

**MANAGEMENT ACCOUNTING FOR
LEAN BUSINESSES**

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Retired Vice President - Finance
The Wiremold Company



Wiremold Before and After Lean

	1990	2000
Assessed Value	\$30 Million	\$770 Million
West Hartford:		
Sales per Employee	\$90K	\$240K
Gross Profit	38%	51%
Throughput Time	4-6 Weeks	2 Hours – 2 Days
Product Dev'l Time	2-3 Years	3-6 Months
# Suppliers	320	43
Inventory Turns	3.4	17.0
Working Cap % Sales*	21.8%	6.7%

* W/C = A/R + Inv – Trade Payables



LEAN

A Business Strategy

Not

A Manufacturing Tactic

Not

A Cost Reduction Program



A Simple Example

Two Companies in Same Industry Using Same Equipment

Company A Set Up Takes 1 Hour	Company B Set Up Takes 1 Minute
----------------------------------	------------------------------------

- Who Has Lowest Cost?
- Who Can Provide Best Customer Service?

A Small Process Improvement Provides
Enormous Strategic Advantage



Time-Based Strategies

Lead-Time Reduction



Lean really is a Growth strategy

Competing on Time...

ASK. . . Can we grow our business By:

- ❖ Significantly reducing Lead times?
(quote, order, submittals, quote to cash)
- ❖ Offering a wide range of configurations fast and low cost?...
- ❖ Increasing quality, reducing customer downtime?
- ❖ Bringing new innovations to the market based on real customer needs in half the time?
- ❖ Bringing new tack-on acquisitions in existing facilities?

OBSTACLES TO CHANGE

- “But, those companies aren’t like ours, we have different problems”
- “We’ll change, but let’s do so very slowly”
- “Our auditors won’t accept that”

“Corporate management accounting systems are inadequate for today’s environment”

Relevance Lost

The Rise and Fall of Management Accounting

H. Thomas Johnson

Robert S. Kaplan

1987

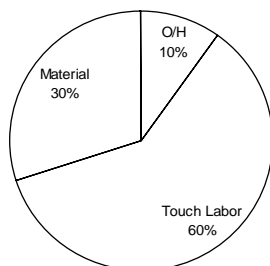
LEAN ACCOUNTING?

All of the essentials of modern management accounting were established by 1930 ... without any significant changes since then

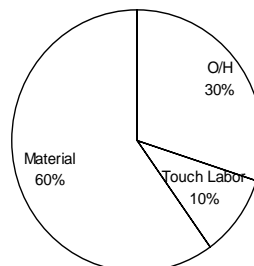
Brian Maskell

TYPICAL COST ELEMENTS

"Yesterday"



"Today"



DIMENSIONS OF LEAN ACCOUNTING

- Performance Measurements
- Accounting Practices
- Investment Management

PERFORMANCE MEASUREMENT

Why are Metrics Important?

- Metrics send a message to employees as to what management thinks is important
- Employees want to appear to be doing what management wants them to do
- METRICS SHAPE BEHAVIOR

When Should Metrics be Addressed?

AT THE BEGINNING OF THE LEAN
TRANSFORMATION

Who are the Principal Users of Metrics ?

The Workers

How should Management use metrics?

- “Leaders may be judged by the numbers they deliver, but that’s not the way they should run the company”
 - Rowan Gibson
- “The winners will be those companies that focus on their processes, not their results”
 - Art Byrne

We don't want to be a “make-the-month” company

What is Process Focus

- Focus of a Traditional Company
 - Results, Results, Results

- Focus of a Lean Company
 - Process, Process, Process...and Results

- Lean Companies care about how they get Results in order to make them Repeatable



PERFORMANCE MEASURES THAT INHIBIT IMPROVEMENT

<u>Measurement</u>	<u>Behavior</u>	<u>Results</u>
Purchase Price variance	Negotiate based on price & “quantity breaks”	Excess inventory and carrying costs; supplier with best quality and cost may be overlooked
Machine Utilization	Run in excess of current requirements to maximize utilization ratio	Excess inventory; wrong inventory
Setup in Standards	Encourages high run quantities	Excess inventory
Scrap factor built into standard	No action if no variance	Inflated standard; scrap allowed to exist



<u>Measurement</u>	<u>Behavior</u>	<u>Results</u>
Direct/Indirect Labor Ratio	Encourages inaccurate labor reporting to maintain “acceptable” ratio	Total costs not in control Lack of integrity
Direct Labor Efficiency	Encourages standards that are easy to achieve	Improvement opportunities overlooked
Earned Labor Dollars	Maximize earned labor-keep workers busy	Excess inventory; Wrong inventory
Overhead Rates	Focus on manipulating allocation methods	Move work to lower overhead work centers to “reduce costs” _____



**ATTRIBUTES OF A GOOD PERFORMANCE
MEASUREMENT SYSTEM**

- Support the Strategy
- Not too many
- Mostly non-financial
- Motivate the right behavior (i.e., eliminate waste)
- Simple, easy to understand
- Measure the process, not the people
- Measure Actual vs. Goals
- Don't use Ratios ... they're too confusing
- Don't combine measures of different things into a single index
- Must be timely ... hourly, daily, weekly ...
- Must be visual and tracked over time to show trends



ACCOUNTING PRACTICES

- Accounting Processes
- Cost Management
- Financial Control

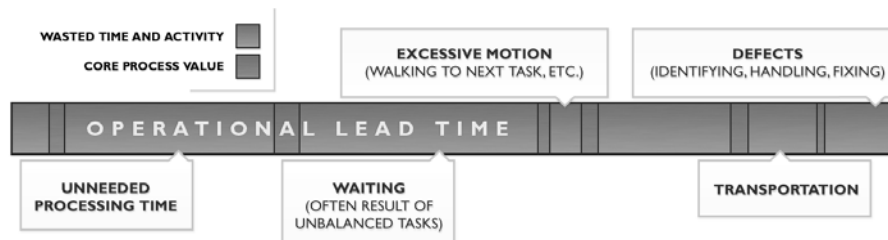
ACCOUNTING PROCESSES

Every Process Has an Output: Physical, Information, or Both

- Each output is always at one of three stages:
 - Being worked on
 - Waiting to be worked on
 - Moving from one place to another in order to wait to be worked on
- The last two stages, and much of the first, is waste

Total waste in most business processes = 90-95%

Waste in Business Processes



*The key is to reduce your processes to
"core value"*

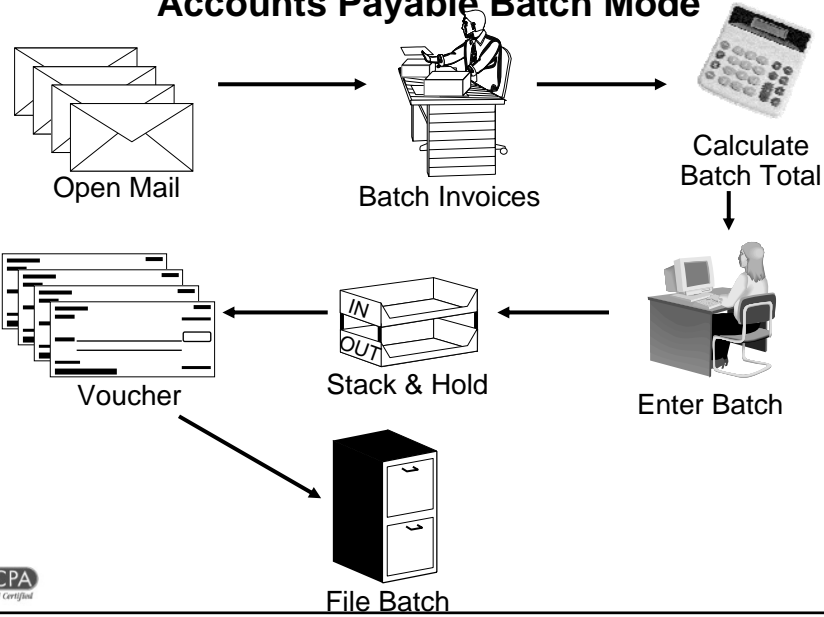
Value Adding & Labor Productivity



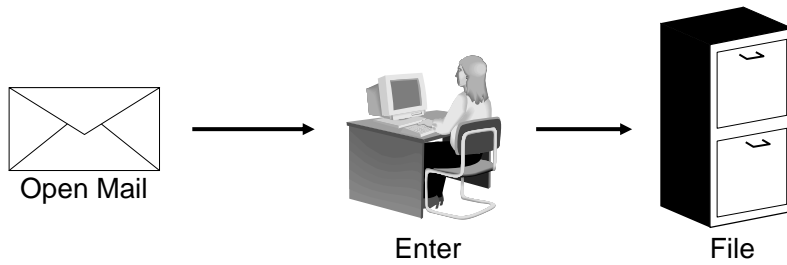
A Lean Business Process Has...

- Small, inexpensive systems in process order
- One-piece flow
- Ergonomically-correct work areas
- Pull system discipline
- “Standardized work” defined and implemented
- Cross-functional, multi-process associates

Accounts Payable Batch Mode



One Piece Flow



Accounts Payable Process Improvements

- One Piece Flow: Pay vendors invoices every day, when due, instead of once or twice per month
- Over Processing: File vendor invoices by day paid instead of by vendor and use search feature to locate if needed
- Waiting: Eliminate unnecessary invoice approvals. Use credit cards for small value items
- Defects: Reduce chart of accounts to reduce coding errors and correcting journal entries



Payroll Process

	Before	After	% Change
# Steps	92	24	-72%
Time	24 Hours	6 Hours	-77%



Customer Order Processing

	Before	After	% Change
# Steps	63	9	- 86%
Time	Days	Hours	



Financial Service Company

- Set up time for new agents
Reduce from 45 days to 10
- Credit approval time for new agents
Cut from 19 days to 22 minutes
- Company enrolled 3500 new agents – double
The prior year with no new resources

Result: Over \$1 million in increased annual revenue



Hospital

	<u>Before</u>	<u>After</u>	<u>% Gain</u>
From Discharge Order to Patient Leaving	185 Min	48 Min	+ 74%
From Patient Leaving to Discharge in Computer	37 Min	4 Min	+ 89%

Don't Just Look at the "Big" Processes

- The Mail Room
 - Space: from 5,220 sq.ft. to 837 sq.ft. (-62%)
 - Time spend on UPS shipments: from 6 hr/day to 3.5 hr/day (-42%)
 - People: From 4 to 2 (-50%)
- Supplies
 - Pens: from 8 varieties to 2 (-75%)
 - Envelopes: from 5 varieties to 2 (-60%)
 - Vendors: from 4 to 1 with JIT deliveries (-75%)
 - Inventory: from centralized to local
 - Spending: from \$250,000/yr to \$130,000/yr (-48%)

COST MANAGEMENT

- Cost Planning
- Cost Accounting
- Financial Control

STANDARD COST ABSORPTION ACCOUNTING

- Most people do not understand a standard cost P&L statement
- Causes us to produce labor hours, not product
- No linkage between labor hours and the customer
- Allocation costs based on labor hours distorts product costs
- ...as a result...

Most companies do not know their product costs ... buy
they think they do ... out to four decimal places

Causes

- Inaccurate reporting
- Inappropriate overhead allocations

...AND...

Inaccurate “Product Cost”
Leads to Poor Decisions

CHANGE THE FOCUS

- From profitability of individual products
 - To profitability of product groups

- From standard costs & variance analysis
 - To actual costs & segregation of assignable and allocated costs

FINANCIAL CONTROL

...in other words...

Financial Statements

STANDARD COST EXAMPLE

	This Year	Last Year
Net Sales	100,000	90,000
Cost of Sales:		
Standard Costs	48,000	45,000
Purch Price Var	(3,000)	10,000
Matl Usage Var	(2,000)	5,000
Labor Eff Var	7,000	(8,000)
Labor Rate Var	(2,000)	9,000
OH Volume Var	2,000	2,000
OH Spend Var	(2,000)	8,000
OH Eff Var	<u>16,000</u>	<u>(17,000)</u>
Total Cost of Sales	<u>64,000</u>	<u>54,000</u>
Gross Profit	36,000	36,000
Gross Profit %	36.0%	40.0%



USELESS MANAGEMENT INFORMATION

How are Standard Costs Calculated?

- . Materials = Quantity x Unit Costs
 - . Material Quantity based on engineering design, *modified for yield*
 - . Material Unit Costs based on *quotes, current average or ???*
- . Labor = Hours x Hourly Rate
 - . Labor Hours based on engineering *studies*
 - . Labor Rates based on *average rate*
- . Overhead = Labor Hours x Overhead Rate
 - . Overhead Rate based on *Budgeted Overhead* divided by *Budgeted Hours*

Variance = Actual – Standard (estimates in Red)



Plain English P&L

	<u>This Year</u>	<u>Last Year</u>	<u>+(-)%</u>
Net Sales	100,000	90,000	11.1
Costs of Sales:			
Purchases	28,100	34,900	
Inventory (Inc) Dec: Mat'l Content	<u>3,600</u>	<u>(6,000)</u>	
Total Materials	31,700	28,900	9.7
Processing Costs:			
Factory Wages	11,400	11,500	(0.9)
Factory Salaries	2,100	2,000	5.0
Factory Benefits	7,000	5,000	40.0
Services & Sup	2,400	2,500	(8.0)
Equipment Depr	2,000	1,900	5.3
Scrap	<u>2,600</u>	<u>4,000</u>	<u>(35.0)</u>
Total Processing Costs	27,500	26,900	2.2
Occupancy Costs:			
Building Depr	200	200	0.0
Building Services	<u>2,200</u>	<u>2,000</u>	<u>10.0</u>
Total Occupancy Costs:	<u>2,400</u>	<u>2,200</u>	<u>9.1</u>
Total Mfg Costs	61,600	58,000	6.2
Manufacturing Gross Profit	38,400	32,000	20.0
Inv Incr (Dec): Labor,O/H Content	<u>(2,400)</u>	<u>4,000</u>	
GAAP Gross Profit	36,000	36,000	0.0
	36.0%	40.0%	



Balance Sheet

Current Assets:	TY	LY	Current Liabilities	TY	LY
Cash	xx	yy	Accts Payable	xx	yy
Acct Rec	xx	yy	Accruals	xx	yy
Inventory	14.0	20.0	Other	xx	yy
Other	xx	yy	Total	xx	yy
Total	xx	yy			
			Long Term Debt	xx	yy
Fixed Assets	xx	yy	Capital	xx	yy
Total Assets	xx	yy	Total Liab + Cap.	xx	yy



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Balance Sheet

Current Assets:	TY	LY	Current Liabilities	TY	LY
Cash	xx	yy	Accts Payable	xx	yy
Acct Rec	xx	yy	Accruals	xx	yy
Inv-Material	8.4	12.0	Other	xx	yy
Inv-Def. L+O/H	<u>5.6</u>	<u>8.0</u>	Total	xx	yy
Total Inv	14.0	20.0			
Other	xx	yy	Long Term Debt	xx	yy
Total	xx	yy	Capital	xx	yy
Fixed Assets	xx	yy	Total Liab + Cap.	xx	yy
Total Assets	xx	yy			



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Implementing Change in Accounting

- Educate entire management team on why they should change and to what they are changing
- Help develop critical few Metrics
- Help Operations collect the relevant data themselves
- Minimize the time between data collection and data analysis
- Have the accounting/financial staff participate in Lean education and shop floor kaizen events frequently

Implementing Change in Accounting

- Convert the financial statements to Plain English format, initially on a parallel system
- Address business process change at a pace to support operational changes:
 - Reduce shop transactions
 - Eliminate all internal warehouses
 - Identify all reporting done specifically for accounting

What about Productivity in Accounting???

		Increase
Sales		4.5x
# Locations		2.8x
# People in Accounting		1.8x

Is Anyone Else Doing Lean Accounting?

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Lean Accounting Summit

September 22-23, 2005:
350 Attendees

September 21-22, 2006
520 Attendees

September 27-28, 2007
500+ Attendees

September 17-18, 2008
500+ Attendees

September 23-24, 2009
Orlando, Fla



www.leanaccountingsummit.com

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LEAN ACCOUNTING SUMMARY

- Lean is a business strategy, not some “manufacturing thing”
- Develop performance metrics that motivate Lean Behaviors
- Apply lean concepts, principles, practices and tools to both production and business processes
- Eliminate transactions by eliminating the need for them
- Use the accounting system as one of many tools to determine if improvement has been made: simplify it so real people can use it
- Base decisions on Value Stream profit rather than standard cost



“It is not the strongest species that survives, or the most intelligent but the most responsive to change”

-Charles Darwin

“It is not necessary to change...survival is not mandatory”

-W. Edwards Deming



THANK YOU

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