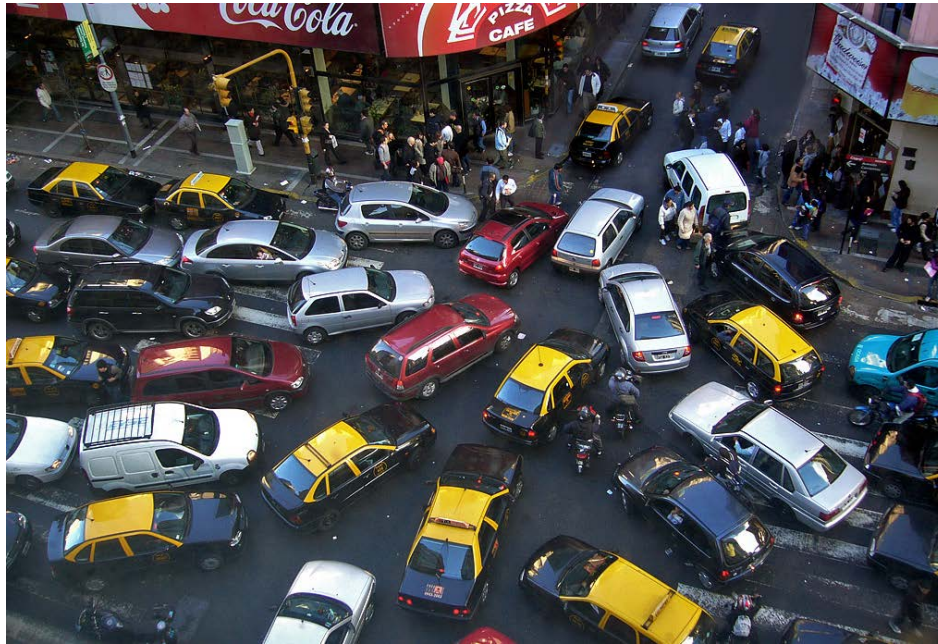# Process Design Thinking
Simple Methods to Get It Right the First Time
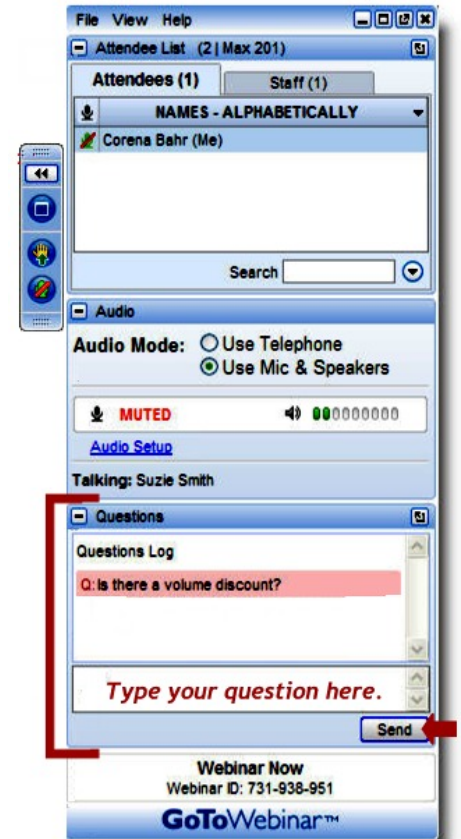

Bill Hathaway, MoreSteam.com
June 21, 2012

Agenda

- Welcome

- Introduction of MBB Webcast Series
  - Larry Goldman, MoreSteam.com

- "Process Design Thinking"
  - Bill Hathaway, MoreSteam.com

- Open Discussion and Questions

MoreSteam.com – The Lean Six Sigma e-Learning Leader

- Founded in 2000

- Trained over 350,000 Lean Six Sigma professionals

- Served over 2,000 corporate customers (including 50+% of the F500)

- First firm to offer the complete Black Belt curriculum online and only firm to offer online DfLSS

- Courses reviewed and approved by ASQ and PMI

- Academic Partnership with Ohio State University

Select Customers:

Quest Diagnostics

IBM

tyco

hp

Nationwide
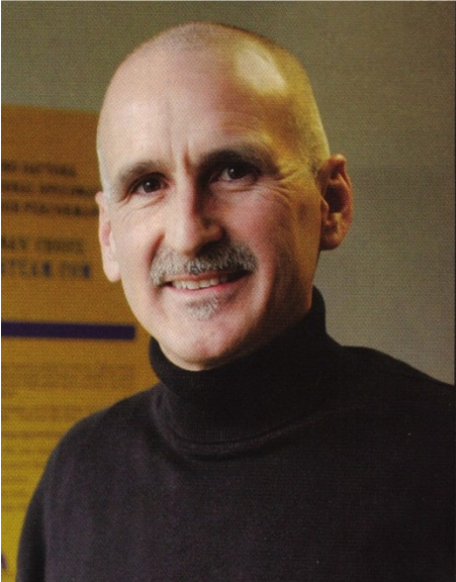
Honeywell

lenovo

XEROX

Hertz

ROLLS ROYCE

CardinalHealth

TEXTRON

MoreSteam.com®

Bill Hathaway

President & CEO, MoreSteam.com

PPC : PPF > 1.0

Everyone is a Designer

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The State of Process Design

Really?

My Design

A Chink In the Armor

Customer Empathy

Customer Empathy
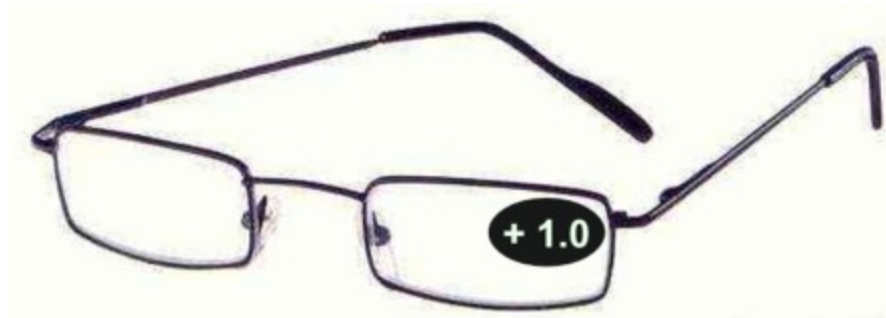
Who Needs a 1-Ball Juggler?

Components

1) Design Thinking = 2 design attitudes:
   - **Respect for the Voice of the Customer** (VOC)
   - **Spirit of Experimentation**.

2) A Design Roadmap
   Define -> Concept -> Design -> Optimize -> Validate.

3) Simple Analytical Tools

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Unrecognized Needs

"If I had asked my customers what they wanted, they'd have said 'a faster horse'".

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Customer Empathy

As Steve Jobs said when asked about what kind of market research was behind the iPad:

"None. It's not the consumer's job to know what they want."

You can probably only get to this level of insight by ***being*** the consumer.

Customer Empathy

Beyond Survey Questions

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Customer Empathy

Feeling My Pain

1) Remote Scan & Pay 2) Advance Scan 3) Cloud Payment 4) Improved Self-Checkout

Good Ideas Need Execution

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Define

Concept

Design

Optimize

**V**erify

In The Absence of Guidance…

The Design Roadmap - *DEFINE*

Critical Questions

- Who is the customer?
- What do they want/need?
- What is the problem to be solved?
- What are the customers willing to pay for a solution?
- What are the business constraints?
- When does this need to be completed?
- Who is going to do it?
- How would we measure success?

Simple Tools

- Initiating a Project – Charter
- Customer Segmentation
- Gathering VOC – Surveys, Interviews, Observation, Participation
- Sorting VOC - Affinity, Requirements Tree Diagrams
- Translating VOC - Simplified QFD, Metrics
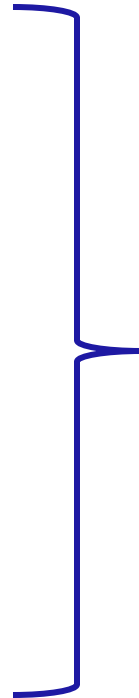
MoreSteam.com®
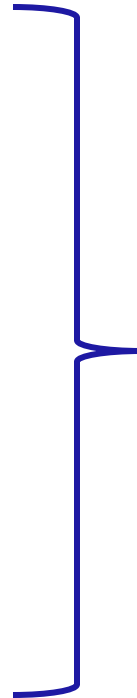
Well-Defined?

The Design Roadmap – CONCEPT (Divergence)

Critical Questions

- What kinds of solutions might work?
- Has anyone else done this successfully?
- ..or unsuccessfully?
- Are there solutions from related or unrelated areas that might apply?
- What can we remix to create a new solution?

Simple Tools

- Metrics to assess design performance
- Divergence – The Creative Process
- Benchmarking, Brainstorming, Remixing
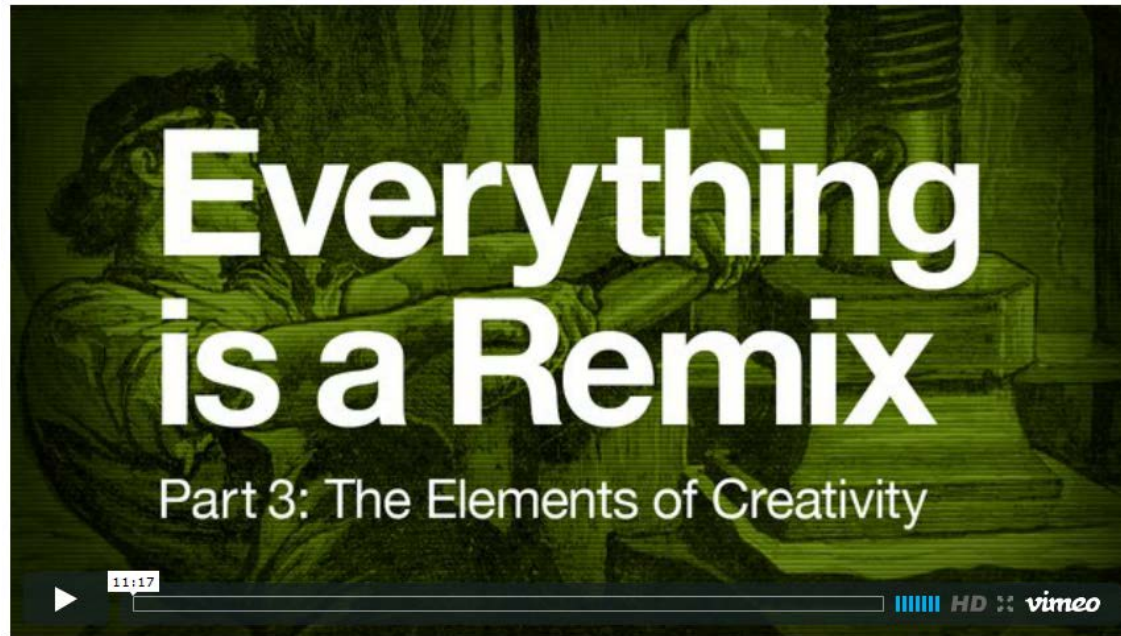- Rough Prototyping
- Pugh Concept Selection

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The Creative Process

"To have a good idea, you must have lots of ideas."
- Linus Pauling

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The Creative Process

http://www.everythingisaremix.info/everything-is-a-remix-part-3/

Good Concept?

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The Design Roadmap – DESIGN (Convergence)

Critical Questions

- What specific design offers the best solution?
- How do you know?
- What are the design specifications?
- Is it feasible (functionally possible)?
- Is the design sustainable?

Simple Tools

- Design Scorecard
- Continuous Flow
- Process Modeling – Monte Carlo Analysis, Discrete Event Simulation

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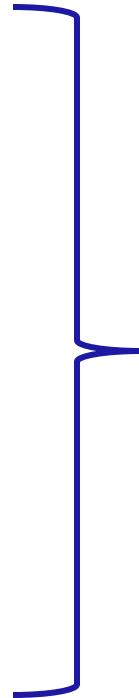
The Design Roadmap - OPTIMIZE

Critical Questions

- How robust is the design to its environment?
- What measures are necessary to minimize variation in execution?
- What are possible failure modes?
- Is the design lean (no waste)?
- What modifications can be made to increase value?

Simple Tools

- Stress Testing – Process Modeling Part 2
- FMEA & Process Reliability
- Design for Lean – Supply Chain Dynamics
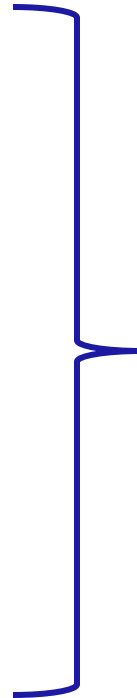
Good from Bad

HTTP 404 – File not found

http://www.ted.com/talks/renny_gleeson_404_the_story_of_a_page_not_found.html

Optimized?

The Design Roadmap – VERIFY

Critical Questions

Simple Tools

- Does the design do what it was intended to do?
- Does the design hold up under all conditions of use?
- Was the target cost achieved?
- Are training and support systems in place to assure a successful launch?

- Process Control Plan
- Piloting
- Launch Planning

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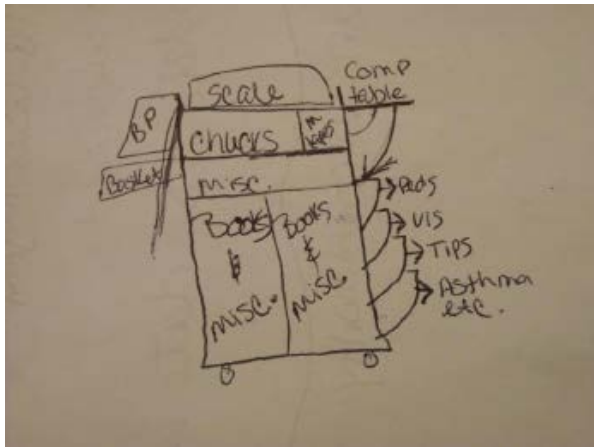
Verified?

MoreSteam.com®
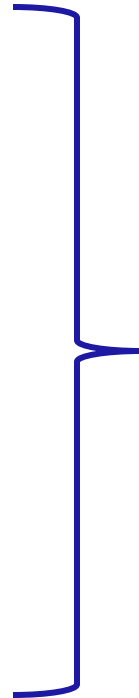
Rough prototypes to generate new thinking

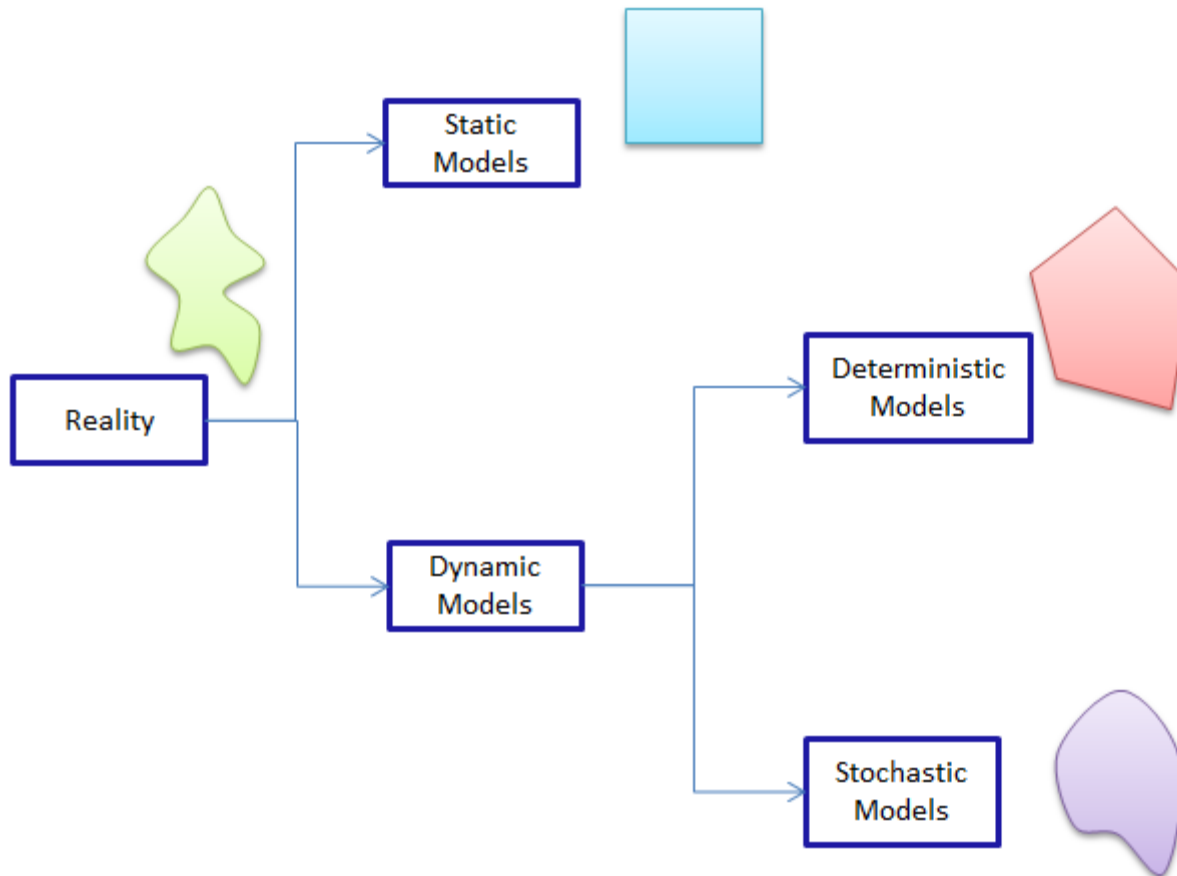# *Building to Think*

Akron Children's Hospital

A mobile triage cart was designed, eliminating the need for separate triage rooms, reducing the need to move patients/families, and creating an additional 4 exam rooms.

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Building to Think

Akron Children's Hospital – New Pharmacy Design

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Virtual Prototyping

Monte Carlo

Monte Carlo for Fast Food Process
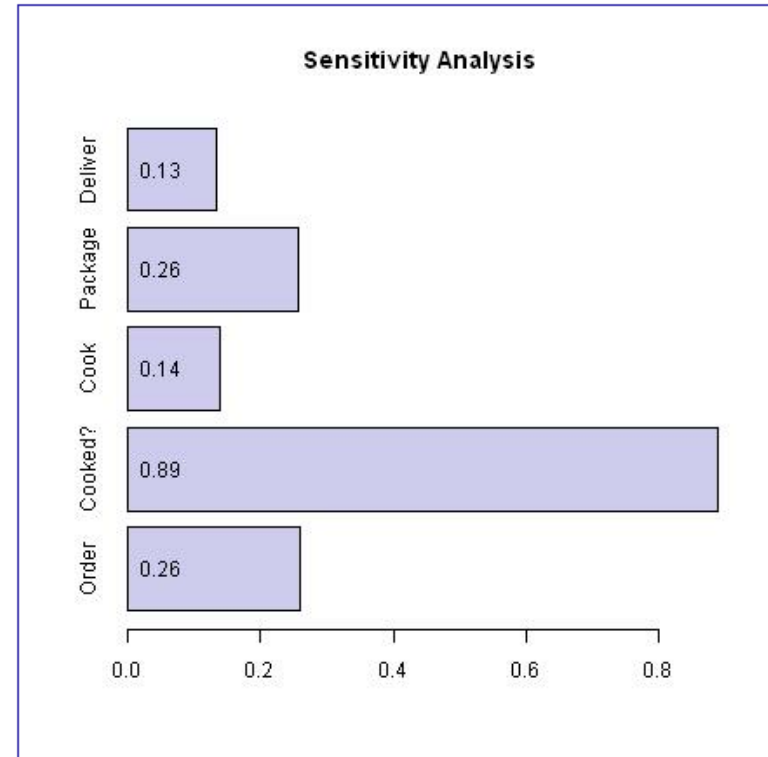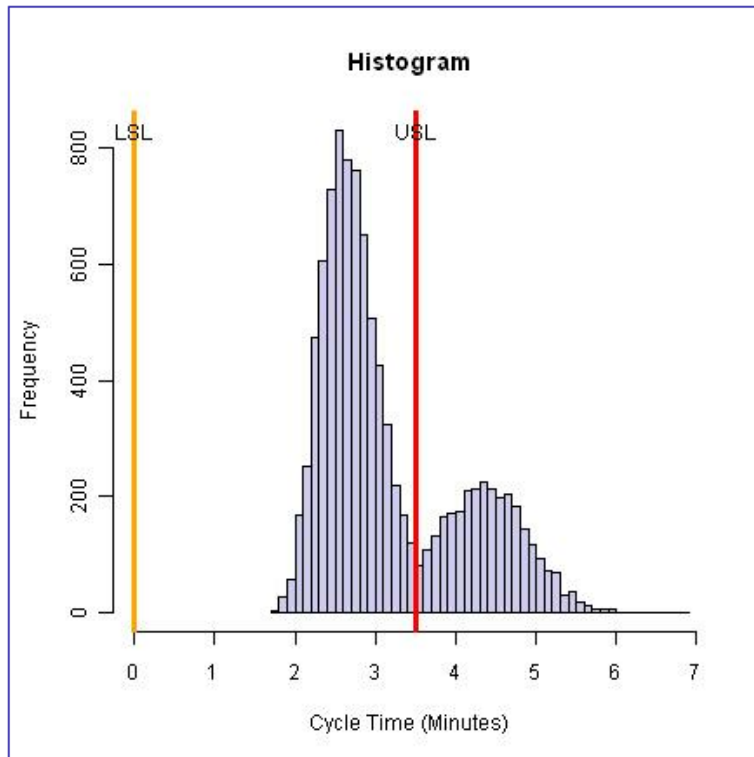
Simulation to Examine Possibilities

Discrete Event Simulation
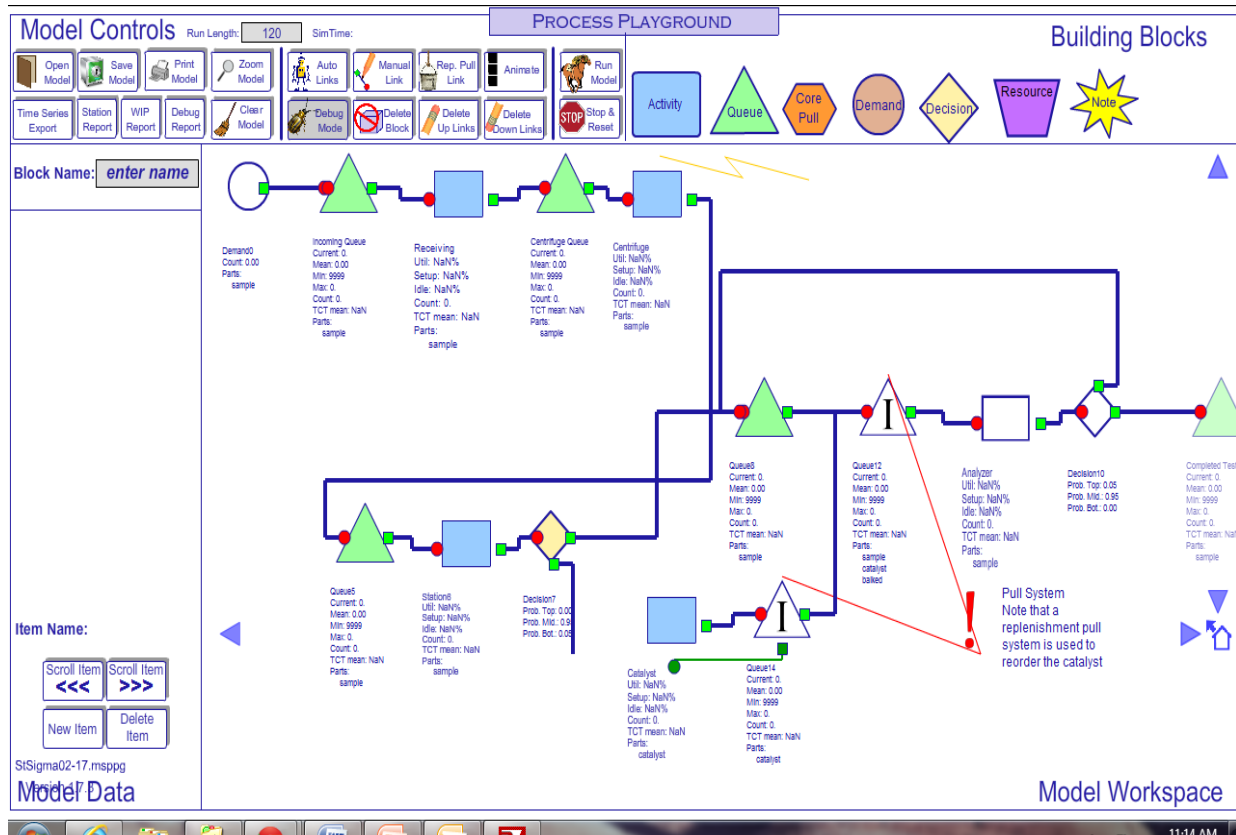
Plenty of Opportunities…

Thank you for joining us

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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*

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Resource Links and Contacts

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

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Larry Goldman, Vice President Marketing – MoreSteam.com
  lgoldman@moresteam.com

Join us for our next Webcast:

"Eating the Elephant: Designing and Deploying Continual
  Improvement in a Multi-Site Environment"
Bill D'Innocenzo, Fresenius Medical Care

Archived presentations and other materials:
http://www.moresteam.com/presentations/