



School of Business, Trinity College, Dublin 2, Ireland  
Scoil an Ghnó, Coláiste na Tríonóide, Baile Átha Cliath 2, Éire.

## Have the Old Principles betrayed us?

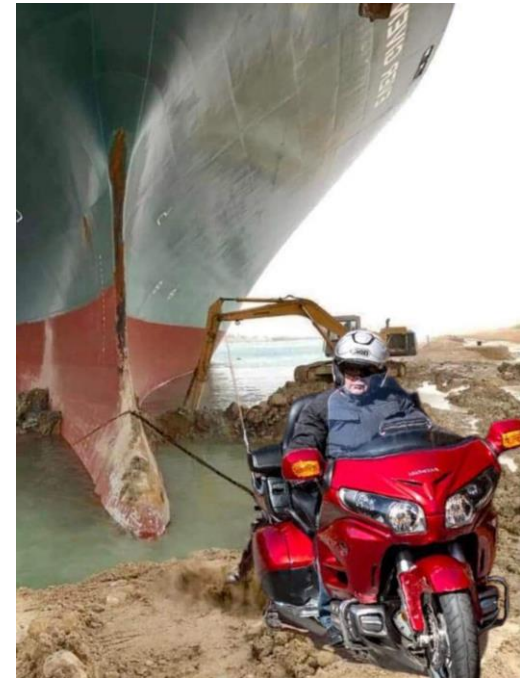
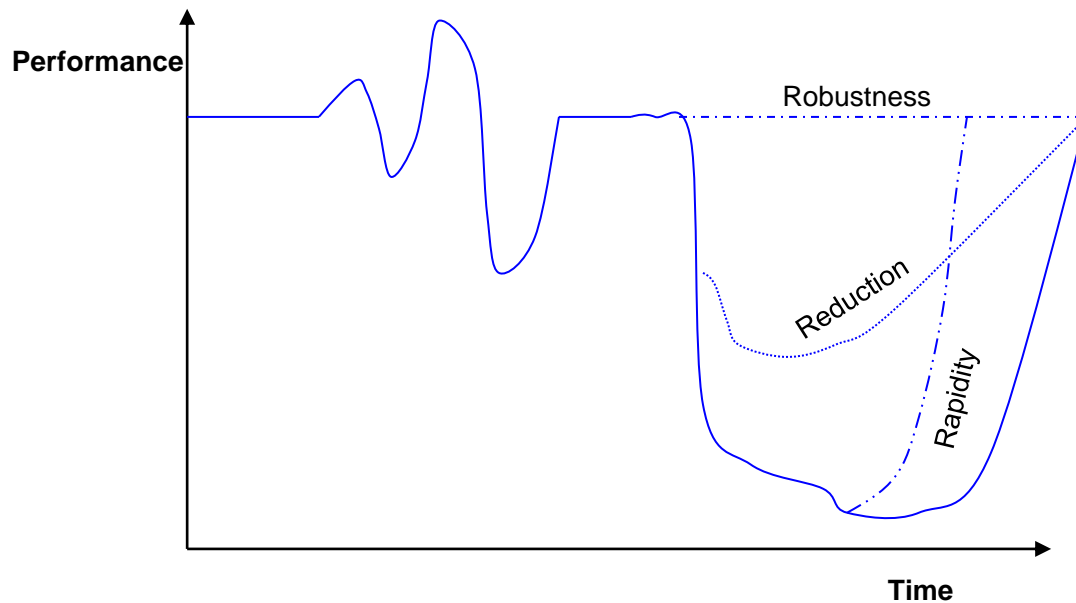
In our Highly Complex, Fast Moving World?

# WE ARE LIVING IN A VUCA TIME.....

Volatile  
Uncertain  
Complex  
Ambiguous

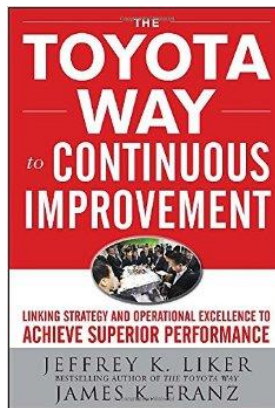
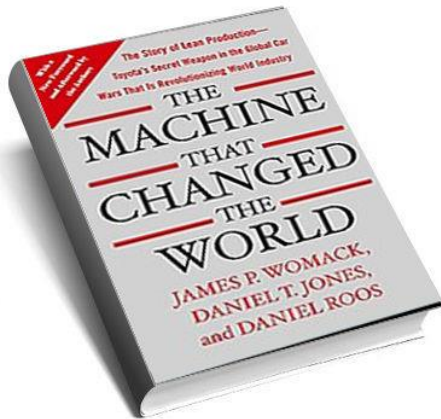


# Robustness, Reduction, Rapidity, Agile, Responsiveness...



# What do we understand as Lean?

- Based on the Toyota Production System
- “Understood” by American & European Academics



Principles  
Rules  
Tools

Questions



# Lean is about Getting Things Done!

Options:

1. Do Everything ourselves
2. Get others to do it – In our businesses or Outsourced
3. Do it the way it has always been done
4. Or understand that “Lean” is about Principles and not a Model to be followed, because ”Toyota do it!”

## PRINCIPLES NOT MODELS



# Basis of Lean Operational Excellence

Leadership team that builds the capability and capacity of their people to be able to identify and fix problems – constantly

TPS is NOT rigid.....it is constantly changing as they learn more.....



# “Keegan” Lean Principles....

- Time
- Money
- Effort
- Respect
- Challenge

**Must want to compete.....**

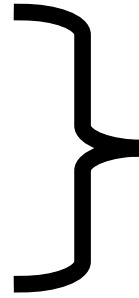
Driving and integrated into company strategy





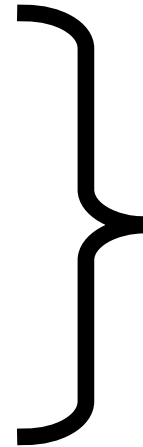
# Rules

1. Fairness
2. Firmness
3. Consistency



Dealing with People

1. Look
2. See
3. Understand
4. Think
5. Do



Dealing with Processes





# Five Fundamental Lean tools.....

- Process Mapping
- Physical Flow mapping
- Check Sheets – What is going wrong?
- Run Charts – Is it getting better or worse?
- Teams – People working together to improve their business



# Key Lean Questions.....

- What are you doing?
- How are you doing it?
- Why are you doing it?

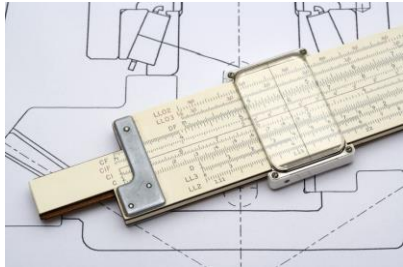
**Capture the FACTS!**

- Who is going to improve it?
- When?

**Make things better.....**



# People aspect & Robotic Aspect



Industry 4.0 -- Industrie 4.0

Smart Factories

Digital Twin

Sensorisation

Virtual Reality

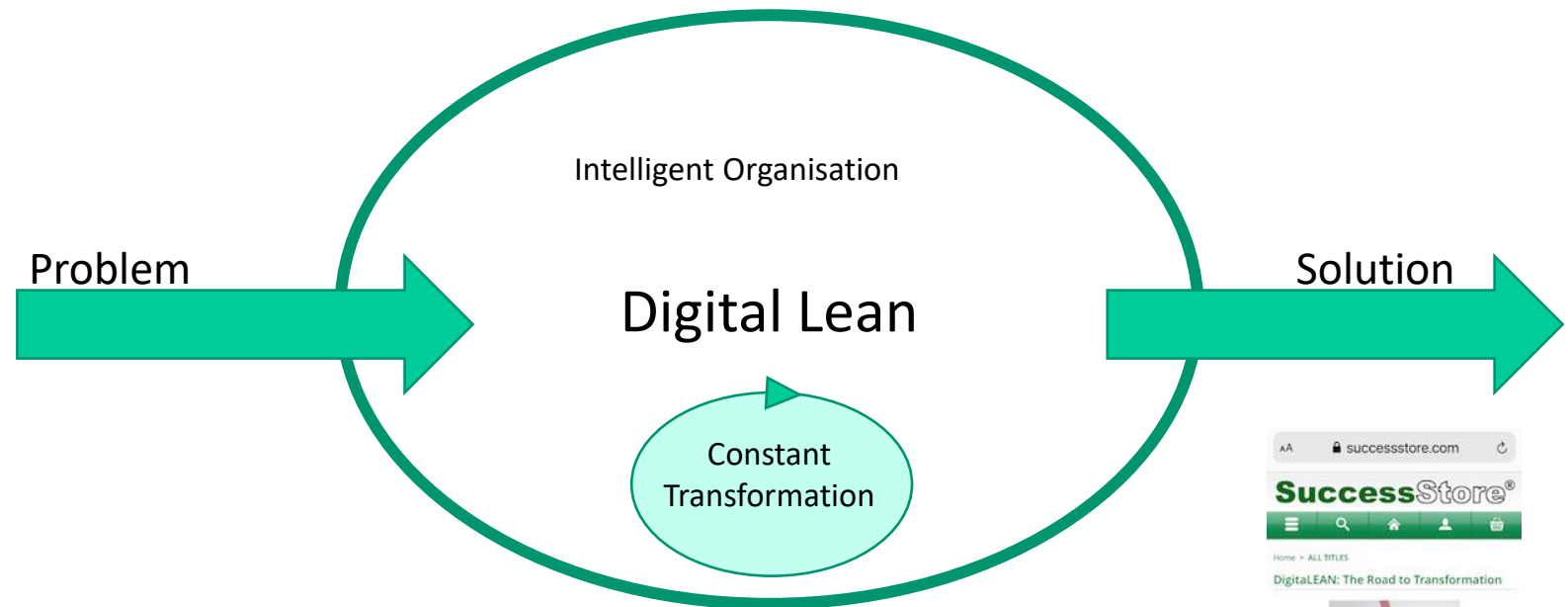
Augmented Reality



Real FACT – Real DATA



# VUCA - Volatile, Uncertain, Complex, Ambiguous



# LEAN in the Digital World

What's New?

More data?

Better Machines and Processes?

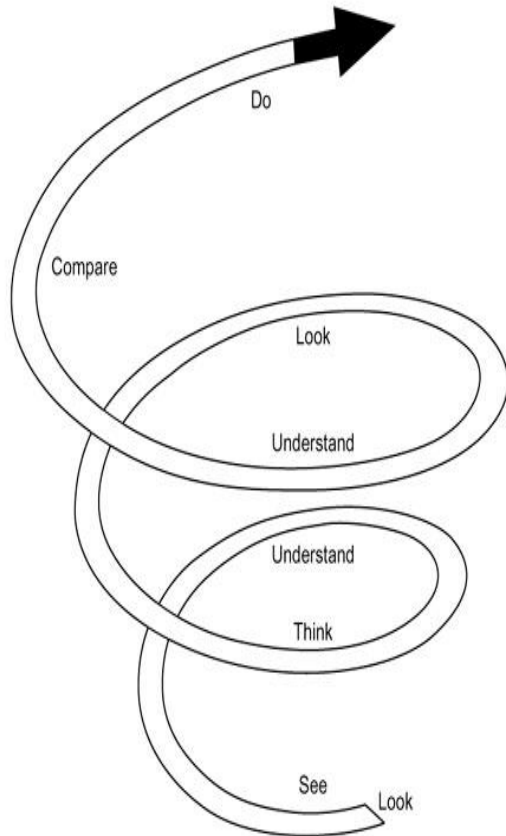
Better Sensors?

Better people?

Different Business Imperatives?



# Keegan Spiral Of Improvement



Process Benchmarking	The Five S's	Total Productive Maintenance	Overall Equipment Efficiency	Six Sigma
Business Excellence	Value Analysis & Management	Lean Production	Target Cost Management	<b>Level 3</b>

Facilitated Assessment Benchmarking	Physical & Process Flow in the Office	Physical & Process Development	Production Control Systems
Saving Time in the Workplace	Maintenance	Practical Quality Tools	Team Building & Culture
Sales and Growing them	Financial Management	Supply Chain & Logistics	Innovation & Design
Business Strategy	Implementation		<b>Level 2</b>

Self Assessment Benchmarking	Physical Flow	Process Flow	Set Up Time Reduction
Check Sheets	Run Chart	People & Teams	Basic Maintenance

## Level 1

# O-P-D-C-A



# Lean in the “New” World War on Waste- Absolutely Focused & Relentless

Need to continuously adapt to our current context

TOYOTA was the last to “fall-over” with current supply chain issues

- They learned and adapted from Fukushima experience
- still learning and adapting....

NON-Formulaic responses Adapting and Learning and Trying – Constantly

How WE as Leaders DECIDE to engage with Peers and Colleagues

