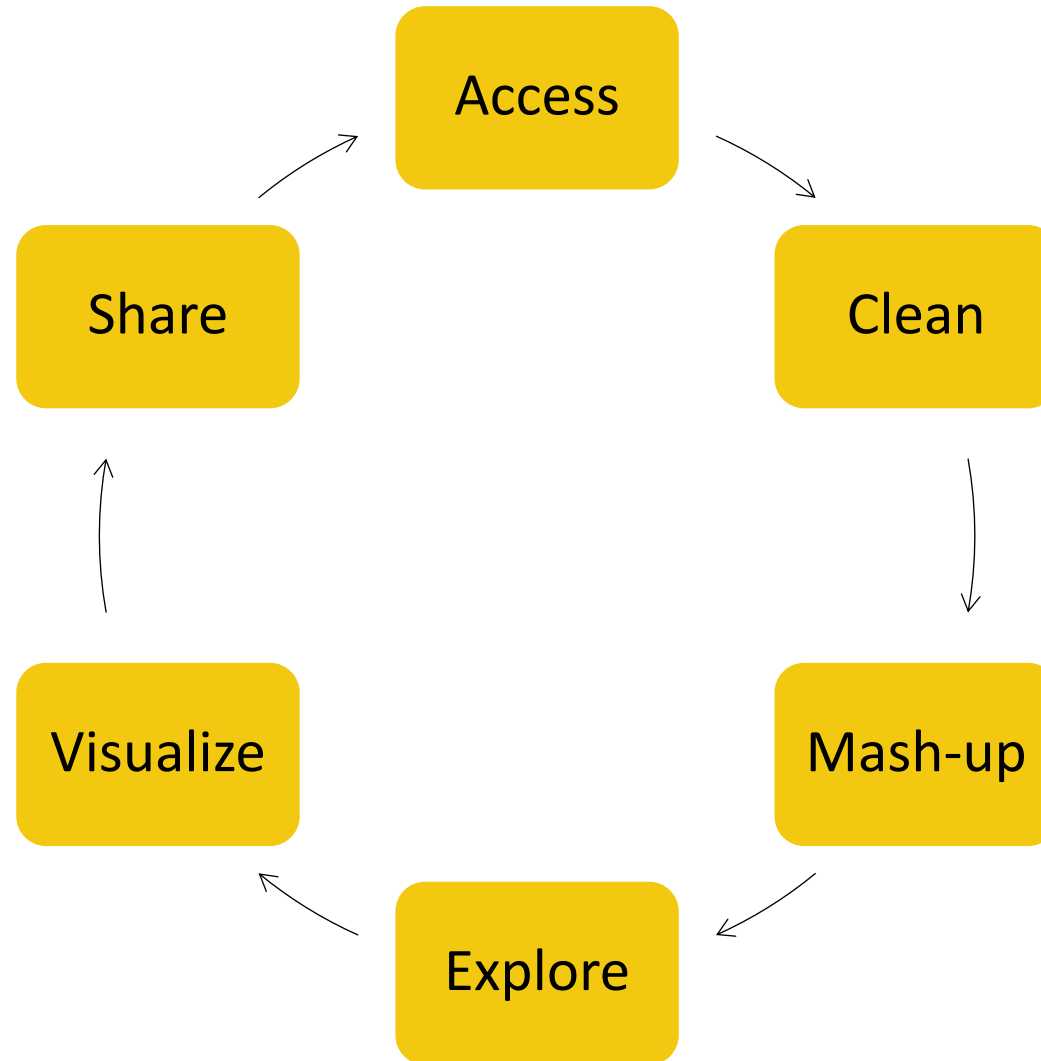


Decrease Complexities,  
Deliver Results.

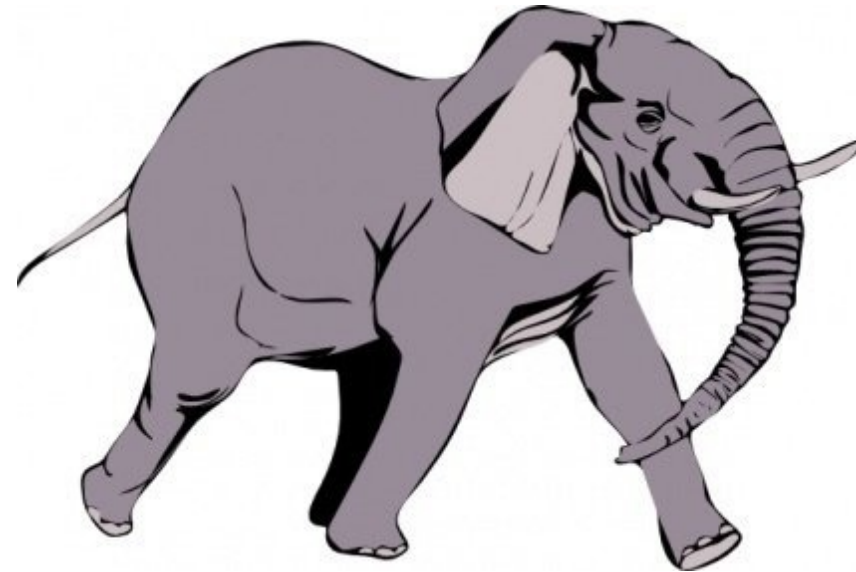
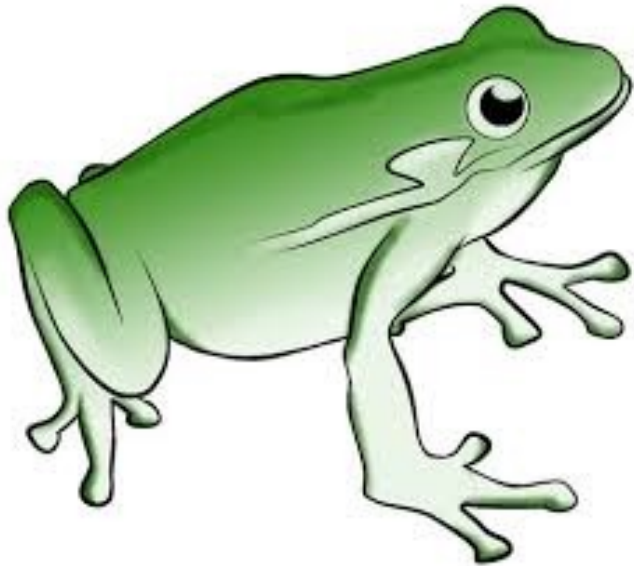
@ 2022 Dynamic Communities



For Users, By Users



# From Problem to Vision with Frogs & Elephants



# How do we get from Problem to Vision?

- **Get Executive Support**
  - Sell the Solution
    - Integrity, Timing & Political Capital
    - Strategy
    - Business Case
      - The Budget must be in the Savings
- **Execute**
  - Manage Expectations
    - Flexibility is Key
  - Change Management
  - Choose the Right Team
  - Dedicate enough Time
  - Avoid Scope Creep – Phase 2



# How do we get from Problem to Vision?

- **Adoption & Human Engineering**
- Know Your Users
  - Handholding
  - Convincing
  - Instructions
  - Directives

# How do we get from Problem to Vision?

- Sell the Solution to Users
  - Identify their pain & eliminate it
  - Multiple potential solutions & choice
  - Naysayers & We've always done it this way!
  - Never promise what you aren't sure you can deliver
  - Under Promise & Over Deliver
- Champions & Dictators
  - Know which you need & when to use them

Decrease Complexities,  
Deliver Results.

# Achitecture



For Users, By Users

@ 2022 Dynamic Communities

## Develop Power BI Reports

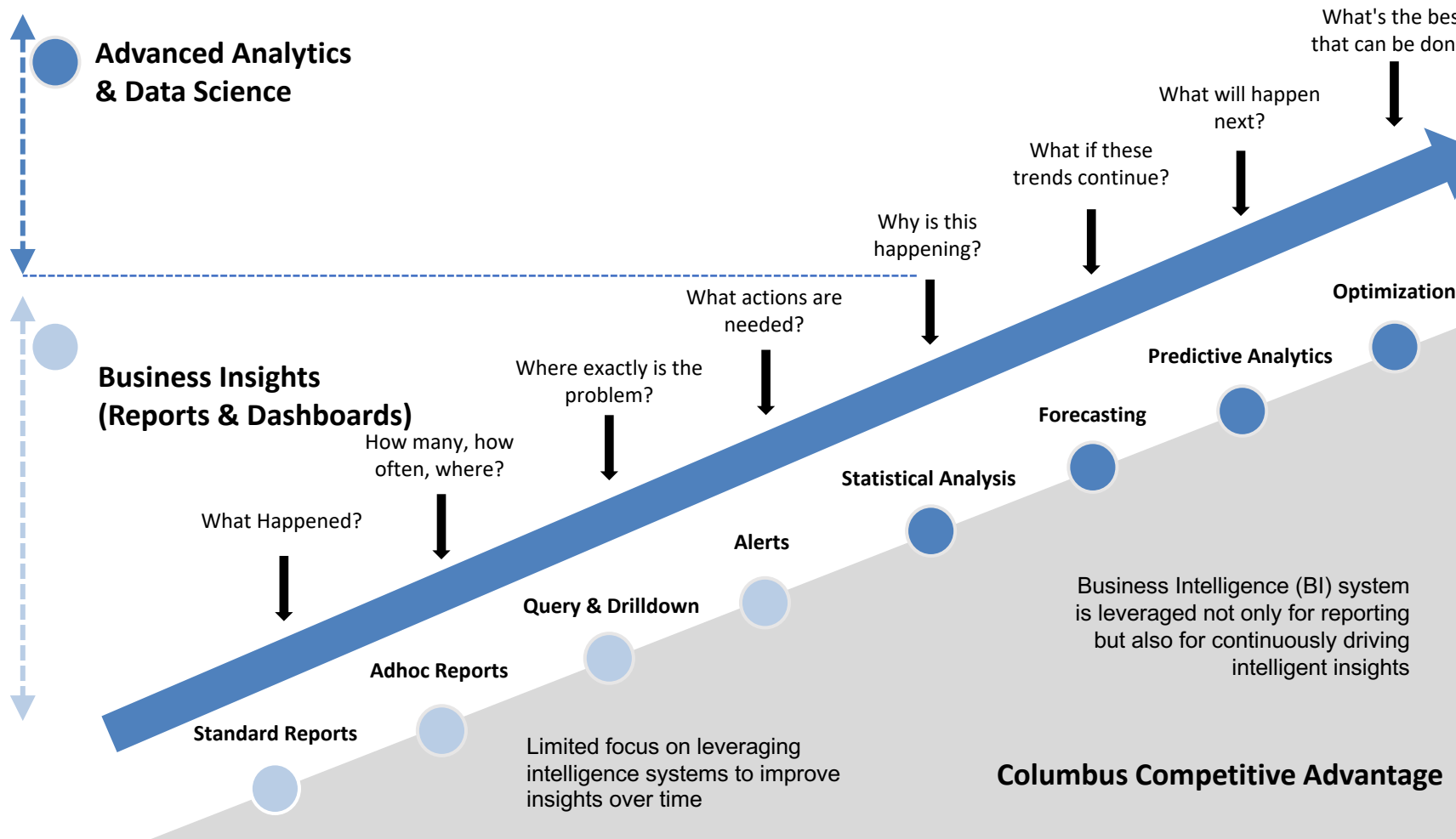
- Connect to AX2012 Cubes to get timely cost data for Active Projects
- Connect to Journyx Timesheet system for up to the minute hours reports
- Connect to existing Budget spreadsheets for Department Manager reports

## Upgrade AX2012 R2, CU7 to D365

- Eliminate custom code =  
Eliminate bugs & gremlins
- Leverage new features & functionality
- Launch Budget & Forecasting modules
- Change perspectives about “the system”

# Data Journey

From Operational Reporting to Intelligent Learning



## Our Services

(A suite of solutions that allow clients to move from mere data collection focus to driving strategic data insights focus)

Analysis & Reporting

Industry Specific Analytics

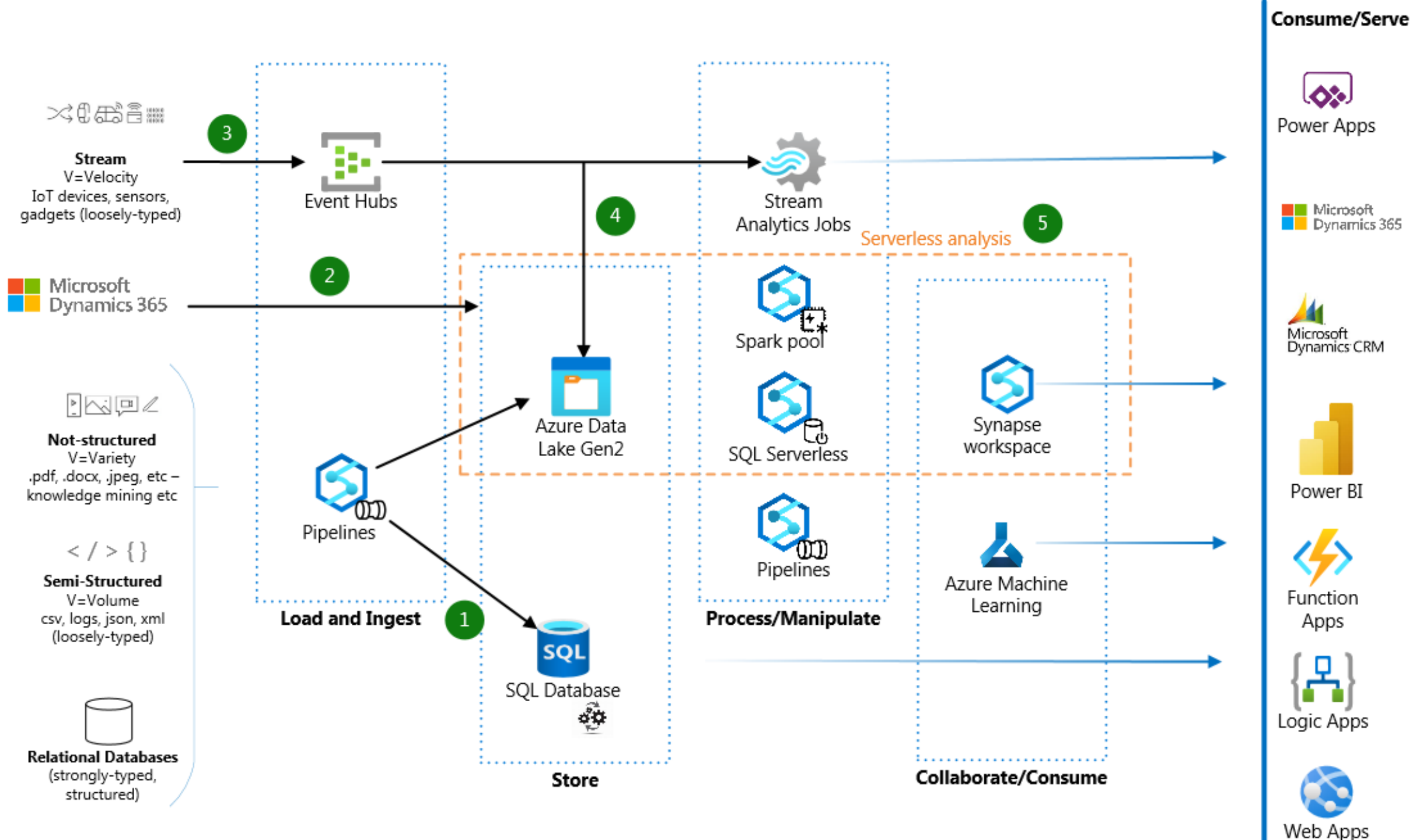
Corporate Performance Management

Advanced Analytics

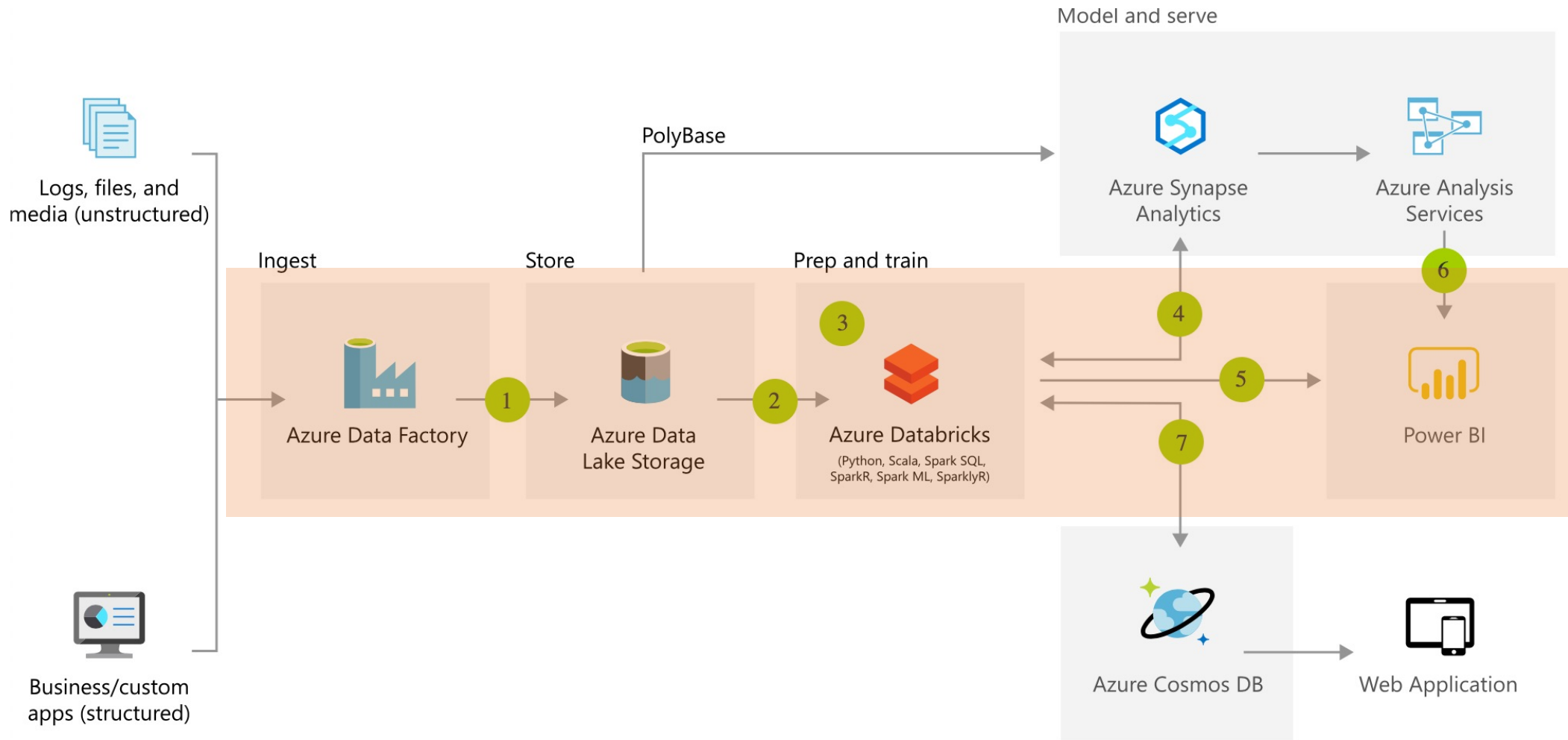
Business Value Consulting

Data Management

Decrease Complexities,  
Deliver Results.



# Architecture



Decrease Complexities,  
Deliver Results.

# Power BI



For Users, By Users

@ 2022 Dynamic Communities



## Usage

- Executive – Daily Monitoring
- Program Manager – Program Cost
- Department Manager – Dept Budget v. Cost
- Employees – Program Cost & Historical Reference

## Savings

- Reduce your AX/D365 License Costs
  - PBI < AX/D365
- Eliminate repeating data download/format/report process
  - Build it once & let it update
- Eliminate Risk of Data Errors

# Getting Started with Power BI Reporting

1. What questions do I want to answer?
2. What data do I need?
3. What data do I have?
4. Do I need Calculations?
5. Where is the data?
6. How good is the data?
7. Static v. Dynamic?
8. Choose the right visual & make it pretty
9. User Access & Security Constraints
10. Power BI Skills, Training & When to call Michael

# Program Financial Health

Power BI Analytics Team | Program Financial Health | Data updated 9/15/22

Pages: Program Financial Heal...  
 Details by WBS  
 Details by Date

6/11/2012 4/1/2024

Company:  CSS  CYM

Activity Number:  A000015  A000020  A000031

3,211,820.08 Labor Hours

\$77,037,415.45 Labor Overhead

\$5,850,765.80 Material Overhead

\$6,463,466.83 ODC Travel

\$168,924,113.15 Labor Dollars

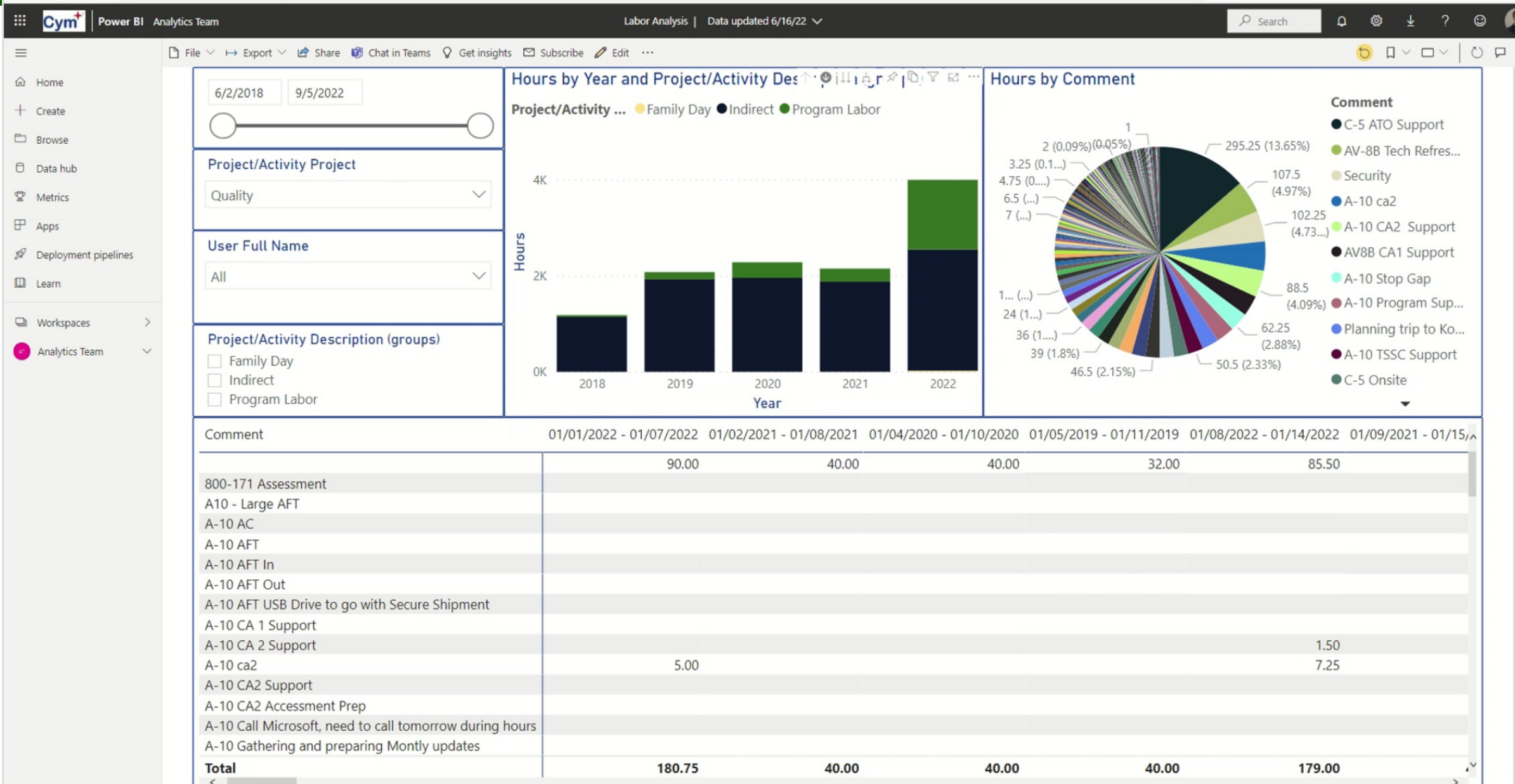
\$161,510,294.71 Material

\$2,427,007.93 ODC Non-Travel

\$521,885,041.90 Total COGS

Project	CLIN	Project Name	Labor Hrs	Labor Dollars	Labor Overhead	Material	Material Overhead	Subcontractor	ODC Non-Travel	ODC Tra
1001	1001.02	KC-135 BOWST-CLIN 0002 #3 Altus (1)	3,891.80	\$1,138,734.61	\$856,638.54	\$0.00	\$0.00	\$0.00	\$0.00	
1001	1001.03	KC-135 BOWST-CLIN 0003 #4 Altus (2)	2,409.70	\$1,048,403.41	\$822,002.73	\$350.00	\$17.50	\$0.00	\$0.00	
1001	1001.04	KC-135 BOWST-CLIN 0004 #2 Fairchild	5,929.30	\$1,295,127.60	\$936,594.63	\$0.00	\$0.00	\$0.00	\$0.00	
1001	1001.05	KC-135 BOWST-CLIN 0005 #5 Grissom	2,807.16	\$1,083,081.94	\$840,443.49	\$0.00	\$0.00	\$0.00	\$70.71	
1001	1001.06	KC-135 BOWST-CLIN 0006 #6 Mar	2,802.70	\$1,085,065.36	\$847,487.69	\$0.00	\$0.00	(\$2,500.00)	\$571.53	
1001	1001.07	KC-135 BOWST-CLIN 0007 #7 Seymour-J	2,928.28	\$678,771.21	\$518,317.46	\$393,447.39	\$19,672.37	\$97,405.00	\$2,047.51	\$18,
1001	1001.08	KC-135 BOWST-CLIN 0008 #8 March	2,705.93	\$634,449.24	\$493,713.70	\$472,834.36	\$23,641.72	(\$593.27)	(\$3,930.33)	\$15,
1001	1001.09	KC-135 BOWST-CLIN 0009 #9 Scott	3,037.93	\$641,255.97	\$492,376.42	\$472,784.82	\$23,639.24	\$0.00	(\$53,291.02)	\$13,
1001	1001.10	KC-135 BOWST-CLIN 0010 Spares	725.73	\$40,870.32	\$16,971.89	\$150,581.70	\$6,134.09	\$0.00	\$3,569.65	
1001	1001.12	KC-135 BOWST-CLIN 0012 Data	2,581.10	\$277,340.33	\$169,622.12	\$0.00	\$0.00	\$0.00	\$0.00	
1001	1001.14	KC-135 BOWST-CLIN 0014 Model Changes	39.50	\$1,377.51	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1001	1001.98	KC-135 BOWST-CLIN 0098 Consideration	28.00	\$855.36	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
1001	1001.99	KC-135 BOWST - CLIN 0099 ECP	572.30	\$44,608.69	\$8,133.56	\$0.00	\$0.00	\$0.00	\$0.00	
1002	1002.01	AV-8B CLIN2006 - CDRLS 11H94 Electrical	2.00	\$117.12	\$99.55	\$0.00	\$0.00	\$0.00	\$0.00	
1002	1002.02	CLIN 2005 - TFCR-11H95 Electrical	0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
<b>Total</b>			<b>2,516,114.94</b>	<b>\$137,473,249.40</b>	<b>\$47,025,403.64</b>	<b>\$161,231,063.68</b>	<b>\$5,836,804.58</b>	<b>\$86,720,531.78</b>	<b>\$2,418,907.24</b>	<b>\$6,297,1</b>

# Labor Analysis





# Risk Item Report

Power BI Analytics Team Redmine Risks V3

File Export Share Chat in Teams Get insights Subscribe Edit

## Cym+ Risk Item Report

Probability	100%
Current Tech Impact	5
Current Schedule Impact	0
Current Cost Impact	(Blank)
Redmine UID #	60229

Project	Title	Status	Redmine Link	Due Date	Created Date
AV-8B DMRT BCU	Trainer Power Insufficient	New	<a href="#">🔗</a>	(Blank)	5/2/2022

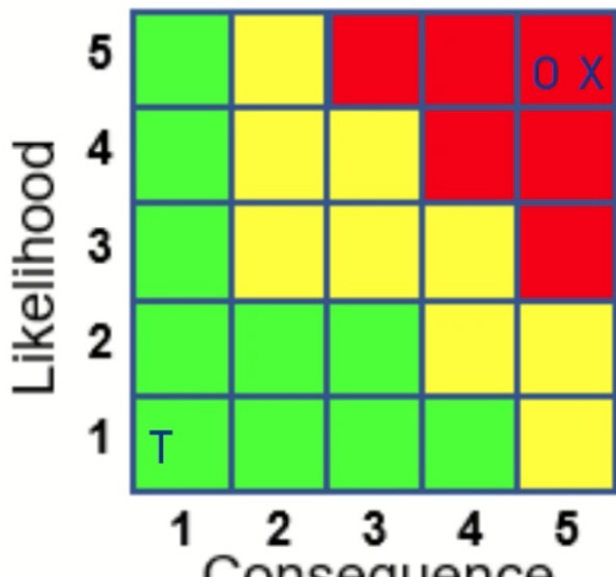
**Description**

Trainer power limitation in PRF requirement 3.13.1.3.2 is not sufficient for trainer operation.

**Risk Mitigation**

Add trainer power circuits. This will not meet the requirement of one 30A circuit. To mitigate this risk, the government has to change power requirements and allow us to have additional circuits. Currently, 3 circuits will be sufficient.

**Last Update**



**Likelihood**

5					O X
4					
3					
2					
1	T				
	1	2	3	4	5

**Consequence**

**O** - Original

**X** - Current

**T** - Target

**High** ■

**Moderate** ■

**Low** ■

# Purchase Order Status Report

Power BI Purchasing | Purchase Order Status | Data updated 9/15/22

File Export Share Chat in Teams Get insights Subscribe Edit

## Cym Purchase Order Status Report

**DELIVERYDATE**

4/20/2016 9/9/2022

**Early\_Status**

Early  
 Late  
 On Time

**PURCHID**

Search

- PO000069
- PO000368
- PO000374
- PO000377

**VENDORNAME**

Search

- Abaco Systems (Formerly GE In...
- Aberdeen Dynamics
- Advanced Simulation Tech
- Advantech Corp

**Project, CLIN**

Search

- (Blank)
- 1404
- 1514
- 1690
- 1691
- 1803
- 1808
- 1810
- 1814
- 1815
- 1890

32.11%  
%\_Lines\_Early

57.81%  
%\_Lines\_Late

10.08%  
%\_Lines\_On\_Time

3.87  
Avg\_Days\_Early

16.94  
Avg\_Days\_Late

**Filters**

Search

Filters on all pages

**Early\_Status**  
is not (Blank)

Redmine	Project	CLIN	PURCHID	PURCHASELINELINENUMBER	Early_Status	Delivery_Status	EXPECTEDDELIVERYDATE	DELIVERYDATE	NUMBEROFDAYSEARLY	NUMBEROFDAYSLATE	QTY	Purcha
	1815	1815.08	PO006412	1	Early	Closed	11/15/2022	8/31/2022	76	0	1	
	1815	1815.08	PO006412	2	Early	Closed	11/15/2022	8/31/2022	76	0	1	
	2017	2017.230	PO006444	1	On Time	Closed	9/9/2022	9/9/2022	0	0	15	
	2202	2202.011	PO006472	3	Late	Closed	9/7/2022	9/9/2022	0	2	1	
	2202	2202.011	PO006472	1	Late	Closed	9/7/2022	9/9/2022	0	2	1	
	2202	2202.011	PO006472	4	Late	Closed	9/7/2022	9/9/2022	0	2	1	
	2202	2202.011	PO006472	2	Late	Closed	9/7/2022	9/9/2022	0	2	1	
	2202	2202.011	PO006464	3	Late	Closed	9/2/2022	9/8/2022	0	6	4	
	2202	2202.011	PO006464	1	Late	Closed	9/2/2022	9/8/2022	0	6	20	
	2202	2202.011	PO006464	2	Late	Closed	9/2/2022	9/8/2022	0	6	20	
	2202	2202.011	PO006419	1	Early	Closed	9/1/2022	8/19/2022	13	0	2	
	2202	2202.011	PO006419	3	Early	Closed	9/1/2022	8/19/2022	13	0	1	
	2202	2202.011	PO006419	2	Early	Closed	9/1/2022	8/19/2022	13	0	2	
	2202	2202.011	PO006423	1	Early	Closed	9/1/2022	8/19/2022	13	0	1	
	2202	2202.011	PO006424	1	Early	Closed	9/1/2022	8/19/2022	13	0	30	
<b>Total</b>				<b>26135</b>					<b>13254</b>	<b>57998</b>	<b>359599</b>	<b>\$11,2</b>

# HR Deferral Audit

Power BI Human Resources | HR\_Deferral\_Audit | Data updated 8/24/22

Search [ ]

File Export Share Chat in Teams Get insights Subscribe Edit

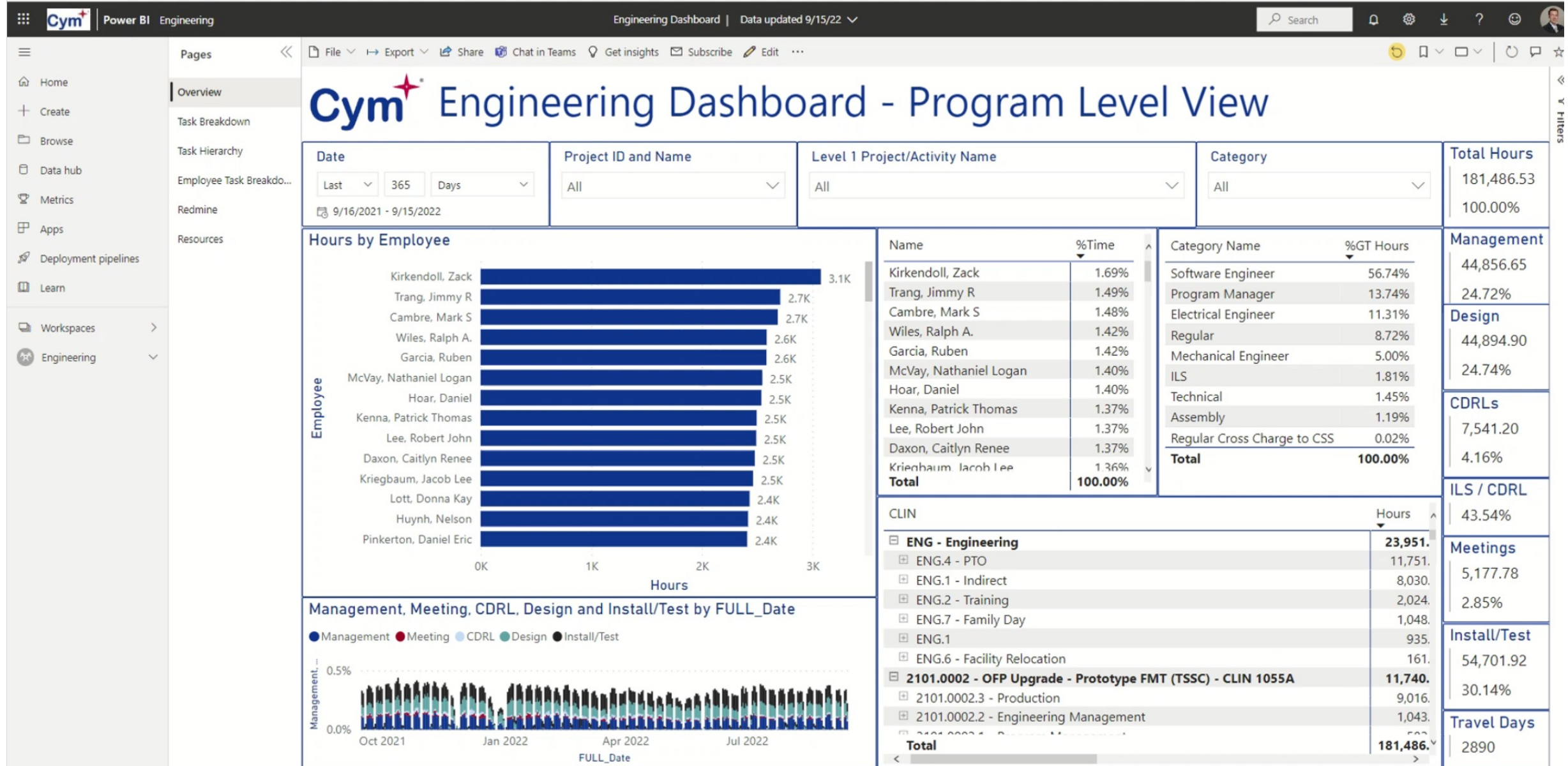
Pages: Cym, Home, Browse, Data hub, Metrics, Apps, Deployment pipelines, Learn, Workspaces, Human Resources

Filters: Search, 401 Company Match is (All), 401 Company Match ... is (All), Average of 401 Compa... is (All), Average of 401k Differ... is (All), Average of Catchup Dif... is (All), Average of Pay Differen... is (All), Average of Roth 401k ... is (All), Average of Roth Catch... is (All), Average of Safe Harbor... is (All), Catchup is (All), Catchup Calc is (All), Employee 401 Calc is (All), Employee 401k is (All), Employee Roth 401k is (All), Employee Roth 401k ... is (All), Gross + Earnings Exclu... is (All), Max\_Pay is (All), Roth Catchup is (All)

Max_Pay	Gross + Earnings Excluded from 401k	Average of Pay Difference Percent	Employee 401k	Employee 401 Calc	Average of 401k Difference %	Employee Roth 401k	Employee Roth Catchup
\$4,480.39	\$4,480.39	0.00%	\$672.06	\$672.06	0.00%	\$0.00	\$0.00
\$2,963.21	\$2,963.09	0.00%	\$177.79	\$177.79	0.00%	\$0.00	\$0.00
\$2,736.12	\$2,736.12	0.00%	\$273.61	\$273.61	0.00%	\$0.00	\$0.00
\$2,824.63	\$2,824.52	0.00%	\$0.00	\$0.00	0.00%	\$197.72	\$197.72
\$3,140.80	\$3,140.80	0.00%	\$188.45	\$188.45	0.00%	\$0.00	\$0.00
\$4,034.28	\$4,034.28	0.00%	\$242.06	\$242.06	0.00%	\$0.00	\$0.00
\$3,181.05	\$3,180.94	0.00%	\$190.86	\$190.86	0.00%	\$0.00	\$0.00
\$2,803.86	\$2,803.86	0.00%	\$0.00	\$0.00	0.00%	\$168.23	\$168.23
\$2,824.84	\$2,824.52	0.01%	\$84.74	\$84.75	0.01%	\$0.00	\$0.00
\$2,606.52	\$2,482.40	5.00%	\$99.30	\$104.26	4.76%	\$0.00	\$0.00
\$2,465.50	\$2,465.50	0.00%	\$147.93	\$147.93	0.00%	\$0.00	\$0.00
\$4,436.73	\$4,436.73	0.00%	\$754.24	\$754.24	0.00%	\$0.00	\$0.00
\$4,189.73	\$4,189.22	0.01%	\$0.00	\$0.00	0.00%	\$628.38	\$628.46
\$2,115.20	\$2,115.20	0.00%	\$0.00	\$0.00	0.00%	\$0.00	\$0.00
\$2,734.50	\$2,884.80	5.21%	\$0.00	\$0.00	0.00%	\$86.54	\$82.04
\$3,533.19	\$3,533.81	0.02%	\$247.37	\$247.32	0.02%	\$0.00	\$0.00
\$3,869.43	\$3,869.43	0.00%	\$270.86	\$270.86	0.00%	\$0.00	\$0.00
\$2,692.31	\$0.00	0.00%	\$0.00	\$0.00	0.00%	\$0.00	\$0.00
\$5,606.64	\$5,606.65	0.00%	\$336.40	\$336.40	0.00%	\$336.40	\$336.40
\$3,642.72	\$3,642.72	0.00%	\$109.28	\$109.28	0.00%	\$109.28	\$109.28
\$3,068.98	\$3,068.98	0.00%	\$214.83	\$214.83	0.00%	\$0.00	\$0.00
\$2,897.27	\$2,897.27	0.00%	\$347.67	\$347.67	0.00%	\$28.97	\$28.97
\$2,960.66	\$2,960.66	0.00%	\$0.00	\$0.00	0.00%	\$177.64	\$177.64
\$2,320.00	\$2,355.09	1.49%	\$0.00	\$0.00	0.00%	\$0.00	\$0.00
\$3,161.21	\$3,161.23	0.00%	\$189.67	\$189.67	0.00%	\$0.00	\$0.00
\$3,737.04	\$3,736.89	0.00%	\$112.11	\$112.11	0.00%	\$0.00	\$0.00
\$9,074.43	\$9,074.43	0.00%	\$0.00	\$0.00	0.00%	\$850.00	\$0.00
\$4,006.31	\$4,006.16	0.00%	\$200.31	\$200.32	0.00%	\$200.31	\$200.32
\$2,954.39	\$2,954.39	0.00%	\$147.72	\$147.72	0.00%	\$147.72	\$147.72
\$6,398.00	\$6,398.01	0.00%	\$383.88	\$383.88	0.00%	\$0.00	\$0.00
\$4,462.36	\$4,462.36	0.00%	\$312.37	\$312.37	0.00%	\$0.00	\$0.00
<b>\$482,399.88</b>	<b>\$478,464.39</b>	<b>1.64%</b>	<b>\$29,467.00</b>	<b>\$24,634.04</b>	<b>0.46%</b>	<b>\$9,325.04</b>	<b>\$5,715.25</b>



# Engineering Dashboard





# Power BI Isn't Everything

- Things to Consider
  - Learning Curve
  - Can be a crowded interface
  - Advanced ETL is limited
  - Large Datasets
  - Performance

Decrease Complexities,  
Deliver Results.

# D365 Integration: The Future



For Users, By Users

@ 2022 Dynamic Communities

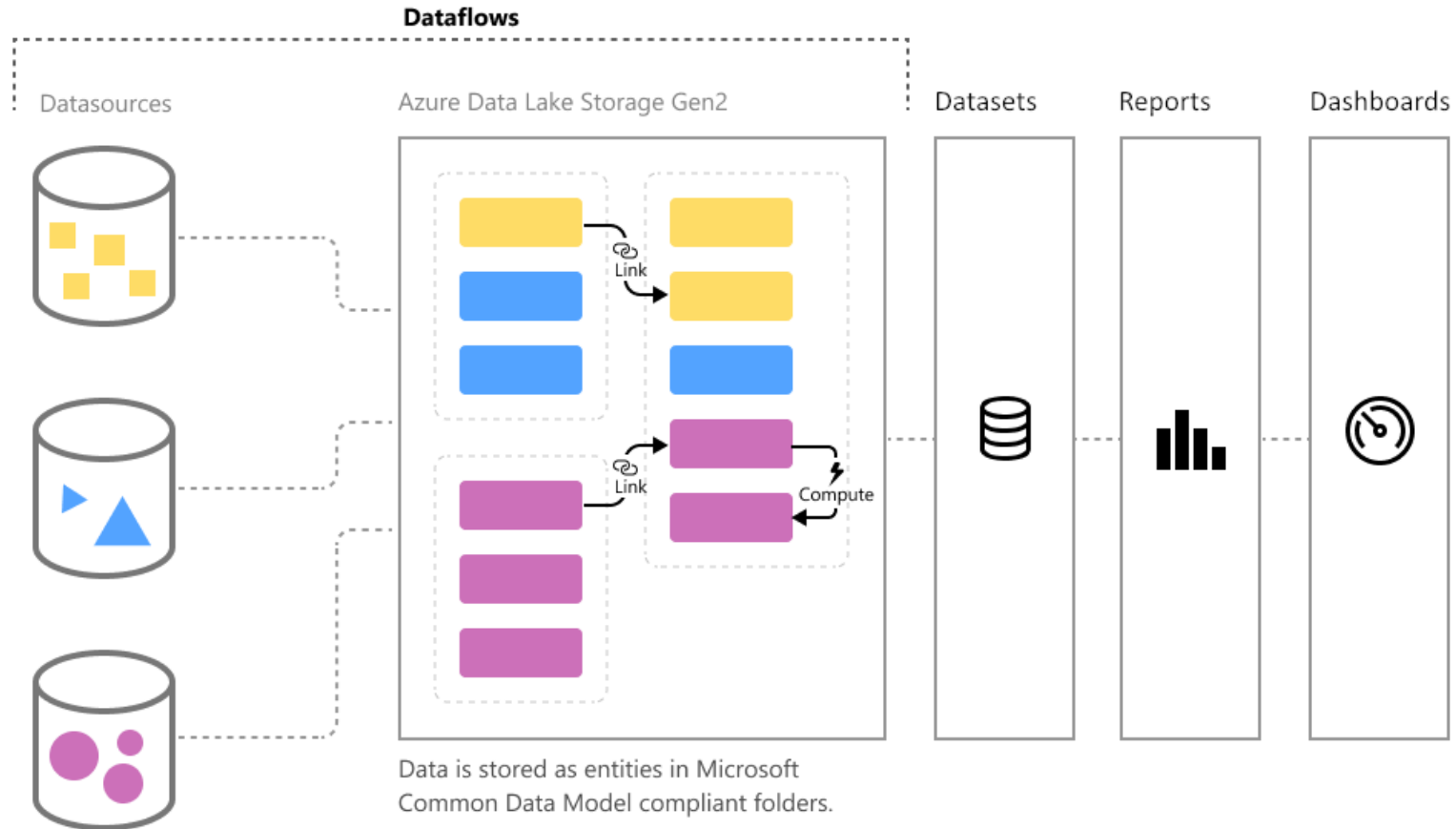
## Automation

- Quarterly Reporting
  - Programs
  - Financials
- Budgeting
- Forecasting
- Manloading
- Resource Planning
- Identify Policy Compliance Issues

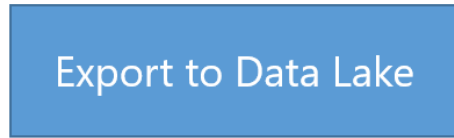
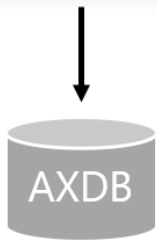
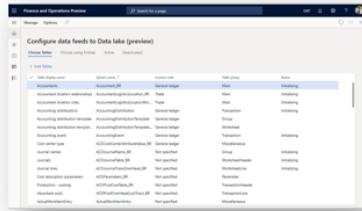
## Analytics

- What if we \_\_\_\_\_?
- Use Past results to predict future
  - Program monthly cash flow
- Use Past Results to create competitive advantage

# Azure Data Lake Integration with D365



# Change Feeds & FSC



**1** **Change Log** (aka. CDC change tables) provides a sequential log of changes in the database as they happen

LSN	Change Date-Time	Change Payload
...		
31	T1	GeneralJournalAccountEntry (Create) GeneralJournalEntry (Create)
32	T2	CustTable (create)
33	T3	GeneralJournalAccountEntry (Create) GeneralJournalEntry (Create)
34	T4	CustTable (modify)
35	T5	GeneralJournalAccountEntry (Create) GeneralJournalEntry (Create)
36	T6	CustTable (delete)

**2** Each changed record in **Tables** folder reflects changed LSN, Datetime stamp of CDC log and the Data lake updated date and time

**CustTable**

RecID	Other fields...	LSN	LastProcessed Change_DateTime	DataLakeModified_DateTime
1001		34	T4	
1002				
1003		32	T2	
1004				

**3** **Change feed folders** provide the change log in customer's data lake

LSN	Change payload for GeneralJournalAccountEntry
31	{.. Data that changed....}
33	{.. Data that changed....}

LSN	Change payload for GeneralJournalEntry
31	{.. Data that changed....}
33	{.. Data that changed....}

LSN	Change payload for CustTable
32	{.. Data that changed....}
34	{.. Data that changed....}

# Machine learning

## Sophisticated pretrained models

To simplify solution development



Vision



Speech



Language



Search

## Popular frameworks

To build advanced deep learning solutions



Pytorch



TensorFlow



Keras



Onnx

## Productive services

To empower data science and development teams



Azure Databricks



Azure Machine Learning



Machine Learning VMs

## Powerful infrastructure

To accelerate deep learning



CPU



GPU



FPGA

## Flexible deployment

To deploy, manage models on intelligent cloud & edge



On-premises



Cloud



Edge

Decrease Complexities,  
Deliver Results.

Questions?



For Users, By Users

@ 2022 Dynamic Communities

# Thank you for attending!

*I truly appreciate your  
feedback on my Session #414*



Decrease Complexities,  
Deliver Results.

The Largest Independent Gathering  
of the Microsoft User Ecosystem