BASIC INTRODUCTION TO LEAN

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LEAN STARTED BACK IN THE 1950S…

Toyota Production System

”All we are doing is looking at the timeline from the moment a customer gives us an order to the point we collect the cash. And we are reducing that timeline in the value stream by removing non value-added wastes”

Taiichi Ohno, father of the Toyota Production System

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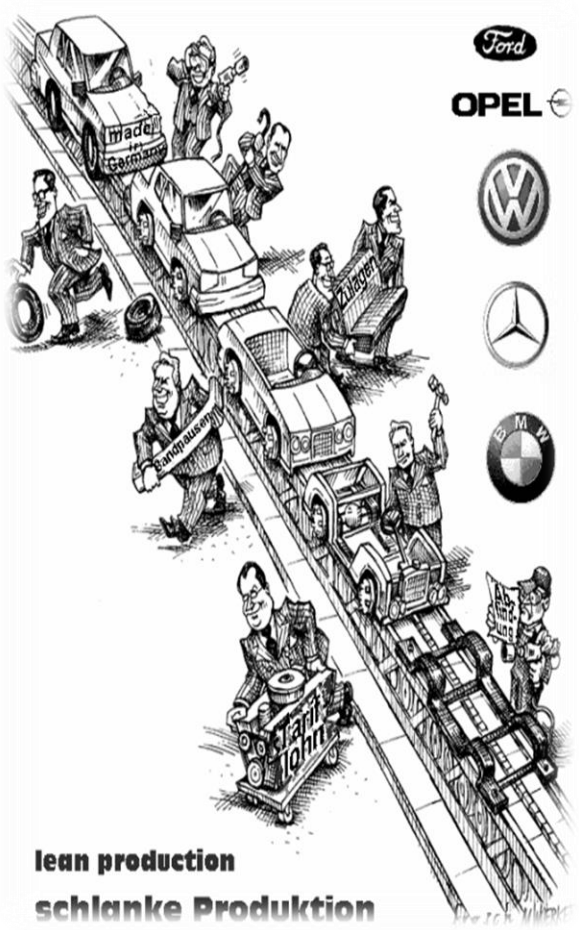
LEAN MANUFACTURING



- ✓Drawing on the knowledge and creativity of individual workers
- ✓Shrinking of batch sizes
- ✓Just-in-time production
- ✓An acceleration of cycle times
- ✓Inventory control

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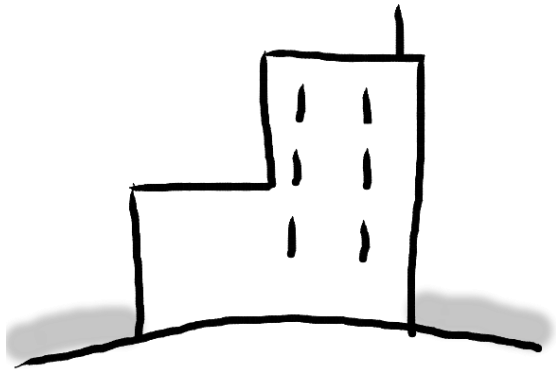
WHY IS IT SO RELEVANT NOW?

Pains

- VUCA: Volatility, Uncertainty, Complexity, Ambiguity
- Fast-paced competition landscape
- New responsibilities (triple bottomline)



21-century company

Gains

- Flexibility
- Adaptability
- Utilize collective intelligence
- Need for learning organization

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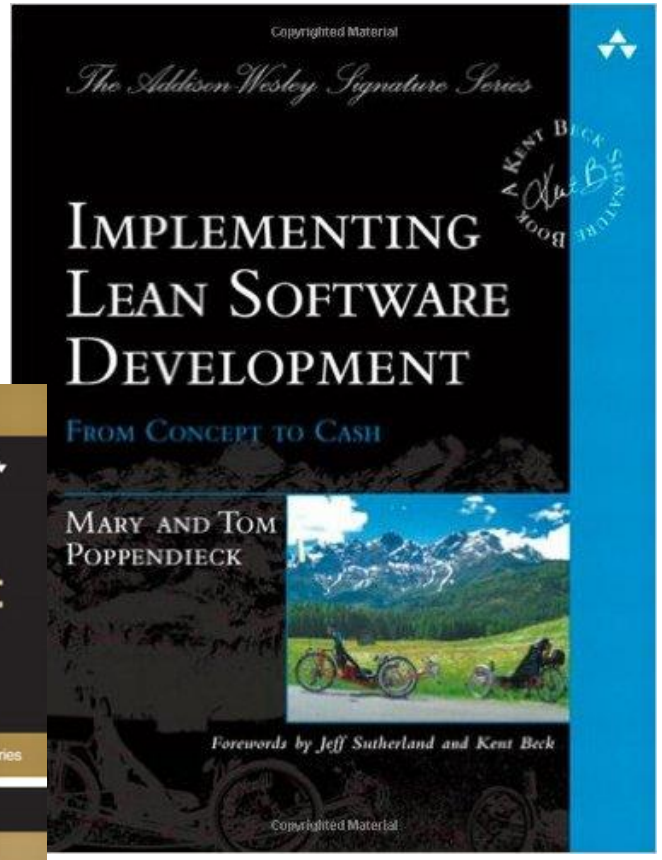
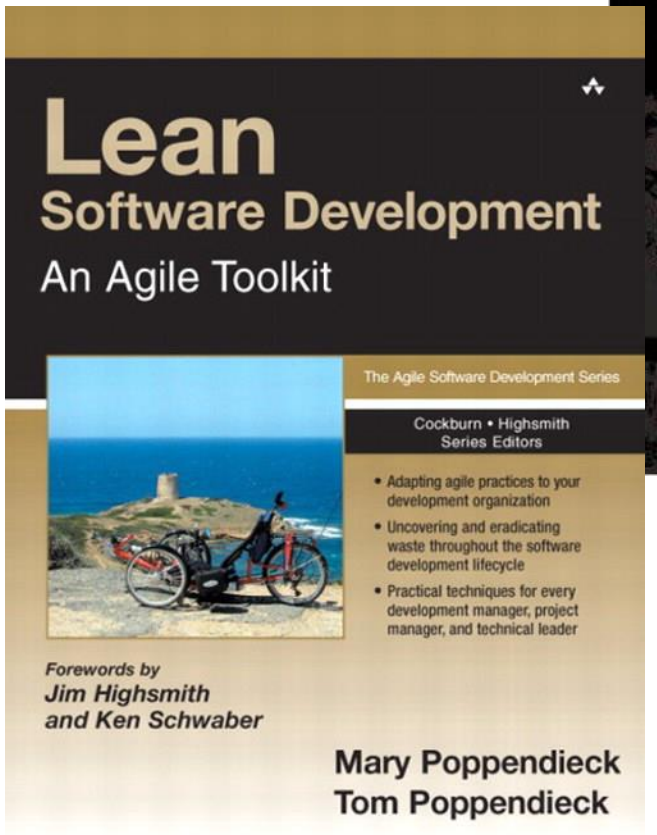
LEAN SOFTWARE DEVELOPMENT

- ✓ Eliminate waste
- ✓ Amplify learning
- ✓ Decide as late as possible
- ✓ Deliver as fast as possible
- ✓ Empower the team
- ✓ Build integrity in
- ✓ See the whole





http://www.poppendieck.com/

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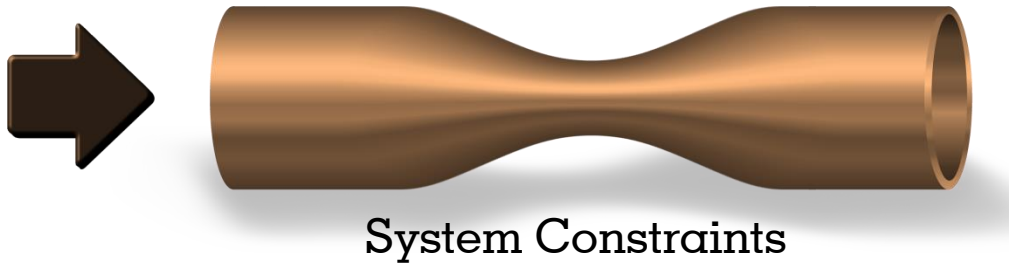
IT IS A PROCESS CONCEPT

Input:
- Ideas and requirements
- Materials
- People



System Constraints

Output:
- Value (to customer => to company)

Goals:

1. Increased **throughput** of value
2. Shortened **lead times**
3. Reduced **cost** for deliveries

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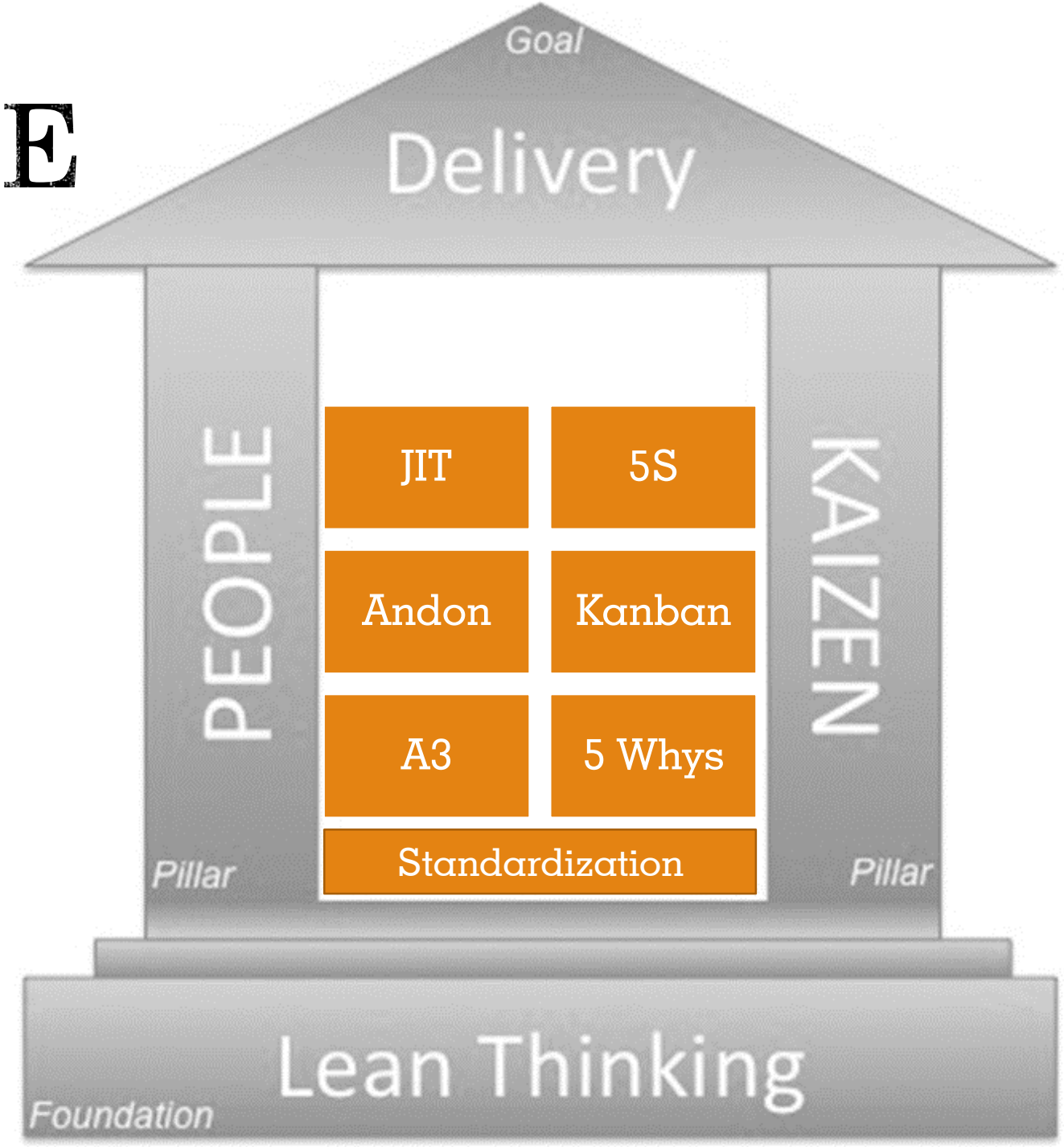
LEAN HOUSE



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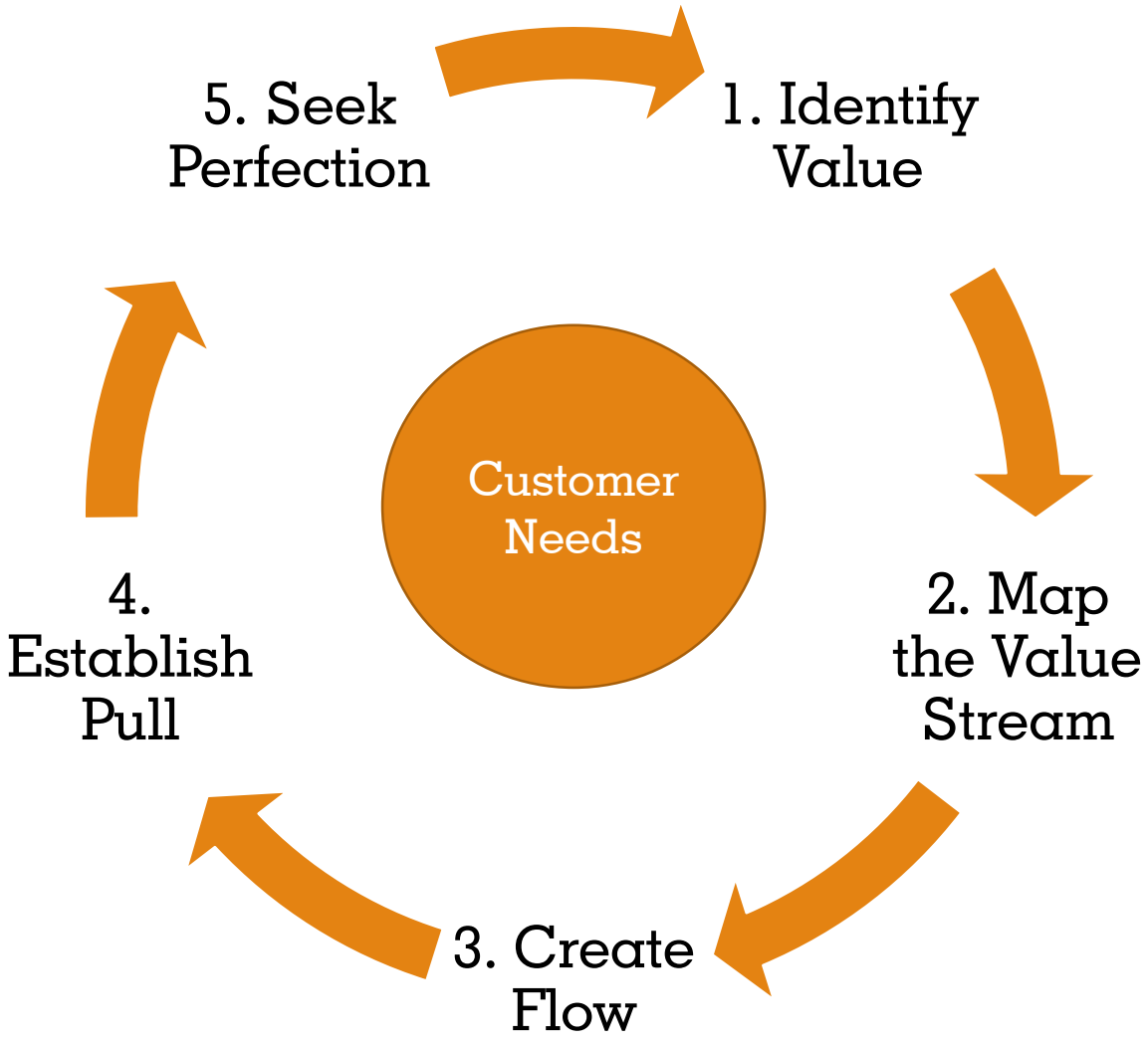
LEAN PRINCIPLES



Key Concepts

- Value and waste
- Optimizing the whole
- Managing flow
- Continuous improvement
- People and leadership

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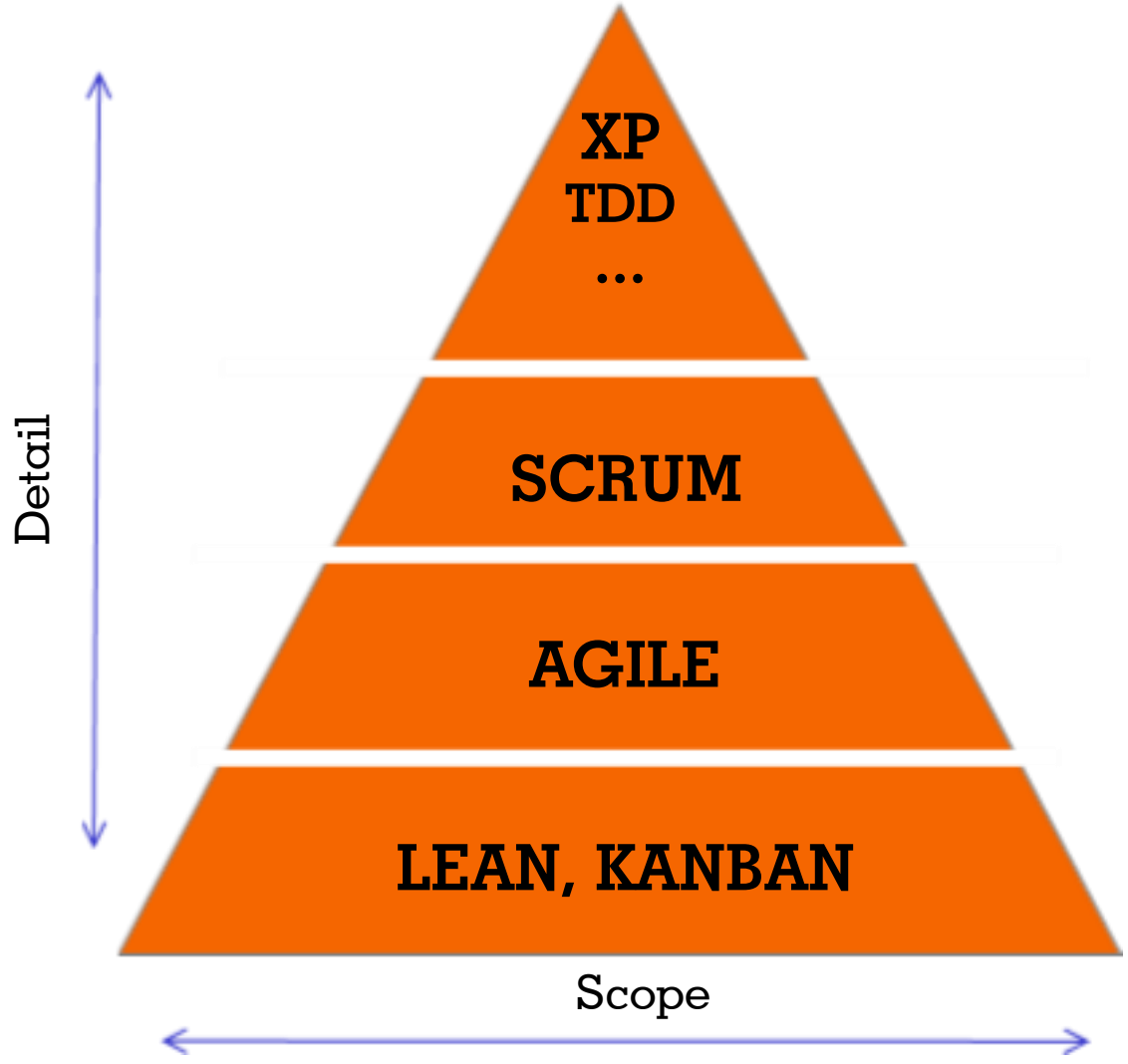
LEAN AND AGILE



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PRIORITIZING REQUIREMENTS WITH KANO MODEL

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PRIORITIZATION

- **Definition :** As a principle, it means doing 'first things first;' as a process, it means evaluating a group of items and ranking them in their order of importance or urgency.

Source: Mike Cohn

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PRIORITIZATION BY VALUE

Financial value

- ✓ Net present value (NPV)
- ✓ Return on investment (ROI)
- ✓ Payback period
- ✓ Discounted payback period

Important but hard to apply on feature level

Desirability/ Customer Satisfaction

- ✓ Kano model

Can be used on any granularity level

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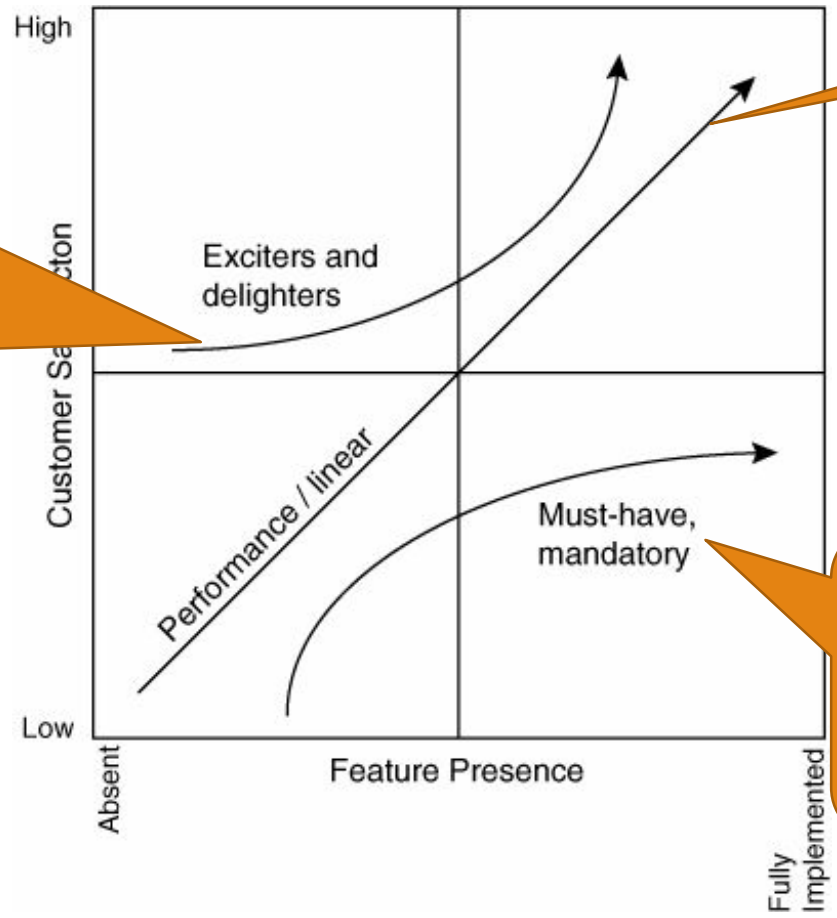
KANO MODEL

Will buy the product without those, but having them will differentiate the product



The more, the better

Expected features; adding more of them does not raise satisfaction beyond a certain point

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EXAMPLE: HOTEL ROOM

Mandatory:

- ✓ Has bathroom
- ✓ Clean

Linear:

- ✓ Fresh towels
- ✓ Aroma candles
- ✓ Flowers
- ✓ Cosmetics

Exciters:

- ✓ Jacuzzi
- ✓ Champagne compliment

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HOW TO APPLY THE MODEL

2 Types of Questions

Functional:
How would you feel if Jacuzzi was available?

Dysfunctional:
How would you feel if Jacuzzi was **not** available?

Answers:

I like it that way
I expect it to be that way
I am neutral
I can live with it that way
I dislike it that way

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CATEGORIZING THEMES

Categorizing an answer pair

Functional Question \ Dysfunctional Question	Like	Expect	Neutral	Live with	Dislike
Like	Q	E	E	E	L
Expect	R	I	I	I	M
Neutral	R	I	I	I	M
Live with	R	I	I	I	M
Dislike	R	R	R	R	Q

M Mandatory
L Linear
E Exciter
Q Questionable
R Reverse
I Indifferent

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Aggregating results

Theme	Exciter	Linear	Mandatory	Indifferent	Reverse	Questionable
Apply formatting themes	3	11	31	1	3	2
Automate report execution	4	22	20	4	1	0
Export reports to PowerPoint	21	9	14	5	1	1

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PLANNING YOUR RELEASE

- **Priority on must-have items**
  - Not necessarily developed in the first iteration but must be available before release
  - Pareto principle might apply (not fully implemented)

  Example: multi-language support at http://strikingly.com

- **As many linear features as possible**

  Example: Pictochart.com adds a possibility to create different formats of an infographic (online presentation, brochure, etc.); yet, their page editing tools are far less comprehensive as compared to MS Powerpoint.

- **Add at least a few delighters to differentiate**

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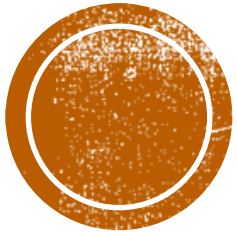
HANDS-ON EXPERIENCE



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YOU ARE A PRODUCT MANAGER AT A CAR MANUFACTURING COMPANY…

Thank You!

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