Could Your Balanced Scorecard Use Some Lean Six Sigma?

Maurice (Mo) Klaus

November 4, 2010

Agenda

- Welcome

- Introduction of MBB Webcast Series

  - Larry Goldman, MoreSteam.com

- Could Your Balanced Scorecard Use Some Lean Six Sigma?

  - Maurice (Mo) Klaus, MoreSteam.com

- Open Discussion and Questions

MoreSteam.com – Company Background

- Founded 2000

- Over 250,000 Lean Six Sigma professionals trained

- Serving 45% of the Fortune 500

- First firm to offer the complete Black Belt curriculum online

- Courses reviewed and approved by ASQ

- Registered education provider of Project Management Institute (PMI)

Select Customers:

CardinalHealth

Nationwide

Honeywell

ROLLS ROYCE

IBM

Quest Diagnostics

tyco

XEROX

lenovo
NEW WORLD. NEW THINKING.

TEXTRON

Master Black Belt Program

- Offered in partnership with Fisher College of Business at The Ohio State University

- Employs a Blended Learning model with world-class instruction delivered in both the classroom and online

- Covers the MBB Body of Knowledge with topics ranging from advanced *DOE* to *Leading Change* to *Finance for MBBs*

- Go to http://www.moresteam.com/master-black-belt.cfm for more information about curriculum, prerequisites, and schedule

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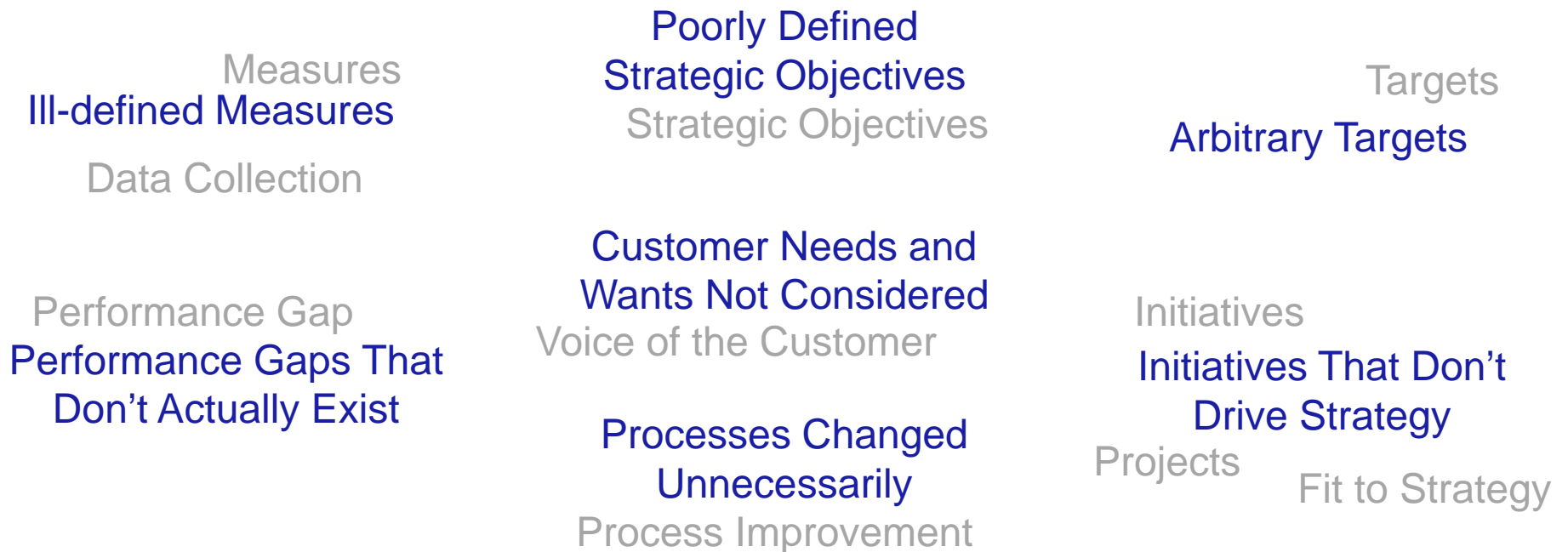
Today's Presenter

Maurice Klaus

Product Architect , MoreSteam LLC

- Develops course content, simulations and software,

- Lean Six Sigma Black Belt

- Registered Professional Engineer (Michigan)

- Bachelor and Master of Science degrees in Mechanical Engineering from The University of Michigan, Ann Arbor, Michigan

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The 'Dilemma'

Balanced Scorecard implementation can have its challenges…

…but it also shares some commonalities with Lean Six Sigma.

Measures
Ill-defined Measures
Data Collection

Poorly Defined
Strategic Objectives
Strategic Objectives

Targets
Arbitrary Targets

Customer Needs and
Wants Not Considered
Voice of the Customer

Performance Gap
Performance Gaps That
Don't Actually Exist

Initiatives
Initiatives That Don't
Drive Strategy
Projects
Fit to Strategy

Processes Changed
Unnecessarily
Process Improvement

☆ Should these methodologies be combined somehow? If not combined, then leveraged? If not leveraged, then what?
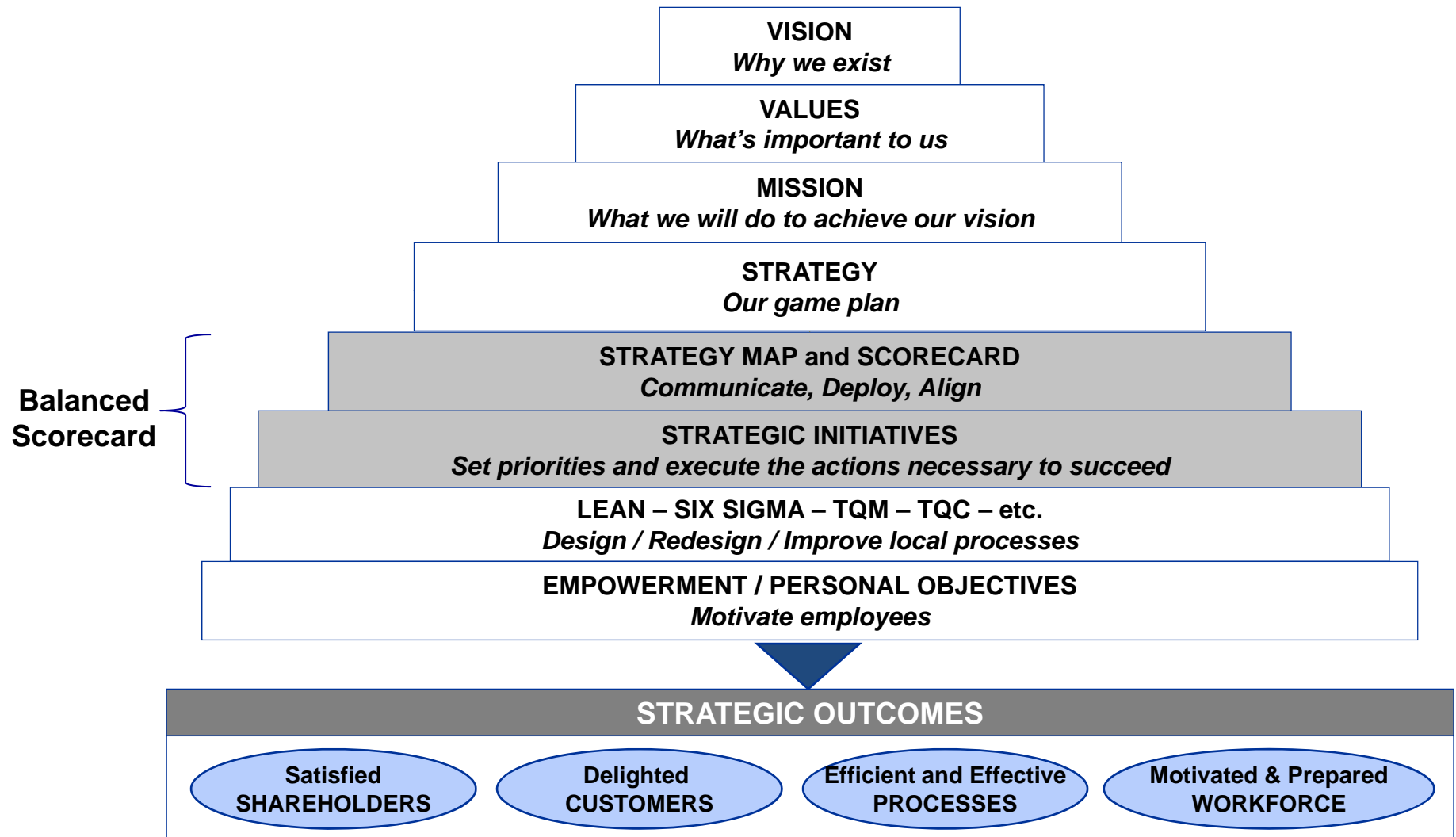
Objectives

Balanced Scorecard (BSC) and Lean Six Sigma (LSS)

- Common ground

- Key differences

- Keep the BSC and LSS separate organizationally

- How BSC can benefit from LSS

Don't Combine – Do Leverage

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The Balanced Scorecard - Very Brief Overview

VISION
Why we exist

VALUES
What's important to us

MISSION
What we will do to achieve our vision

STRATEGY
Our game plan

Balanced Scorecard

STRATEGY MAP and SCORECARD
Communicate, Deploy, Align

STRATEGIC INITIATIVES
Set priorities and execute the actions necessary to succeed

LEAN – SIX SIGMA – TQM – TQC – etc.
Design / Redesign / Improve local processes

EMPOWERMENT / PERSONAL OBJECTIVES
Motivate employees

STRATEGIC OUTCOMES

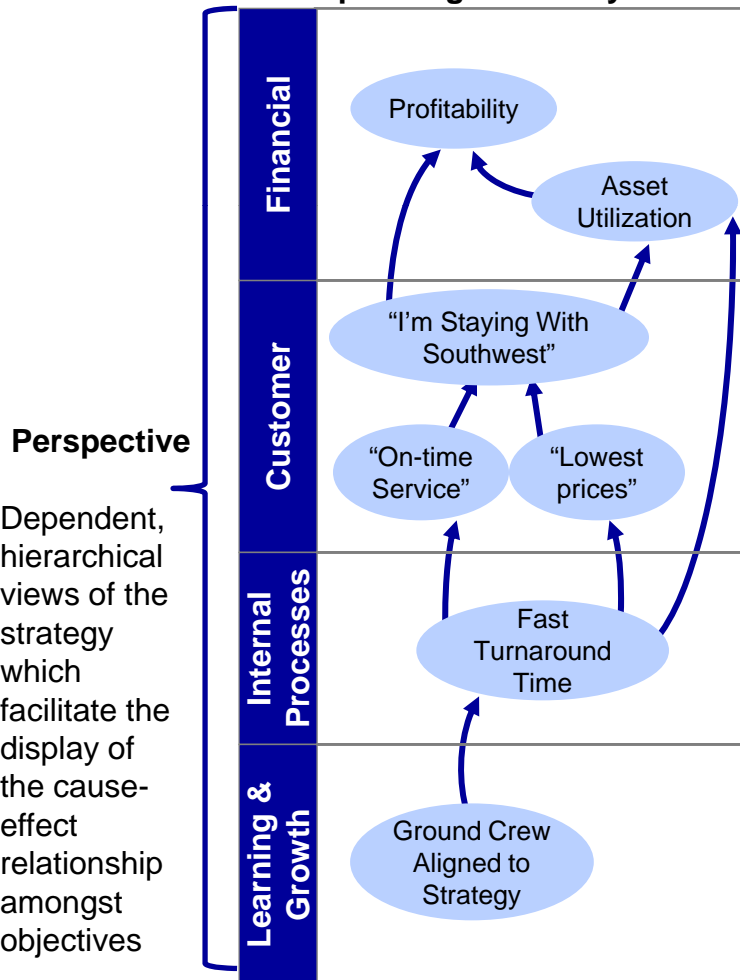| Satisfied SHAREHOLDERS | Delighted CUSTOMERS | Efficient and Effective PROCESSES | Motivated & Prepared WORKFORCE |

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Balanced Scorecard Components

Strategy Map

A visual representation of the strategy

Southwest Airlines Example

Theme

A common area of focus

Operating Efficiency Theme

Perspective

Dependent, hierarchical views of the strategy which facilitate the display of the cause-effect relationship amongst objectives

Financial
- Profitability
- Asset Utilization

Customer
- "I'm Staying With Southwest"
- "On-time Service"
- "Lowest prices"

Internal Processes
- Fast Turnaround Time

Learning & Growth
- Ground Crew Aligned to Strategy

Objective	Measure	Target	Initiative
What the strategy is trying to achieve	How performance against the objective is monitored	The level of performance or rate of improvement needed	Projects required to reach the target
Fast turnaround time	On Ground Time On-Time Departure	30 Minutes 90%	Turnaround Cycle Time Optimization

Scorecard

How progress is tracked against expectations and corrective actions identified

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Adapted from *Strategy Maps*, Harvard Business Press, p53

The Strategy Map Helps Tell The Story

Financial

…deliver ever-increasing value to our shareholders.

"What are our shareholders' expectations and how do they define success?"

ensuring that we

Customer

…develop mutually beneficial long-term relationships with our customers…

"To satisfy our shareholders, how must we appear to our customers?"

which drives our ability to

Internal Processes

…excel at the specific processes which provide our customers with great products and superior service…

"To satisfy our customers, at which processes must we excel?"

enables us to

Learning & Growth

Reinvigorating our technical, relationship and leadership skills while fostering an entreprenurial culture…

"To excel at our critical internal processes, how must our organization change?"

A Complete Strategy Management Plan

Strategy Map		Scorecard			
Theme: Operating Efficiency	**Objectives**	**Measurement**	**Target**	**Initiative**	**Budget**
Financial — Profitability; Revenue Growth; Asset Utilization	• Profitability • Grow revenues • Fewer planes	• Market Value • Seat Revenue • Plane Lease Cost	• 30% CAGR • 20% CAGR • 5% CAGR		
Customer — "I'm Staying With Southwest"; "On-time Service"; "Lowest Prices"	• Flight is on-time • Lowest prices • Loyalty	• FAA On-Time Arrival Rating • Customer Ranking • # Repeat Customers • # Customers	• #1 • #1 • 70% • Increase 12% annual	• Quality Management • Customer Loyalty Program • Implement CRM System	• $XXX • $XXX • $XXX
Internal Processes — Fast Turnaround Time	• Fast turnaround time	• On Ground Time • On-Time Departure	• 30 Minutes • 90%	• On Ground Cycle Time Optimization	• $XXX

Learning & Growth — Ground Crew Aligned To Strategy; Strategic Systems: Crew Scheduling; Strategic Job: Ramp Agent	• Ground crew aligned with strategy
	
	• Develop the necessary skills
	• Develop the support system
		• % Ground Crew Stockholders
		• Strategic Awareness
		
		• Strategic Job Readiness
		
		• Info System Availability
			• 100%
			• 100%
			
			• Yr 1 - 0%
			  Yr 3 - 90%
			  Yr 5 - 100%
			• 100%
				• ESOP
				
				• Ground Crew Training
				
				• Crew Scheduling System Rollout
				
				• Communications Program
					• $XXX
					
					• $XXX
					
					• $XXX
					
					• $XXX

				Total Budget	**$XXXX**

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Adapted from *Strategy Maps*, Harvard Business Press, p53

Common Ground Between BSC and LSS

- Financial outcomes

- Customer

- Y= f(x), cause-effect hypothesis

- Measures

- Root cause analysis

- Projects (initiatives) to close performance gaps

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Differences Between BSC and LSS

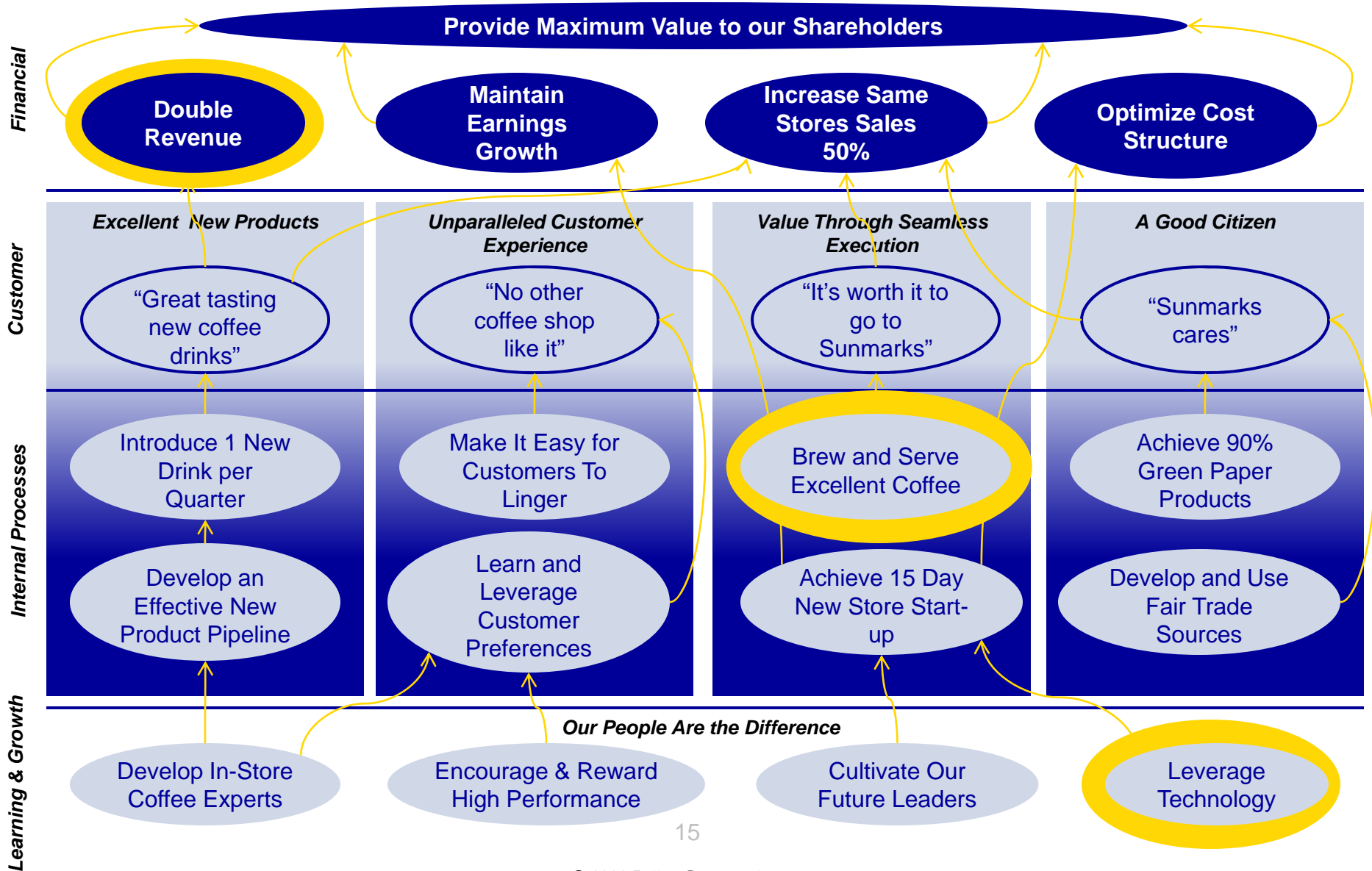| Balanced Scorecard	Lean Six Sigma
• For executive mgt team first, then for all	• For belts and team members primarily
• Change management is a major focus	• Change management may or may not be a component
• A day-to-day communication vehicle, continuous	• Focus on project completion, non-continuous
• To manage strategy deployment and execution	• To manage process improvement (DMAIC) and design (DFSS) projects
• Works best when initiated at the top management level	• Can be deployed very successfully at lower level operating units
• Does not work as a grass roots movement	• Can work very well as a grass roots movement
• Intended to ultimately involve the entire organization	• Does not necessarily require whole organization involvement

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How the BSC Can Benefit From LSS

Let's take a look at:

- 5 examples
  - Objectives
  - Measures (2)
  - Performance Reporting
  - Initiative Selection

- Real BSC deployments

- Fictionalized
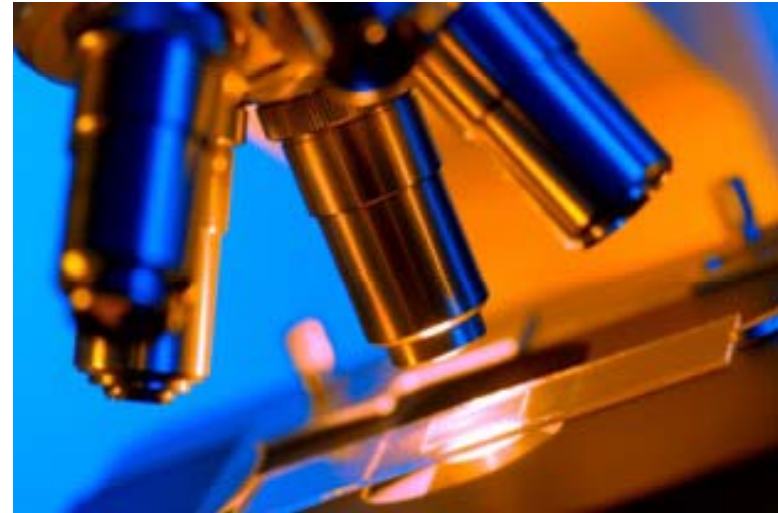
Sunmarks Coffee Company

Provide Maximum Value to our Shareholders

Financial

Double Revenue

Maintain Earnings Growth

Increase Same Stores Sales 50%

Optimize Cost Structure

Customer

Excellent New Products

Unparalleled Customer Experience

Value Through Seamless Execution

A Good Citizen

"Great tasting new coffee drinks"

"No other coffee shop like it"

"It's worth it to go to Sunmarks"

"Sunmarks cares"

Internal Processes

Introduce 1 New Drink per Quarter

Make It Easy for Customers To Linger

Brew and Serve Excellent Coffee

Achieve 90% Green Paper Products

Develop an Effective New Product Pipeline

Learn and Leverage Customer Preferences

Achieve 15 Day New Store Start-up

Develop and Use Fair Trade Sources

Learning & Growth

Our People Are the Difference

Develop In-Store Coffee Experts

Encourage & Reward High Performance

Cultivate Our Future Leaders

Leverage Technology

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Strategic Differentiation and Value Proposition

	Operational Excellence	**Product Leadership**	**Customer Intimacy**
Value Proposition	Best Total Cost	Best Product	Best Total Solution
Improvement Levers	• Process Design/Redesign • Continuous Improvement	• Product Technology • R&D Cycle Time	• Problem Expertise • Service Customization
Example Organizations	• Wal-Mart • McDonalds • FedEx	• Lexus • Apple • Google	• Cabela's • Nordstrom • USAA (insurance)

Adapted from *The Discipline of Market Leaders*, Basic Business Press, p194

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Few guidelines for creating

Double Revenue

- Our revenue growth has been flat for the past 5 years. Because of our new strategic objectives, we will experience double-digit revenue growth from new products. Revenue growth for existing products will be no more than single digit but will be positive.

Unclear, Vague, Unmeasureable, Open-ended

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Objective Definition With LSS

Based on **operational definition** requirements

Leverage Score: 5
5 being best score

Double Revenue

- Through a combination of expanding into new markets and penetrating our existing markets we will double the revenue generated through sales of our products within 3 years. The percent of sales from new products will increase from 40% in year 1 to 55% in year 3.

Clear, Unambiguous, Measureable, Time-bound

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- ## Declarative
  - "We're measuring 'time to prepare' so let's keep doing that."

- ## Comparative
  - "Our biggest competitor measures customer engagement time: from the time the customer enters the line to the time the order is placed. Let's do better and measure from the time the customer arrives until they leave. "

- ## Nominative
  - "Let's vote."

What do the objectives suggest? What does our strategy need?

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Measure Selection With LSS

Based on Value Driver (i.e. CTQC) Trees

Leverage Score: 4

Objective	Key Elements (also Objectives)	Value Drivers	Strategic Measures
Provide Maximum Value to Our Shareholder	**Double Revenue**	**New markets**	New market revenue growth (%)
	Maximize Earnings Growth	**Maximize existing channels and customers**	Share growth in existing markets (%)
	Increase Same Store Sales 50%	**New products**	New Product Revenue (%)
	Optimize Cost Structure	**Acquisitions**	NPV / Payback

"what we want"   *"where it comes from"*   *"how it's measured"*

Explicit relationship

Measures reflective of the value that the Objectives deliver

- **Declarative**
  - "Our serve time averages 180 seconds so let's set our target to 175 seconds and give ourselves a stretch task."

- **Comparative**
  - "Our biggest competitor averages 3.5 minutes so let's set our target to 3.2 minutes. This will make sure we attain a competitive advantage."

- **Nominative**
  - "Let's vote."

What does the customer want? What does our strategy need?

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Target Setting With LSS

Voice of the Customer process followed

Leverage Score: 2

Objective	Value Drivers	Strategic Measures	Target
Brew and Serve Excellent Coffee	**Timely Delivery**	Time to Serve (sec)	210 seconds maximum for specialized drinks
	Good Tasting		

Surveys, observation, benchmarking

Our serve time = 180 sec

Comp. serve time = 3.5 min

Voice of the Customer Process

Gather ➔ **Sort** ➔ **Develop** ➔ **Translate**

Active & Passive Information — **Affinity Diagram** — **CTQC Tree** — **Specifications**

The targets = the required level of performance

![MoreSteam.com logo]

Performance Reporting Before LSS

Poorly Defined Measures and Targets

Average Time to Serve (sec)
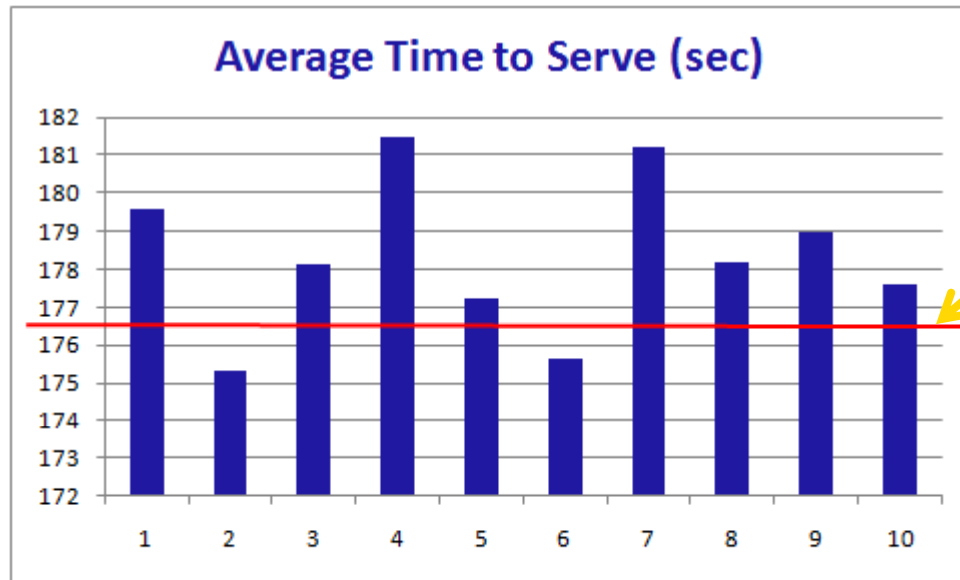
**Arbitrary target
(declarative)**

**Project chartered
(unnecessarily) to
improve performance**

What does the process "say"?

Performance Reporting With LSS
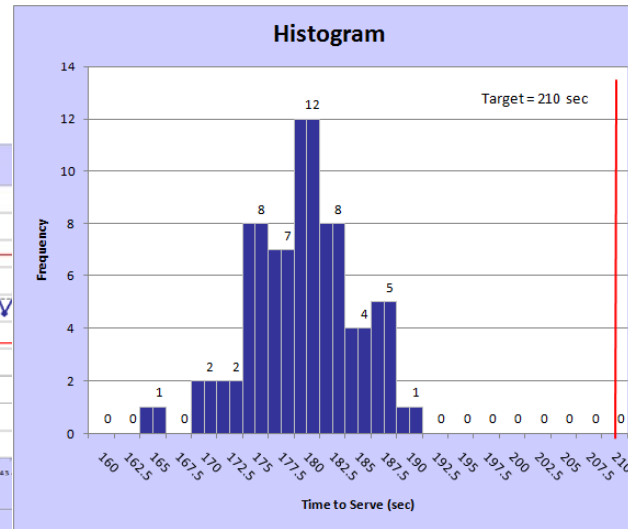
Disciplined approach through Voice of the Process first

Leverage Score: 2

Histogram

Next: what is the process capability?

Process Behavior Charts

Grand Average	178.33	
Units	seconds	
Standard Deviation (σ)	5.04	Estimated or Calculated? Calculated
Upper Specification Limit	210	
Lower Specification Limit		

Z_{USL}	6.28	Number of standard deviations between the grand average and the USL
Z_{LSL}	35.38	Number of standard deviations between the grand average and the LSL
Z_1	1.00	Based on Z_{USL} from normal distribution table
Z_2	0.00	Based on Z_{LSL} from normal distribution table
Z_{min}	6.28	Smaller of Z_{USL} and Z_{LSL}
Pp	6.94	(USL - LSL)/(6 x σ) Based on Calculated Standard Deviation
Ppk	2.09	$Z_{min}/3$ Based on Calculated Standard Deviation
Yield	100.00%	$Z_1 - Z_2$

Next: is the process meeting spec?

Finally: analysis & recommendation

- **Continue to monitor**

First: is the process stable?

More process management, less process tinkering

Initiative Selection Before LSS

- ## Declarative
  - "We need to make sure we have something covering our ERP system. It's that important."

- ## Comparative
  - "When I was working at our competitor, we had a project to set up on-line collaborative design and development. We need the same thing here."

- ## Nominative
  - "Let's vote."

- ## Enumerative
  - "We have the right amount of initiatives already, let's move on."

Initiatives disconnected from strategy

Initiative Selection With LSS

Leverage Score: 3

Criteria → **Weighting** → **Rate & Rank** → **Select**

From the strategy development process

Pairwise comparison

Cause-Effect Matrix

Based on cut-off values

Business Benefit	Revenue Incr	Cost Decr	Gross Margin Incr	Cust Sat Incr	Process Improv
Revenue Incr	1	0.5	1	0.333	0.2
Cost Decr	2	1	0.333	1	0.111
Gross Margin Incr	1	3	1	0.2	0.143
Cust Sat Incr	3	1	5	1	0.333
Process Improv	5	9	7	3	1
Total	12.00	14.50	14.33	5.53	1.79

Business Benefit	Revenue Incr	Cost Decr	Gross Margin Incr	Cust Sat Incr	Process Improv	Sum	Local	Global
Revenue Incr	0.083	0.034	0.070	0.060	0.112	0.36	7.2%	1.9%
Cost Decr	0.167	0.069	0.023	0.181	0.062	0.50	10.0%	2.7%
Gross Margin Incr	0.083	0.207	0.070	0.036	0.080	0.48	9.5%	2.6%
Cust Sat Incr	0.250	0.069	0.349	0.181	0.187	1.04	20.7%	5.6%
Process Improv	0.417	0.621	0.488	0.542	0.560	2.63	52.5%	14.2%

Rating Criteria

Rank	Initiative	Strategic	Mitigation of Risk	Legal / Regulator	Discretionary	Revenue Increase	Cost Decrease	Gross Margin Inc.	Cust. Sat. Increase	Process Improvement	Cost to Implement	Time to Implement	Complexity	Interdependecy	Total	Revenue Increase	Cost Decrease	Gross Margin Inc.	Cust. Sat. Increase	Process Improvement	Total
9	Initiative 1	8								2	1	1	2	2	12.67	-	-	-	-	0.025	0.70
3	Initiative 2	8			4						1	1	2	1	14.33	0.009	-	-	-	-	0.67
2	Initiative 3	8								2	2	2	2	4	14.67	-	-	-	-	0.025	0.61
3	Initiative 4	8								2	2	1	2	4	14.33	-	-	-	-	0.025	0.60
3	Initiative 5	8								2	2	1	2	4	14.33	-	-	-	-	0.025	0.60
1	Initiative 6	4								8	2	1	2	2	15.67	-	-	-	-	0.142	0.48
15	Initiative 7	1								2	2	1	2	2	6.67	-	-	-	-	0.025	0.46
11	Initiative 8	1								4	4	2	2	2	11.00	-	-	-	-	0.069	0.46
7	Initiative 9	4								4	2	1	4	4	13.00	-	-	-	-	0.069	0.37
8	Initiative 10	4								2	2	2	4	8	12.67	-	-	-	-	0.025	0.41
14	Initiative 11	2								2	1	1	2	4	7.33	-	-	-	-	0.025	0.30
12	Initiative 12	4								2	2	1	2	4	10.33	-	-	-	-	0.025	0.29
13	Initiative 13	1			2					2	1	1	4	8	9.33	-	-	-	-	0.025	0.30
10	Initiative 14	2								2	4	4	4	4	12.00	-	-	-	-	0.025	0.17
6	Intiative 15	4								2	4	1	8	2	13.67	-	-	-	-	0.025	0.18

A comprehensive portfolio of projects

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6th example if time allows

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References

- *Balanced Scorecard Step-by-Step: Maximizing Performance and Maintaining Results,* Niven, Paul R.

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- *Out of the Crisis*, Deming, W. Edwards

- *The Balanced Scorecard: Translating Strategy Into Action,* Kaplan, Robert S. and Norton, David P.

- *The Discipline of Market Leaders*, Treacy, Michael and Wiersema, Fred

- *The Strategy-Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment,* Kaplan, Robert S. and Norton, David P.

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Summary

Balanced Scorecard (BSC) and Lean Six Sigma (LSS)

- Common ground

- Key differences

- Keep the BSC and LSS separate organizationally

- How BSC can benefit from LSS

Don't Combine – Do Leverage*

* Except the Project and Initiative Selection Process, Combine These

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Thank you for joining us

Resource Links and Contacts

Questions? Comments? We'd love to hear from you.

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> mklaus@moresteam.com

> **Larry Goldman, Vice President Marketing - MoreSteam.com**
> lgoldman@moresteam.com

Additional Resources:

Archived presentation, slides and other materials:
http://www.moresteam.com/presentations/webcast-balanced-scorecard.cfm

Master Black Belt Program: http://www.moresteam.com/master-black-belt.cfm

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Join Us for Another MBB Webcast

"Fault Tree Analysis for Root Cause Analysis of Sporadic Events"

Debra Detwiler, Bridgestone Americas
Thursday, November 18, 2010, 11 AM EST

http://www.moresteam.com/presentations/webcast-fault-tree-analysis.cfm

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Critical Success Factor Decomposition for Measures

Average length of service of staff who have left this month

# of team members without agreed goals

# of team members that have mentors

# of team members with career paths

# of team members who have attended executive management courses

New branch

# of social functions planned

Job Satisfaction

# of team members who have presented to Senior Mgmt. Team

Career paths for team members

# of key positions with succession planning

Training

# of recruitments from internal referrals in last 3 months

Turnover of key staff in last 3 months

New branch

# of team members who are working on a major project

Encourage & Reward High Performance

# of team members booked to attend executive management courses in next six months

# of incentive payments to team members that are late

Compensation

Performance Feedback

# of team members who have not had informal feedback in last 3 months

Team members whose compensation has not been benchmarked in last 6 months

Team members paid below benchmark

# of applicants for vacancies

Team members who have not had at least a week's vacation in the last 6 months

Recognition of team members

# of team members featured in press releases, intranet newsletter

Sick leave taken by team members

Work Environment

New branch

# of days leave taken in last 12 months

Team members with no vacation scheduled in the next 6 months

# of recognitions made in last 20 working days

# of CEO recognitions in last month, 2 months, 3 months

Team members who have not received recognition in last 3 months

Overtime hours works by team members

# of problems identified by team members that have been addressed

% of team members covered by 360-degree evaluations