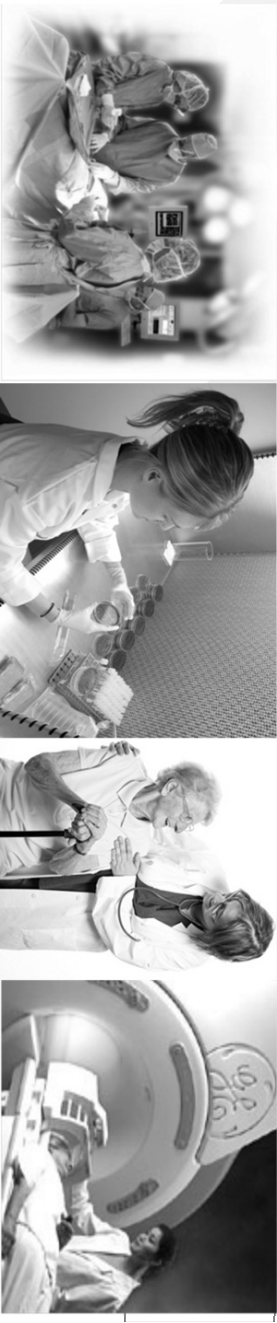


# The Future State of Lean in Healthcare

*Dirk Van Goubergen*



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## The Future of Lean?



# Agenda

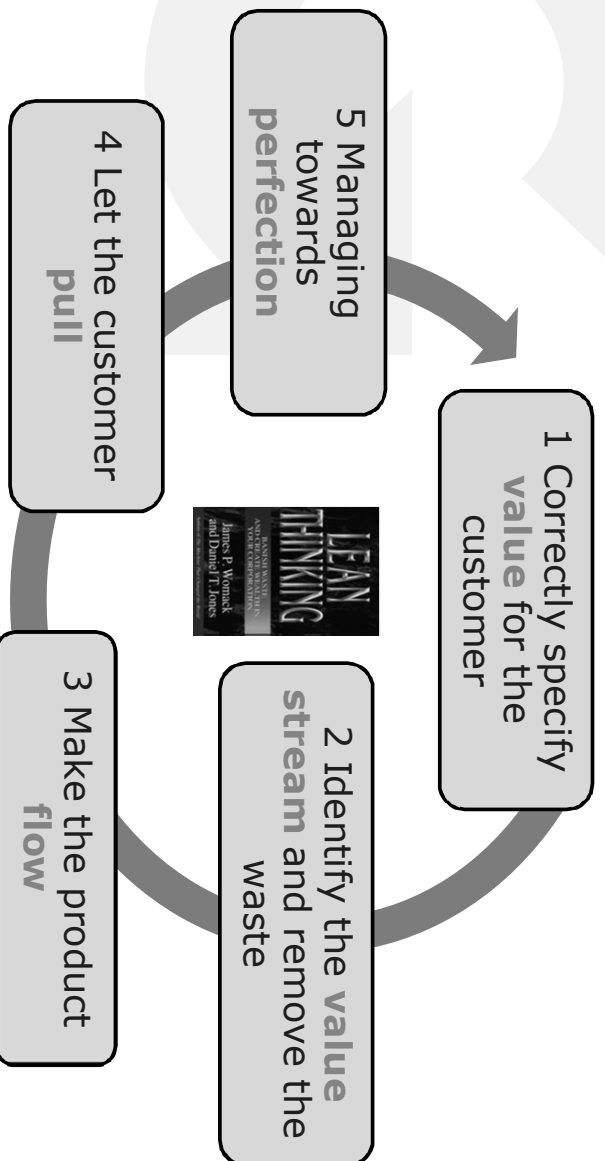
- The Essence of Lean
- Does Lean have a Future?
  - Let's look at Toyota...
  - And the rest of the world (outside healthcare)?
- What about Healthcare
  - Current State of Lean
  - Healthcare in 2020 - What will the Future bring?
- What about Lean in your organization in 2020?
  - How is Lean being implemented ?
- Vision for Lean 2020 in Healthcare

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## The Essence of Lean Thinking – 5 Steps

Lean is a **business strategy** for organizing and improving the operational activities of companies in order to achieve business objectives in a more effective way.



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(Lean Thinking - Womack, Jones)  
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# Lean in 4 Pictures



OR



Resource Efficiency

100%↑

0%  
0%

100% Flow Efficiency

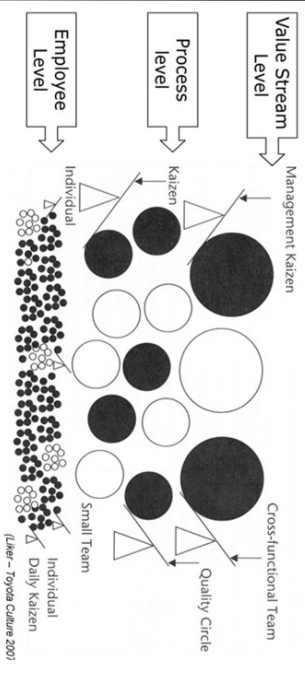
"We get brilliant results from average people managing brilliant processes.  
We observe that our competitors often get average (or worse) results from brilliant people managing broken processes."

Product value stream



People value stream

"Before you make things, you first have to make people!"



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# The Future of Lean?



TPS/Lean @ Toyota

1945-50

Lean Manufacturing - Office

1990-

Lean Healthcare

2000-

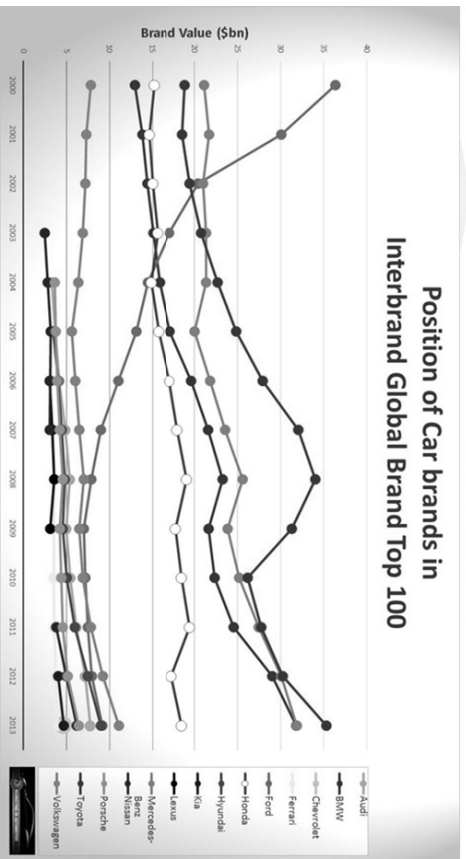
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## Let's Look @



TOYOTA

Position of Car brands in  
Interbrand Global Brand Top 100



- 70 Years of Toyota Production System
- Number 1 and ongoing...

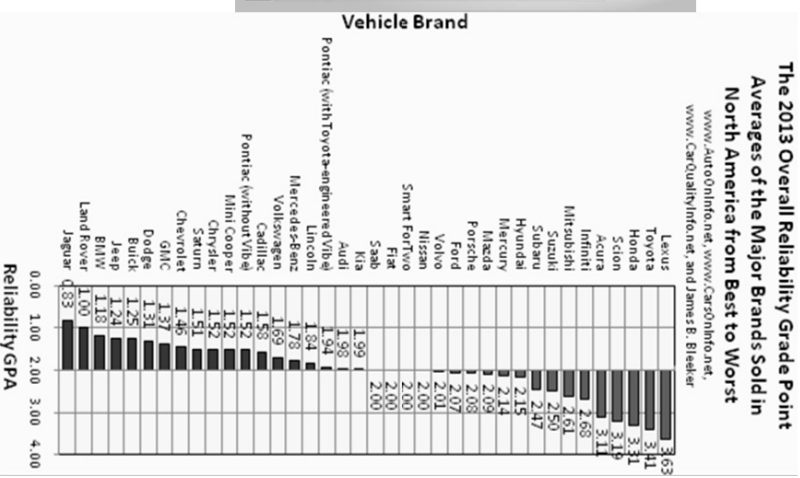


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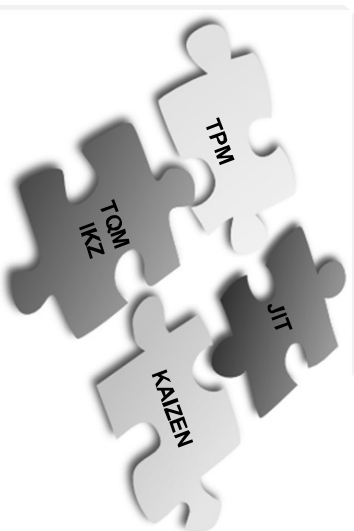


## Let's Look @



TOYOTA

- Evolving and learning



Enablers



- Manufacturing Focus => Supply Chain (logistics/distribution, suppliers)
- R&D/Product Development and Engineering flows
- "Chief Engineer"
- Long term Leadership commitment/involvement

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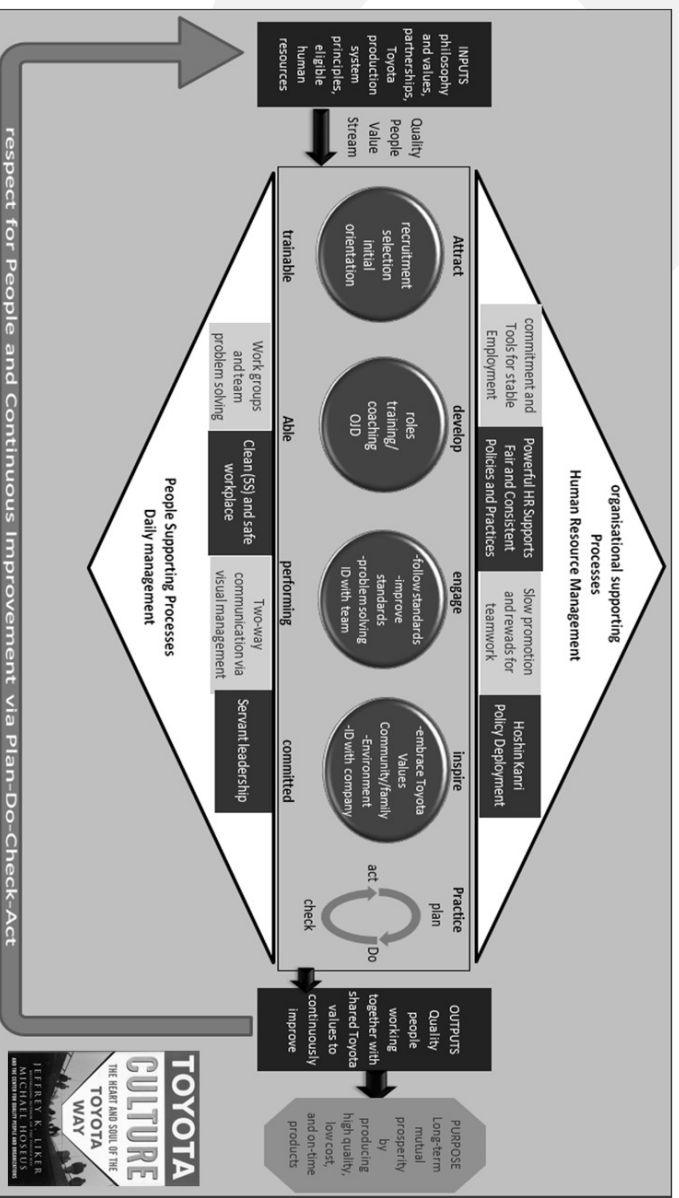
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# Let's Look @



- HR Strategy supporting TPS => HRD (Human Resource Development)



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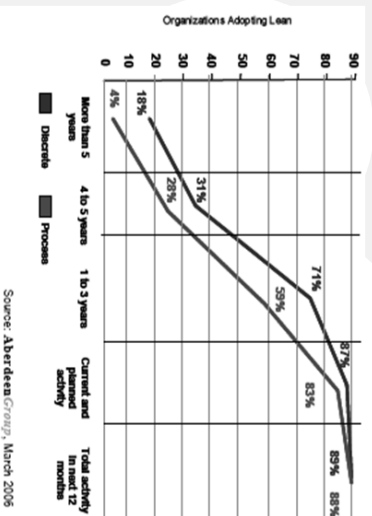
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## And the Rest of the World (outside Healthcare)?

- Popularity of Lean is increasing since 90ties
- The term 'Lean' is 25 years old...how long will it last?



- Does Lean (principles) stay relevant for the rest of the world?

- Global Economy => We are in an 'abundance' model => Customer focus is a 'MUST'

- Are there any Failures?

- Different levels of deeper understanding of Lean => different implementation approaches

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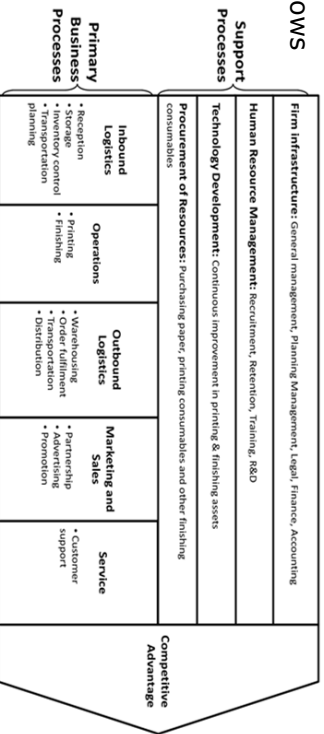
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# And the Rest of the World (outside Healthcare)?

## ▪ Evolutions/Observations:

- Outside factory walls => Supply Chain
- Administrative, support, service flows  
=> all supporting flows
  - Target = M2O, O2C,...
  - Product Development/R&D

Porter Value Chain Template



## ▪ Kaizen

- Goal or Enabler?
- True Kaizen culture?

## ▪ Are IT, Accounting, HR systems supporting Lean ?

## ▪ From 'Eliminating Waste' to 'Improving Value Streams' to 'Value Stream DESIGN'

- All decisions (equipment CapEx, Layout, Staffing, ...) are taken with the value stream focus in mind

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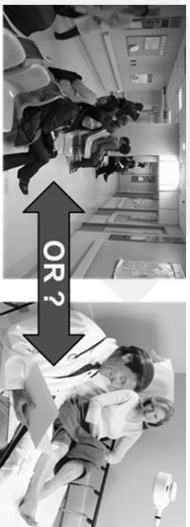
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# What about Healthcare ?

## ▪ Mix of different types of Value Streams



## ▪ Current State of Lean in Healthcare

- About 10-15 years down the road, first implementations in US, UK
- How is Lean implemented ?
  - (bottom-up) Kaizen
  - Focus on nursing activities (e.g. "Productive Ward" program from NHS)
  - Implementations in the Facility Management (logistical flows, medicines, food,...) - Cost reduction?
  - Lab environments: focus on lead time reduction (flow)
  - (local) Value stream improvements in polyclinics, emergency department, surgery rooms,...
  - Lean Layout – 3P
  - How about value stream improvements across departments ?

## • Current struggles/challenges

- Is it a goal or a strategy?
- Financing systems
- Cultural barriers between different functions, groups
- Whose time is more important ? (Resource efficiency vs. Flow efficiency)

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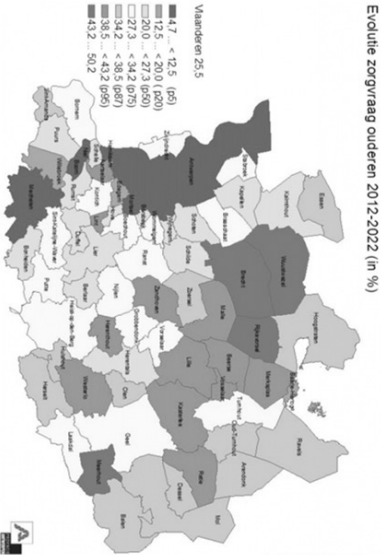
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# Healthcare in 2020 : what will the Future bring?

- Increasing demand
- Big pressure on costs
- More demanding/critical customers-patients
  - Quality/Information
  - Time
  - Pull of Service vs. Push
- Is Lean suitable to tackle these challenges?
- Or what is the alternative?
- What about digital information? IT/ERP ?
- What about faster, more complex equipment?



(nwh.org)

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## What about Lean in your Organization in 2020?

- How is Lean being implemented?

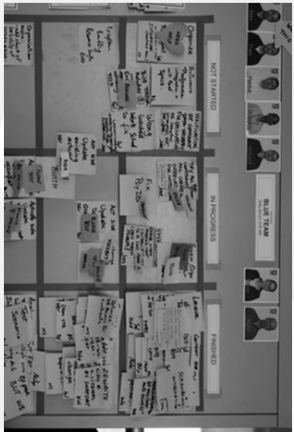



Focus	Hard	Soft	The Future
	€/Business Impact	Culture	Lean still around?

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# What about Lean in your Organization in 2020?

▪ How is Lean being implemented?

Focus	Hard €/Business Impact	Soft Culture	The Future Lean still around?
			
			

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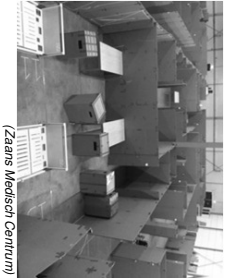
# Vision for Lean 2020 in Healthcare



- Deep understanding of Value for the Customer
  - Customer Pull for Value vs. Organisation's Push of Service



- Value Stream Design and Management
  - All value streams are defined and designed according to Lean flow principles
  - What is the expected demand per value stream?
  - Which (dedicated) equipment/staffing is suitable to support the value stream?
  - Which lay-out will facilitate the flow of value in the value stream?
  - Horizontal focus instead of vertical (functional) structures
  - Value Stream managers, overseeing the whole to avoid suboptimization
  - Financing mechanisms and earning models (across functions) that support overall value stream performance



▪ Kaizen

- Suitable HR strategy (hiring, training, coaching)
- Cross functional improvement activities and learning sessions involving ALL key players
- Clear visual management (flow/value stream performance, kaizen,...)
- Lean Leadership behavior, with active involvement
  - Genchi Genbutsu - Hansei
  - Clear Hoshin kanri/Policy deployment
  - Visual Obeya Room



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# Wie ben ik?

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 @DVVGoubergen

## Education:

- \* MS in Mechanical Engineering (1991) – Royal Military Academy, Brussels (B)
- \* MS in Industrial Management (1997) – Ghent University/Merck Management School (B)
- \* PhD in Industrial Engineering (2004) – Ghent University (B)

## Professional experience:

1992-2004 Lecturer in Industrial Engineering at HORTO College Turnhout (B)  
 1993-.. Founder and president of VAN GOUBERGEN P&M Productivity Improvement ([www.vangoubergen.com](http://www.vangoubergen.com))

- \* +20 years of international experience in the area of set-up reduction, lean management and productivity improvement in different manufacturing and service industries throughout Europe, North America and Asia (a.o. Volvo, Akzo, Atlas Copco, Masterfoods/Mars, Danone, Philips, Coca Cola, Parker Hannifin, GKN, Lays, Belgian Railways, ...)

2000-2004 Research Associate at Ghent University – Dept. of Industrial Management (B)

- \* Graduate classes on Design of Production Systems and Operations Management

2004-2012 Professor of Industrial Engineering at Ghent University – Dept. of Industrial Management (B)

- \* Grad. classes on Design of Manufacturing and Service Operations, Operations Management, Method Engineering and Work Measurement.
- \* Guest Lecturing at Vlerick Business School (B), Antwerp Management School (B), Virginia Tech (USA), Wrocław Polytechnic University (Poland), Polytechnic University Sofia (Bulgaria), King Mongkut University Bangkok (Thailand), Tel Aviv University (Israel), Rijksuniversiteit Groningen (NL)

2002 Examiner for the US Senate Productivity and Quality Award for the State of Virginia (USA)

2004-2010 Program Director 'Fellow in Industrial Engineering' program from the Flemish Engineers Chamber VIK (B)

2005-2012 Guest Professor at the Antwerp University (B)

- \* Grad. Class on Cost and Performance Benchmarking

2005-2010 Program Director of the "Master in Industrial Management" program at the Ghent University (B)

2005-..... Founder and Coordinator of the Van Goubergen Lean Academy 'Green/Black Belt in Lean' training/certification program

- \* until 2011 (6<sup>th</sup> edition) organized in collaboration with Ghent University (B)

2006-.. Founder and President of the CENTER FOR PRODUCTIVITY IMPROVEMENT ROMANIA ([www.productivity.ro](http://www.productivity.ro))

2010-...Member of the Advisory Board of the Institute of Industrial Engineers – Process Division (USA)



(Photo by FotoCaring)

Senior Member of the Institute of Industrial Engineers (IIE)

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