

Learn Lean from the Source

TOYOTA

MATERIAL HANDLING

Lean Academy



Lean 4.0

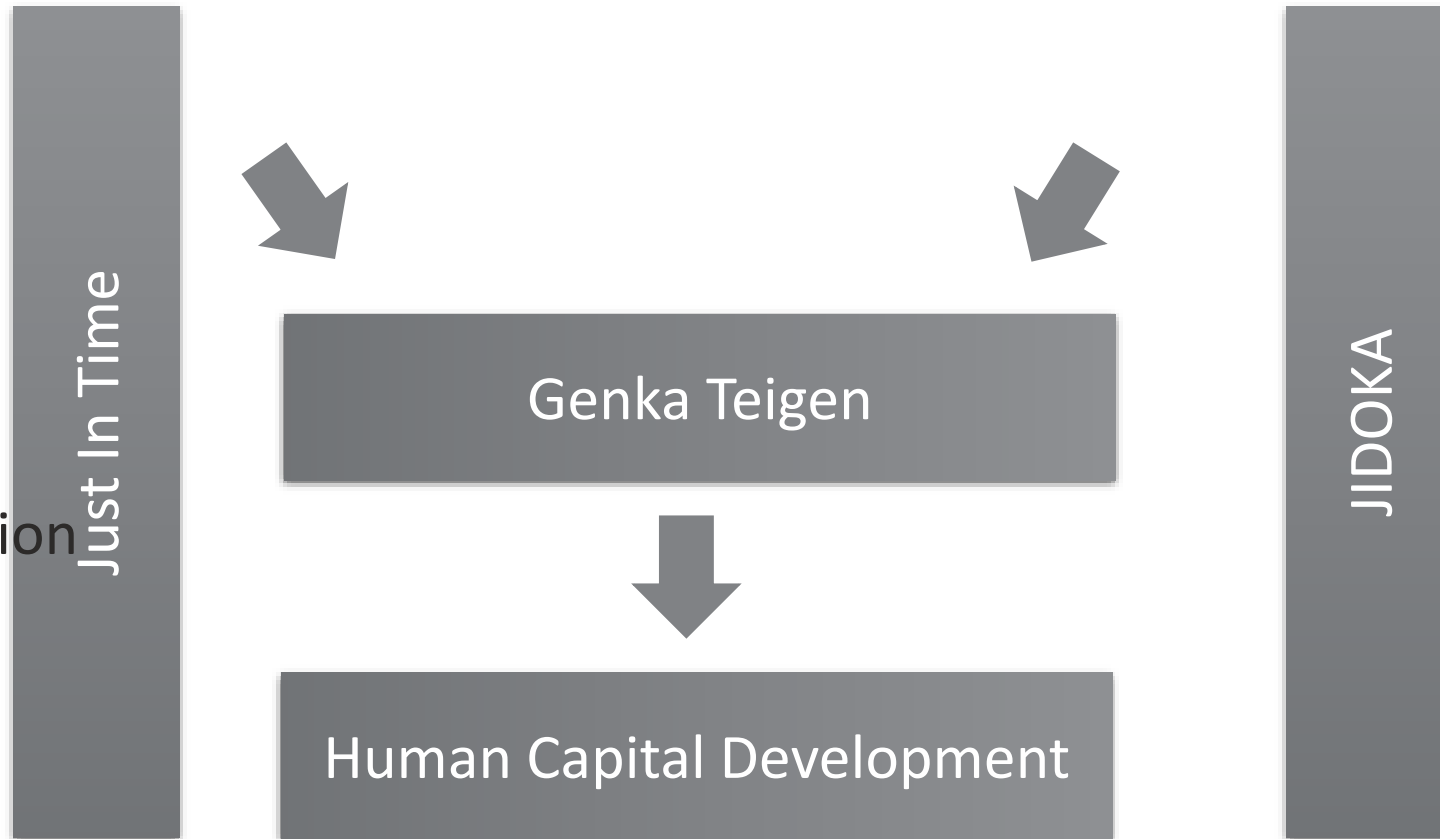
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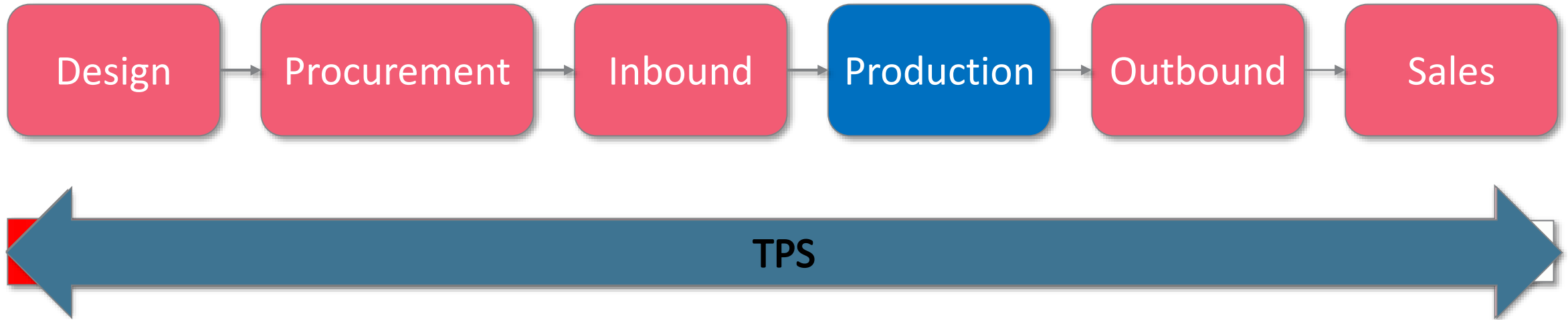
Basic TPS philosophy

TPS philosophy is based on the "two pillars"

- Genka=Cost
- Teigen=Reduction



The Toyota Production System

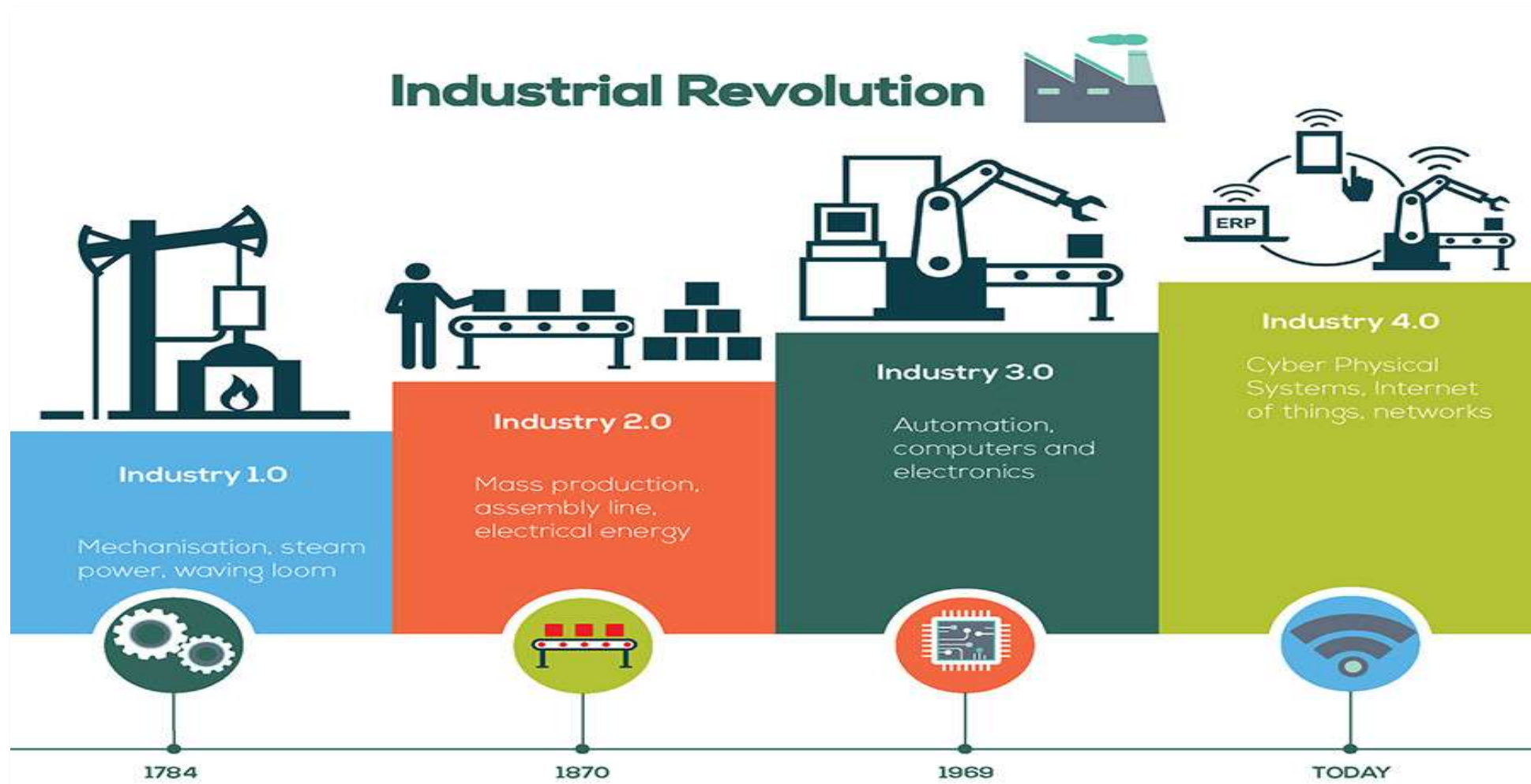


TPS optimize and eliminate waste in the entire value chain



ZERO MUDA.

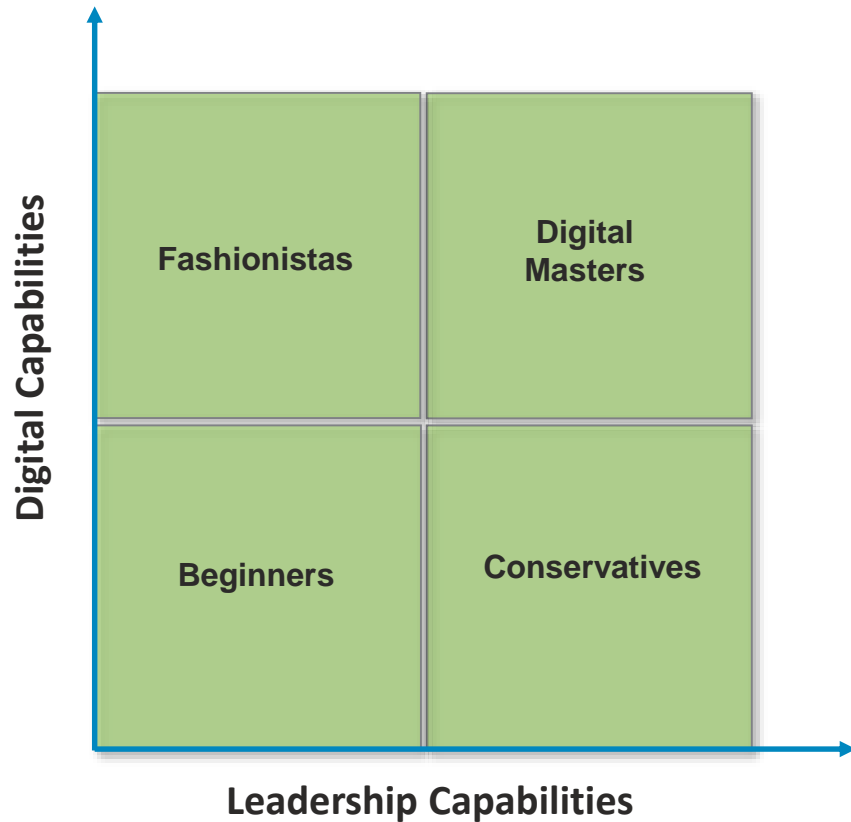
No more waiting and waste
through seamless flow of goods and data.



The playground



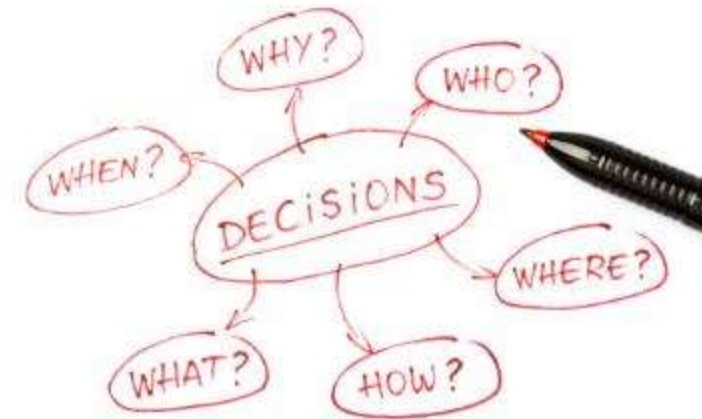
The Digital Mastery Framework*



Digital and Leadership capability should be combined in order to provide values for the customer

* G. Westerman, M. Tannou, A. McAfee

Data ≠ Information



However, while companies are increasingly gathering IoT data, few are analysing it as well the could be. They have data but they not converting it to information. As of 2016, **while 51% of firms** gathering IoT data, **only 29% were using it to inform real-time decision making** (Forrester Research)



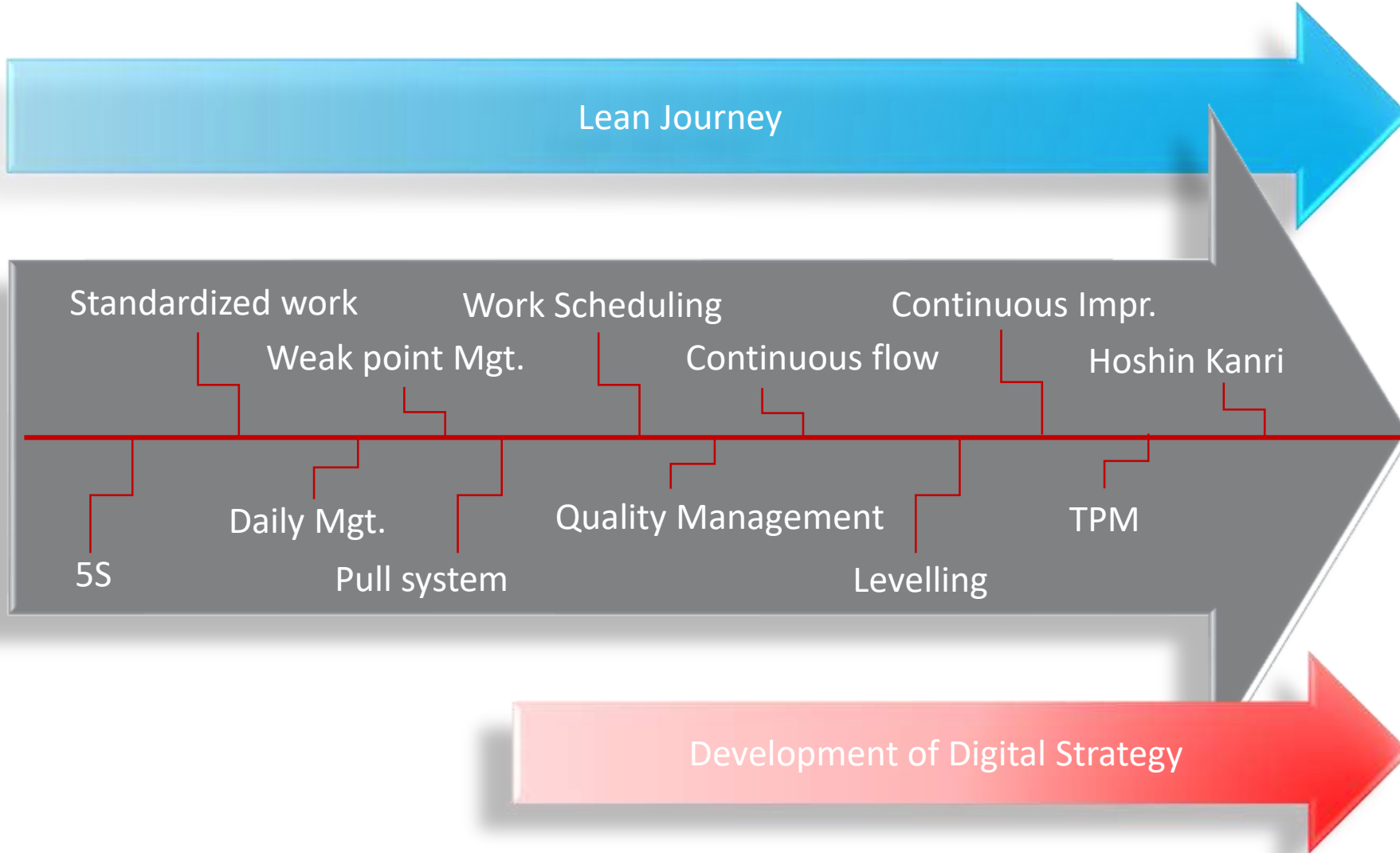
- Industry 4,0 is a vision of the Industry and Manufacturing in which **Information Technologies are going to boost competitiveness and efficiency** by interconnecting every resource (Data, People and Machinery) in the Value Chain.
- The Toyota Production System (TPS) is an **integrated socio-technical system** developed by Toyota (automotive manufacturer) to **efficiently organize manufacturing and logistics, including the interaction with suppliers and customers**, to minimize cost and waste.

Key steps for a successful digitalization



1. Process mapping and waste identification
2. Setting KPI's
3. Data collecting & monitoring by people (Daily Management & Measurement attitude)
4. Improve the process & remove the waste (Kaizen attitude)
5. **Evaluate the process to digitalize** (tangible benefit for the company)
6. Start again from process mapping





The power of visualization

Smart watches and devices provides us many information about our **calories** consumption....



But.....

Visualized on the steps of the metro are most persuasive



CONNECTIVITY IS POWERFUL, BUT
YOU NEED TO HAVE A LEAN STRATEGY TO
TAKE FULL ADVANTAGE