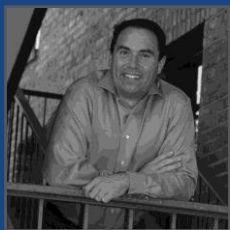


Obliterate Profit Constraints with Integrated Processes



By: Brian Andrew / David Brown





DAVID



BRIAN

D. BROWN MANAGEMENT

Helping Contractors Grow Profitably

OPERATIONS

In industry since 1988

Apprentice, electrician, superintendent, project management, executive

Stints with GC and CPA

Projects from service calls through \$20M design & build

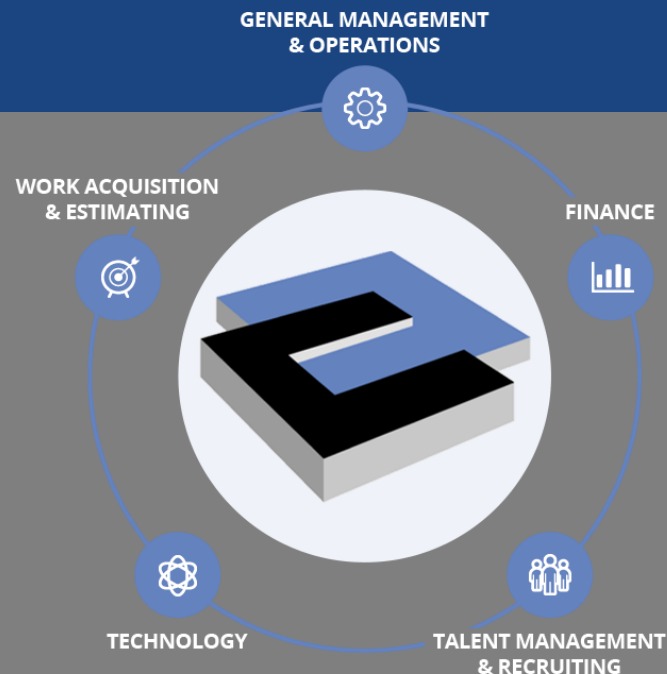
FINANCE

20+ Years in construction

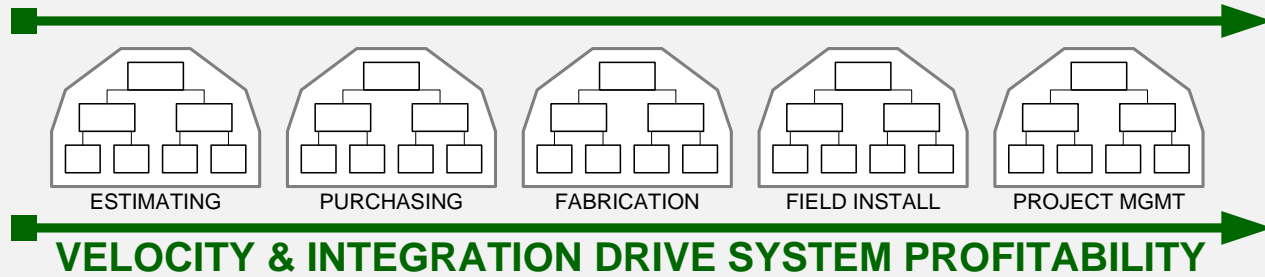
CFO of ENR Top 600 sized contractor

BBA in Accounting and Management Information Systems from UGA

Worked with hundreds of contractors “driving financial acumen from the field to the boardroom”



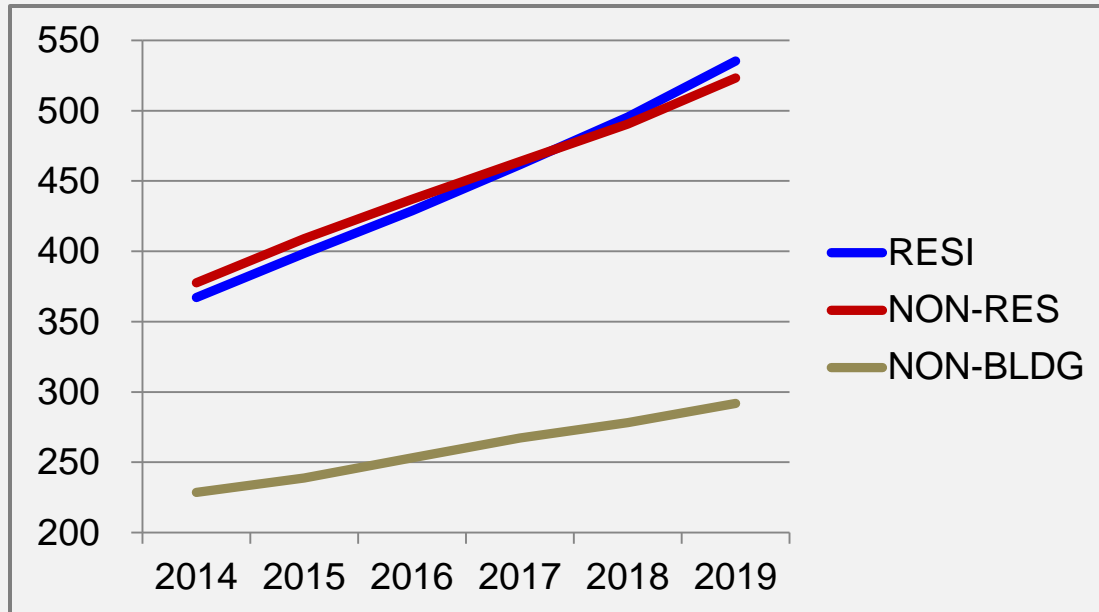
Systems Theory of Management



A system is a collection of parts brought together to accomplish an objective. If one part of the system is weak or fails the system itself cannot work.

The most difficult part of owning a construction business is defining each process that results in more or less net income.

Grow With the Economy



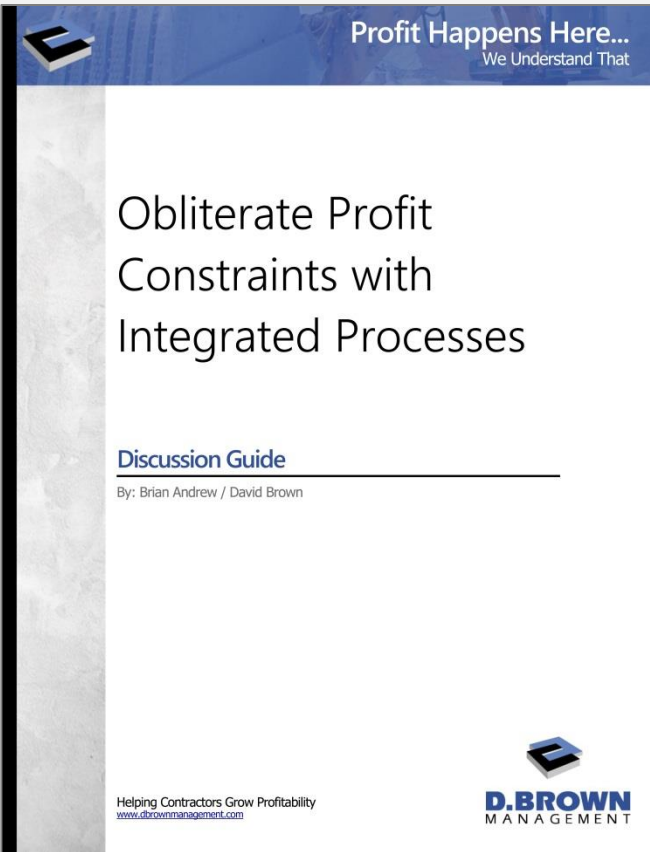
Source: FMI 2015-Q1 Industry Outlook

- Annual Growth Rate 6-9%
- Non-Residential Construction Will Be Back To Peak 2008 Levels By 2018
- Non-Building Construction Currently Above 2008 Levels But Growing Slower At 4-6%

Prepare for the Next Downturn

Leveraging the Class for Growth

Meet With Your Team / Dig Deep



Tomorrow @8AM

Specific

Measurable

Achievable

Responsible

Time



D. BROWN
MANAGEMENT
www.dbrownmanagement.com

Ideas Without Action Mean Nothing

The Most Valuable Ideas Are Ones Implemented Immediately

What Will You Do Differently Tomorrow?

List At Least Three Key Actions You Will Take Immediately Including When You Will Have Them Done By And What Your Estimated Return On Investment (ROI) Is

Tomorrow @ 8AM

NAME:	<i>Fast Freddy</i>
COMPANY:	<i>ABC Construction</i>
EMAIL:	<i>fast@abcccon.com</i>
DATE:	<i>July 22, 2015</i>
MEETING / CLASS:	<i>Growing Profitably</i>

WHAT WILL YOU DO DIFFERENTLY?	WHEN	EST. ROI (\$\$)
<i>Dig deeper into the entire material purchasing and logistics process starting with a common pricing database for the whole company.</i>	<i>8/31</i>	<i>\$ 150K</i>
<i>Build a structured project start-up process. Assign someone to lead the process that has good integration skills.</i>	<i>9/30</i>	<i>\$250K</i>
<i>Increase the rigor of the Project Review Meetings including adding additional team to the meetings.</i>	<i>8/15</i>	<i>\$50K</i>

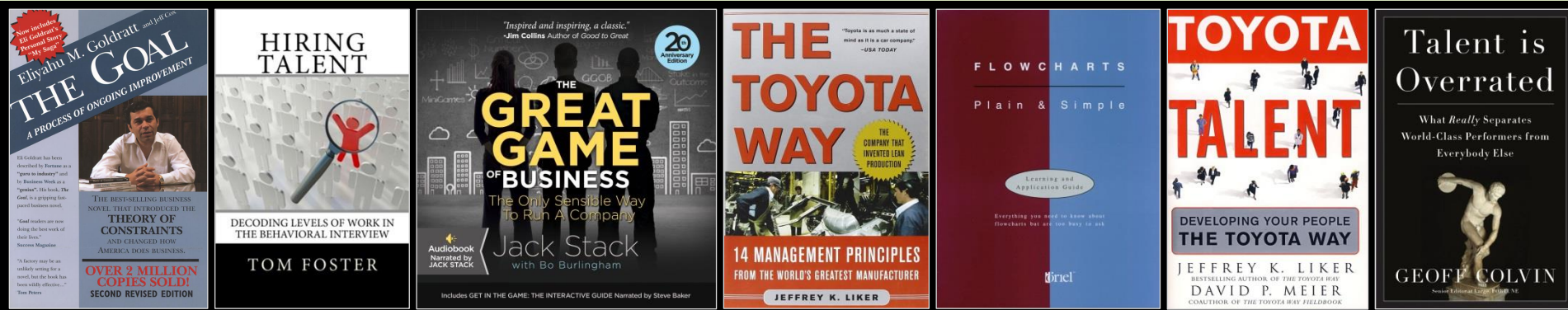
What was your biggest thought change based on the meeting / class? (Sentence or Two Below)

Our key processes are more complicated than realized and many of the steps are being done inefficiently outside our core technology systems.

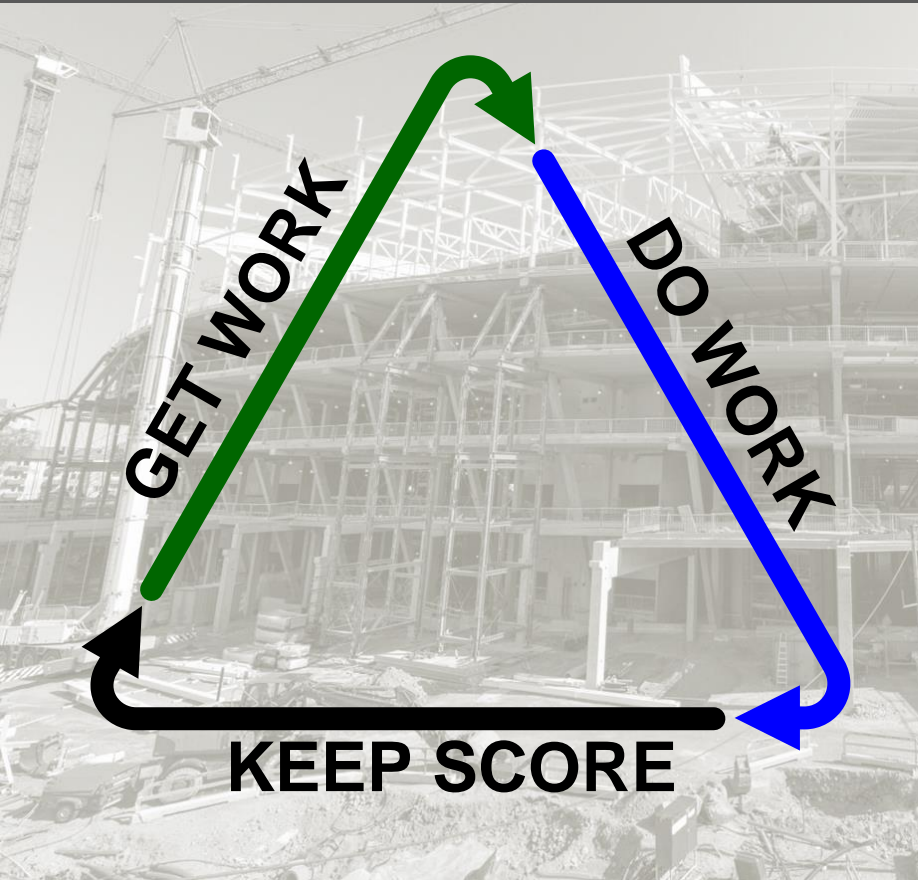
Free Books / Downloads

<http://www.dbrownmanagement.com/abc>

- Upload Your Tomorrow @8AM Forms
- Free Article / Whitepaper Downloads
- Free Book of Your Choice (First 50 People)



3 Basics of a Construction Business



PROJECT EXECUTION

Design

Planning / Detailing

Procurement

Fabrication / Kitting

Equipment

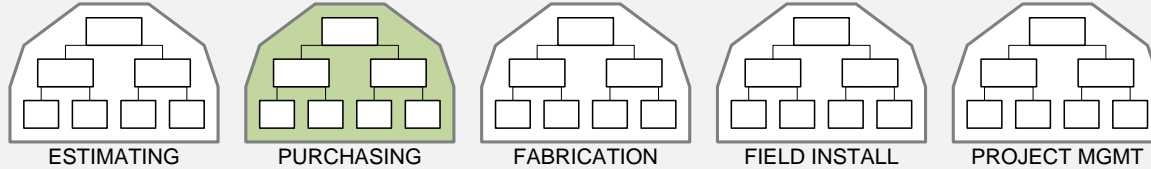
Field Installation

Project Management

Service / Warranty



Optimization: Task, Function and System Integration

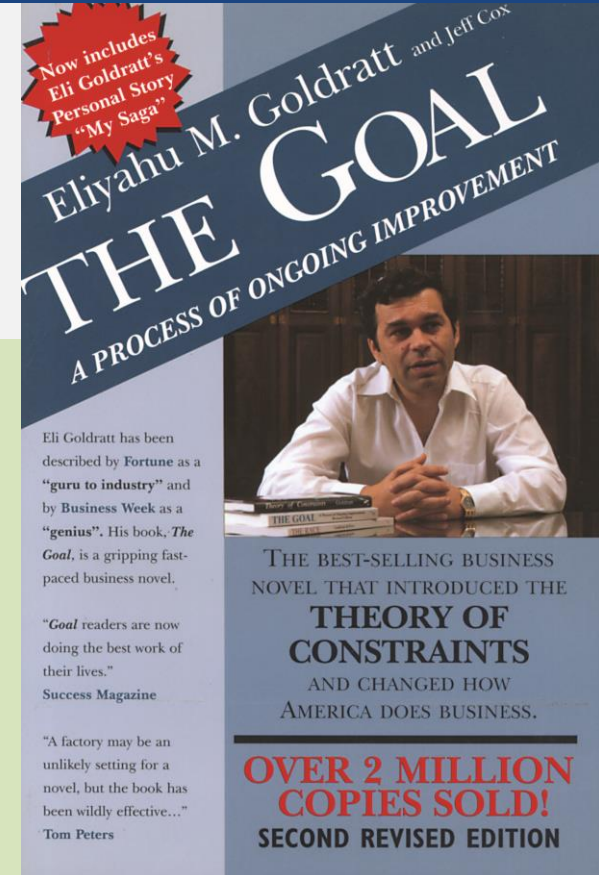


VELOCITY & INTEGRATION DRIVE SYSTEM PROFITABILITY

Task: Write a Purchase Order efficiently

Function: Purchase materials at the lowest possible price and within the timeframe required

System: Ensure that the total cost of designing, purchasing and installing the materials is done at the lowest possible cost within the project schedule



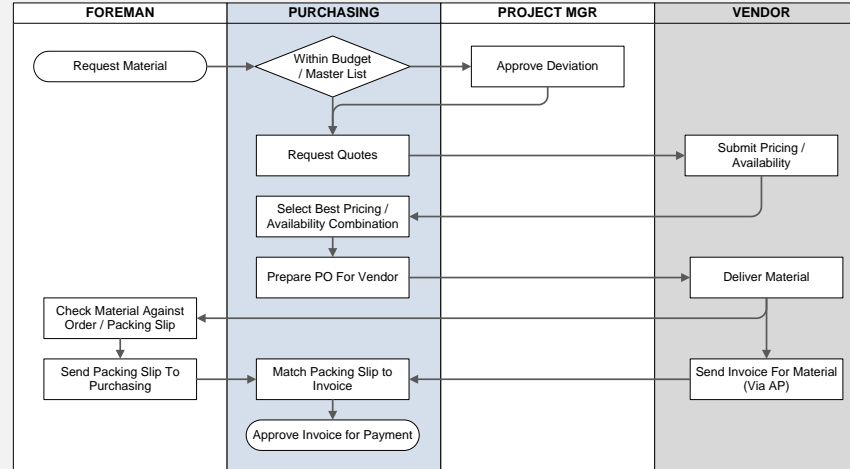
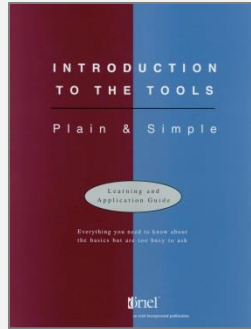
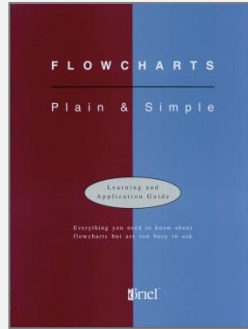
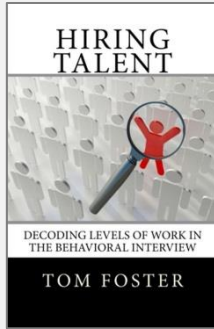
Poll Question:

Which functional area in your company has the most well defined systems?

- **Business Development**
- **Estimating**
- **Project Management**
- **Field Operations**
- **Accounting / Finance**

3 Basics of Optimization / Integration

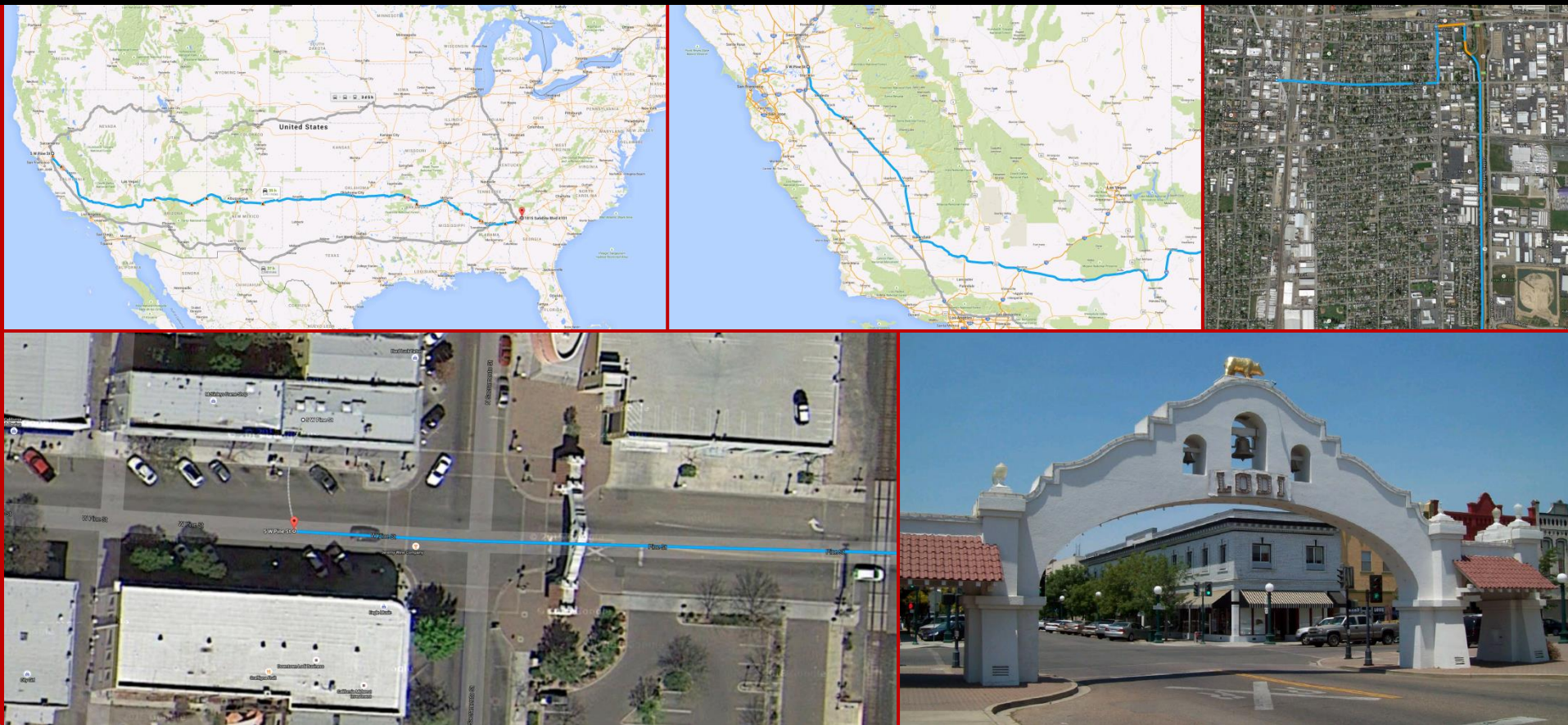
People >> Workflow >> Systems



STRATA	KEY FUNCTION	% POP
1	Perform Work	40%
2	Supervision	40%
3	Functional System	4%
4	System Integration	0.5%



Workflow – Levels of Detail (Like Maps)



Get Work – Work Acquisition



- **Market Strategy**
- **Marketing**
- **Business Development** (Relationships)
- **Opportunity Management** (Go / No-Go Decision)
- **Estimating** (Determine Cost)
- **Sales** (Setting Price / Closing the Deal)

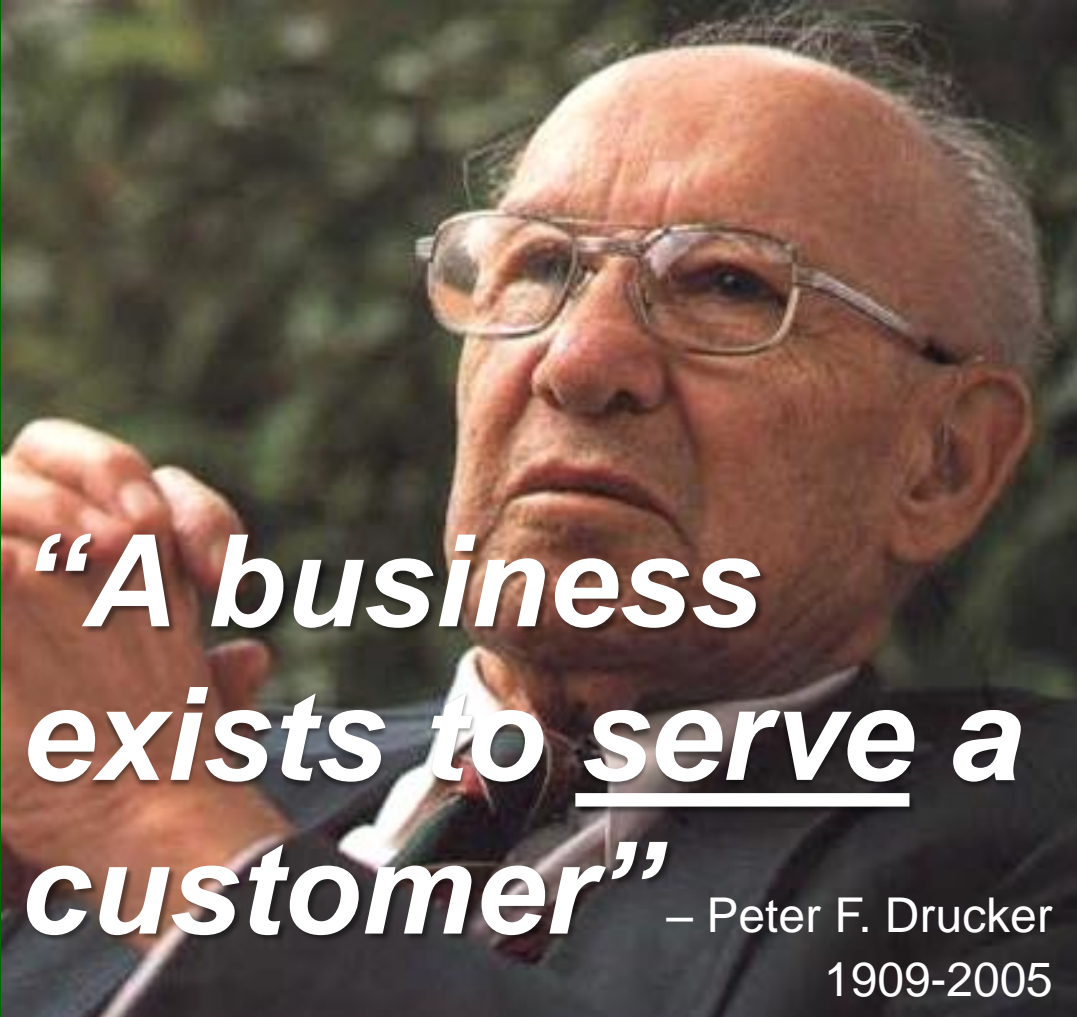


Do Work – Project Execution



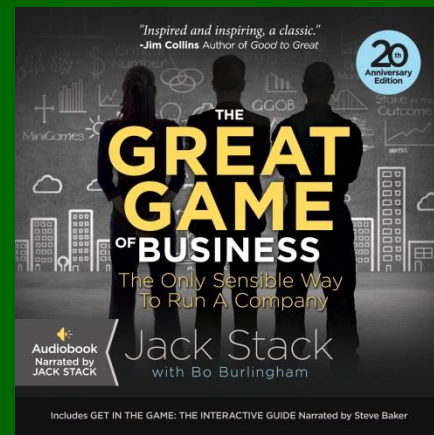
- Design
- Planning / Detailing
- **Procurement** (Commodities / Equipment / Subs)
- **Fabrication / Kitting**
- **Equipment** (Trucks, Tractors, Tools, Etc.)
- **Field Installation** (Building the Project)
- **Project Management**
- **Service / Warranty Management**





“A business exists to serve a customer”

– Peter F. Drucker
1909-2005



“People who run companies know that there are really only two critical factors in business. One is to make money and the other is to generate cash.”

– Jack Stack, CEO of SRC

3 Primary Purposes of a Construction Business

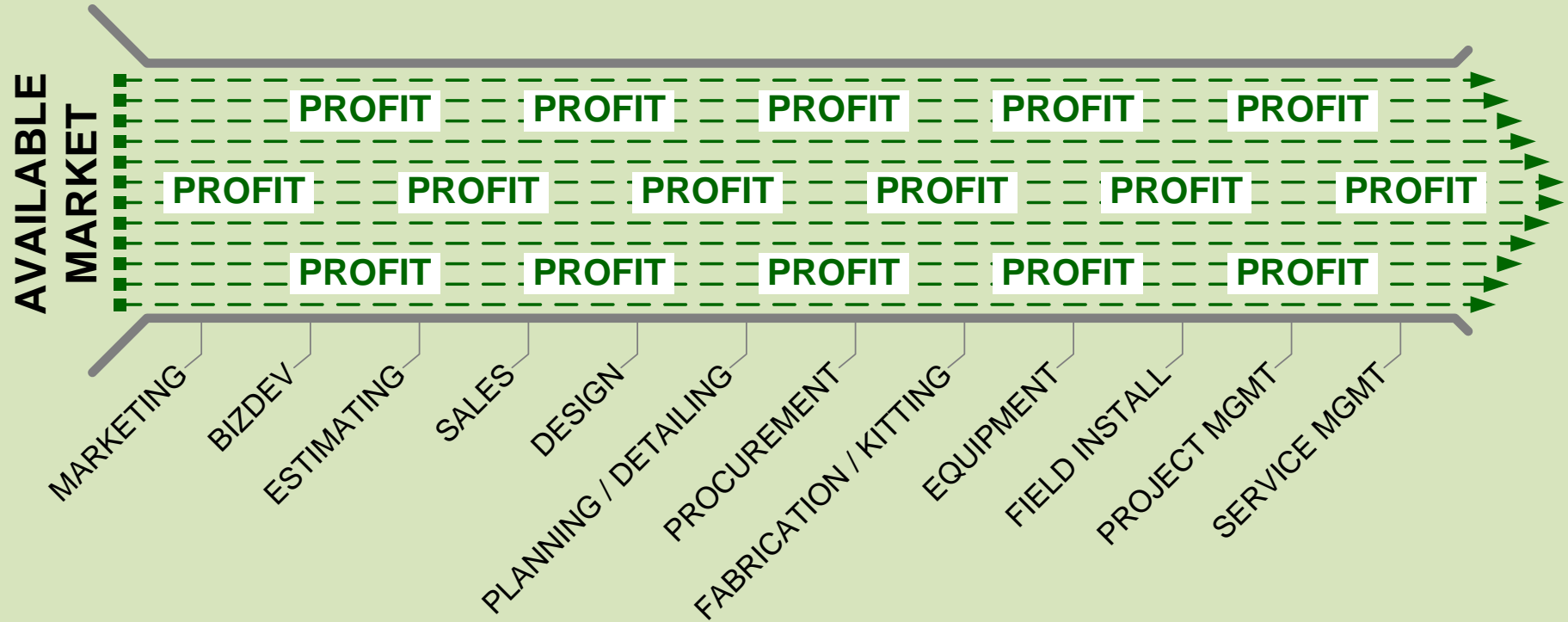
1. Build Great Projects
2. Make a Profit
3. Generate Cash

Can you be consistently profitable if you are consistently delivering great projects?

Can you consistently generate cash if you aren't consistently profitable?

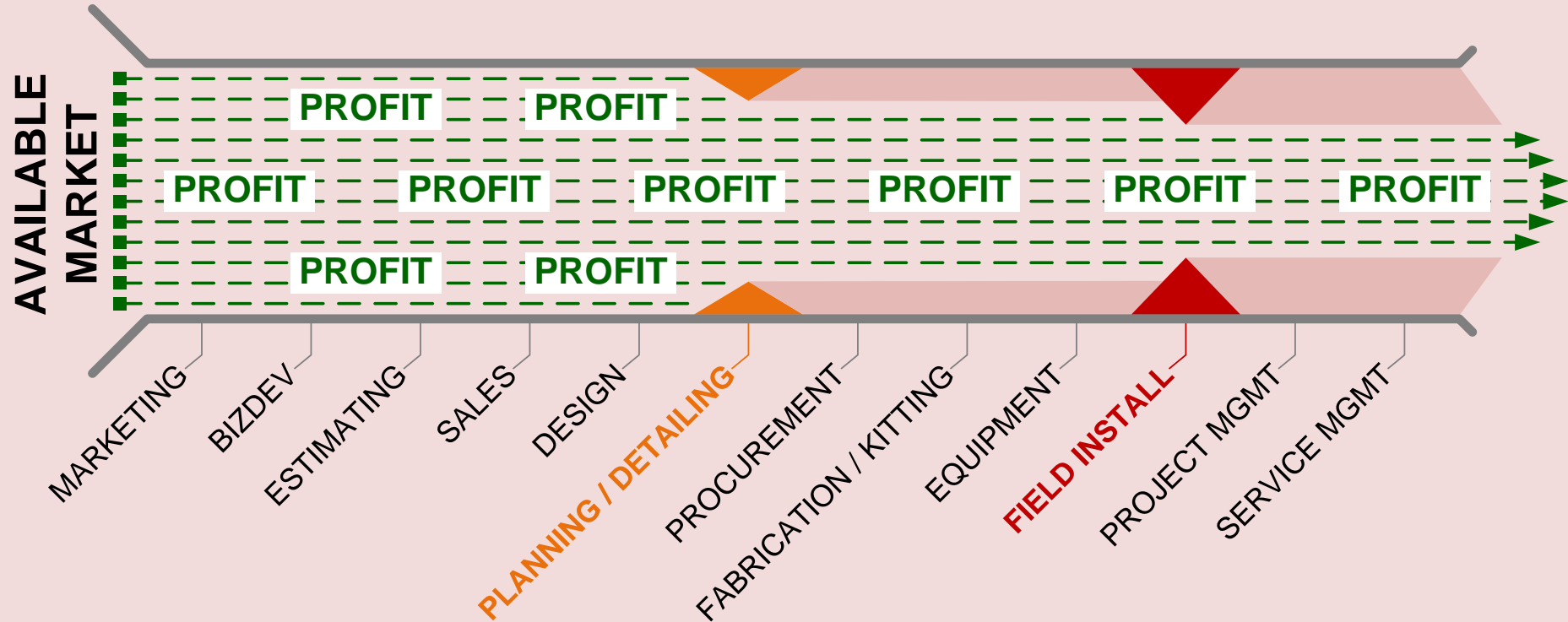
If you used consistent profitability and cash flow as the ultimate "grade" would that drive the right changes to Work Acquisition and Project Execution processes?

Profit Flow – What Are Your Processes?

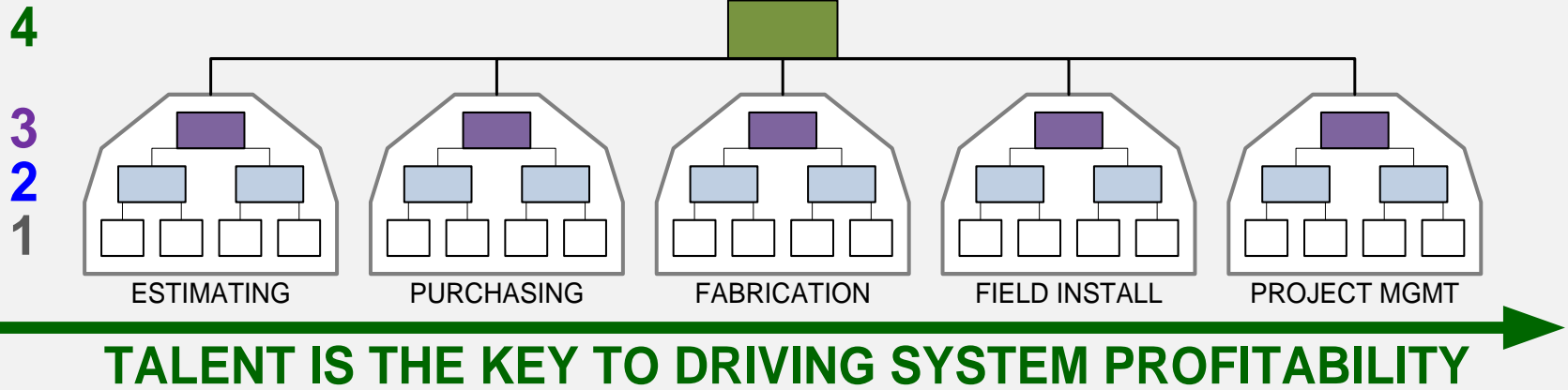


Profit Constraints – What's Holding You Back?

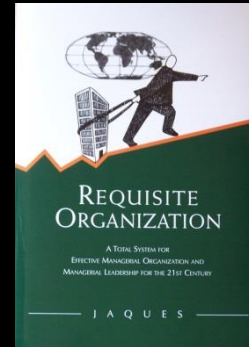
What Is It Worth to Remove Those Constraints?



Elliott Jaques – Levels of Work



STRATA	KEY FUNCTION	% POP
1	Perform Work	40%
2	Supervision	40%
3	Functional System	4%
4	System Integration	0.5%



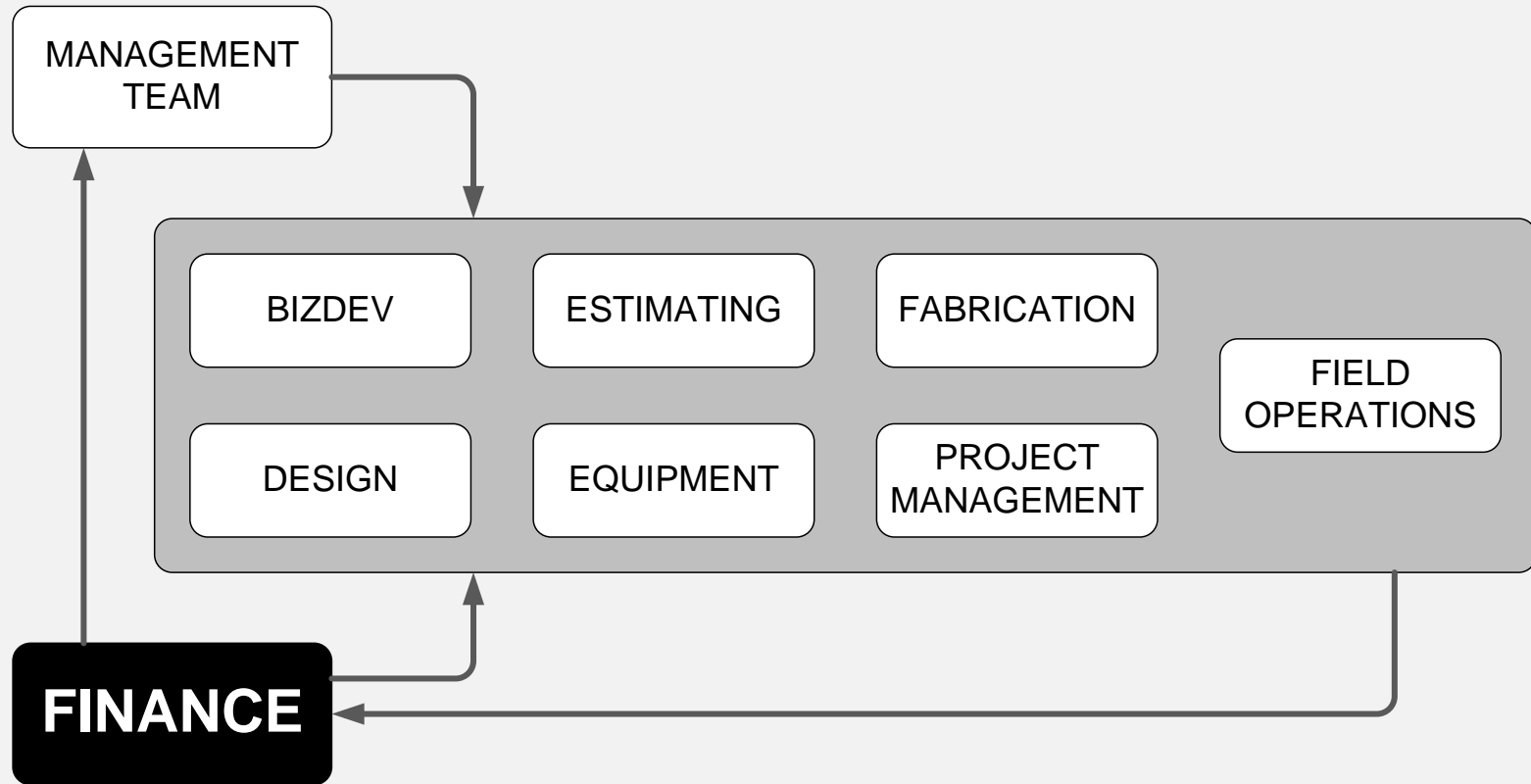
Elliott Jaques (1917 – 2003) was an organizational psychologist, known for developing the notion of requisite organization from his 'stratified systems theory.'

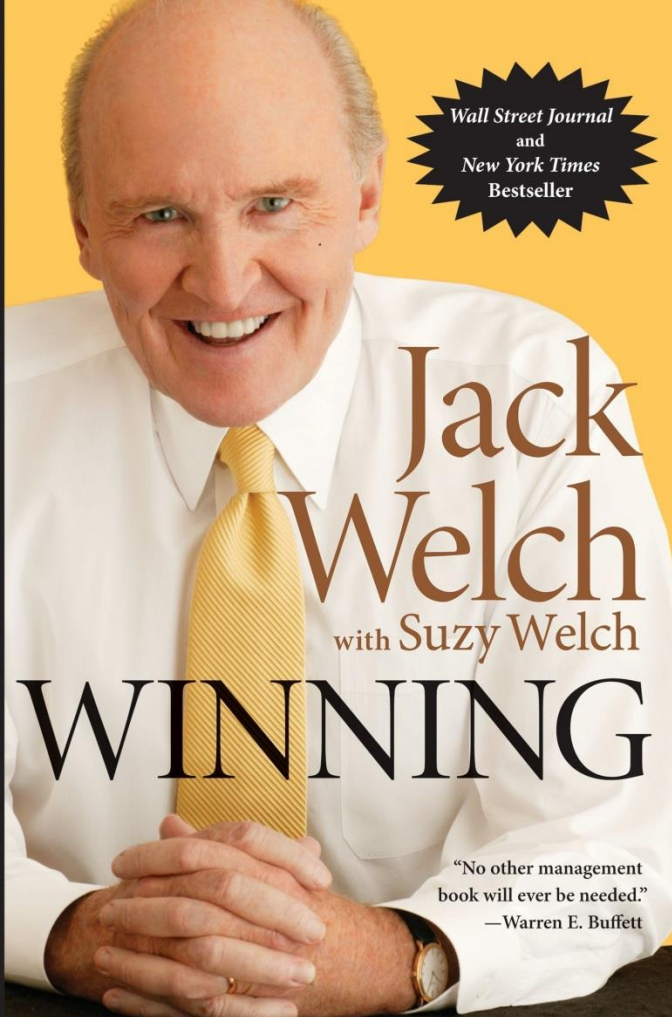
Poll Question:

What constrains your profit the most?

- Qualified Field Labor
- Qualified Management Talent
- Technology
- Lack of Available Work
- Not Enough Working Capital

Keep Score - Finance

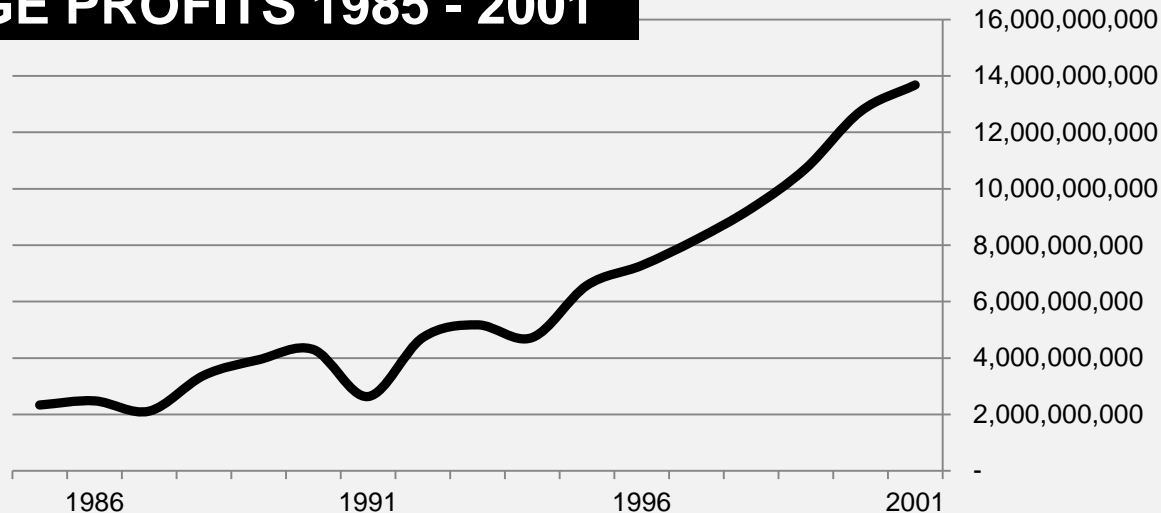




“All reasonable people will come to the same answer if given the same information”

Jack Welch – Retired Chairman, GE

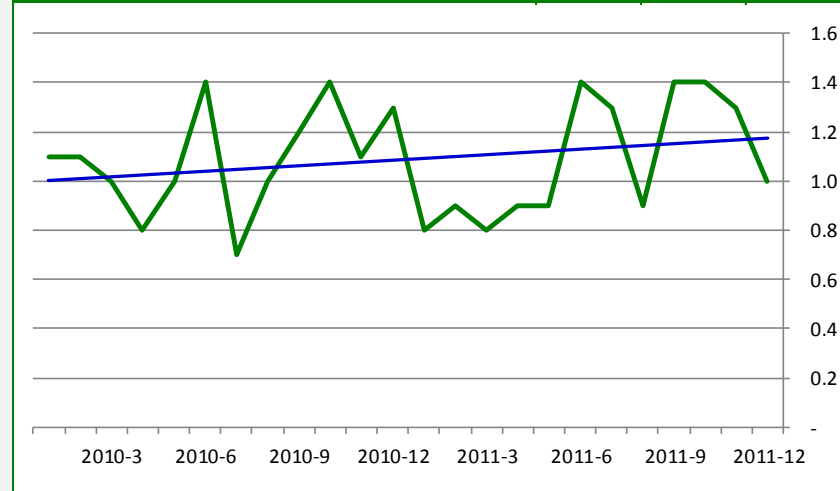
GE PROFITS 1985 - 2001



Feedback: Throughput (P&L Areas)

- Revenue
- Gross Margins
- Indirect Costs (Over / Under)
- Overhead
- Net Margins
- Cash Flow

CASH METRIC TRENDING - PRIOR 24 MONTHS



Current Performance

Historical Trends

Forecasts

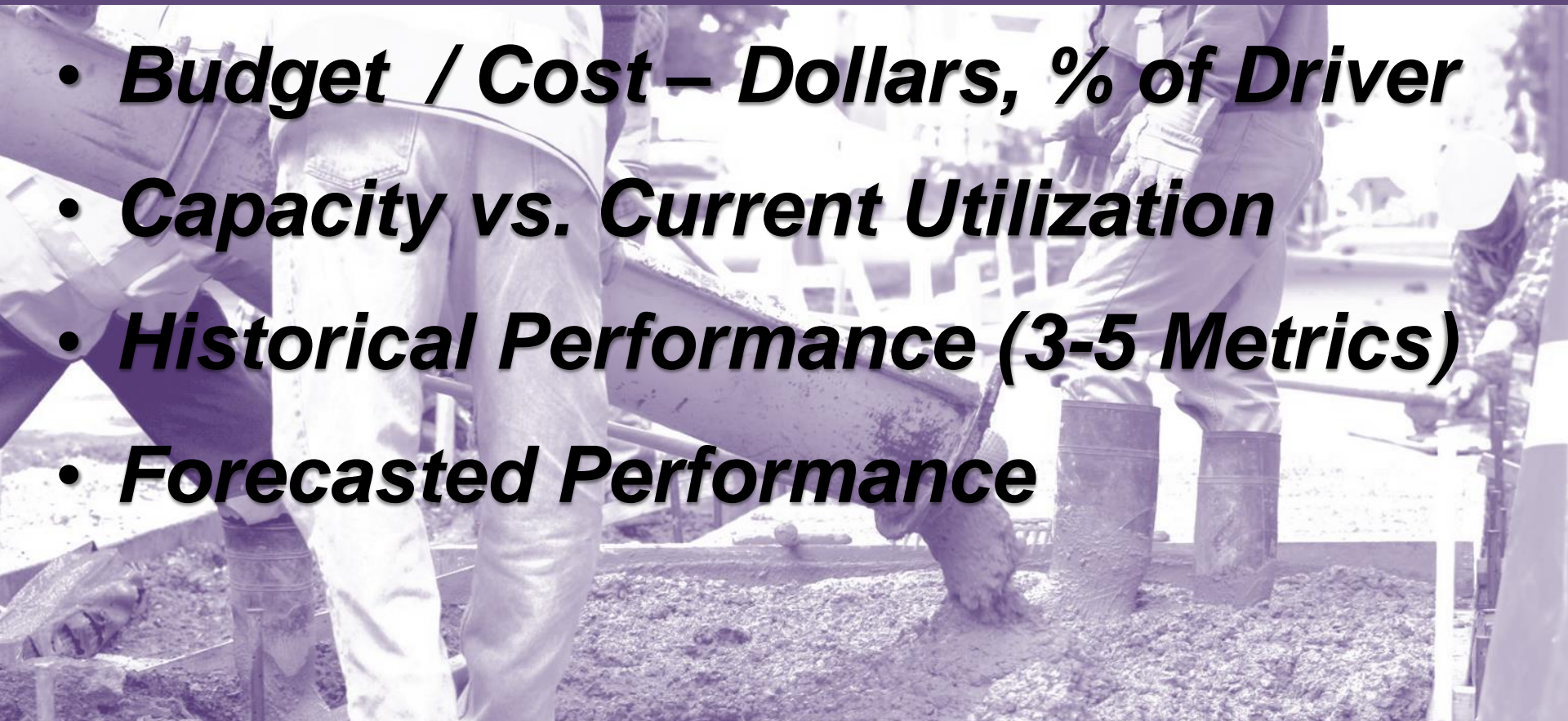
Whole Company

Market Groups / Divisions

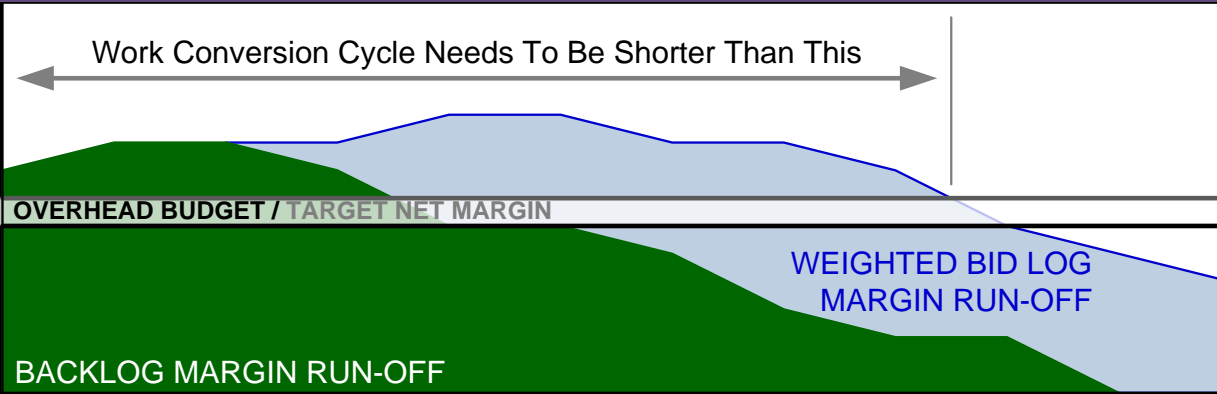
Market Areas

Feedback: Functional Areas

- ***Budget / Cost – Dollars, % of Driver***
- ***Capacity vs. Current Utilization***
- ***Historical Performance (3-5 Metrics)***
- ***Forecasted Performance***



Example: Work Acquisition



INTEGRATION REQUIRED

- Opportunity tracking system / review
- Project review process (accurate WIP)
- Backlog run-off forecast system / logic
- Indirect volume / cost logic
- Overhead budget

KEY FEEDBACK

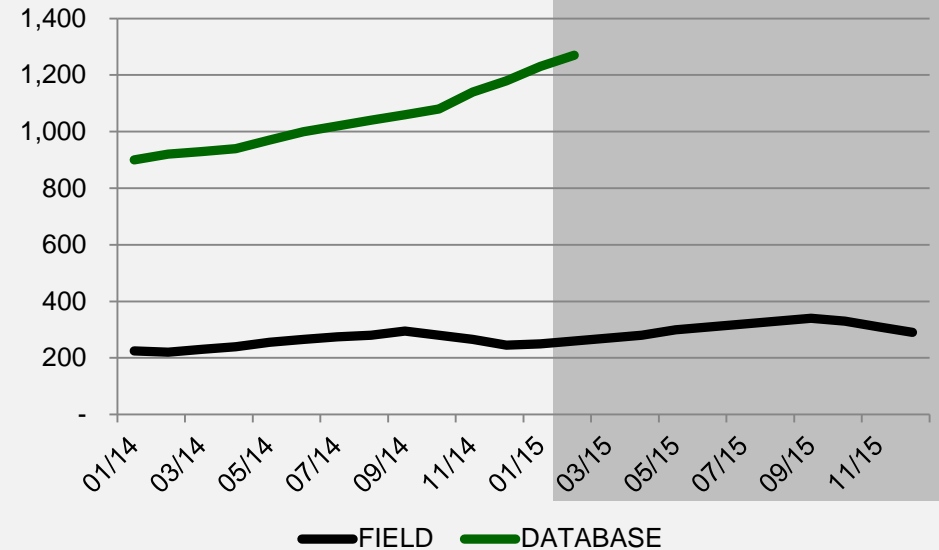
- How urgent (or not) is securing new work (set markup)
- Do we have opportunities in our pipeline (increase BizDev efforts)
- Upcoming cash flow or profitability problems

Example: Field Workforce

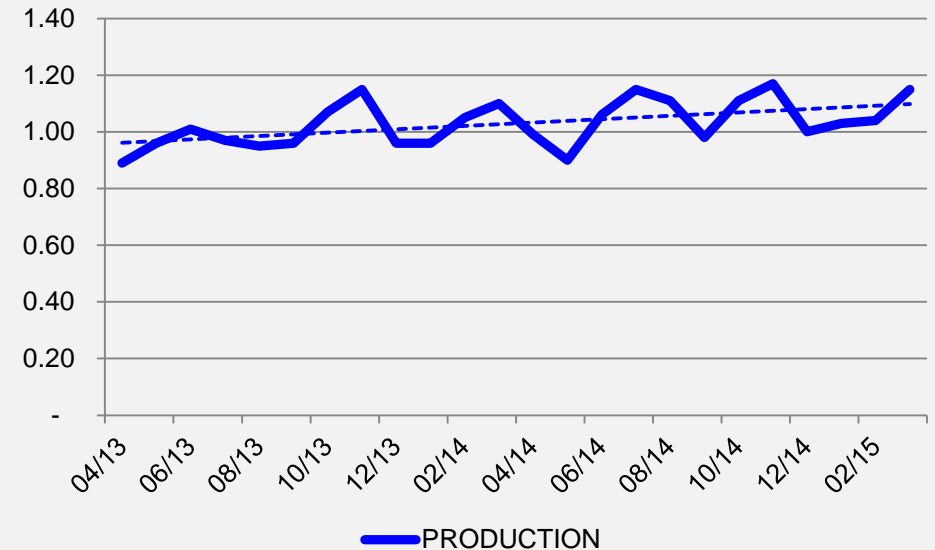
FIELD FCST	340	CURRENT	3.8
TARGET	5X	DATABASE	1,290
DATABASE	1,700	REQUIRED	(410)

LAST 90 DAYS		LAST 12 MONTHS	
INCIDENTS	1	INCIDENTS	7
LOST TIME	0	LOST TIME	2

FIELD FORECAST / RECRUITING DATABASE



PRODUCTION SUMMARY (PRIOR 24 MTHS)

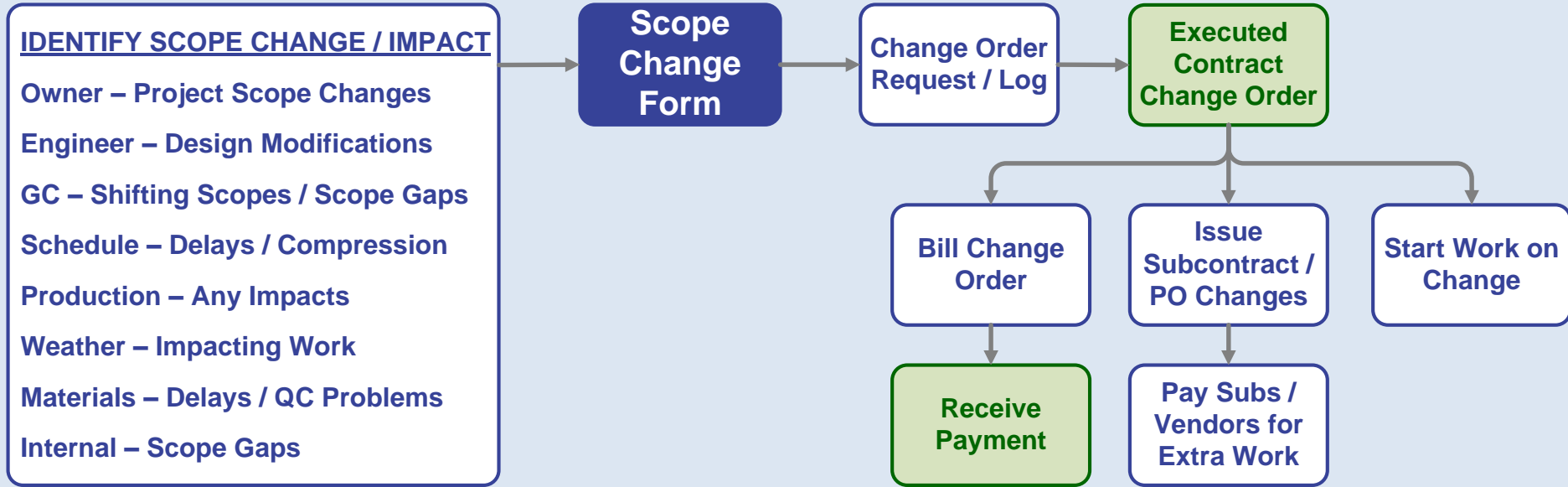




**“Give me a place to
stand and with a
lever I will move the
whole world.”**

– Archimedes

Leveraging Real Data to Drive Change

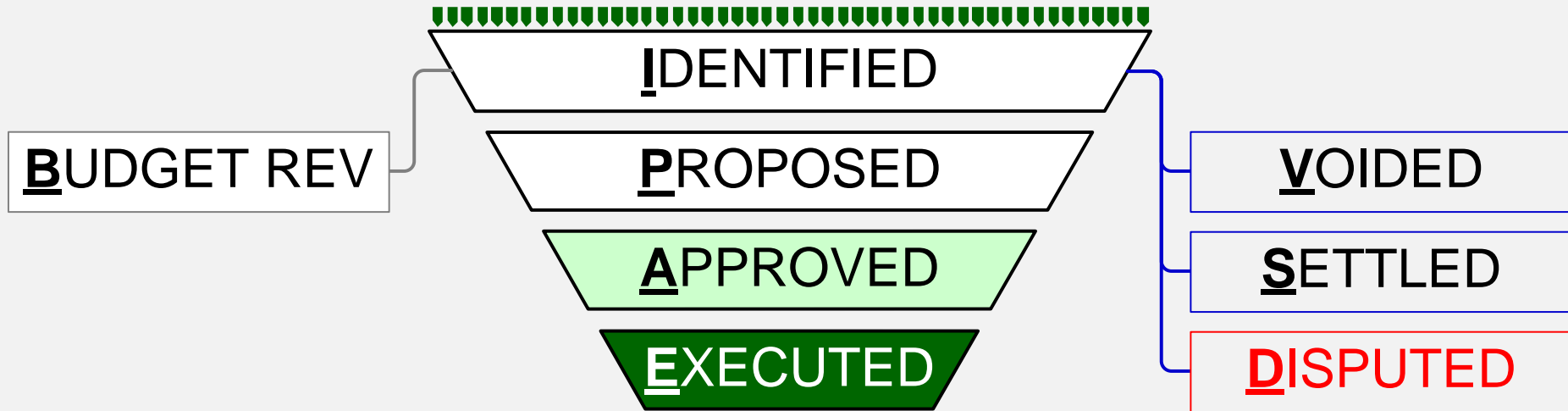


The process is this simple right?

- Focus on what you can control – **IDENTIFICATION**
- Monitor the process to manage the exceptions and stay close to “on-track”

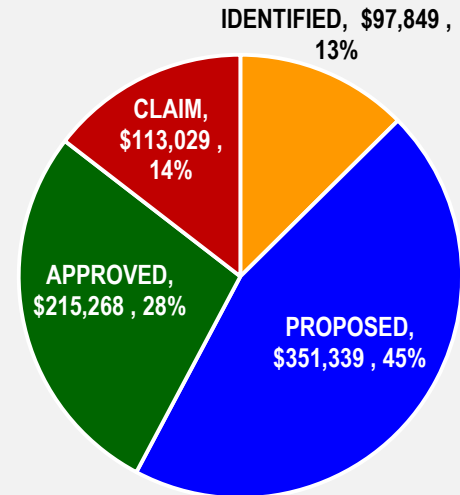
Leveraging Real Data to Drive Change

- Clear change processing stages need to be defined
- Summarize Top 10 list by project / customer / change



Leveraging Real Data to Drive Change

STATUS		TOTAL		0-15 DAYS		16-30 DAYS		31+ DAYS	
I	IDENTIFIED	39	\$ 97,849	26	\$ 58,500	11	\$ 12,507	2	\$ 26,842
P	PROPOSED	93	\$ 351,339	22	\$ 49,500	53	\$ 60,261	18	\$ 241,578
A	APPROVED	45	\$ 215,268	15	\$ 33,750	18	\$ 20,466	12	\$ 161,052
SUBTOTAL		177	\$ 664,456	63	\$ 141,750	82	\$ 93,234	32	\$ 429,472
				21%		14%		65%	
E	EXECUTED	169	\$ 1,195,264	23	\$ 51,750	28	\$ 31,836	118	\$ 1,111,678
SUBTOTAL		346	\$ 1,859,720	86	\$ 193,500	110	\$ 125,070	150	\$ 1,541,150
S	SETTLED								
V	VOIDED								
C	CLAIM	12	\$ 113,029	1	\$ 2,250	3	\$ 3,411	8	\$ 107,368
B	BUDGET REV								



Leveraging Real Data to Drive Change

TOP 10 PROJECT MANAGERS WITH OUTSTANDING CHANGES

PM	TOTAL	INCOMPLETE			PENDING		
		0-15	16-30	31+	0-15	16-30	31+
CC	1,068,798	239,832	226,102	179,356	131,828	185,512	106,168
ED	1,048,011	232,809	101,104	206,028	226,174	200,684	81,212
BC	1,045,716	212,643	97,789	218,737	186,728	198,630	131,189
DB	1,026,000	115,250	268,500	126,500	315,200	110,350	90,200
SJ	1,006,431	104,572	216,527	187,335	235,788	232,914	29,295
SB	997,064	118,304	174,264	190,176	147,781	195,970	170,569
CS	796,301	203,427	195,511	86,683	41,167	202,274	67,239
BA	773,150	27,774	67,365	60,618	245,296	127,659	244,438
DO	745,439	169,981	194,202	94,348	63,199	44,073	179,636
EG	711,663	231,185	159,650	89,527	28,917	83,375	119,009
	9,218,573	1,655,777	1,701,014	1,439,308	1,622,078	1,581,441	1,218,955

- **Slow processing of changes impacts cash flow at best but often hurts profitability and customer satisfaction**
- **Allows managers to spot problem changes / projects / PMs rapidly**

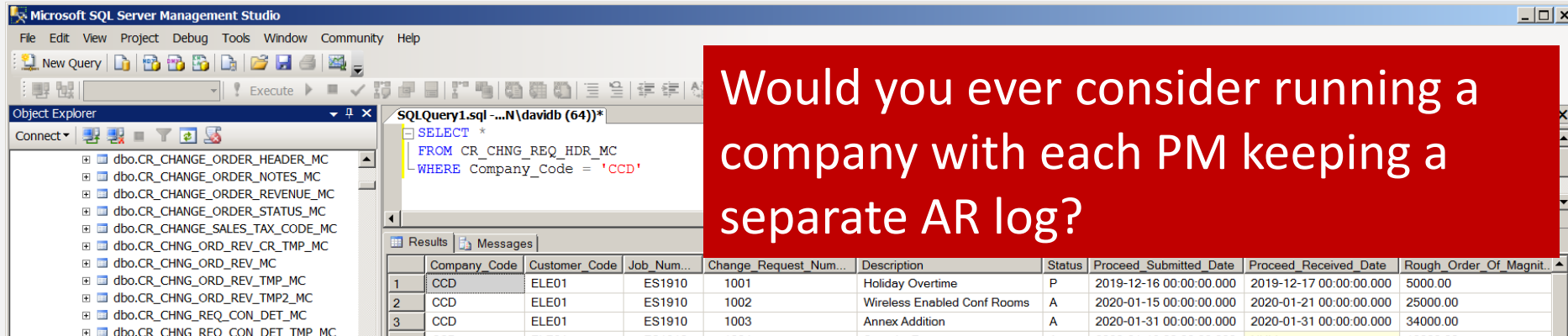
One List You Don't Want To Be On Top Of

Leveraging Workflow Data / Exceptions

- Scope change / impact summary email sent weekly to management team
- Changes stuck in process
- Changes without budgets / bad budgets
- Subcontract changes not tied to change orders
- Change orders not billed / paid

Leveraging Real Data to Drive Change

- Difficult if not impossible information to summarize if each PM keeps a separate change log in ~~Excel~~
- Data is readily available in nearly every accounting / project management system – requiring some relatively simple data manipulation



The screenshot shows the Microsoft SQL Server Management Studio interface. The 'Object Explorer' on the left lists various database objects. The 'Query Editor' in the center contains the following SQL query:

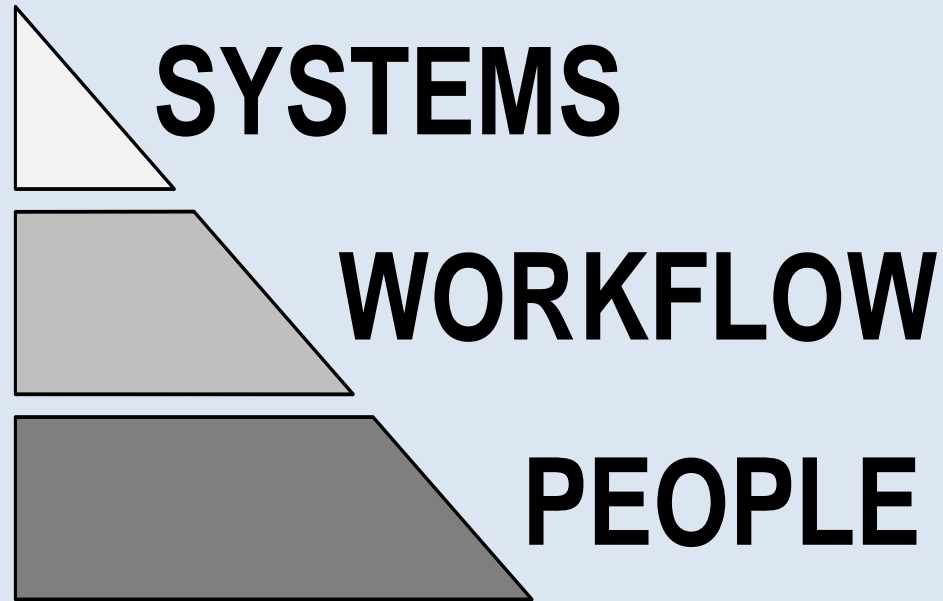
```
SELECT *  
FROM CR_CHNG_REQ_HDR_MC  
WHERE Company_Code = 'ccd'
```

The 'Results' pane at the bottom displays a table with the following data:

	Company_Code	Customer_Code	Job_Num...	Change_Request_Num...	Description	Status	Proceed_Submitted_Date	Proceed_Received_Date	Rough_Order_Of_Magnit.
1	CCD	ELE01	ES1910	1001	Holiday Overtime	P	2019-12-16 00:00:00.000	2019-12-17 00:00:00.000	5000.00
2	CCD	ELE01	ES1910	1002	Wireless Enabled Conf Rooms	A	2020-01-15 00:00:00.000	2020-01-21 00:00:00.000	25000.00
3	CCD	ELE01	ES1910	1003	Annex Addition	A	2020-01-31 00:00:00.000	2020-01-31 00:00:00.000	34000.00

A red text box is overlaid on the right side of the screenshot, containing the text: "Would you ever consider running a company with each PM keeping a separate AR log?"

3 Basics of Optimization / Integration

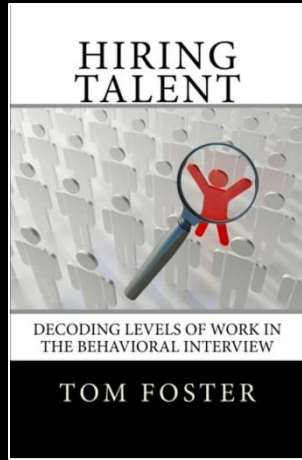


Build a foundation of people and workflow before system integration or else scalability will be impacted



Norman Schwarzkopf
The Value of People
“Giving Orders to Tanks”

Process Troubleshooting & Strata Levels

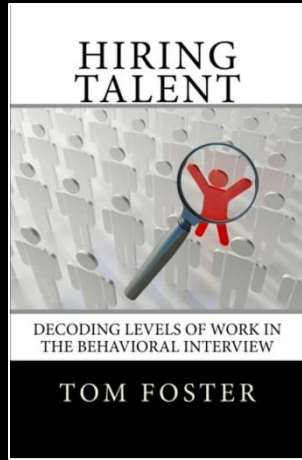


STRATA	KEY FUNCTION	PROBLEM SOLVING	% POP
1	Perform Work	Trial & Error	40%
2	Supervision	Experience	40%
3	Functional System	Root Cause Analysis	4%
4	System Integration	Root Cause Analysis	0.5%

You won't be able to troubleshoot / streamline processes without strata level 3 and 4 people (internal or external)

<https://www.youtube.com/playlist?list=PL0ADD4CCF8627BFFE>

Process Troubleshooting & Strata Levels

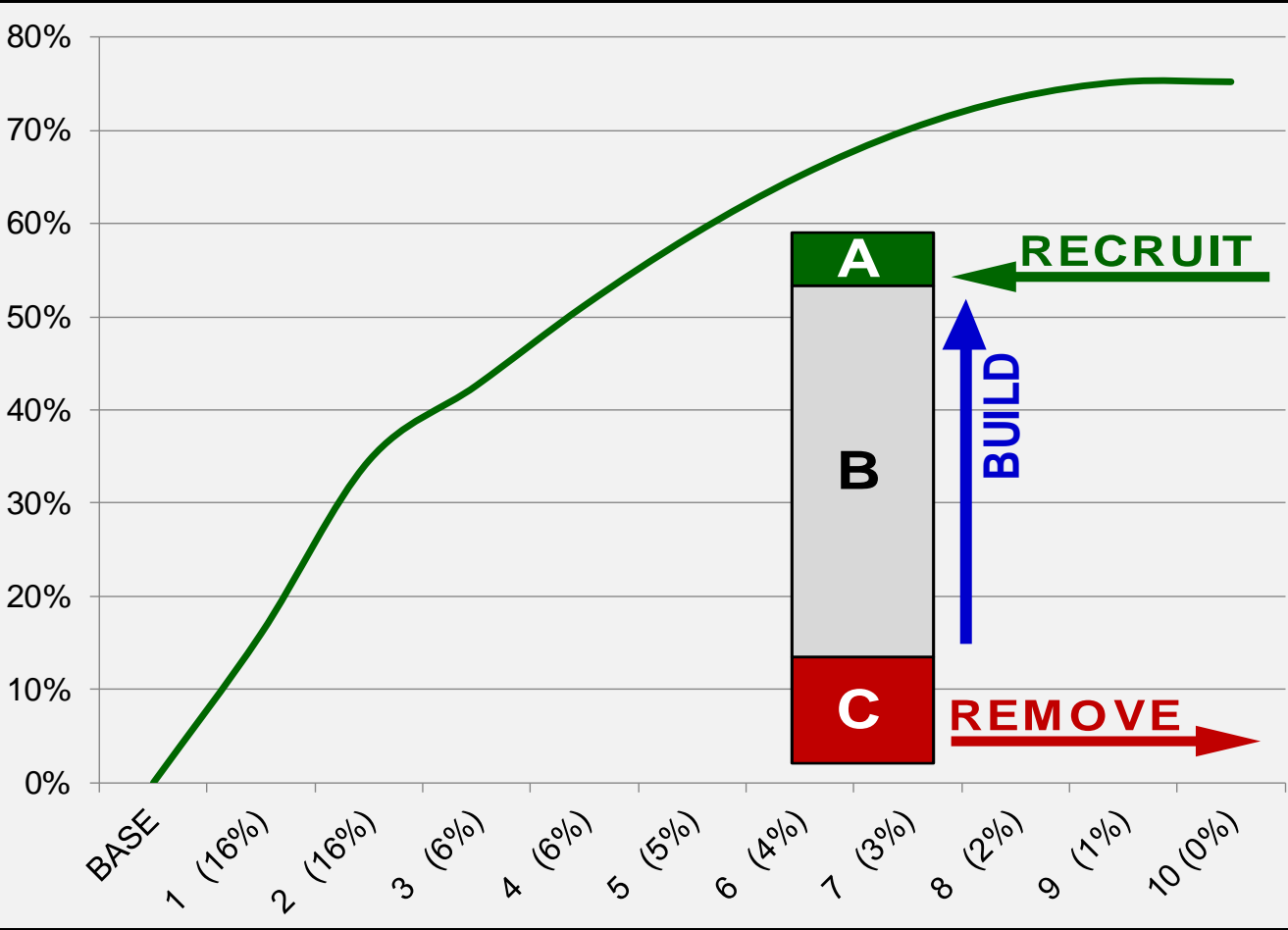


STRATA	KEY FUNCTION	LOGICAL THINKING	% POP
1	Perform Work	Or...or...or	40%
2	Supervision	And...and...and	40%
3	Functional System	If...then	4%
4	System Integration	If...and only if...then	0.5%

You won't be able to troubleshoot / streamline processes without strata level 3 and 4 people (internal or external)

<https://www.youtube.com/playlist?list=PL0ADD4CCF8627BFFE>

10 YEAR PRODUCTIVITY IMPROVEMENT WITH 'FORCED RANKING' TALENT MANAGEMENT



Steve Scullen, an associate professor of management at Drake University in Des Moines, found that forced ranking, including the firing of the bottom 5% or 10%, results in an impressive **16% productivity improvement** over the first couple of years. After that the gains drop off, from 6% climbs in the third and fourth years to basically zero by year 10.

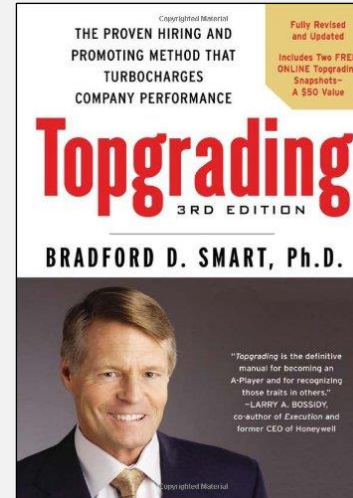
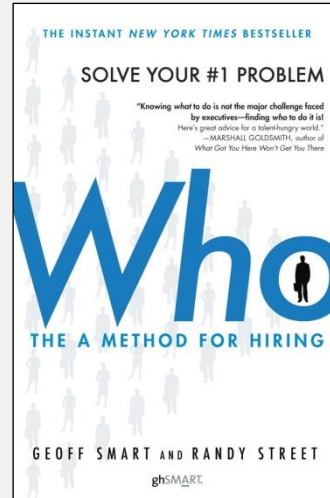
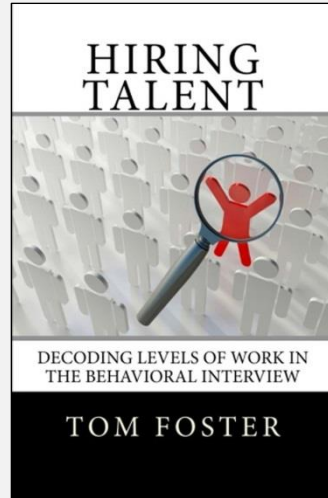
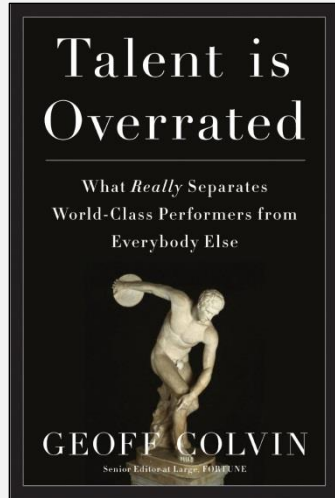
ROLES: Perspectives, Learning & Teaching

- Business Development
 - Estimating
 - Engineering / Design
 - Project Execution
 - Procurement
 - Finance
 - Owners / Executives
- What are the top 3 priorities for each role – what is their “Mission”?
 - Where do the different roles interact with each other?
 - What are the key differences on those interactions? Level of detail? Speed? Communication styles?
 - What are the key differences in personality traits between the roles?

EXAMPLE: Finance Team & Project Team

WHAT TO TEACH THE PROJECT TEAM	WHAT TO LEARN FROM THE PROJECT TEAM
What Over / (Under) Billings Are	The Work Acquisition Cycle Including Average Timelines and Costs
Cash Flow Dynamics of a Project and the Company	How Estimates are Built, Including Key Assumptions, Pricing, Markup, Scope and Clarifications
How a WIP Report Works and Why Accurate Projections are so Important	Budgeting Process, Including Scope for Each Cost Code
Gross Margin, Velocity and Company Profitability	Key Risks and Installation Dynamics of Each Phase of Work
The Cost of Risk and Value of Good Contract Administration	Approval Process for the Schedule of Values (SOV), Change Orders and Billings

Talent Books – Learning More

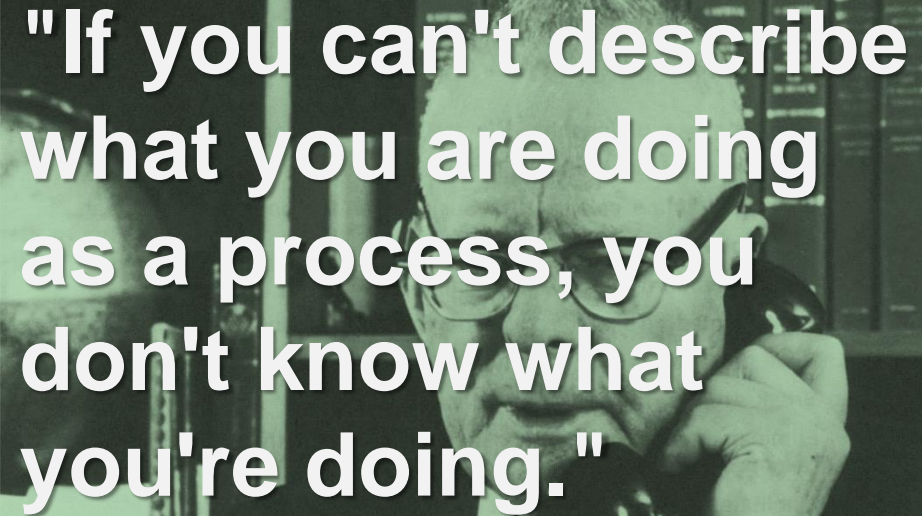


FREE BOOK: First 50 People Who Upload 8AM

<https://www.dbrownmanagement.com/ABC>

Business-Level Workflows

- Prospect to Opportunity
- Opportunity to Contract
- Contract to Cash
- Procure to Pay
- Recruit to Retire

A black and white photograph of W. Edwards Deming, an older man with glasses, wearing a suit and tie, holding a telephone receiver to his ear. The photo is partially obscured by text.

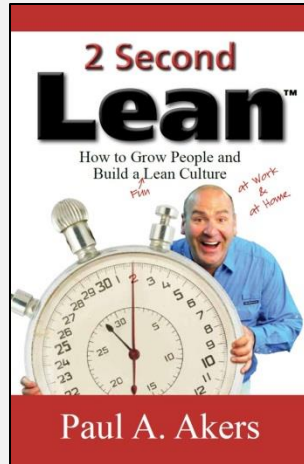
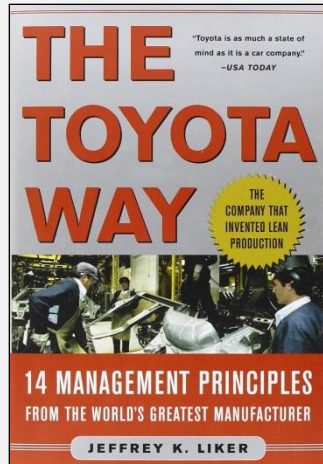
"If you can't describe what you are doing as a process, you don't know what you're doing."

- W. Edwards Deming (1900 – 1993)

William Edwards Deming (October 14, 1900 – December 20, 1993) was an American statistician, professor, author, lecturer, and consultant. He is perhaps best known for the "Plan-Do-Check-Adjust" cycle popularly named after him. In Japan, from 1950 onward, he taught top business managers how to improve design (and thus service), product quality, testing, and sales by various means, including the application of statistical methods. President Reagan awarded him the National Medal of Technology in 1987.

LEAN Culture / Tools / Methodologies

- Kaizen – Small Continuous Improvements
- Pull Through Production – What Do You Need?
- PDCA – Plan >> Do >> Check >> Adjust



Lean Six Sigma
Green Belt 10 Day Class

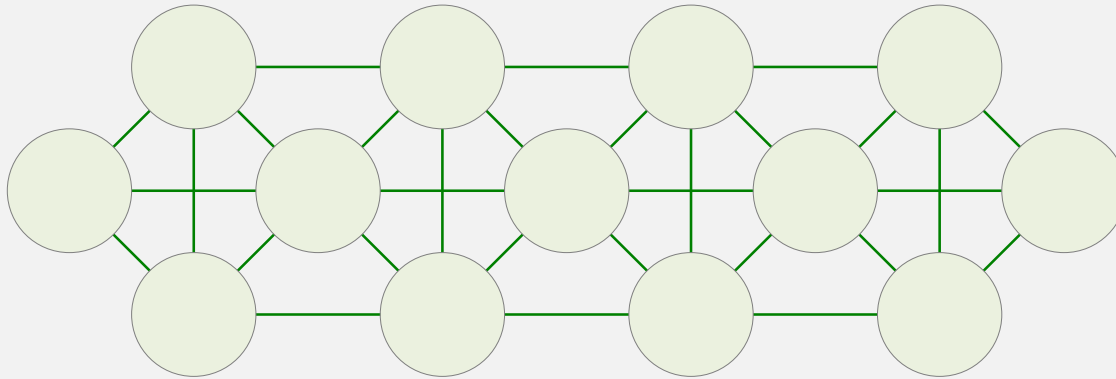
Poll Question:

Which of the following meetings has (or could have) the biggest impact on your business?

- **Marketing / BizDev Activity / Opportunity Review**
- **Project Startup / Exit Planning**
- **Labor Production Reviews**
- **Financial Reviews (Project / Company)**
- **Talent Reviews**

#1 Process: Communication

- **Regular Meeting Rhythm W/ Structured Agendas**
- **Facilitated Process Improvement Meetings**
- **Cross-Functional Communication / Relationships**



Operating Rhythms – Meetings / Structured Agendas

- Marketing / BizDev Activity Review
- Opportunity Review
- Project Startup / Exit Planning
- Jobsite Safety (Daily / Weekly)
- Labor Production Reviews (Weekly)
- Project Reviews (Monthly)
- Financial Reviews (Monthly)

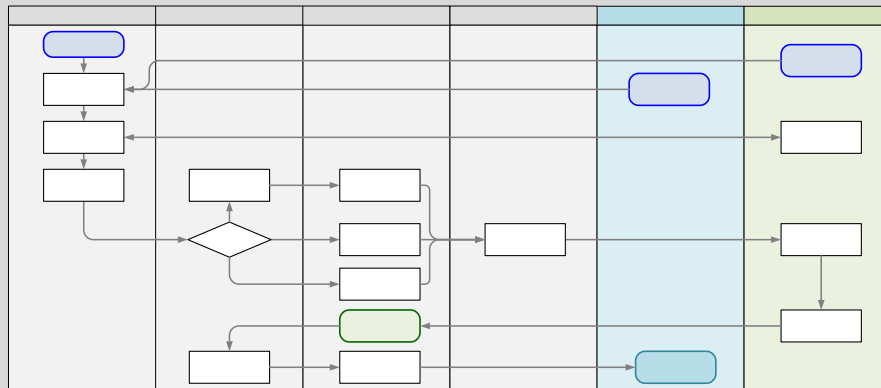
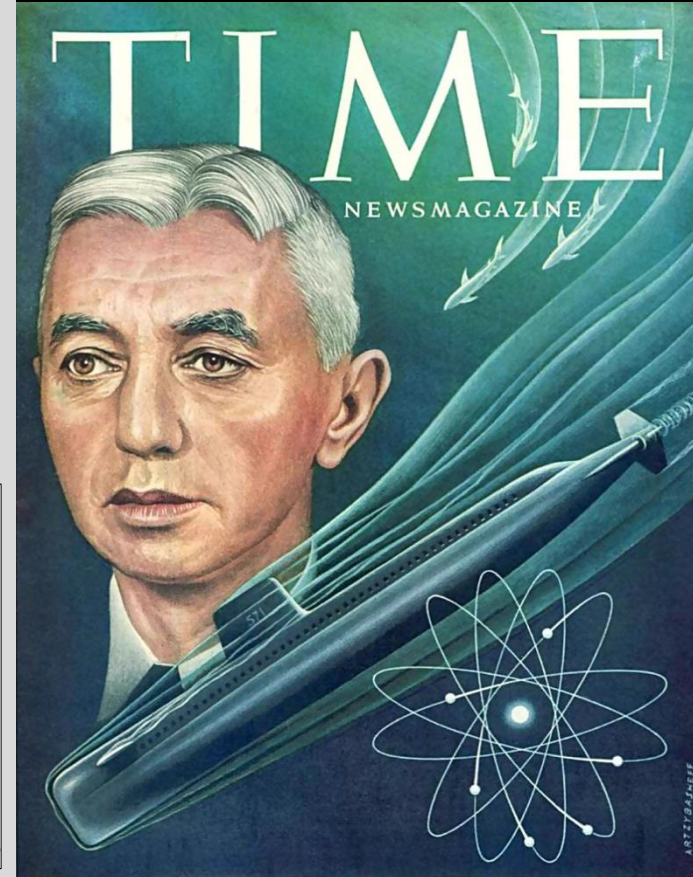
Which of these meetings do you regularly have?

What would make these meetings more effective?

Process Documentation / Training / Testing

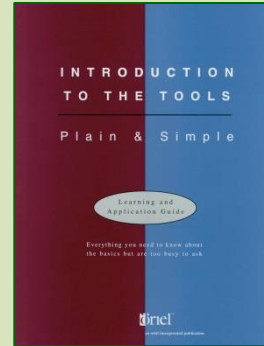
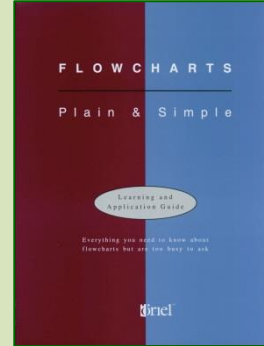
“Nothing so sharpens the thought process as writing down one's arguments. Weaknesses overlooked in oral discussion become painfully obvious on the written page.”

- Hyman G. Rickover

A form titled "PROCESS DETAIL" for "ABC Construction". It contains several sections: "Executive Summary" with a description of the process; "Objectives" with a table for "OBJECTIVE", "SUMMARY", "SUMMARY", and "SUMMARY"; "Summary" with a table for "SUMMARY", "SUMMARY", "SUMMARY", and "SUMMARY"; and "Table of Contents" with a list of sections and page numbers. The form is designed for documenting a process in detail.

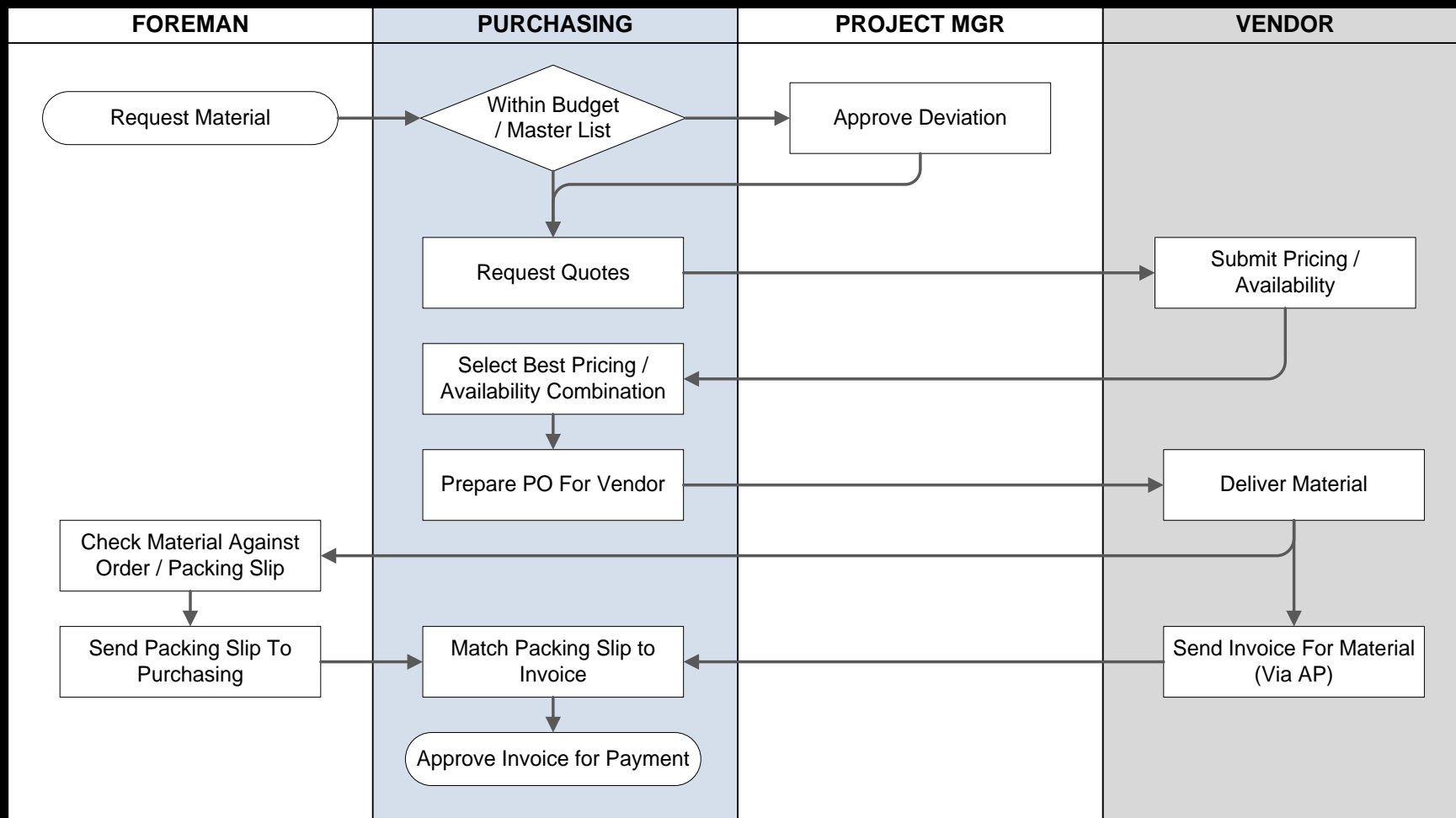
Key Elements of a Good Workflow

- Ties into one of the business-level workflows
- Appropriate level of detail (25 steps max)
- Responsibilities and hand-offs are clearly defined
- Workflow includes external parties where appropriate
- Breakdowns in the process can be easily seen
- Every step in the process serves a clear purpose



The most streamlined process is the process that can be eliminated. Does the process add value or protect risk that exceeds the cost of the process?

Procurement (Simple)



Systems – Ensuring it Happens Right

- Enforce Workflow
- Visual Indicator of Progress / Problems
- Streamline the Process
- Track History



Systems May or May Not Be High-Tech

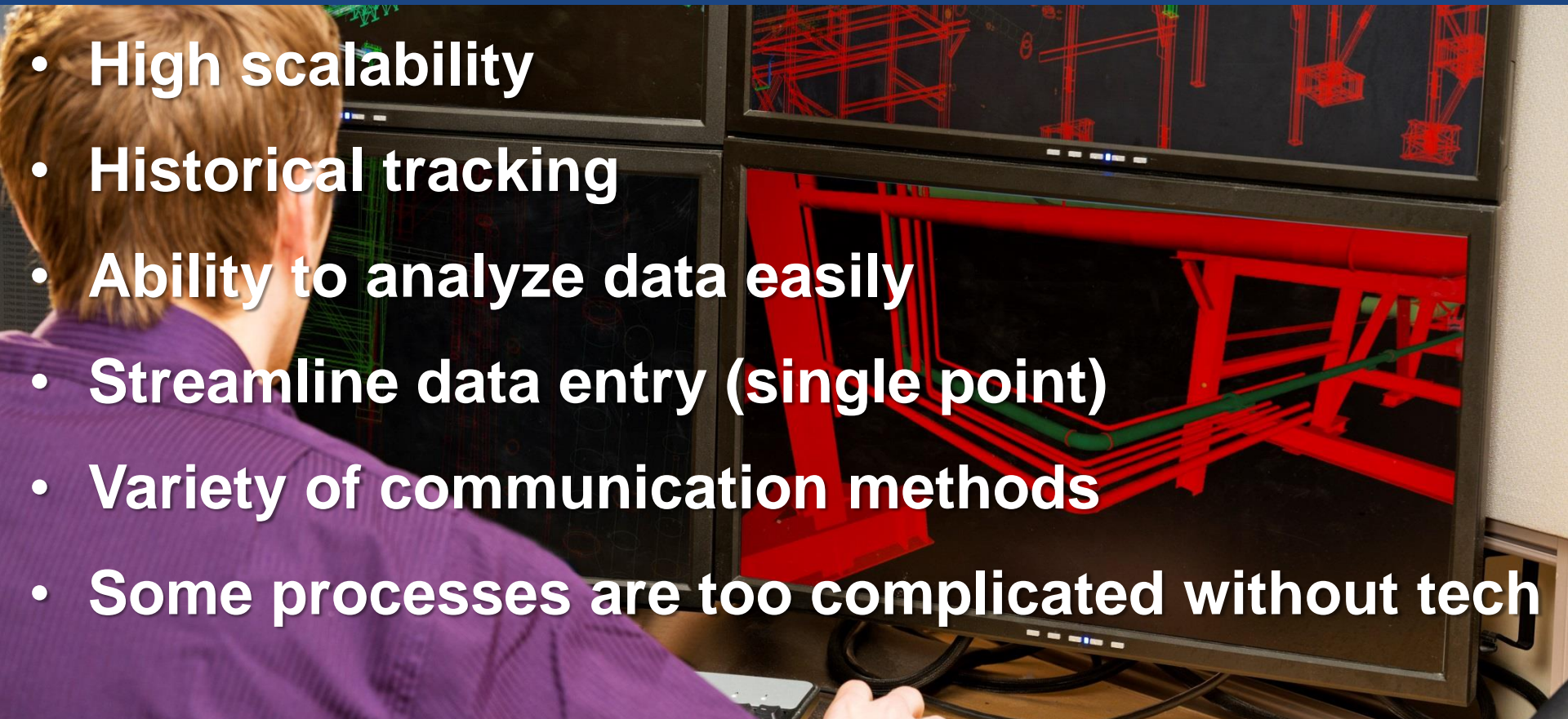


High-Involvement
High-Visibility
High-Communication
HIGHLY EFFECTIVE!

Pull Planning session by J.E. Moore Consulting

Technology is Really Helpful!

- High scalability
- Historical tracking
- Ability to analyze data easily
- Streamline data entry (single point)
- Variety of communication methods
- Some processes are too complicated without tech



Industry Technology (Major Categories)

CRM (Customer Relationship Management)

Estimating

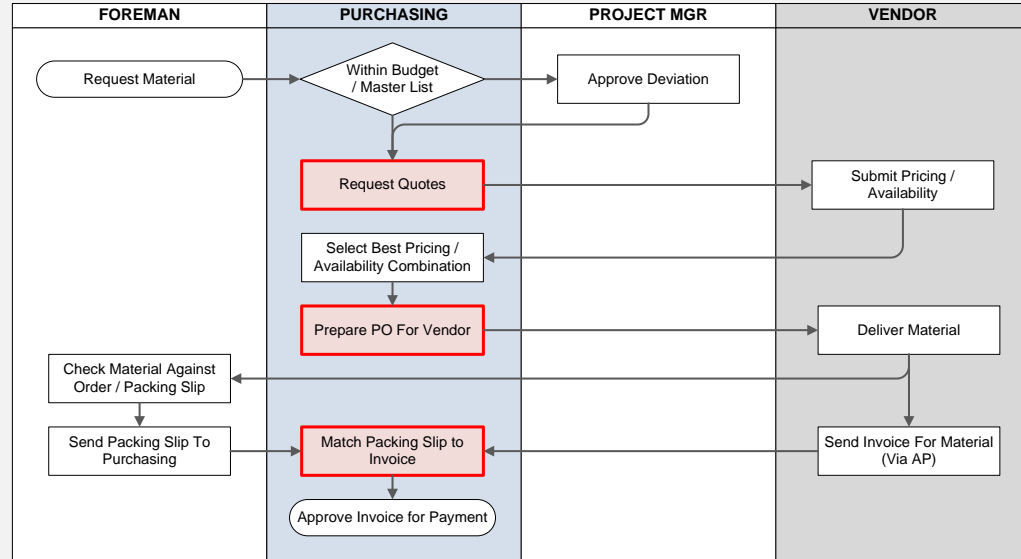
Design / Engineering

Accounting / ERP (Enterprise Resource Planning)

Project Management

Workflow vs. Features

✓	Proposed Purchase Orders
✓	Shipping Terms
✓	Unit or Lump Sum Pricing
✓	1 or 2 Step Receiving
✓	Open Commitment Reporting
✓	Customizable PO Forms
✓	Email PO Directly to Vendor



Long feature lists may only address a few steps in the actual workflow process. Clearly identify the workflow and validate which steps of the process the software truly addresses. Make a plan for what is missing.

3 Most Important Company Meetings

Opportunity Review

Project Review

Talent Review

Execution is a systematic process of rigorously discussing 'hows' and 'whats,' questioning, tenaciously following through, and ensuring accountability. – Larry Bossidy; Retired Chairman of Honeywell

UPDATED WITH A NEW INTRODUCTION

"A great practitioner and an insightful theorist join forces to write a compelling business story of 'how to get it done.'"

— JACK WELCH

EXECUTION

THE DISCIPLINE OF
GETTING THINGS
DONE

THE #1 NEW YORK TIMES BESTSELLER

LARRY BOSSIDY
Former Chairman and CEO, HONEYWELL INTERNATIONAL
& RAM CHARAN

Author of *WHAT THE CEO WANTS YOU TO KNOW*

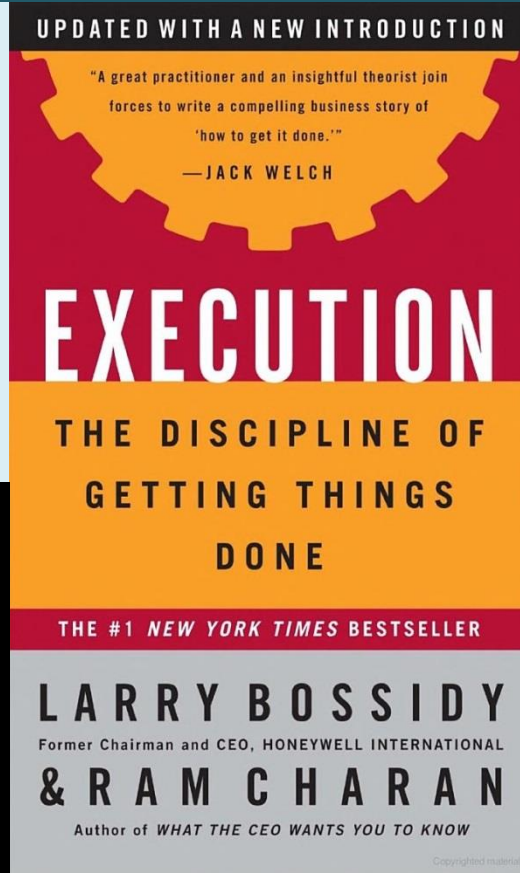
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2 Most Important Project Processes

Startup Planning

Exit Planning

Execution is a systematic process of rigorously discussing 'hows' and 'whats,' questioning, tenaciously following through, and ensuring accountability. – Larry Bossidy; Retired Chairman of Honeywell



NEXT STEPS

- Meet With Your Team / Use Discussion Guide
- Tomorrow @8AM – Free Book / Downloads
- <http://www.dbrownmanagement.com/ABC>

THANK YOU - Q&A