

Is Your Driver Tree Stuck in Neutral?

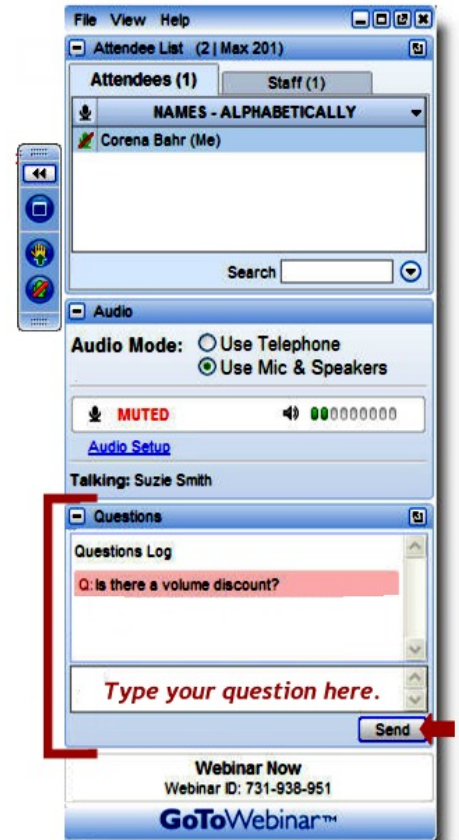
Maurice (Mo) Klaus

December 14, 2011

Agenda



- Welcome
- Introduction of MBB Webcast Series
 - Larry Goldman, MoreSteam.com
- Is Your Driver Tree Stuck in Neutral?
 - Maurice Klaus, MoreSteam.com
- Open Discussion and Questions



MoreSteam.com – Company Background

- Founded 2000
- Over 300,000 Lean Six Sigma professionals trained
- Serving over 50% 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)



Today's Presenter



Maurice Klaus

Owner, MBK, Inc.

BB and Product Architect, MoreSteam.com

- Over 16 years of management consulting experience and has worked with more than 75 private sector organizations
- Product Architect for EngineRoom®
- M.S. and B.S. in Mechanical Engineering from The University of Michigan

What is a driver tree?

- Critical to Quality (CTQ) / Critical to Success (CTS) trees
 - Needs → **Drivers** → Specifications / Targets
- Value driver trees
 - Objective → **Drivers** → Measures
- Fishbone (Ishikawa) diagrams
 - Effect → **Drivers** → Causes



$x_1, x_2, x_3 \dots x_n \rightarrow \text{Drivers} \rightarrow Y$

★ Our new approach borrows from all three

The 'Dilemma'

Using driver trees can be **challenging...**

Poorly defined drivers:
too general or too
specific

Can't identify drivers

All I get are more
"needs", not
"drivers"

Can't agree on
drivers

Can't identify
critical to quality
characteristics

Critical to quality
characteristics not
specific

Critical to quality
characteristics not
measureable

☆ Driver trees are usually easy to use but, sometimes, it can be difficult to get to meaningful results. When that happens, what can be done?

Objectives

A new approach to using driver trees

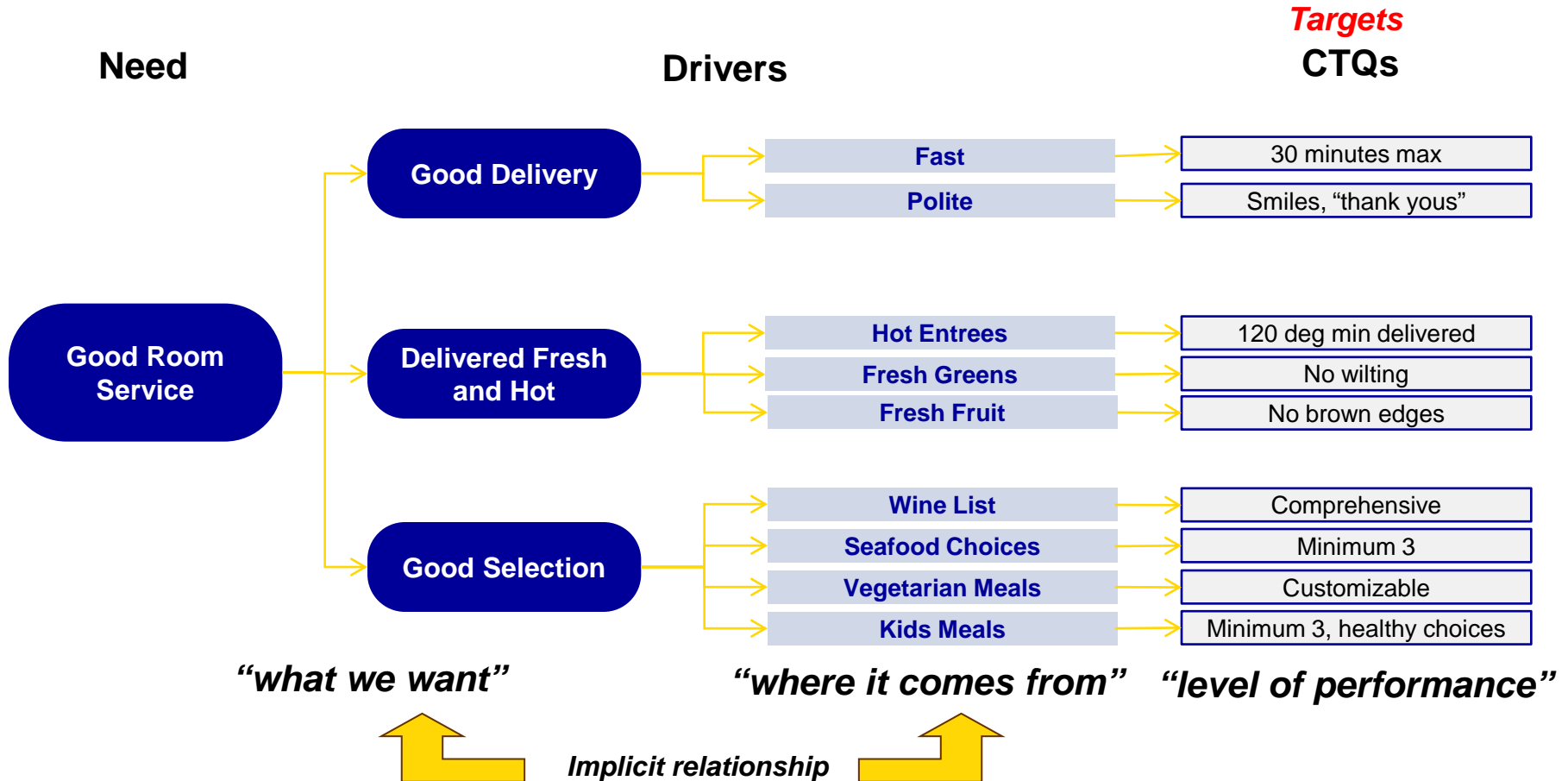


- Basic CTQ/CTS tree **features**
- **Process / systems** view
- Drivers have **success factors**
- **Measures of success**

☆ Simply a different way to look at it

Customer outcomes with CTQ driver trees

Critical to Quality (CTQ) Tree

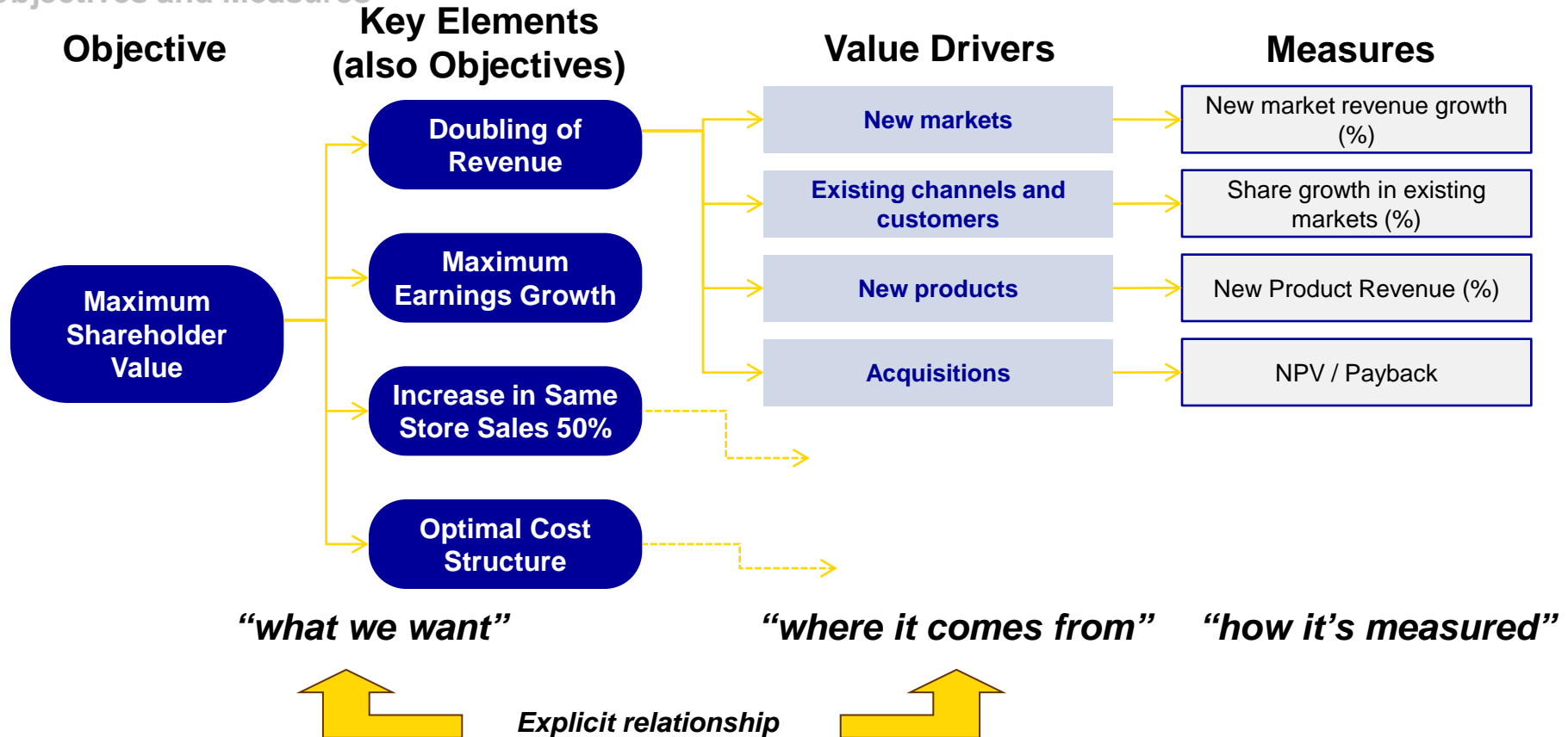


☆ CTQs reflective of what it takes to meet the stated need

Financial outcomes with value driver trees

Value Driver Tree

Objectives and Measures

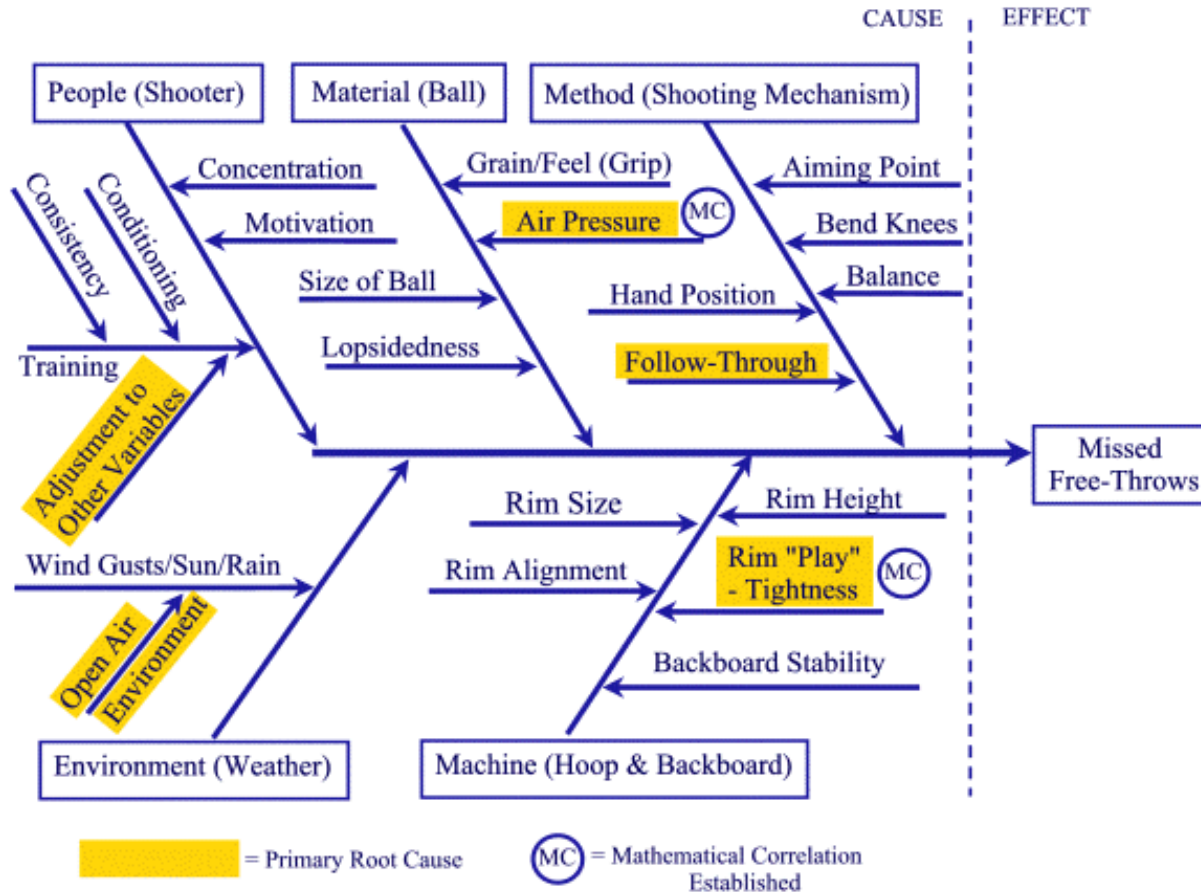


★ Measures reflective of the value that the Objectives deliver

Cause & Effect with Ishikawa diagrams

Ishikawa (Fishbone) Diagram

Categories



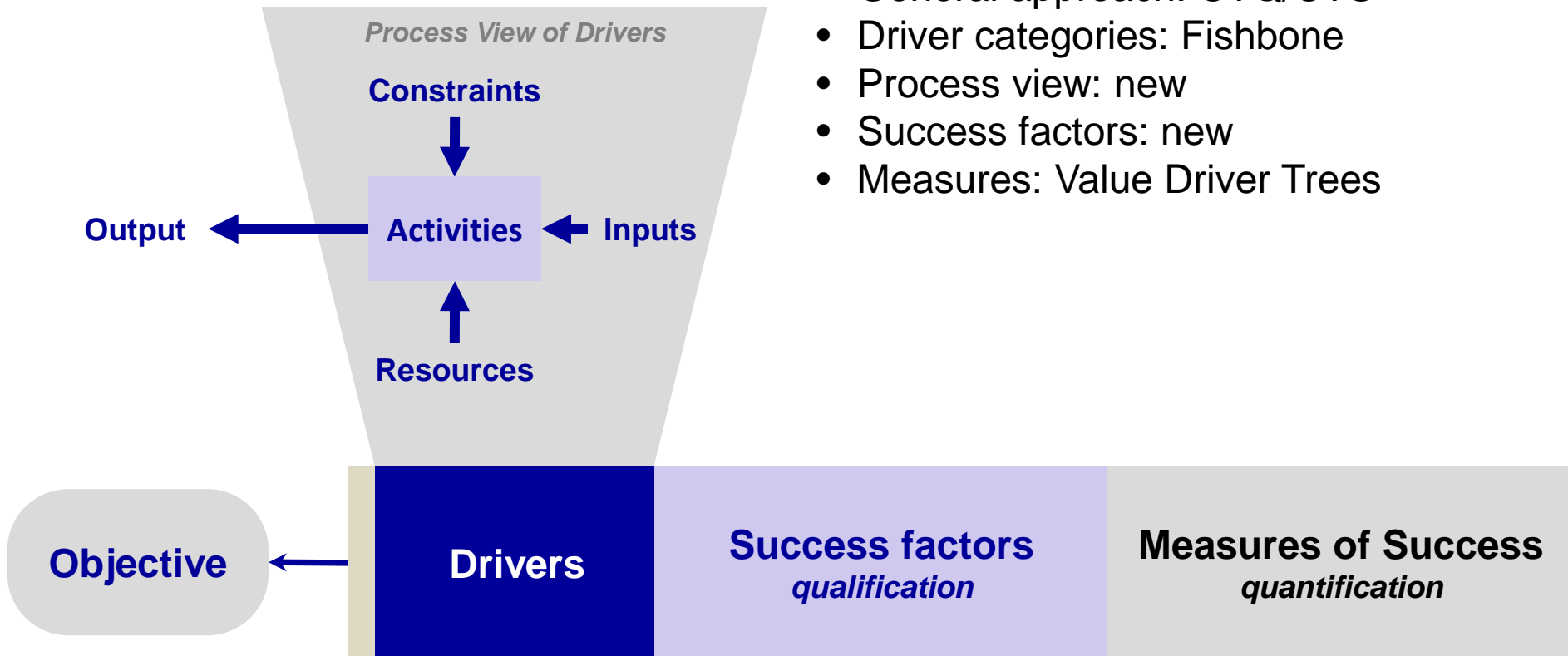
☆ Categorized and correlated root causes drive the effect

The new approach

- Basic CTQ/CTS format
- **Process** view
 - Drivers: Inputs, Resources, Constraints
 - Need / objectives / effect: Output
- **Success Factors**
- **Measures** of success



The new approach



- General approach: CTQ/CTS
- Driver categories: Fishbone
- Process view: new
- Success factors: new
- Measures: Value Driver Trees

“what we want”

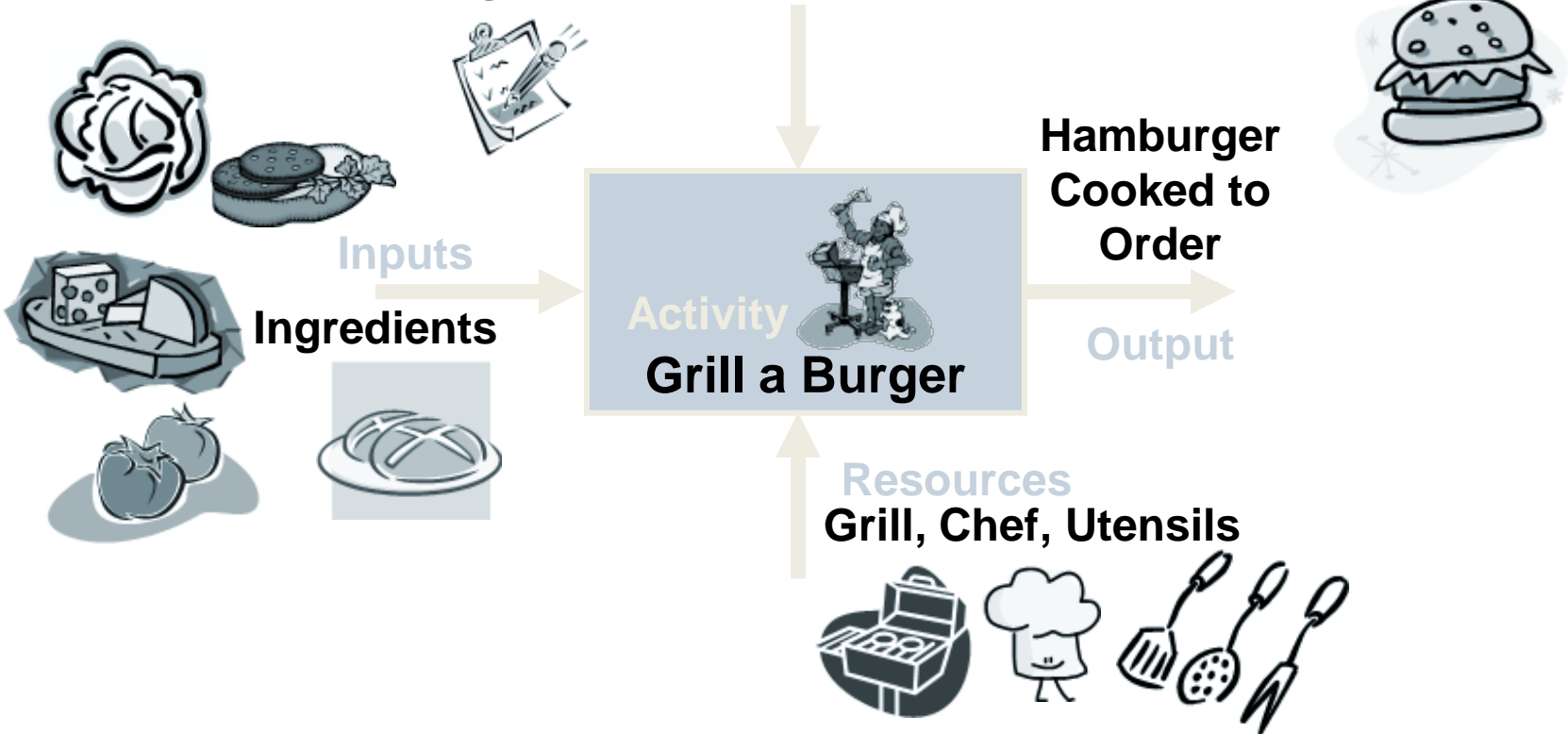
“where it comes from”

“how we need to do it”

“how we’ll know we’ve done it”

Example of a process

Constraints
Cooking Instructions



Example of the new approach

Objective

Drivers

Success Factors

Measures of Success

Constraints

- Cooking instructions

- Follow the instructions
- Note any variances for review later
- Do not use spatula to press on burger
- Cheese place at proper time

- Cooking time
- Number of flips
- Time between flips
- Grill temperature

Inputs

- Raw hamburger
- Lettuce
- Cheese
- Tomato
- Onion
- Bun

- Form the patty to the specified size and thickness
- Use fresh, un-wilted lettuce
- Slice tomatoes to the specified thickness
- Use only 9 year aged cheddar
- Use fresh, never-frozen buns that can hold a burger
- Use the best hamburger for grilling

- Age of cheese
- Tomato slice thickness
- Burger fat content
- Burger starting weight
- Burger starting thickness
- Bun type (Kaiser, onion, etc.)
- Lettuce type (iceberg, bib, etc.)

Resources

- Grill
- Chef
- Utensils

- Remove any residue from previous grilling
- Pre-heat grill to specific temperature
- Use proper utensils for grilling
- Don't be read instructions while grilling

- Grill type (gas, charcoal)
- Chef years experiences
- Utensil type (Teflon, stainless, etc.)

Hamburger
Cooked to
Order

Activities

- Form patty
- Pre-heat grill
- Grill burger
- Place cheese
- Plate the burger
- Serve the burger

“what we want”

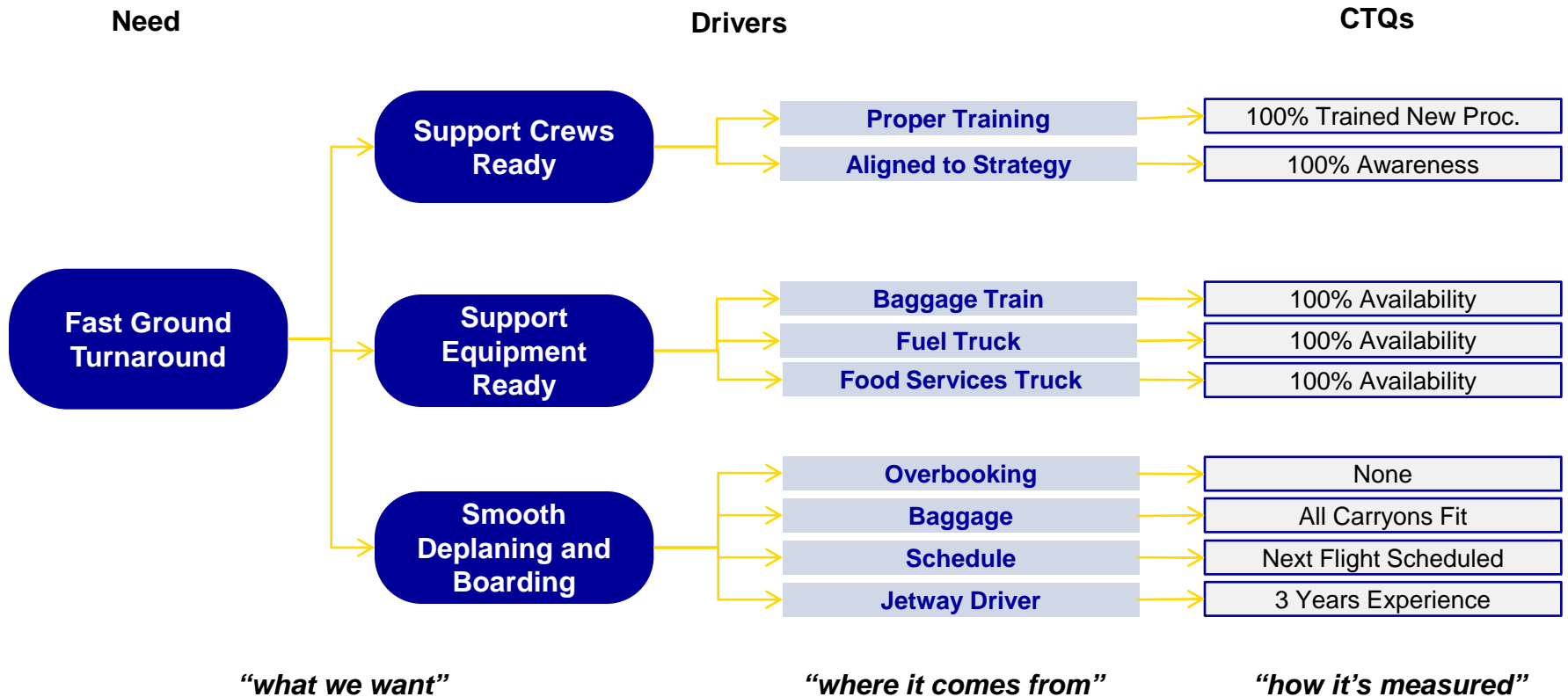
“where it comes from”

“how we need to do it”

“how we’ll know we’ve done it”

The dilemma illustrated

Critical to Quality (CTQ) Tree



☆ Something is missing, it feels incomplete

The dilemma relieved

Objective

Drivers

Success Factors

Measures of Success

Constraints

- Regulations
- Schedule
- Weather

- Reg's clearly reflected in procedures
- Schedule supports turnaround objective
- Weather delays minimal

- Unacceptable turnaround times due to : equipment, staffing, overbooking

Inputs

- Airplane
- Passengers
- Checked Baggage
- Fuel
- Food and drinks
- Carryons

- Airplane pre-flight check successful
- Airplane maintained per schedule
- Passenger special needs identified well prior to boarding
- Checked baggage screening uneventful
- Proper fuel type and quantity ready

- Regular plane maintenance timeliness
- Baggage screening events
- Time to board
- Fuel readiness
- Time to fuel
- Pre-flight issues

Resources

- Ground Crew
- Flight Crew
- Gate Crew
- Passengers
- Jetway
- Fuel Trucks
- Food Service Trucks
- Passenger List
- Scheduling System
- Baggage Train
- Pre-flight Checklist

- Crews aligned to objective
- Crews properly trained
- Supportive work environment
- Passengers engaged in the process and the objective
- Jetway availability
- Fuel truck availability
- Food service truck availability
- Crew staffing levels match needs
- All passengers cleared promptly
- Overbooked situations handled promptly
- Baggage train readiness

- Unacceptable turnaround times due to : equipment, staffing, overbooking
- Employee survey
- Equipment availability
- Crew staffing rate
- Average experience
- Passenger survey
- Seat utilization

Fast Ground Turnaround

Activities

- Deplaning
- Cleaning
- Refueling
- Restocking
- Boarding
- Pre-flight Check
- Baggage Handling

“what we want”

“where it comes from”

“how we need to do it”

“how we'll know we've done it”

How it works in process design and redesign

- Organizational capability assessment
- Driver analysis
- Identify gaps
- Effort focused on closing largest gaps
- Prioritization



Example

Driver	Importance	Current State, 1=Excellent to 4 = Very poor				Priority
	1 = low 4 = high	4	3	2	1	1 = low 4 = high
Reg's clearly reflected in procedures	4		x			12
Schedule supports turnaround objective	3		X			9
Weather delays minimal	2		X			6
Airplane pre-flight check successful	2			X		4
Airplane maintained per schedule	3				X	3
Passenger special needs identified well prior to boarding	1				X	1
Checked baggage screening uneventful	3				X	3
Proper fuel type and quantity ready	4				X	4
Crews aligned to objective	4	X				16
Crews properly trained	4	X				16
Supportive work environment	2		X			6
Passengers engaged in the process and the objective	1	X				4
Jetway availability	4			X		8
Fuel truck availability	3				X	3
Food service truck availability	3				X	3
Crew staffing levels match needs	2		X			6
All passengers cleared promptly	2	X				8
Overbooked situations handled promptly	3	X				12
Baggage train readiness	4			X		8

Example – sorted by priority

Driver	Importance	Current State, 1=Excellent to 4 = Very poor				Priority
	1 = low 4 = high	4	3	2	1	1 = low 4 = high
Crews aligned to objective	4	X				16
Crews properly trained	4	X				16
Reg's clearly reflected in procedures	4		X			12
Overbooked situations handled promptly	3	X				12
Schedule supports turnaround objective	3		X			9
Jetway availability	4			X		8
All passengers cleared promptly	2	X				8
Baggage train readiness	4			X		8
Weather delays minimal	2		X			6
Supportive work environment	2		X			6
Crew staffing levels match needs	2		X			6
Airplane pre-flight check successful	2			X		4
Proper fuel type and quantity ready	4				X	4
Passengers engaged in the process and the objective	1	X				4
Airplane maintained per schedule	3				X	3
Checked baggage screening uneventful	3				X	3
Fuel truck availability	3				X	3
Food service truck availability	3				X	3
Passenger special needs identified well prior to boarding	1				X	1

Summary

- Alternative, not replacement
- Process view
- Focus on measures
- Capability gaps
- Give it a try!



Thank you for joining us



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](#), topics ranging from advanced *DOE* to *Leading Change* to *Finance for MBBs*



Resource Links and Contacts

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

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Additional Resources

Archived presentation, slides and other materials:

<http://www.moresteam.com/presentations/>

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