European Lean IT Summit

13 & 14 october, 2011

Paris, France

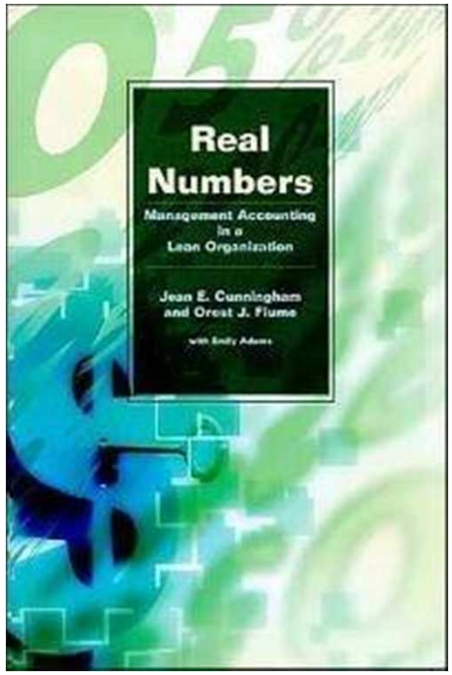
Information Needs for the Lean Organization

with

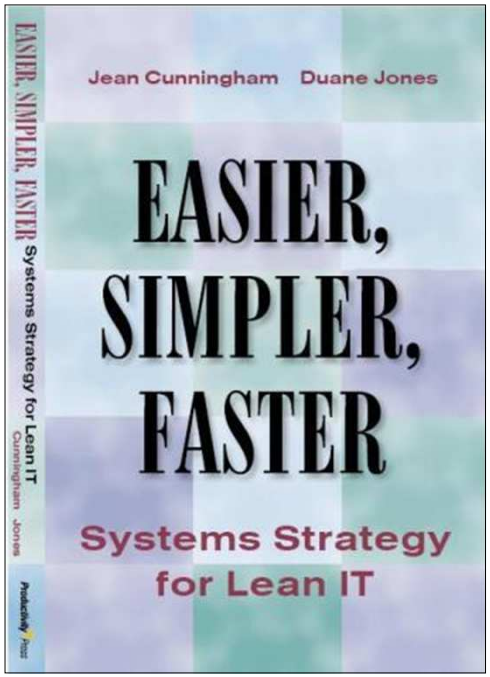
Jean Cunningham

JEAN CUNNINGHAM CONSULTING

Building LEAN Beyond Manufacturing



Managing Times Press, 2003
Shingo Prize, 2004



Productivity Press, 2007
Shingo Prize, 2008

- Founder and President
- Lean accounting pioneer
- Former CFO, Lantech, Inc.
- Former CFO, Marshfield Door Systems

Evaluate and/or Eliminate Standard Cost Accounting

Sam and his saw

Information Needs for the Lean Organization

WHY LEAN ACCOUNTING FOR LEAN ORGANIZATIONS?

Traditional Standard Cost Accounting

Why is it an issue with lean?

Traditional Financial Statement

	$	%
Sales	$1303	100%
Standard cost	$900	69%
Labor variance	$50	4%
Burden variance	($12)	(1%)
PPV	($26)	(2%)
Total COGS	$912	70%
Gross margin	$391	30%

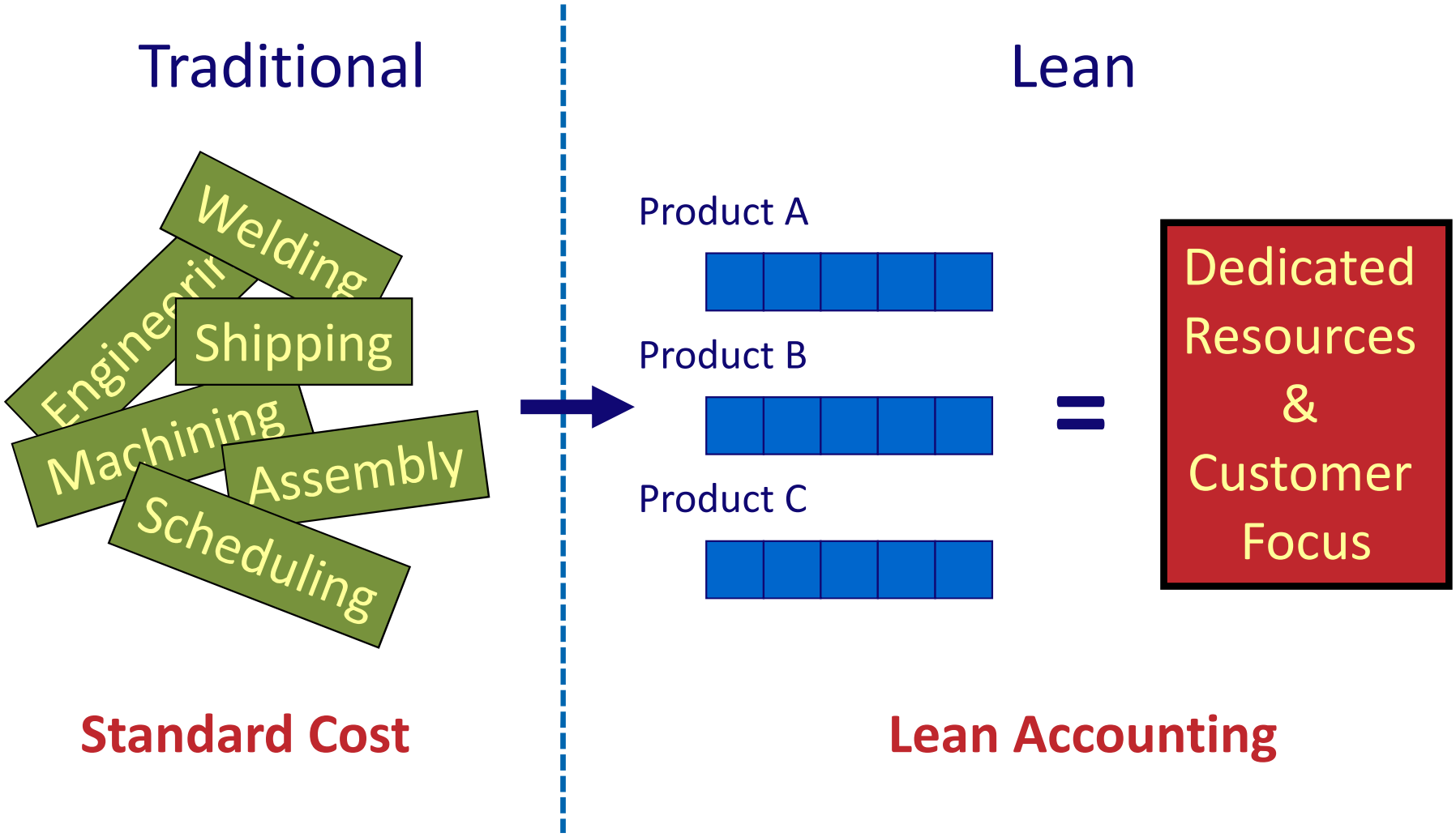
Traditional Metrics

Variance	Non-Lean Outcomes/Behaviors
Absorption variance	► Building of unnecessary inventory ► Reluctance to change over equipment
Machine utilization	► Reluctance to change over equipment ► Reluctance to perform necessary PM procedures
Purchase price variance	► Promotes buying excess inventory due to quantity discounts ► May compromise quality and delivery over price considerations ► Promotes increase in number of suppliers
Direct labor variance analysis	► Use of lowest cost resource regardless of skill set ► Piece rate encouraged the building of unnecessary inventory and compromised quality
Overhead variance analysis	► Favorable variances interpreted as good regardless of continuous improvement trend ► Encourages production regardless of demand

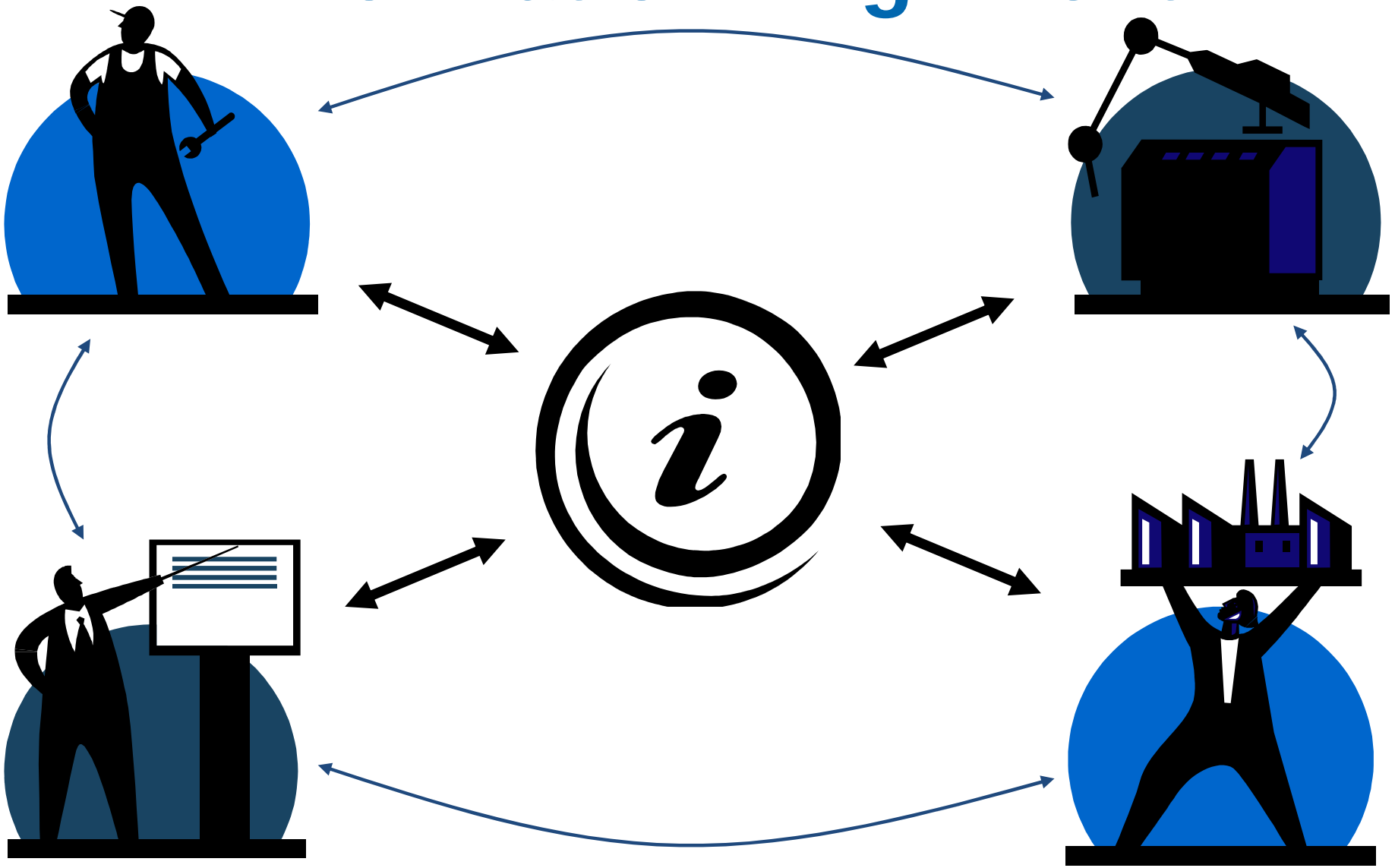
Lean

	Plant 1		Plant 2	
	$	%	$	%
Sales	$1303	100%	$1303	100%
Material	$517	40%	$517	40%
Supplies	$72	5%	$72	5%
Net freight	$54	4%	$54	4%
Variable margin	$660	51%	$660	51%
Labor and benefits	$190	15%	$190	15%
Fixed cost (leases, dpr, utilities)	$42	3%	$42	3%
Cost (to)/from inventory	$37	3%	($100)	(8%)
Total cost of sales	$912	70%	$775	59%
GM	$391	30%	$528	41%
Natural margin	$428	33%	$428	33%
Shipments/employee	$225		$225	

Evolution: Manufacturing Allocations



Information Alignment



Sales has an opportunity to sell the product. Should we take it?

Traditional

Product Line	
Quote price	$30 /unit
Standard cost	$25 /unit
Gross margin	$ 5 /unit
Gross margin %	16.67%
Gross margin target	28%
Current gross margin	23%

Lean

Product Line			
	Direct	Shared	Total
Sales	100,000		100,000
Material	20,000		20,000
Direct costs	18,000		18,000
Shared		39,000	39,000
	62,000	(39,000)	23,000

- Material content from BOM = $6
- 1 additional direct labor needed
- **10,000** units — 50% probability
  2,500 units — 95% probability

	@ 10,000	@ 2,500
Revenue	300,000	75,000
Material	60,000	15,000
Variable Margin	240,000	60,000
Direct cost	40,000	40,000
Profit	200,000	20,000

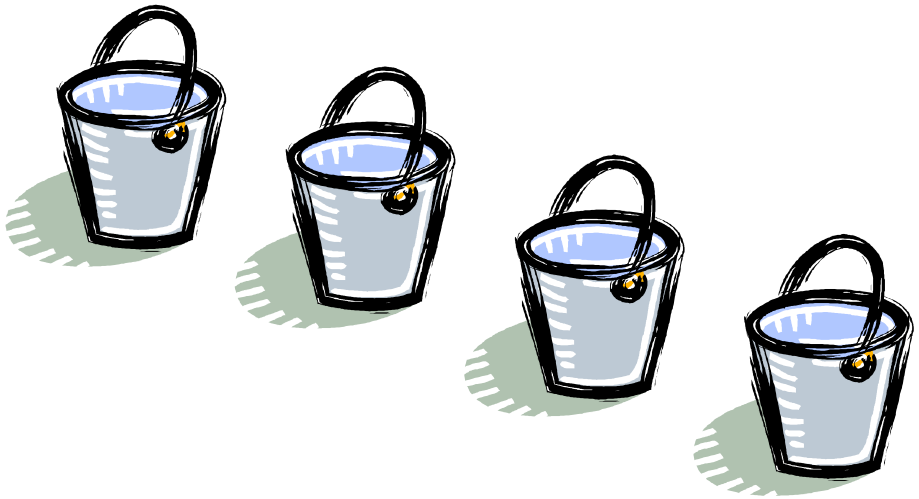
Company Totals

Product Line				@ 10,000	@ 2,500
	Direct	Shared	Total		
Sales	100,000		100,000	400,000	175,000
Material	20,000		20,000	80,000	35,000
Variable Margin	80,000		80,000	320,000	140,000
Direct costs	18,000		18,000	58,000	58,000
Shared		39,000	39,000	39,000	39,000
Gross Margin	62,000	(39,000)	23,000	223,000	43,000
GM %age			23%	57.5%	24.6%

I have to close a plant. Which one?

Traditional

	Plant 1		Plant 2	
	$	%	$	%
Sales	$1303		$1303	
COGS	$900		$900	
Variances	$12		($125)	
GM	$391	30%	$528	41%
Productivity/employee	$200		$250	



Lean

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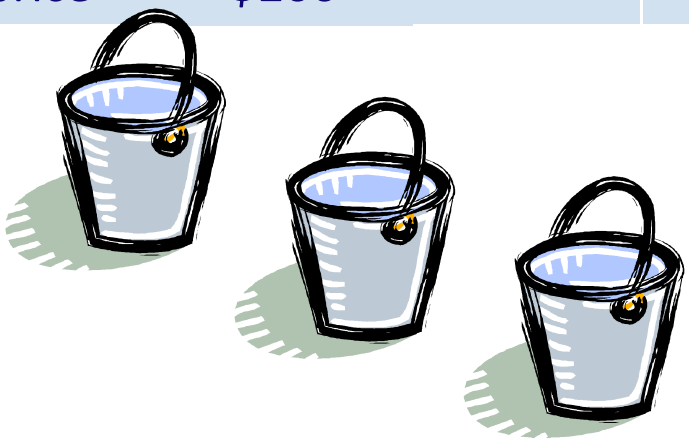
What will happen if we insource this product?

Traditional

Insource			
	A	B	C
Standard hours	2	3	7
Standard rate	$40	$23	$30
	$80	$69	$210
Material cost	$70		
Total cost	$429		
Vendor price	$200		



Lean

In Source		
Material cost	$70	
x units	1,000	$70,000
Direct cost		
3 people	$120,000	$120,000
Utilities	$2,000	$2,000
		$192,000
Vendor cost	$200	
x units	1000	$200,000

Breakeven: $200 – $70 = $130, then $\frac{\$122,000}{\$130}$ = 938 units

Reality Measures

LEAN MEASURES

New Measures Working Points

- Support the company strategy
- Be few in number
- Mostly non-financial
- Motivate the right behavior
- Simple to understand
- Measure the process
- Be timely
- Be visual; show trends

Box Score

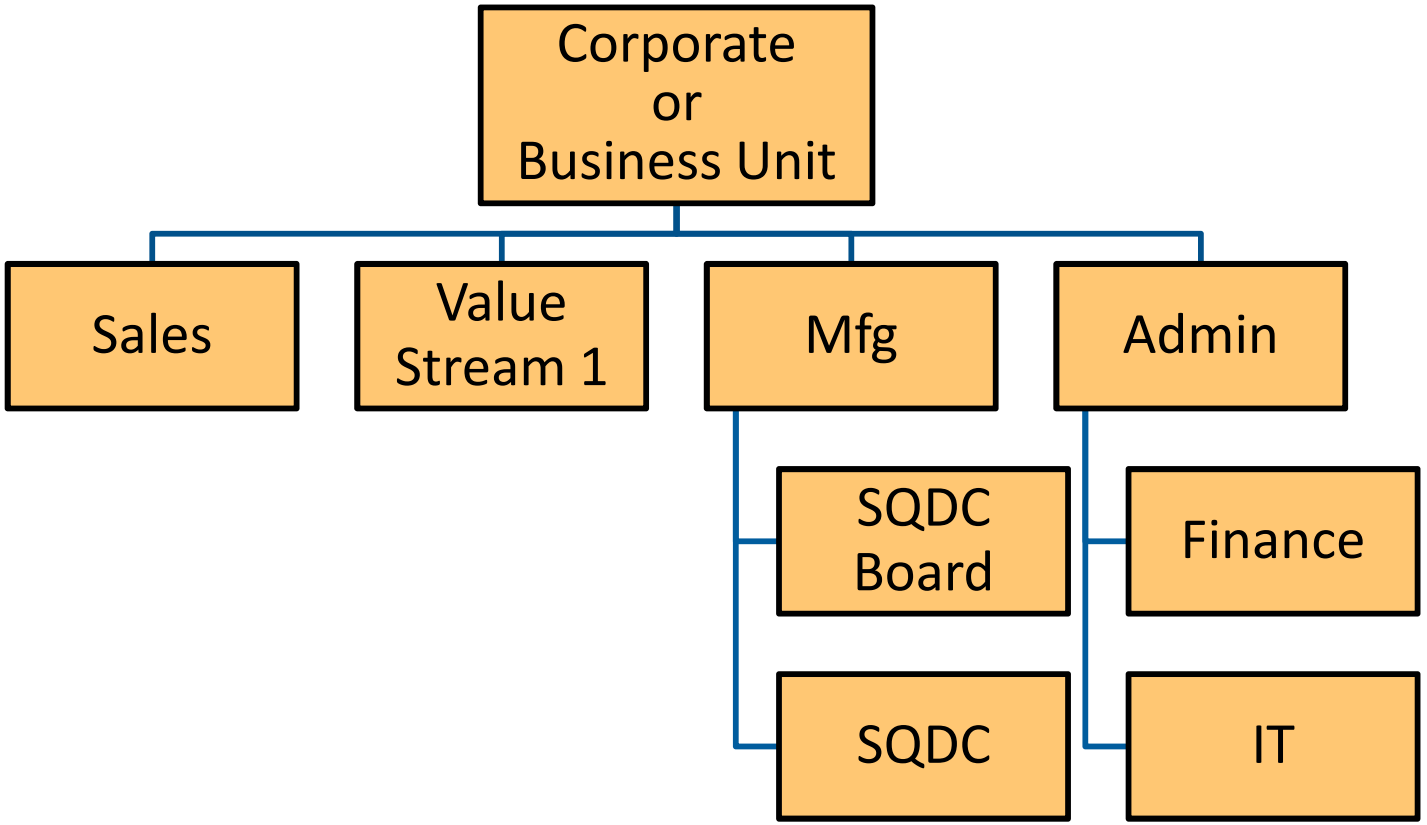
	LAST YR	GOAL	J	F	M	A	M	J	J	A	S	O	N	D
Operational														
Units Shipped	5000/month	6000/month	5400	5550	5700	5800	5925	5800						
Sales per person ($K)	$201,000	$340,000	217	237	260	264	289	305						
Batch size	10	1	6	6	3	1	1	1						
Stop the Line	5 x per day	4 x per day	6	4	7	3	3	5						
5S	77%	95%	90%	75%	80%	84%	87%	70%						
Floor Space	9000 sf	8000 sf	9000	9000	9000	9000	9000	8750						
Produce to TAKT	120%	Under 100%	97%	80%	80%	90%	100%	100%						
Capacity														
People in Cell	17	12	17	16	15	15	14	13						
TAKT	120 seconds	105 seconds	120	120	120	110	110	105						
Financial														
Inventory ($K)	$500,000	$300,000	480	420	380	350	350	340						
Revenue ($K)	$285,000/mth	$342,000/mth	307	316	325	330	337	331						
Material scrap ($K)	$10,000/mth	$3,500/mth	8	2	2	3	2	0.5						
Profit contribution ($K)	$86,000	$110,000	84	87	95	97	102	100						
Overtime Hours	5,000 hrs	2,000 hrs	40	30	10	20	40	0						

IT Box Score

	LAST YR	GOAL	J	F	M	A	M	J	J	A	S	O	N	D
Operational														
Projects with changed go live date	##													
Acceptance to resource commitment	# days													
Delivered projects IT satisfaction score	XX%													
Senior leaders IT satisfaction score	XX%													
All employees IT satisfaction score	XX%													
Capacity														
Admin hours versus total hours	XX%													
Kaizen events held	##													
Improvements implemented	##													
Financial														
Portfolio funds with no action	$XXXX													
Delivered projects over budget	##													
Global sales / employee	$XXXX													

Cascading Box Scores

Example



Each with unique performance measures.

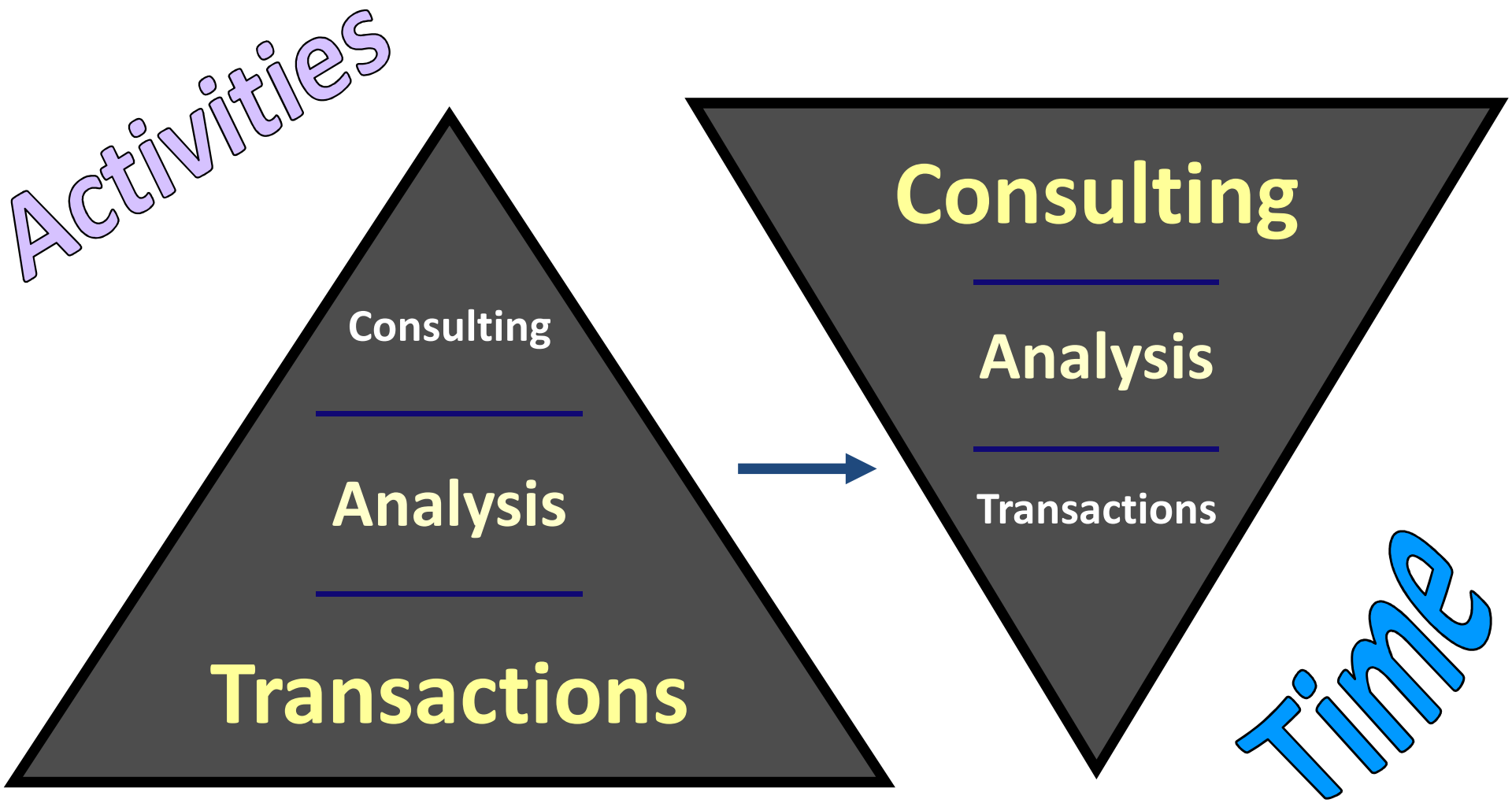
Process and Outcome Metrics

PROCESS:	Number of manual entries
OUTCOME:	Days to close
PROCESS:	Number of WIP locations
OUTCOME:	Inventory days on hand
PROCESS:	Client Changes To Specification
OUTCOME:	Projects On Time
PROCESS:	Orders entered without carrier info
OUTCOME:	On time delivery

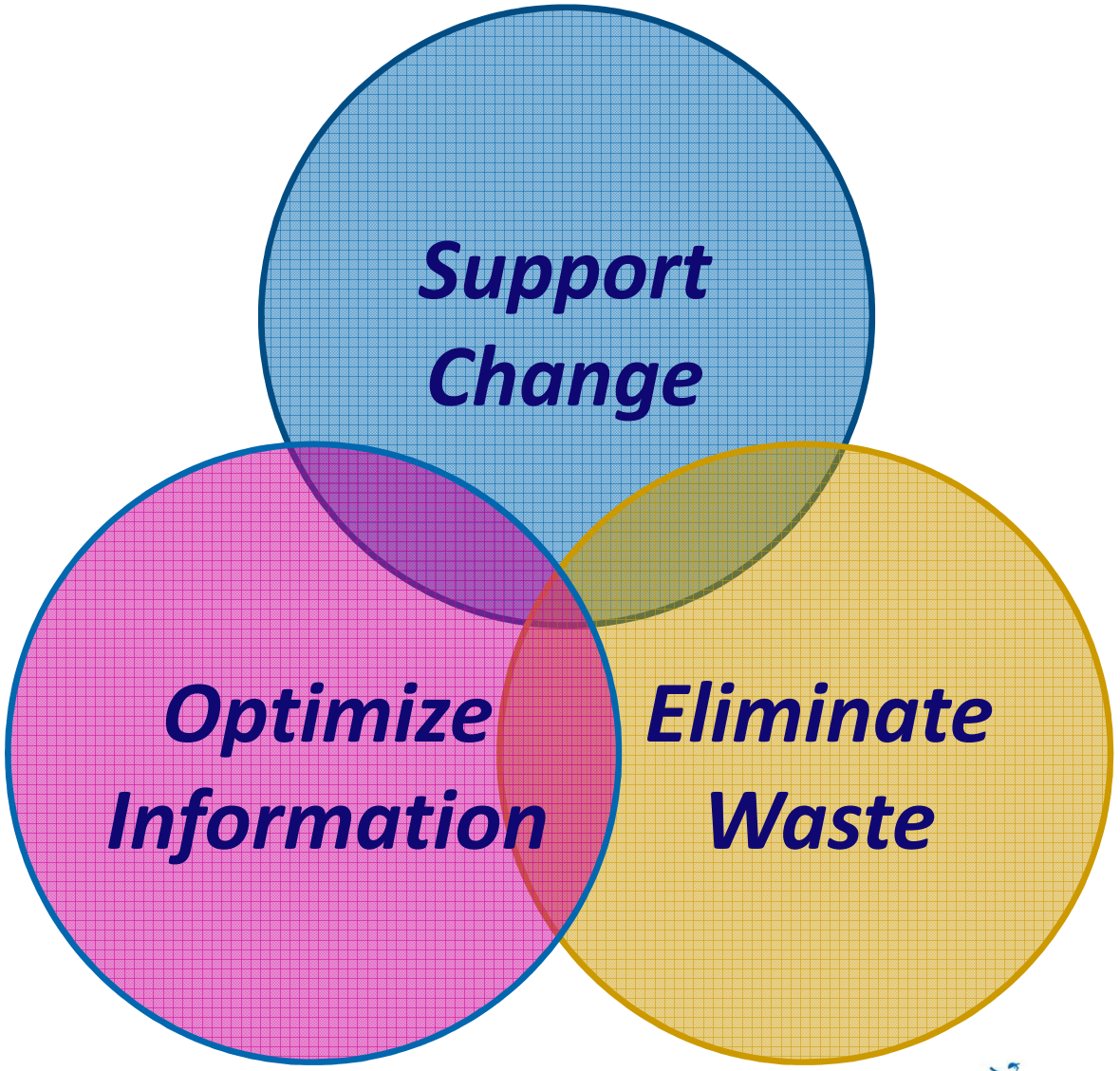
Next Steps

YOUR LEAN ROADMAP

Lean IT Transformation



Lean IT Support Goals

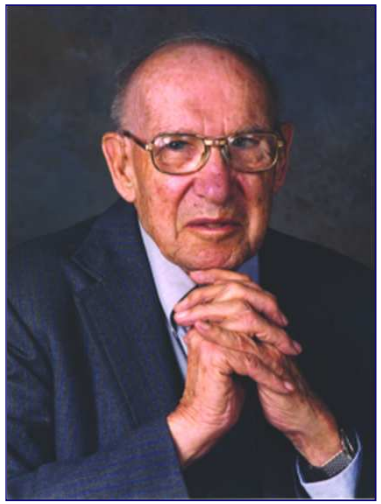


Apply IT to Improvements

Pilot	Early Adapters	Operational	Value Add
Manual	Technical Support	Integration	Analysis & Poke Yoke
• Fax • Paper • Email	• Track kanban cards • Create kanban cards	• Scan kanban for receive and order • Entry to ERP • Handling exceptions	• Error proofing • Part usage • BOM quality • Supplier performance • Part performance
Manual entry to ERP	**Manual entry to ERP**	**Integrated with ERP**	

Questions & Answers

"There is nothing so useless as doing efficiently that which should not be done at all."



– Peter Drucker

Contact

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- Business Process **Kaizens**
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