

Lean software development: achieving better requirements

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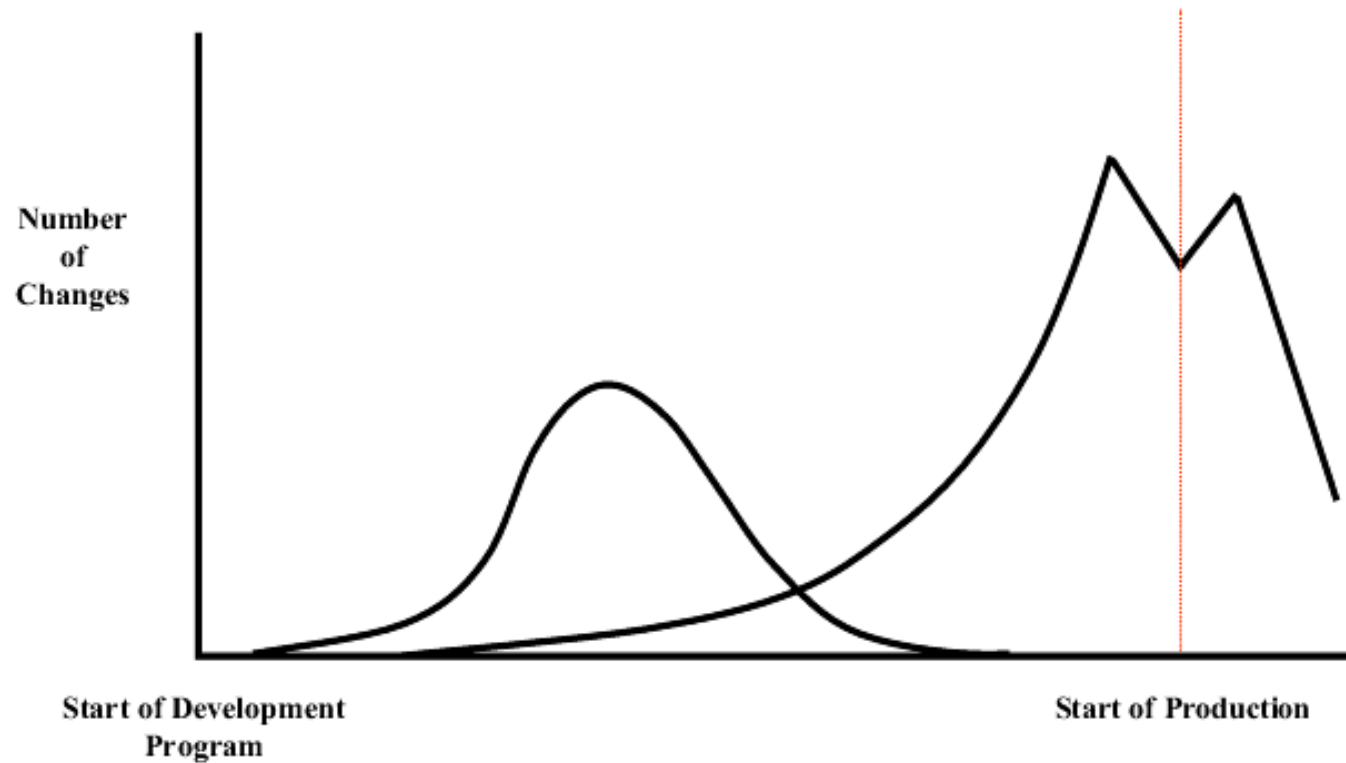
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Brendan O'Donovan

Agile Scrum Requirements

- **Assumes high levels of noise**
 - Changing requirements?
 - Understanding of requirements?
 - Agreement on requirements?
 - Agreement on technologies?
 - Implementation alternatives?
- **Solution: Emergent requirements**

Graph of Toyota Engineering Changes Before Launch vs. U.S. Automakers



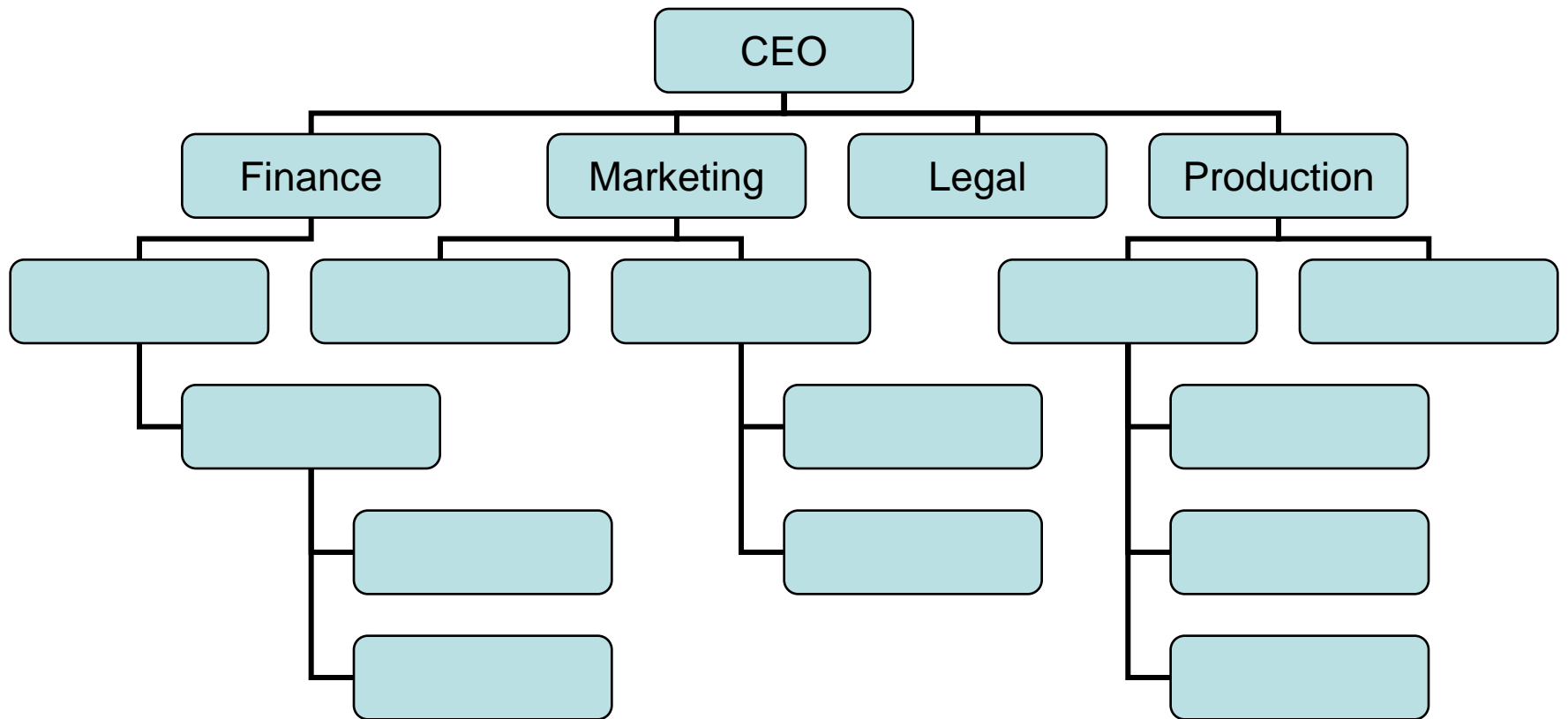
20% - 70% gains:

- Purpose of system?
- Reasons for customer contact?
 - Core processes?
 - Failure demand v. Value demand?
- Entire end to end time?

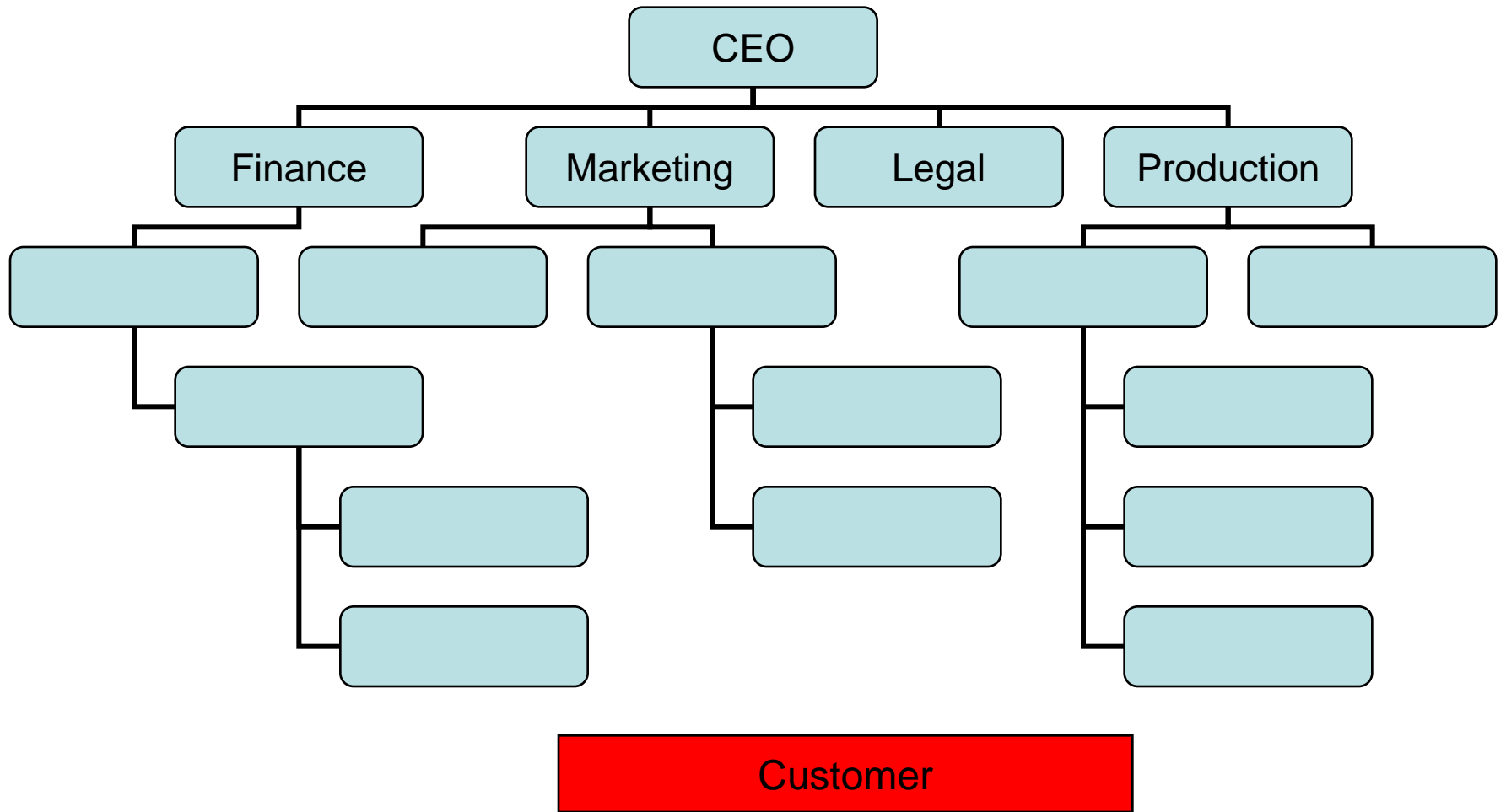
Foundations

- Capability – from customer perspective
- System conditions – why system behaves
- Sub optimisation – makes things worse

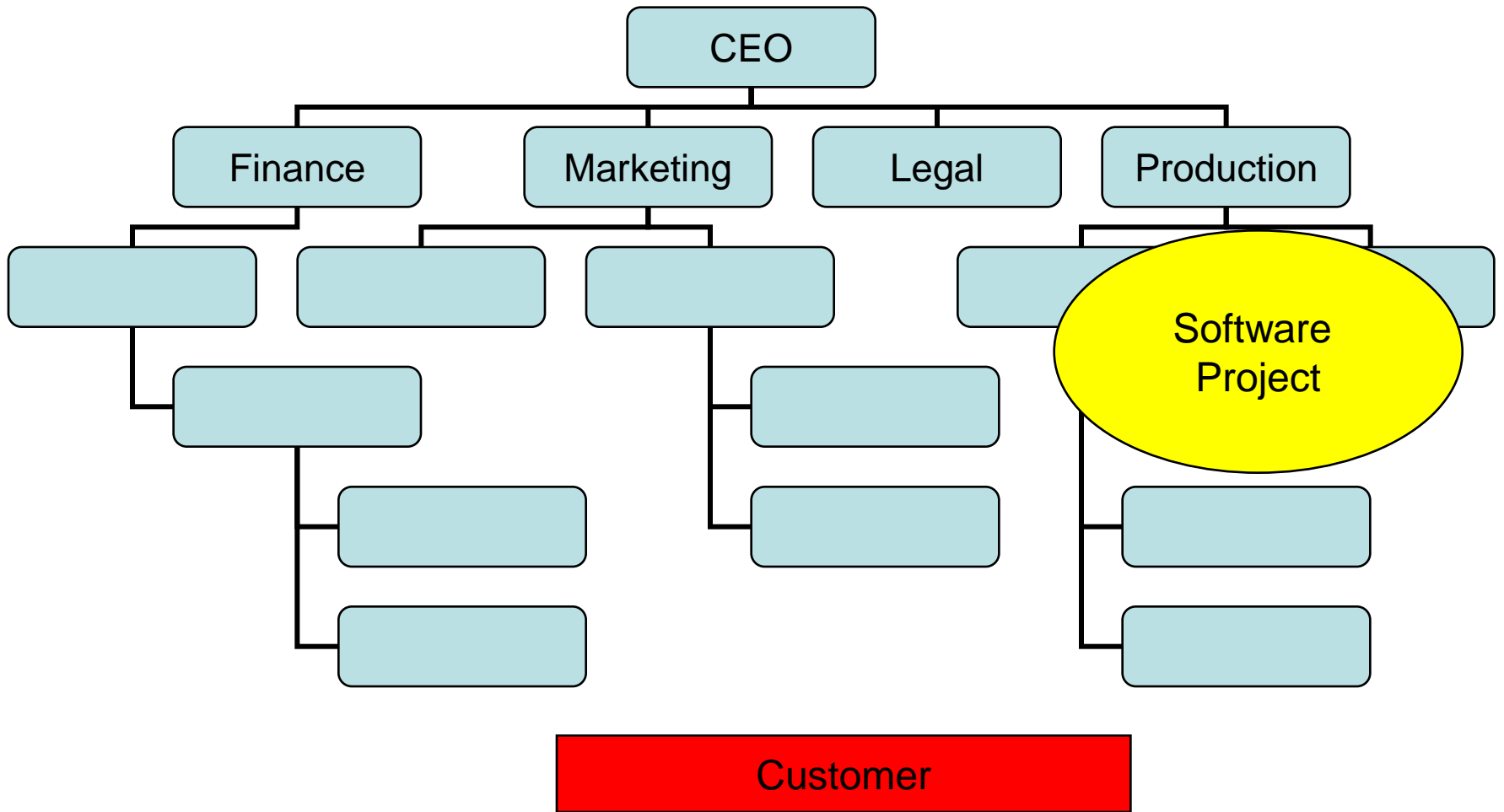
Organisation of Departments (measures, constraints, context)



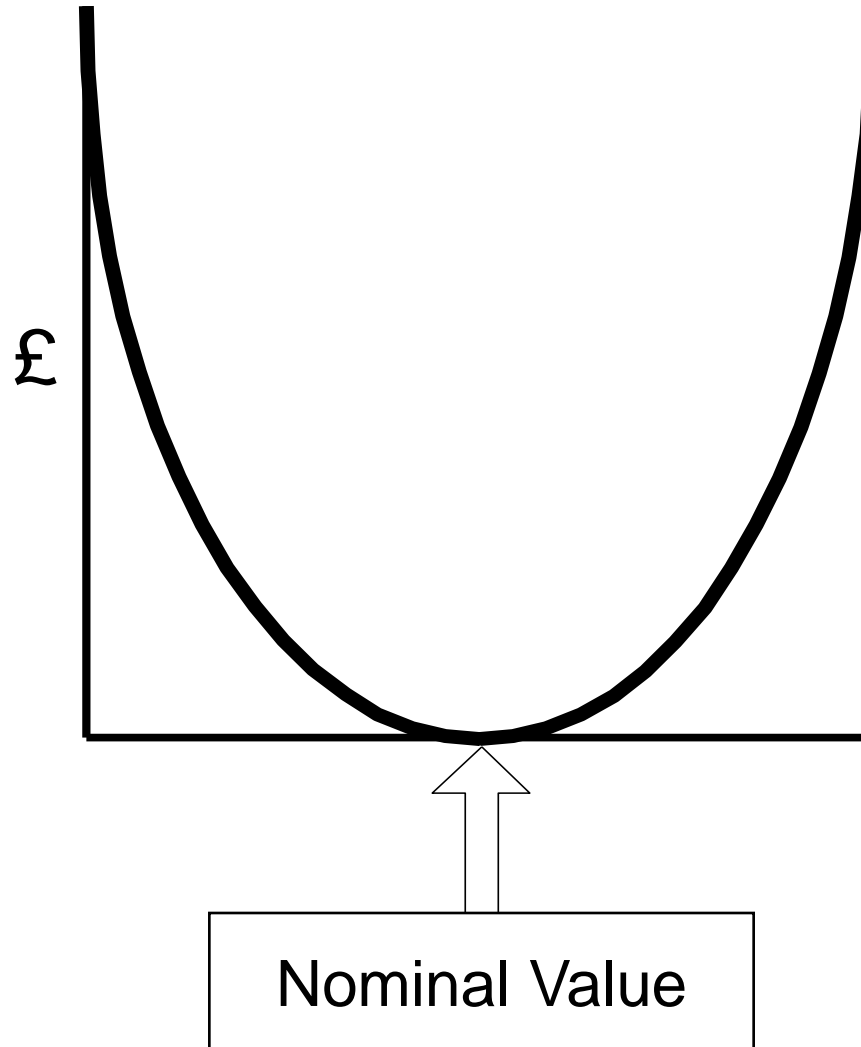
Where is the customer?



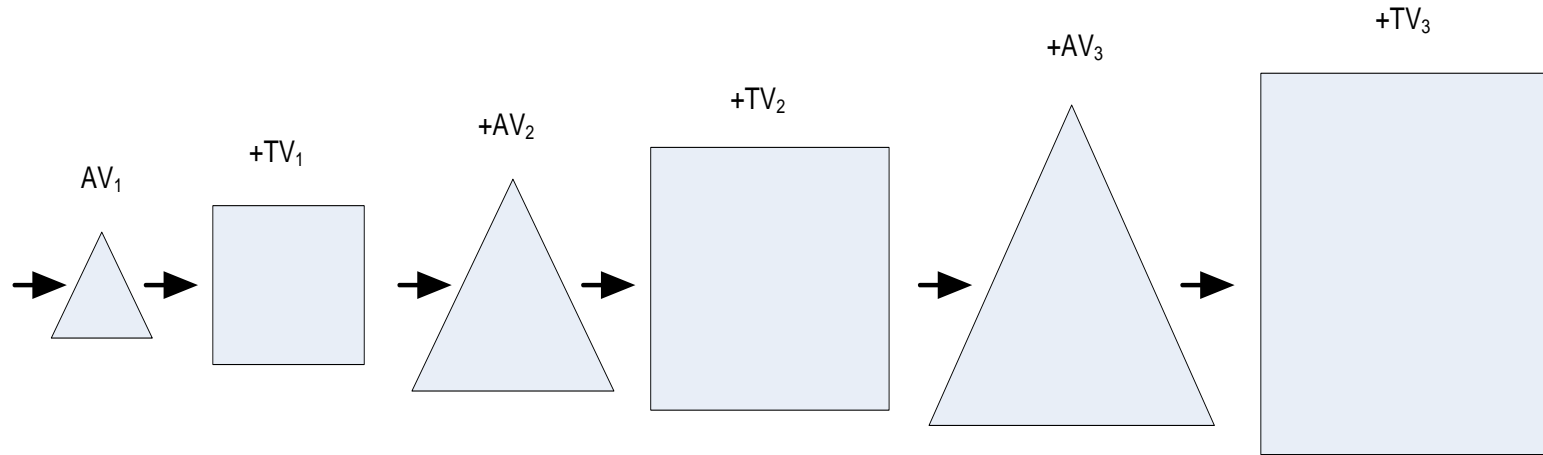
Sub optimisation & IT concrete



Taguchi: customer satisfaction

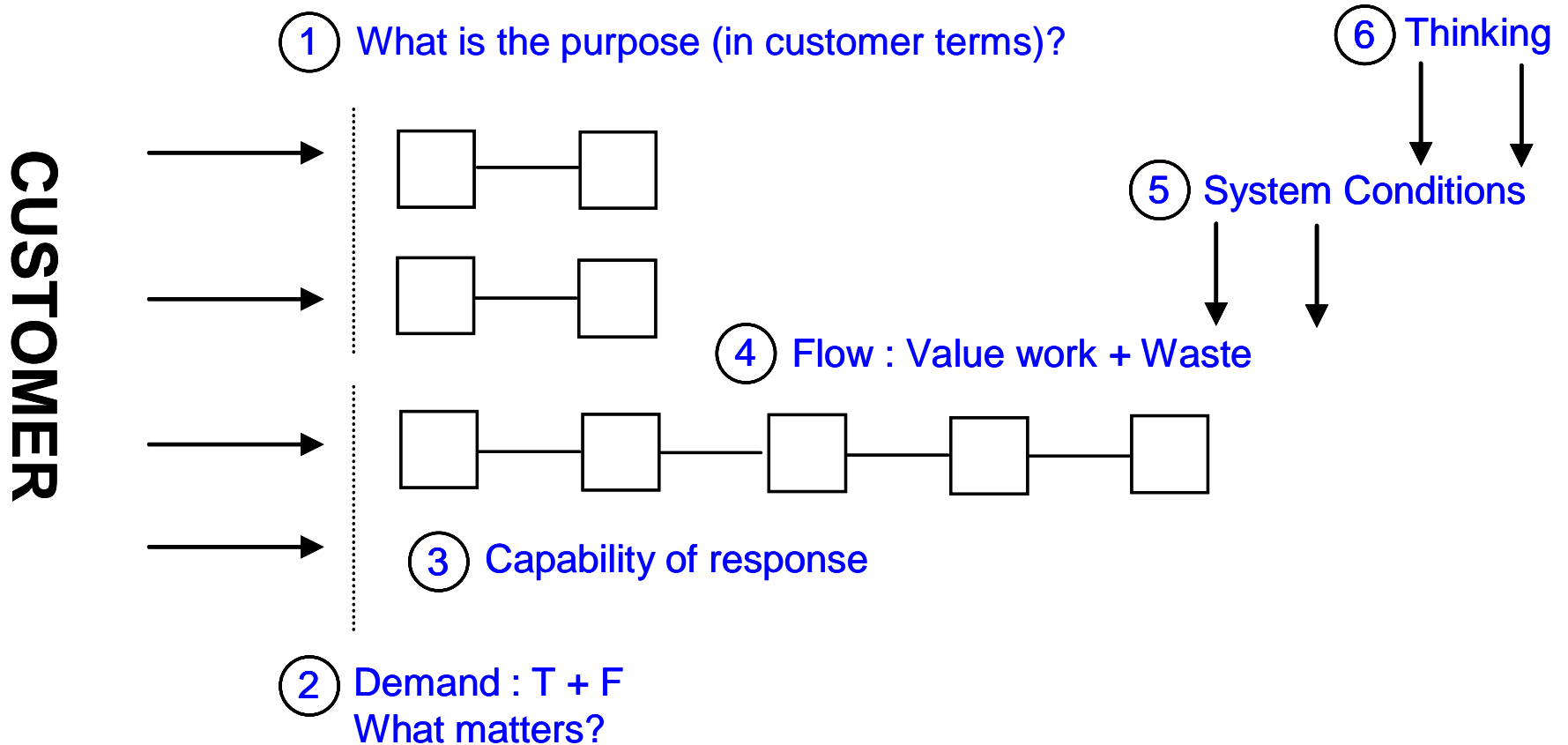


Propagation of variability



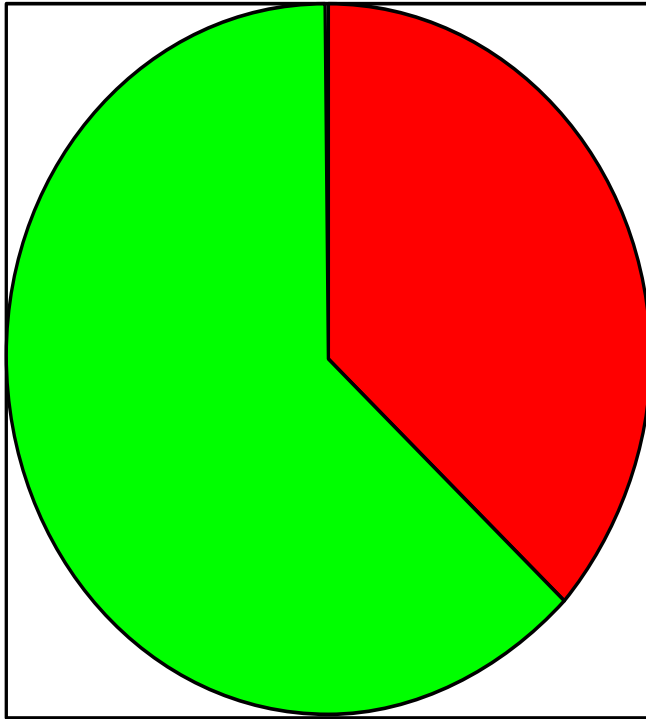
Analyse customer interactions

(John Seddon, 2003)



Analysis of why customers call

Failure demand: activity but waste

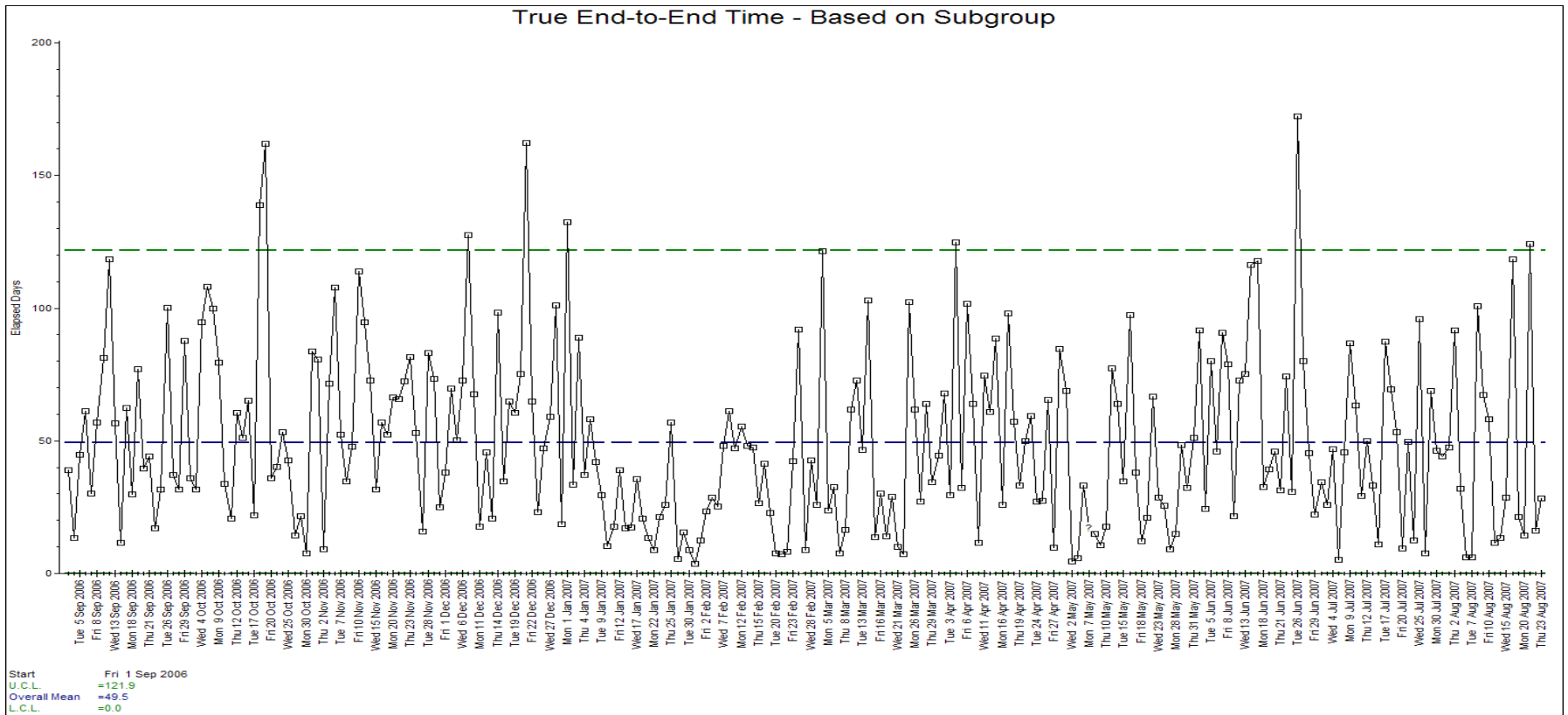


■ Failure demand 37%

■ Value demand 63%

Customer: end to end times

Statistical Control: UCL 122 days, Av: 50 days



Customer Perspective

Customer KPI

What matters to the customer?	New Measures
Do it quickly	End to end time
On one visit	% of first visit fix
Do it when it suits me	% do it when I want you
It stays fixed	% it stays fixed

Conclusion

for better requirements:

- Purpose of customer interactions
 - *Why did they contact us?*
- Failure demand: 20% - 70%
 - *Wrong information, delivery not made*
- Customers: Statistical Process Control
 - *Data driven with less politics*
- Less noise & sub optimisation

References

- *Freedom from Command & Control: a better way to make the work work*
John Seddon, 2003
- *The Toyota Product Development System: Integrating People, Process and Technology*
James Morgan & Jeffrey K. Liker, 2006
- <http://www.spcforexcel.com/> software