Manage risk: budgeting and planning in construction

Adapting to a new world

Presenters

Bob Tinglestad | Principal Construction Technology

I'm one of the firm's construction leaders with an emphasis on improving organizational performance through technology optimization and analytics. My expertise spans business intelligence needs analysis, data integration/management, and BI tool implementations. My passion is helping our clients through the journey of becoming a data-driven organization; enabling them in making confident decisions that solve problems, optimize productivity, seize opportunities, and manage risk.

Chris Porter | Manager, Construction

As the leader of the Construction team, Chris is responsible for ensuring that Construction organizations understand how Corporate Performance Management (CPM) software will help to better manage their projects to gain a deeper understanding of their data and make better business decisions. In Chris' 10 years with Prophix he has consistently taken on greater responsibilities in a variety of roles including; Consulting, Sales and Channel Partners. Chris is passionate about helping people improve the pace of their business through the power of automation.

Learning objectives

- **Understand how types of budgets and forecasts that can improve your organization's decision making.**
- What is a CPM tool and how can it help?
- Benchmarking and consensus gathering

Creating a data-driven culture in construction

Collaboration, Transparency & Alignment.

A few practical examples to support your visioning…

Example #1: Cash gap

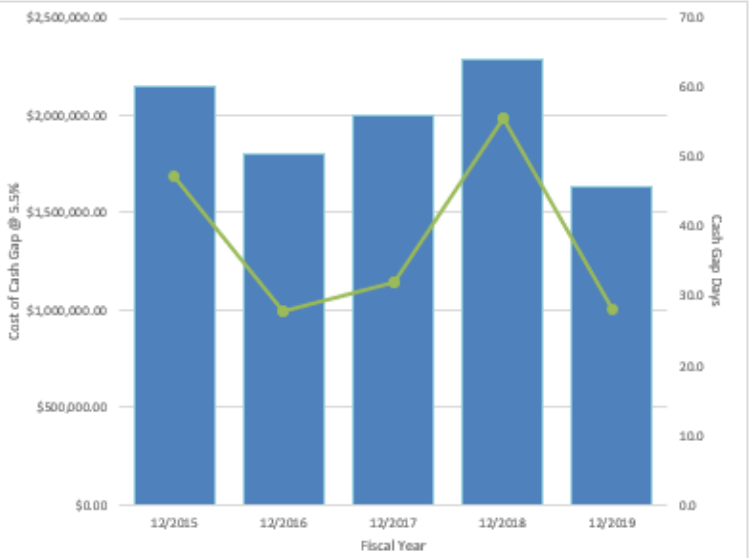
Acme Contractors

CASH GAP

Month and Year Selected: 12/2019

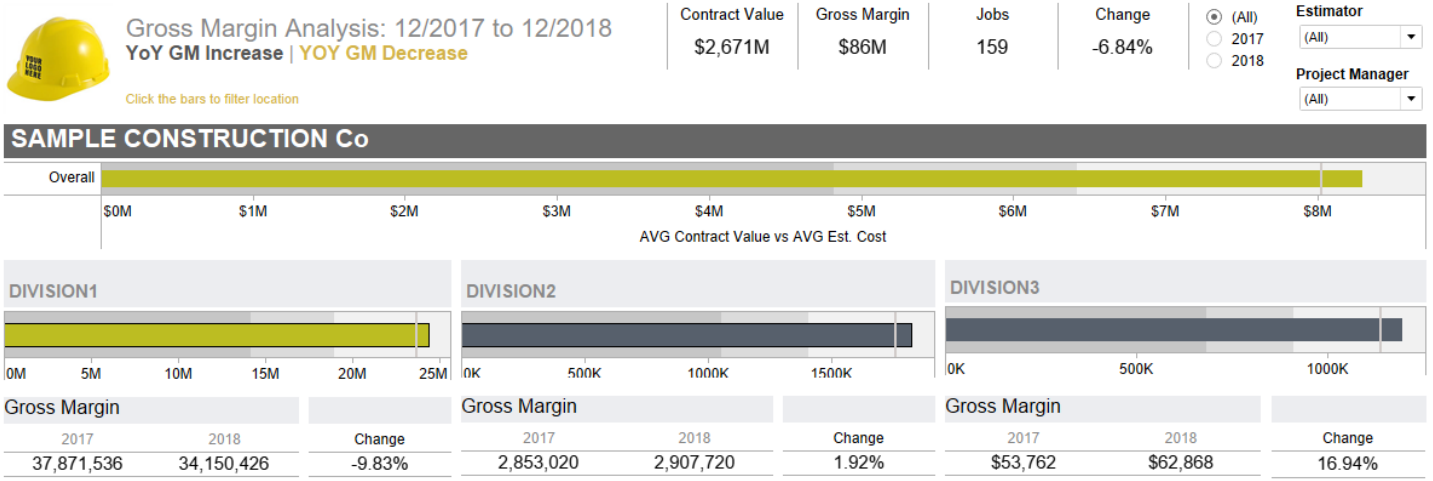
Cash Gap

	12/2015	12/2016	12/2017	12/2018	12/2019
Cash Gap Days	60.2	50.4	55.3	64.1	45.7
Cost of Cash Gap @ 5.5%	$1,687,223.04	$998,633.54	$1,143,652.66	$1,386,543.99	$1,006,385.79



	12/2015	12/2016	12/2017	12/2018	12/2019
AR Days	47.3	44.6	80.2	65.2	55.8
Net Billings in Excess	-2.60	-0.33	-1.90	2.39	-11.60
Inventory Days	40.62	13.30	22.50	20.38	15.60
AP Days	8.69	20.40	5.36	5.80	13.13
Inventory	$6,195,234	$6,013,254	$5,474,580	$5,620,104	$5,327,382
Net Billings in Excess	-4.88	-0.39	-2.59	4.80	-9.30
One Day Cost of Sales	$29,645.36	($39,606.79)	$88,555.66	$756,321.63	$5,643.01
One Day of Revenue	$460,550.30	$351,216.35	$267,353.43	$393,321.64	$600,453.12
Accounts Payable	$1,363,245.36	$6,594,321.65	$2,064,374.33	$994,653.64	$4,832,615.13
Accounts Receivable	$22,563,984.43	$16,438,732.13	$17,654,368.03	$31,438,657.13	$8,564,837.31

Example #2: Margin Analysis



Detail

Job Name	2017 Contract Value	2017 Estimated Cost	2017 Gross Margin	2017 GM %	2018 Contract Value	2018 Estimated Cost	2018 Gross Margin	2018 GM %
Grand Total	1,279,531,886	1,235,097,738	44,434,148	5.8%	1,391,744,331	1,350,348,316	41,396,015	6.0%
111 Diego Dr.	45,151,628	44,751,628	400,000	0.9%	46,709,054	48,806,326	-2,097,272	-4.5%
CC River	32,799,138	32,179,256	619,882	1.9%	33,186,530	33,325,356	-138,826	-0.4%
Park Library Parking Lot	237,203	237,203	0	0.0%	0	72,719	-72,719	0.0%
Cotton Wood Visitor Center Roof	143,000	143,000	0	0.0%	161,674	181,999	-20,325	-12.6%
Master Main Lobby	1,178,068	1,139,793	38,275	3.2%	1,173,171	1,184,984	-11,813	-1.0%
TR5 Veranda Reno	262,942	312,942	-50,000	-19.0%	227,256	238,669	-11,414	-5.0%
Succession Art Gallery	504,021	504,021	0	0.0%	532,524	533,622	-1,099	-0.2%
Widedot - Box T*R	1,691	1,495	196	11.6%	0	163	-163	
P90 USCG Carpet Install	2,547	2,316	232	9.1%	1,631	1,763	-132	-8.1%
Widedot - U3, Y65, Duo	4,893	4,355	538	11.0%	4,448	4,467	-20	-0.4%
Widedot Fill Holes	9,200	8,464	736	8.0%	4,980	4,998	-18	-0.4%
Widedot - Flooring	5,300	4,876	424	8.0%	4,941	4,958	-18	-0.4%
Widedot - Flooring part 2	5,300	4,876	424	8.0%	4,972	4,986	-14	-0.3%
Widedot - Basement Blowout	1,100	979	121	11.0%	1,047	1,050	-4	-0.3%
Welton Crop Redesign	1,125	1,077	48	4.3%	0	1	-1	

Example #3: Backlog & scheduling

Labor Backlog

Material Backlog

Category	As Bid Backlog Days	Backlog Days Used	Days Remaining	Potential Days	Open Days
Traffic Control	1643	661	982	1700	57
Grading	613	673	-60	750	137
Mill Cleanup	1000	995	5	1500	500
Conditioning	105	100	5	110	5
Paving	889	449	440	900	11

Choose a Job Number: (All)

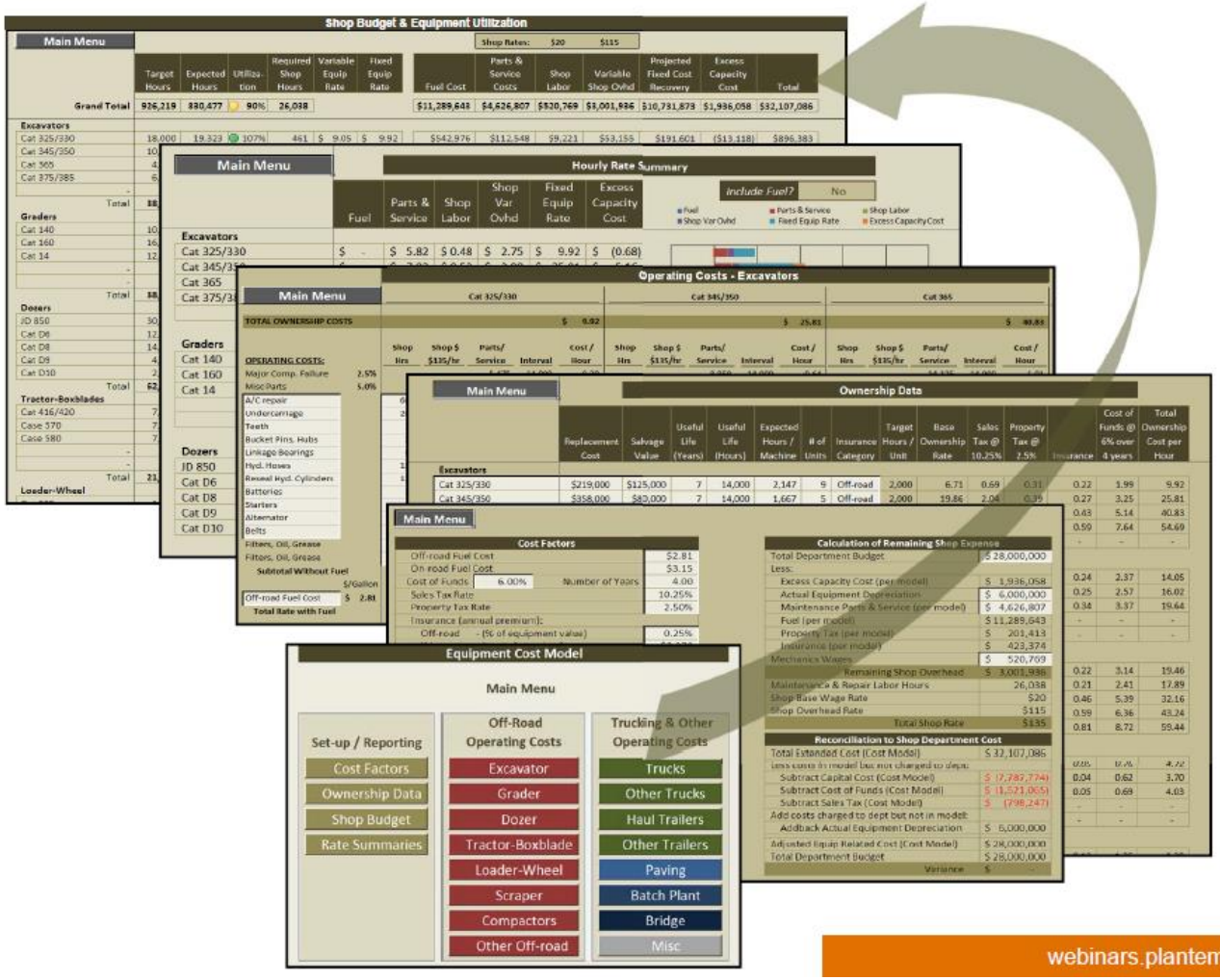
Estimator Name: (All)

Project Manager Name: (All)

Job Number	Job Description	Estimate Number	Estimator	Project Manager	Category	As Bid Backlog Days	Backlog Days Used	Days Remaining
316-56984	Bryant St	13654987	Noah Fant	Shaun Hanson	Conditioning	22	15	6.6
					Paving	94	83	10.6
					Grading	198	180	18
135-4465	16th Street Mall	13224976	Jack Johnson	Shaun Hanson	Conditioning	17	5	11.8
					Paving	73	43	29.8
					Grading	154	99	55

Example #4: Equipment Cost Modeling

EQUIPMENT COST MODEL EXAMPLE



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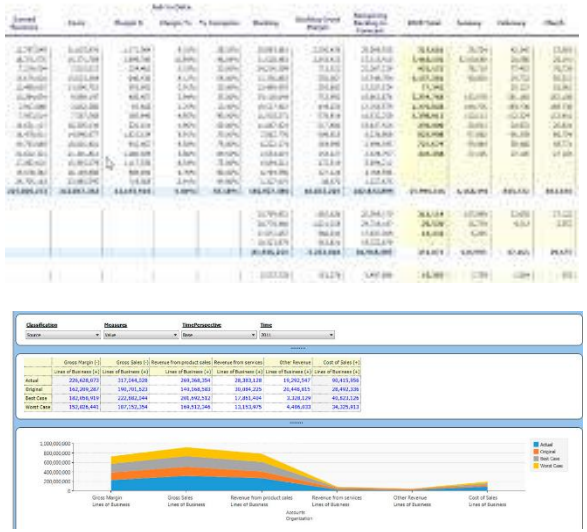
Construction performance management

- Scenario / What-if modeling
  - Cash flow
  - Headcount Planning / PPP
  - CAPEX Planning
  - OPEX Budgeting
- Compare to industry benchmarks
- Planning and forecasting driven by leading indicators



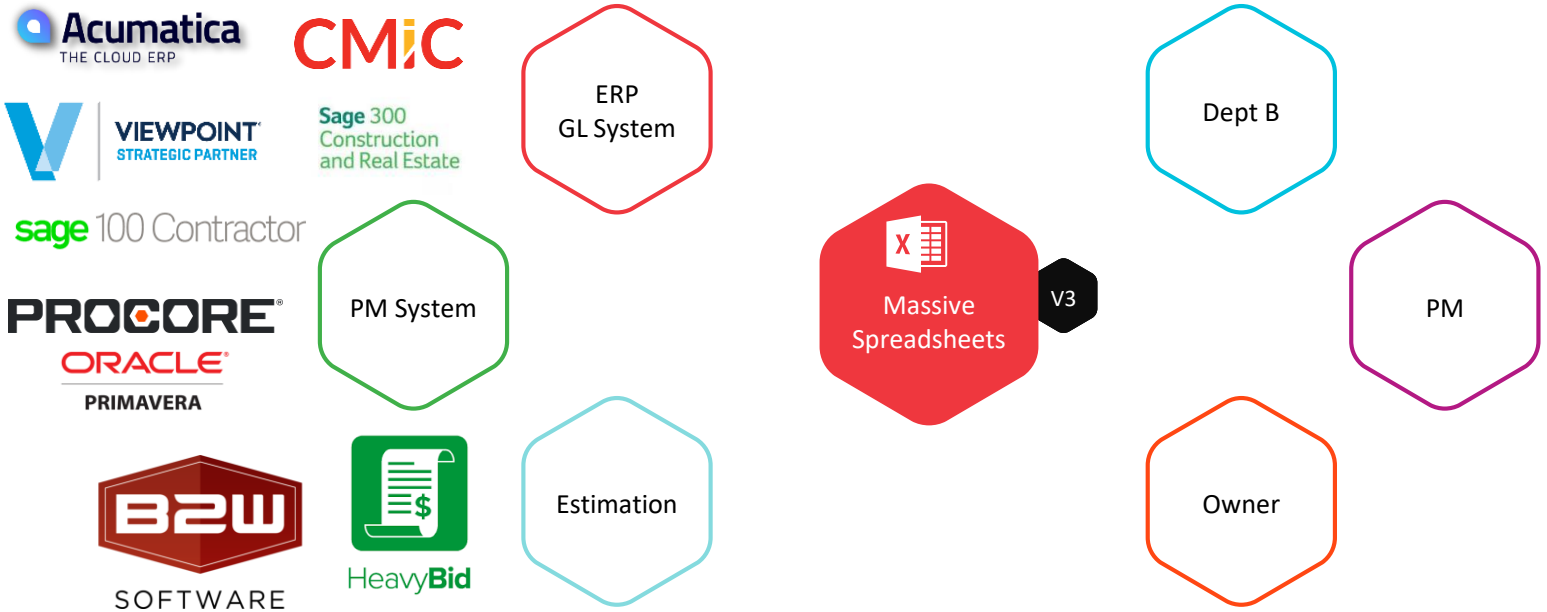
"In preparing for battle, I have always found that plans are useless, but planning is indispensable."

–General Dwight D. Eisenhower

Learning objectives

- Understand how types of budgets and forecasts that can improve your organization's decision making.
- **What is a CPM tool and how can it help?**
- Benchmarking and consensus gathering

Today, many environments look like this…



And you have all of this for **budgets**, **actuals** *and* **forecasts**!!!
Resulting in overwrites, deletions, lost versions, late nights and **confusion**!

Prophix®

DEMO

Prophix®

Learning objectives

- Understand how types of budgets and forecasts that can improve your organization's decision making.
- What is a CPM tool and how can it help?
- **Benchmarking and consensus gathering**

End user adoption

Solve a business need

Understandability

Performance

Accuracy

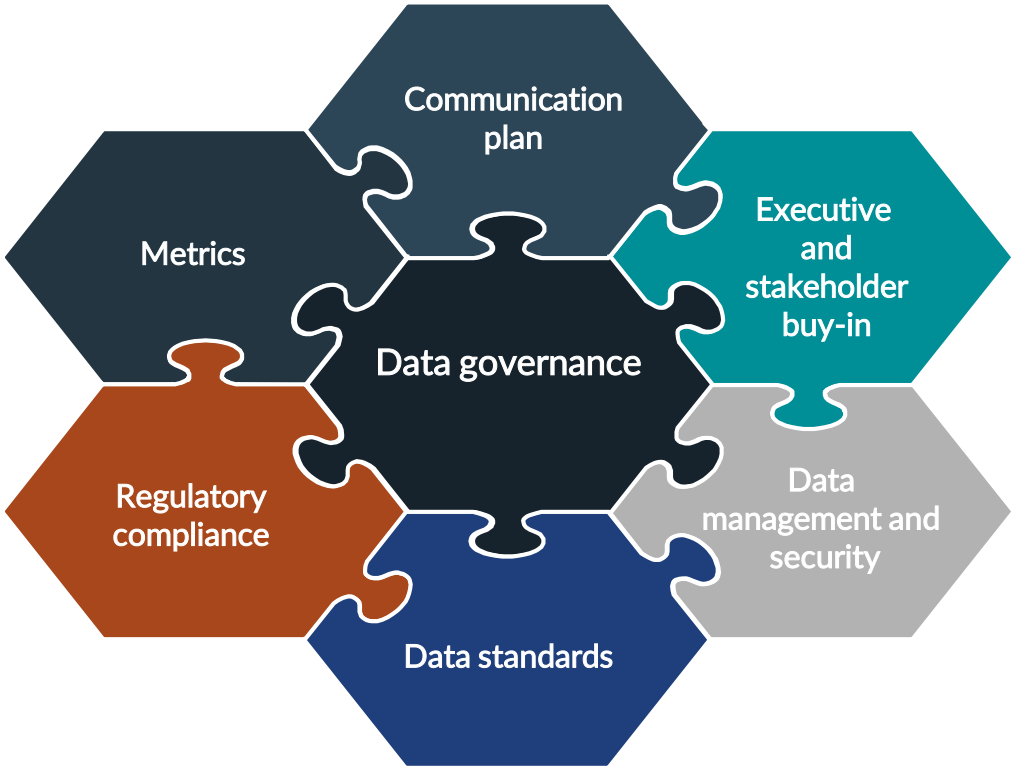
Executive sponsorship

The jigsaw of data governance

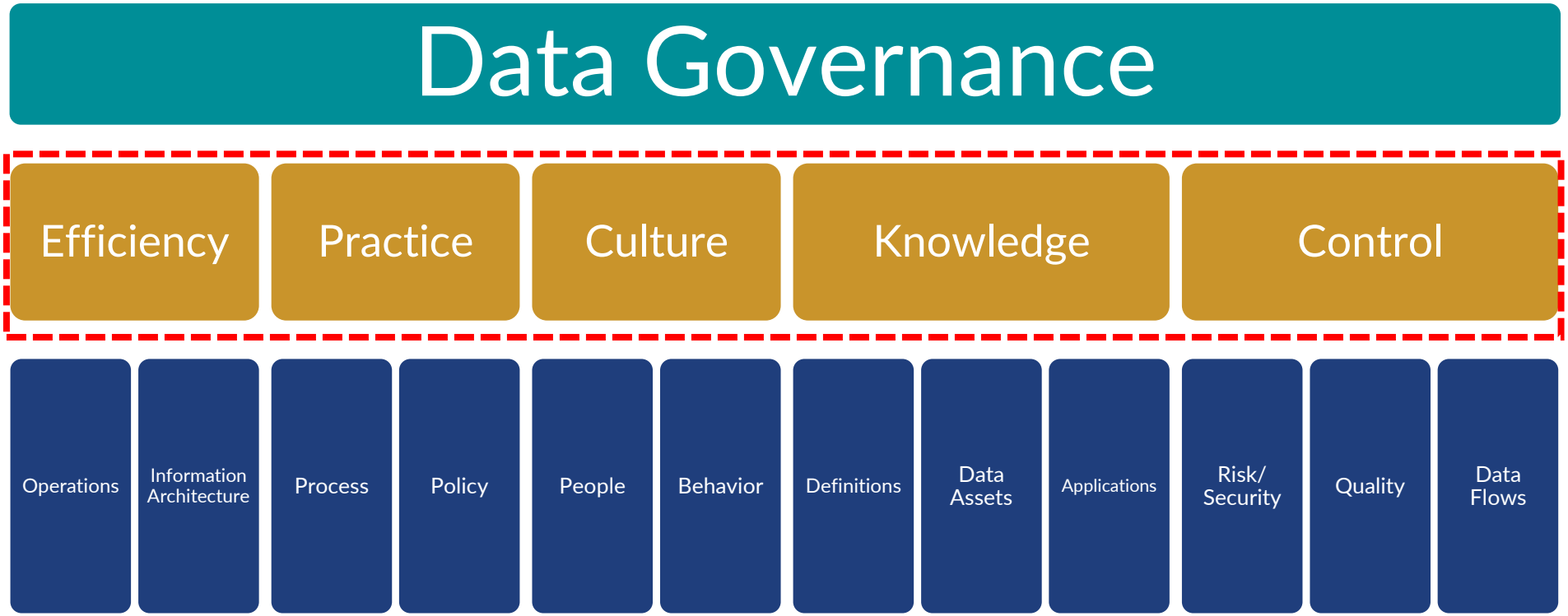
Best practice components are variable for each organization; some translate into higher success rates than others.

Start with a manageable set of data. **Look at the size of the organization, the number of data sets to be governed, and required data security compliance**

Establish which best practices will generate the highest results for your organization's data governance initiative and implement them first.



Data Governance guided by Drivers




Q&A

Thank you for attending!

Business Analytics for Data Driven Decisions (CFMA)

Supercharge your industry peer group to drive innovation

Growing into business analytics

How construction companies can use business analytics to boost margins

Case study: Large construction company upgrades critical ERP software