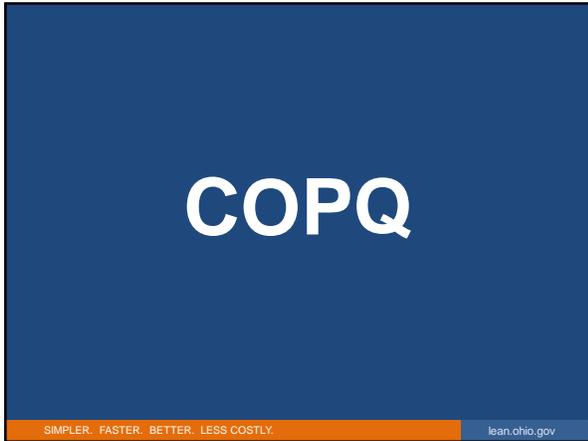


LEAN Ohio

Transforming the Public Sector

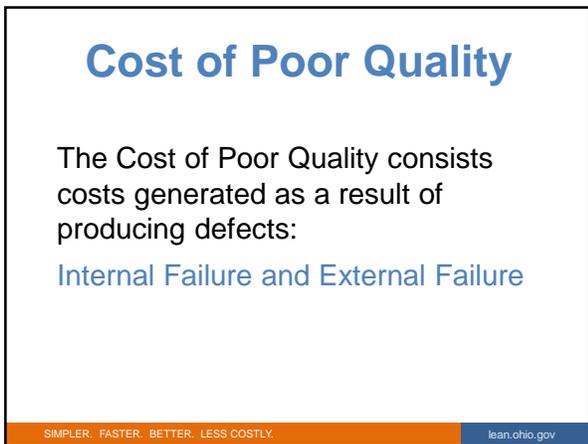
Green Belt
Critical to Quality

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COPQ

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Cost of Poor Quality

The Cost of Poor Quality consists of costs generated as a result of producing defects:

Internal Failure and External Failure

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Defects

A Defect is defined as anything that:

- Does not meet customer's specifications or requirements
- Causes customer dissatisfaction
- Does not fulfill the requirements (re-work)

REWORK

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Specifications

- Do you know your process specifications?
- Do you know your customer specifications?

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On the Surface:

Customer complaints	Long waits
Customer calls	Errors
Calls to legislators	Returns

Beneath the surface:

Transportation	Waiting
Inventory	Overproduction
Motion	Overprocessing
Underutilization	Defects

Functional organization	Batching of forms, applications	Lack of training
Technology gaps	Data-entry batching	Misplace skills
Excessive controls	Changing policies	Slow machines
Dated process design	No decision-making rules	Obsolete forms, poor form design
No backup or cross-training	Poor visual controls	Poor layout
Unbalanced workload	Disorganized workplace	Ambiguous government regulations
Excessive paperwork	Excessive storage	Excessive approvals

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Cost of Poor Quality

Direct COPQ

- Rework
- Sorting

Indirect: Difficult to Measure

- Inspections
- Documentation
- Delayed services
- Financial costs to customer
- Morale

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Quality at the Source

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Quality at the Source

- Quality at the Source places the responsibility for catching errors in the hands of the employee.
- Quality is not just the responsibility of the quality control department.
- Processes should be developed so employees recognize errors before they become defects.

Quality at the Source requires a Culture Shift

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Assuring First-Time Quality Means...

- Building a system with appropriate information
- Poke Yoke (mistake-proofing) your process for common problems
- Establishing clear decision rules



Poke Yoke
key points

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Assuring First-Time Quality Means...

- Never Accept a Defect
- Never Make a Defect
- Never Pass a Defect



DEFECTS

Fix defects immediately and find root causes

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CT Flowdown

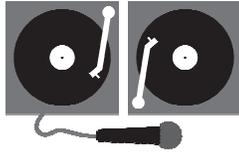
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CT Flowdown

Another Root Cause Analysis Tool

- Helps define the scope of a project by breaking it down into critical pieces
- Provides a clear picture of the different processes under the project umbrella
- Helps identify the branch with the biggest potential for improvement (root causes)

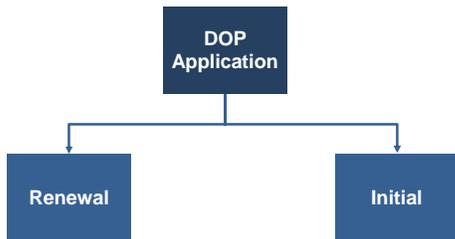
2 TURNTABLES AND A MICROPHONE



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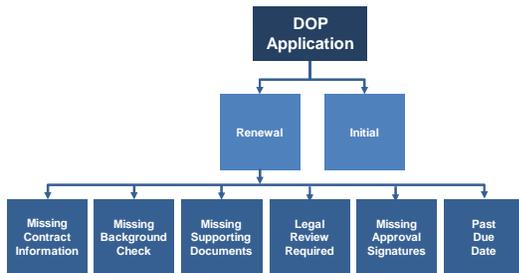
CT Flowdown - DOP



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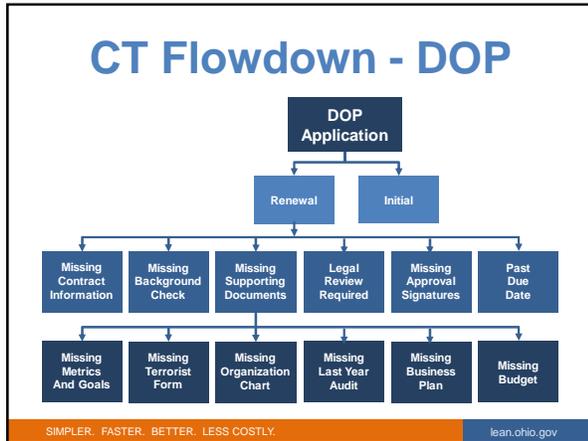
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CT Flowdown - DOP



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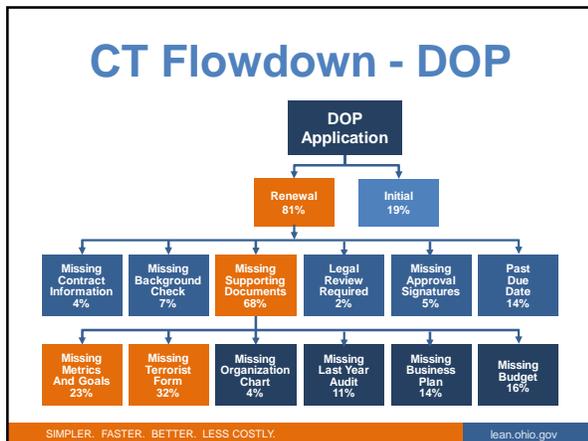
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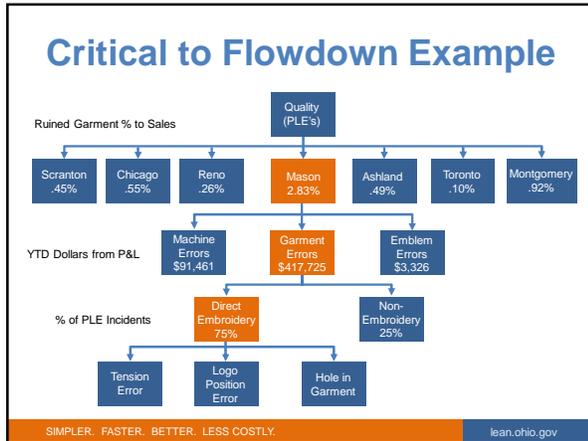


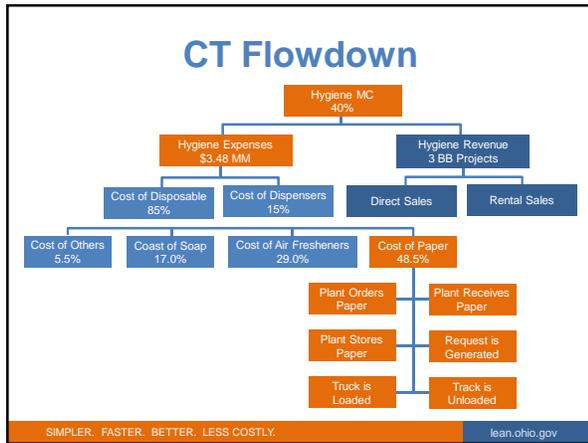
CT Flowdown

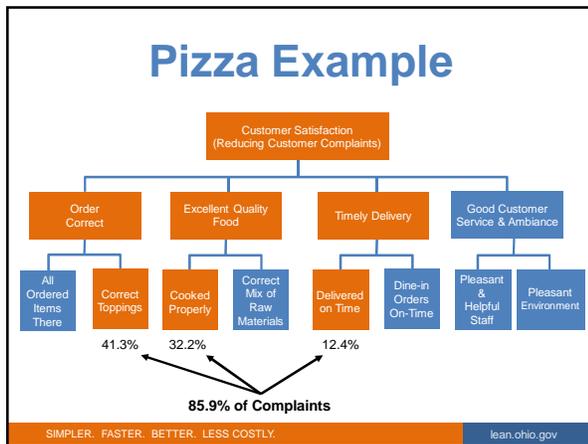
Best if you add simple data to help see the root cause.

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CT Flowdown – Class Exercise

- Identify the level for your project objectives
 - If you are at a high level, how would it flow down?
 - If you are at a low level, what higher levels did you flow down from, and what other CTs at your level might need to be considered?
- Draw a more complete CT tree
- Be prepared to present your work to the class
- Allow 15 minutes for this exercise

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Voice of the Customer

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Understanding the Customer

- Who is the customer?
 - Is the customer internal or external?
- What product, service or information does the customer receive?
- What are the customer requirements?
- Do the requirements represent the "Voice of the Customer"?
- Translate customer requirements into functional process requirements



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Terms

In defining the project opportunity, new terms (with acronyms) will be introduced. Here is summary of them:

- VOC: Voice of the Customer
- CCR: Critical Customer Requirements
- CTQ: Critical to Quality

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Voice of the Customer (voc)

- "I'm always on hold or get transferred to the wrong person"
- "I need faster service"
- "We are getting too many customer returns"



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What are your customers telling you?

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Translating VOC's to CCR's

- Often the Voices of Customers (VOC) are not specific and not in technical language.
- Sometimes the Voices of Customers are stated solutions
- Therefore VOC needs to be translated to the Critical Customer Requirements (CCR)

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Translating VOC's to CCR's

- A Critical Customer Requirement (CCR) is a requirement that is important to the customer.
- CCR can be measured (VOC may not be measurable)
- Establishes a target
 - Customer specifications
 - Acceptable range of performance

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Translating VOC's to CCR's

VOC	CCR
I'm always on hold or get transferred to the wrong person	Customer reaches correct person the first time within 30 seconds
I need faster service	I need my deliveries in 3 days or less
My form keeps getting sent back	All needed information will be collected the on the first entry

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Translating CCR's to CTQ's

- Often the Critical Customer Requirements are not stated in a way that can be measured internally
- Therefore CCR needs to be translated to the Critical to Quality (CTQ), which can be measured in the agency

Note: for some projects, CCR may be the same as CTQ

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Comparison of VOC, CCR and CTQ

	VOC	CCR	CTQ
Language	Customer language	Technical/ specific language	Technical/ specific language
Metric	May not measurable	Can measure in final product	Can measure in business or factory

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Translating VOC to CCR to CTQ

VOC	CCR	CTQ
I'm always on hold or get transferred to the wrong person	Customer reaches correct person the first time within 30 seconds	Customer reaches correct person the first time within 30 seconds
I need faster service	I need my deliveries in 3 days or less	Our process lead time for this product needs to be 2 days or less
It takes too long to get my application processed	Need decision to customer in 5 days	Need application reviewed and decision in 3 days

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Identify What Matters to the Customer

150 °F (ideal temperature)

149.9 - 150.1 °F (ridiculously tight)

150 °F (ideal temperature)

120 - 180 °F (dangerously loose)

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Defining What Matters to the Customer

150 °F (ideal temperature)

145 - 155 °F (the limits of customer indifference; the customer cannot tell OR does not care about variation within this range)

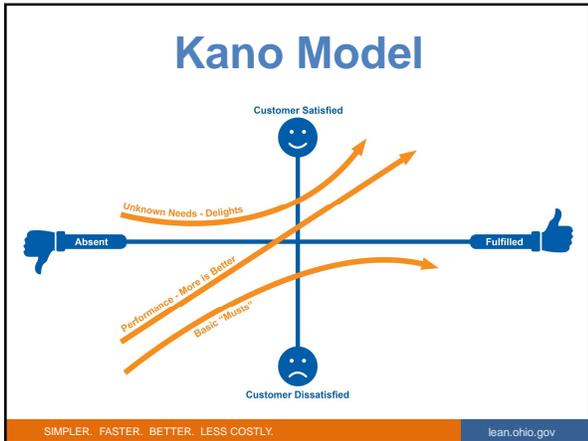
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Kano Model

Kano classified Customer requirements into three categories

- Basic (customer expects to get these features)
- Performance (more is better)
- Excitement (wow factor)

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Customer Requirements

	Automobile	Restaurant
Basic	Brakes function	No Food Poisoning
Performance	Acceleration	Fast Service
Excitement	"Look & Feel"	Ambiance

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Exercise

Complete a Kano model for:

- Buying a house
- Planning a wedding
- Attending a conference
- Other....

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