KOMPLIZIERTES
EINFACH
MACHEN

SIXSIGMA
LEAN CONSULTING
www.sixsigma-lean.com

Methodology Toolkit for...

data-driven process improvement

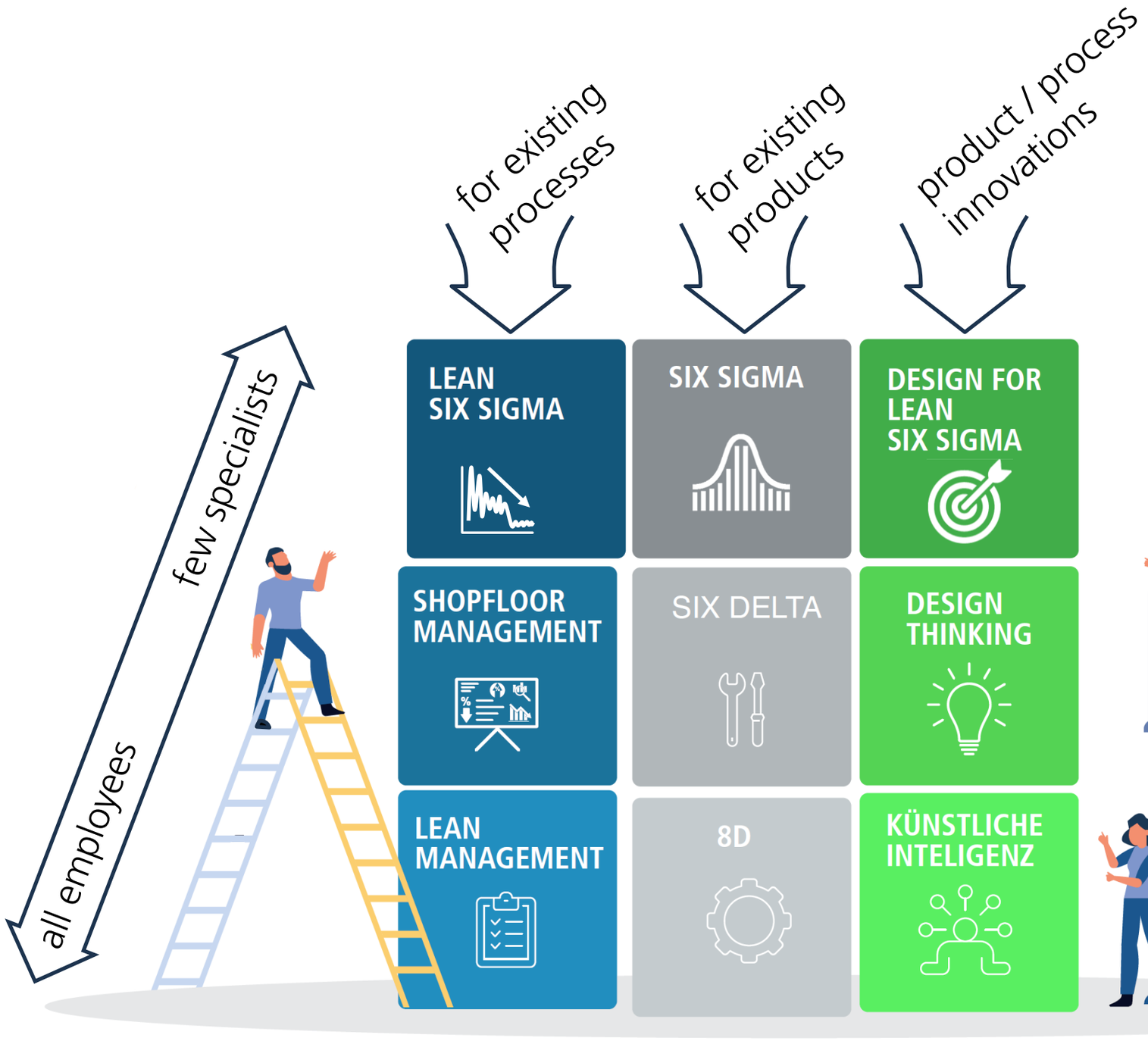
complex technical problem solving

The best approaches of the Automotive Industry

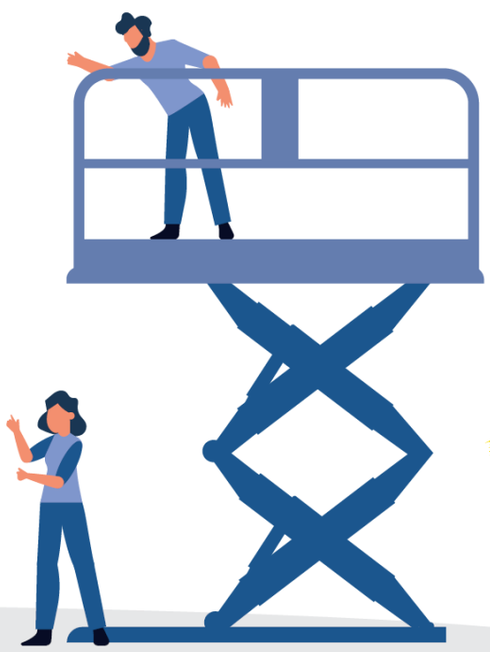
KOMPLIZIERTES EINFACH MACHEN

Using the best combination of 9 methodologies, we help you to make your company the LEADER in your industry

Methodology Toolkit



Customised combined & adapted for your company!



WHAT?! easy!

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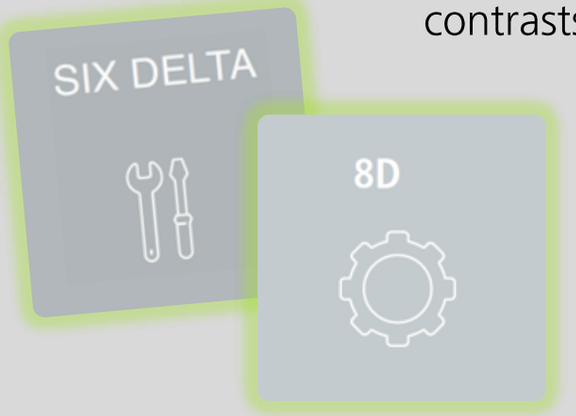
Achieve breakthrough improvements in projects & workshops
and establish a structured & data-driven problem-solving culture

Complex technical problems
Solve quickly & pragmatically with structure, contrasts & simple statistics



Design new processes & products
consistently from the customer's perspective ensuring robust & error-free implementation

Anchoring **transparency** & **daily improvement** in day-to-day business

Improve products & processes sustainably
with advanced statistical methods

Creative innovations & process automation
generating real added value from customers' perspective

Value creation perfectly under control
from workplace to end-to-end value stream

Methodology Toolkit

WHAT?! easy!

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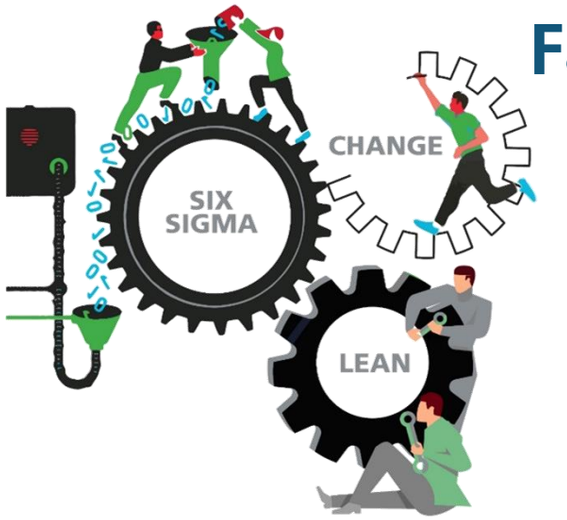


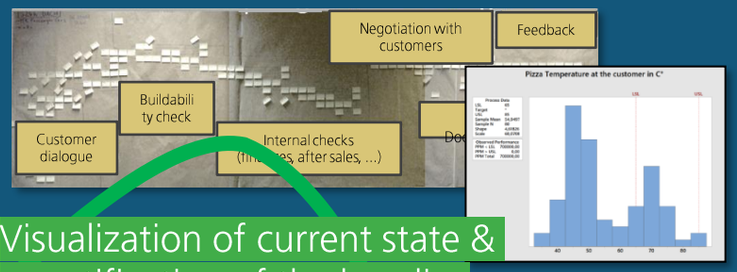
Fast project success with LEAN SIX SIGMA & Change

- ✓ Process stability & quantification through SIX SIGMA
- ✓ Speed & pragmatic implementation through LEAN
- ✓ Acceptance & change dynamics through CHANGE
- ✓ Combining the best approaches to create a data-driven problem-solving culture

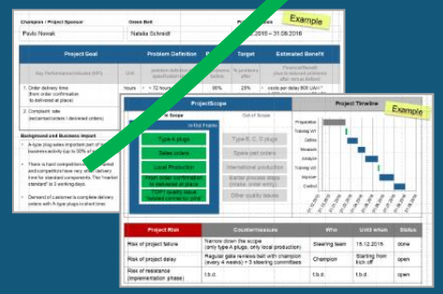
KOMPLIZIERTES EINFACH MACHEN

Define	Measure	Analyze	Improve	Control
WHAT IS OUR PROBLEM & FOCUS?	HOW TO VISUALIZE & QUANTIFY?	WHAT CAUSES THE PROBLEM?	WHAT SOLVES THE PROBLEM?	HOW TO ENSURE SUSTAINABILITY?

Example



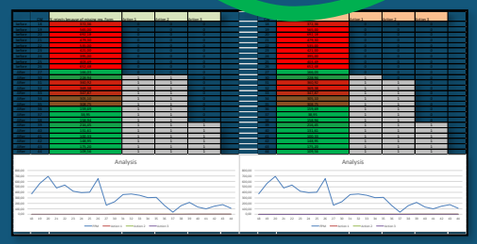
Visualization of current state & quantification of the baseline



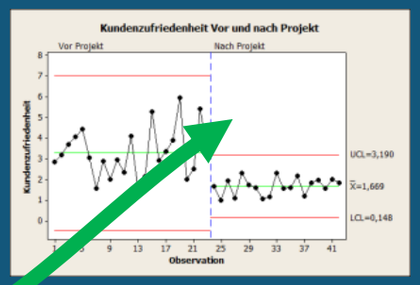
Definition of pain points, project key metrics & clear project focus

Data-driven analyses to understand important relationships

Focused implementation on the main causes & levers



Proof of effectiveness & quantification



Safeguarding sustainability

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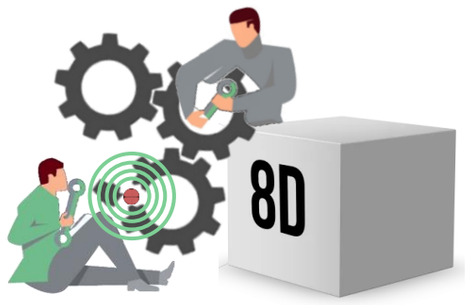
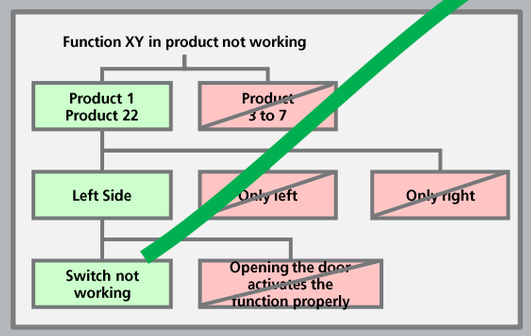
Solve complex technical problems quickly with 8D + SIX DELTA©



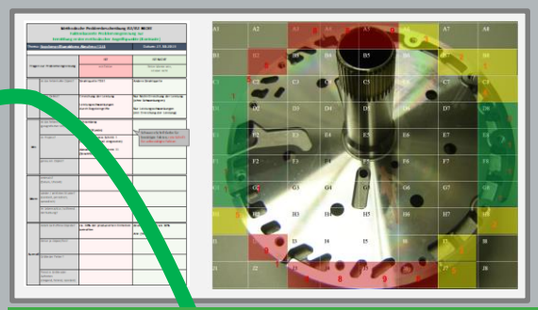
- ✓ Systematically narrow down the problem with facts & differences
- ✓ Find the cause immediately with the help of contrasts & simple statistics
- ✓ Confirm and implement simple & effective solutions without unnecessary detours

Concentrate	Characterize	Clue	Confirm	Correct
WHAT DO WE CONCENTRATE ON?	WHAT CHARACTERISES OUR PROBLEM?	WHICH CLUES LEAD US DIRECTLY TO THE CAUSE?	HOW TO CONFIRM THE TRUE TECHNICAL ROOT CAUSE?	HOW TO VALIDATE AND SECURE IRREVERSIBLE CORRECTION?

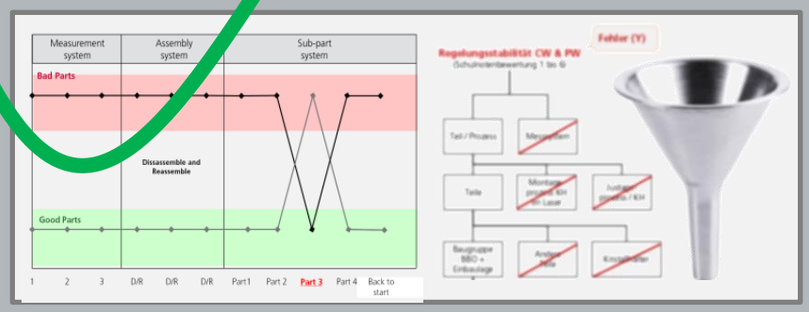
Example



Enable focussed processing of the main error and reduced complexity



Product and process contrasts identified to enable rapid root cause search



Fact + contrast-driven clue generation for rapid & detour-free root cause search

Simple tests to confirm the root cause and define optimal product characteristics

Geometry	Unit	Pairing 1 Bad	Pairing 1 Good	Pairing 2 Bad	Pairing 2 God	Pairing 3 Bad	Pairing 3 Good	Pairing 4 Bad	Pairing 4 Good	Pairing 5 Bad	Pairing 5 Good
Length A	mm	14,77	14,67	14,68	14,71	14,59	14,50	14,57	14,66	14,46	14,64
Length B	mm	0,37	0,98	0,00	1,09	0,22	0,72	0,07	0,79	0,21	0,72 !
Lenghts C	mm			0,00	0,10	0,00	0,05	0,09	0,11	0,10	0,05
Angleα	°	2,60	0,00	2,57	0,00	2,57	0,00	3,07	0,00	1,07	0,00 !

Effectiveness of the solution is proven and stability over time confirmed

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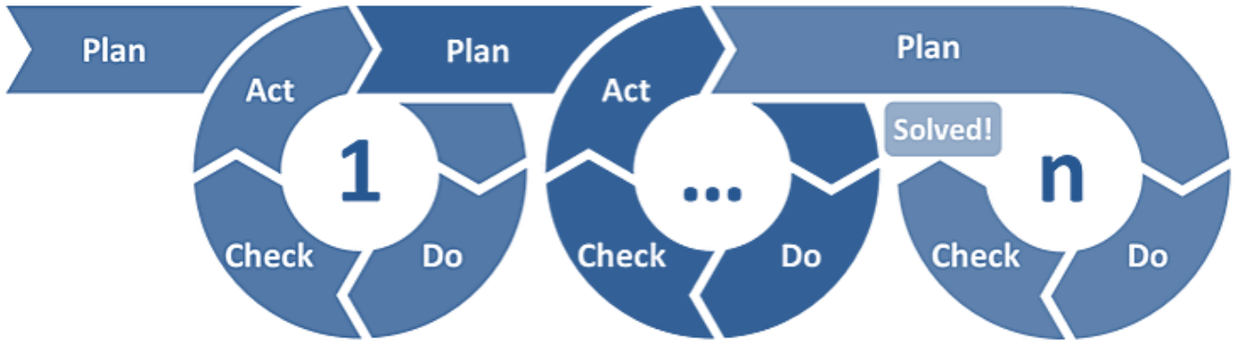
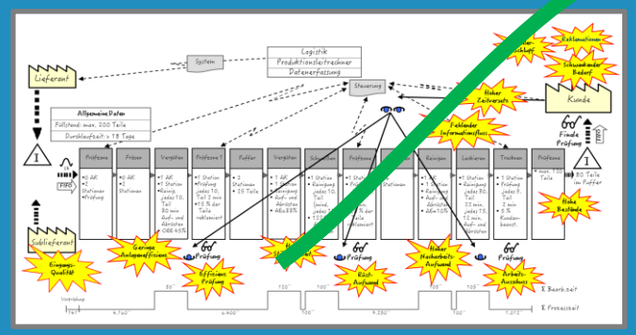
Rethink & improve processes every day with LEAN MANAGEMENT

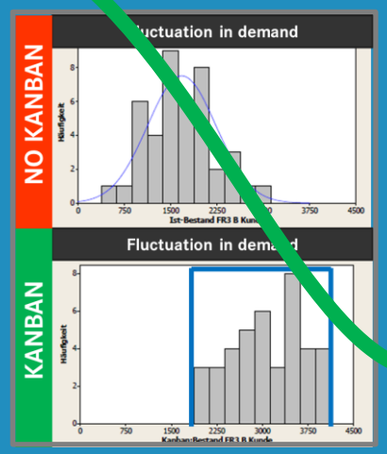
- ✓ Perfect control of the workplace
- ✓ Avoid unnecessary effort
- ✓ Iteratively achieve small & large improvements



Example

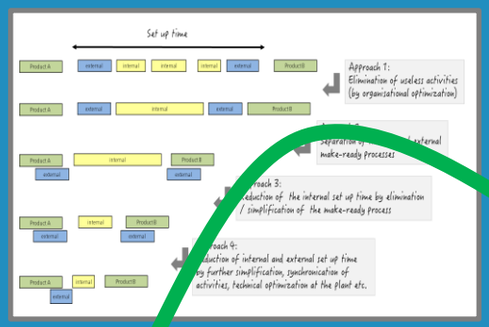


Evaluation & visualisation of the CURRENT and TARGET state,
e.g. value stream analysis

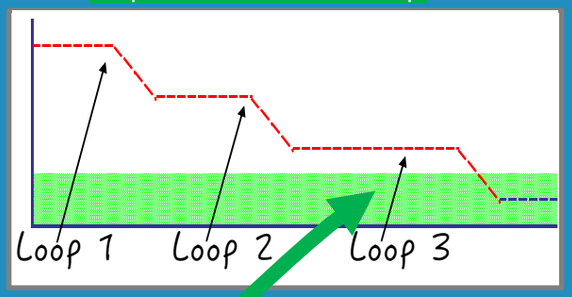


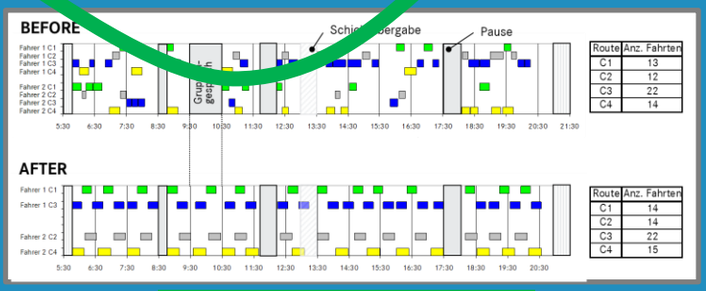
Implementation loop 1
e.g. KANBAN

Implementation loop 2
e.g. SMED & Kamishibai boards



KPI Tracking for each implementation loop





Implementiation loop 3
e.g. LINE BALANCING

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Control your daily business with SHOPFLOOR MANAGEMENT

- ✓ Improvement of operational KPIs, standards, transparency & error culture
- ✓ Short-cycle communication with facts & accelerated problem solving
- ✓ Support for daily improvement work through process proximity and involvement of employees & managers

KOMPLIZIERTES EINFACH MACHEN

Transparency & process steering	Key indicator management	Fields of action & problem solving	Organisation of communication	Standards & process control
WHAT IS THE MAIN CONTROL FUNCTION?	HOW TO GENERATE LEARNING CURVES?	TACKLING WHAT PROBLEMS & FIELDS OF ACTION?	HOW TO BRING THE ELEMENTS INTO COMMUNICATION?	WHAT ROUTINES NEED TO BE ESTABLISHED?

Example

Alignment of on-site management to the key requirements of all process participants

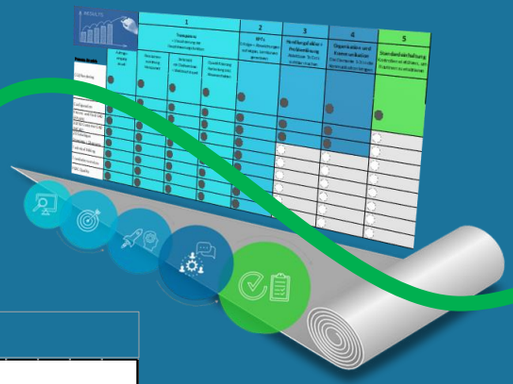
Daily KPI tracking

Kapazitätsboard

	Tage													
	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Fr. Mayer	Urlaub				Rendering 6					RX	RX	R18		RX
					R16		R1		R17	RX	RX	R5		RX
Hr. Müller	Rendering 1				R5		R1	R8	RX	Rendering 11				
	RX	RX	RX	R4			R7	RX	R10	Rendering 6				
Hr. Schmidt		R3		Weiterbildung					Rendering126					RX
	RX	RX	RX						RX	RX	RX	RX	RX	RX

Implementation of the main control function, e.g. visual capacity control

Step-by-step roll-out of the SFM & communication elements



Continuous optimisation in the ongoing SFM process

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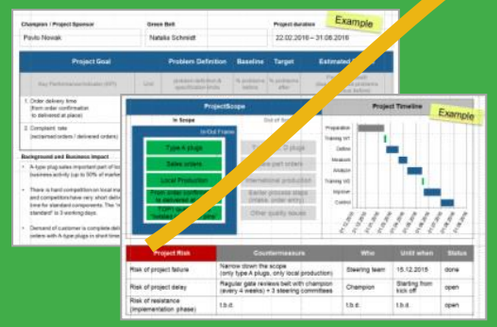
Design new processes & products with DESIGN 4 LEAN SIX SIGMA consistently from the customer's perspective & error-free implemented

- ✓ On schedule from customer request to finished product / process
- ✓ Translate relevant customer requirements in a structured way
- ✓ Products & processes robust & error-free right from the start

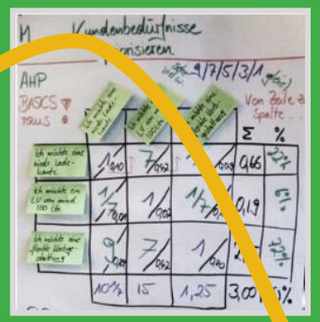
Define	Measure	Analyze	Design	Verify
WHAT IS THE AIM OF THE INNOVATION?	WHAT ARE OUR CUSTOMERS' EXPECTATIONS?	HOW CAN EXPECTATIONS BE MET?	HOW CAN THIS BE REALISED IN DETAIL?	HOW DOES THE INNOVATION PROVE ITSELF IN THE MARKET?

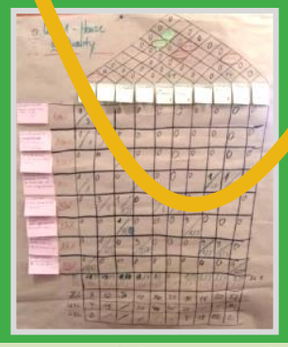
Example



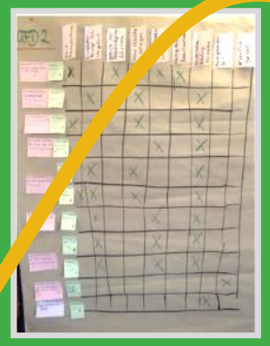
Goals & Purpose

Prioritised customer wishes



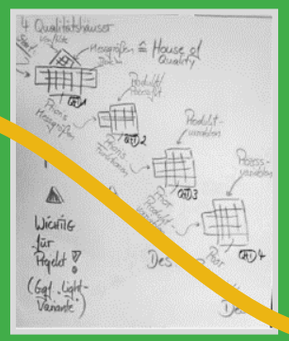


Customer wishes made measurable, including dependencies



Transition to technical design features

Step-by-step concretisation



Finding the best solution e.g. morphological box

Recognise & comprehensively fulfil key user needs with DESIGN THINKING

- ✓ User-centred solutions that meet the actual needs of users
- ✓ Iterative improvements through feedback & context adjustments
- ✓ Creative problem solving & innovative approaches

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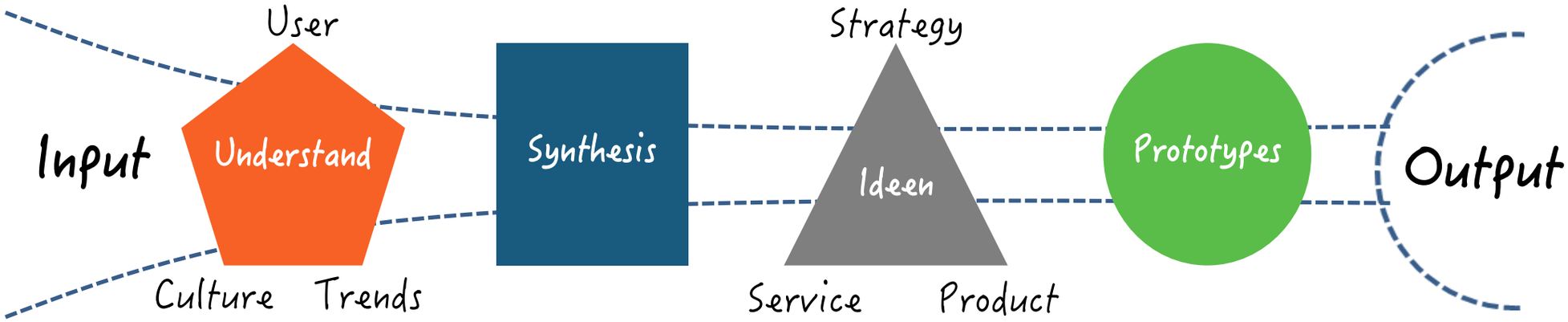
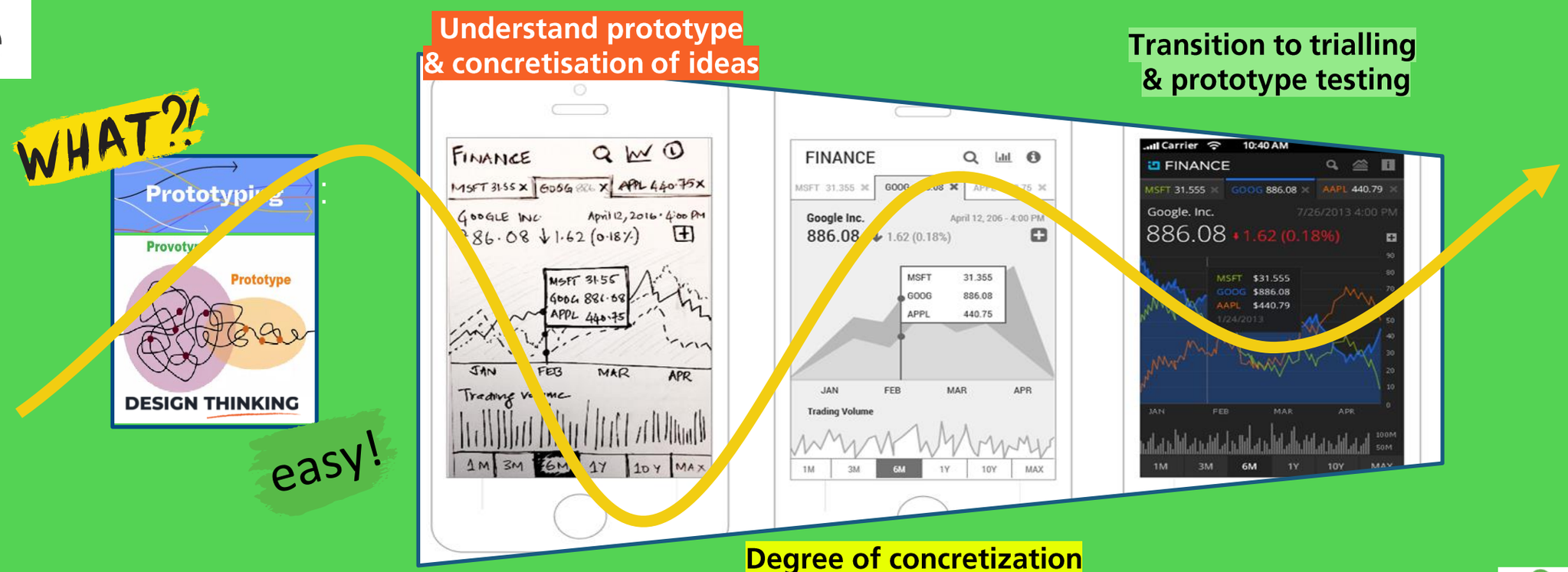


Example



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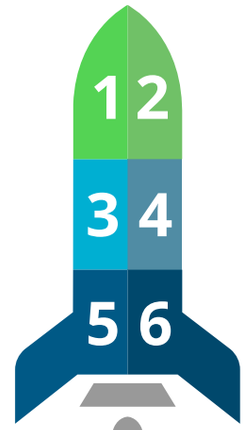
With this simple SELF-CHECK you will recognise groundbreaking key approaches for your company



KOMPLIZIERTES EINFACH MACHEN

How well does your company....

average sufficient good inadequate Very good unsatisfactory

Designing workplaces & value streams to flow perfectly so that work is quick, easy & error-free?

Work on projects in a structured & data-driven way and achieve fast & sustainable breakthrough improvements?

Actively involve all employees in problem solving, process-related improvement and an open error culture in day-to-day business?

To resolve complex technical problems quickly, sustainably and without unnecessary detours to the main causes?

To design innovations & user experiences in such a well thought-out way that they comprehensively fulfil the needs of the users?

Develop new products & processes robustly & consistently from customer's perspective & timely introduction with minimal risks?

LEAN MANAGEMENT

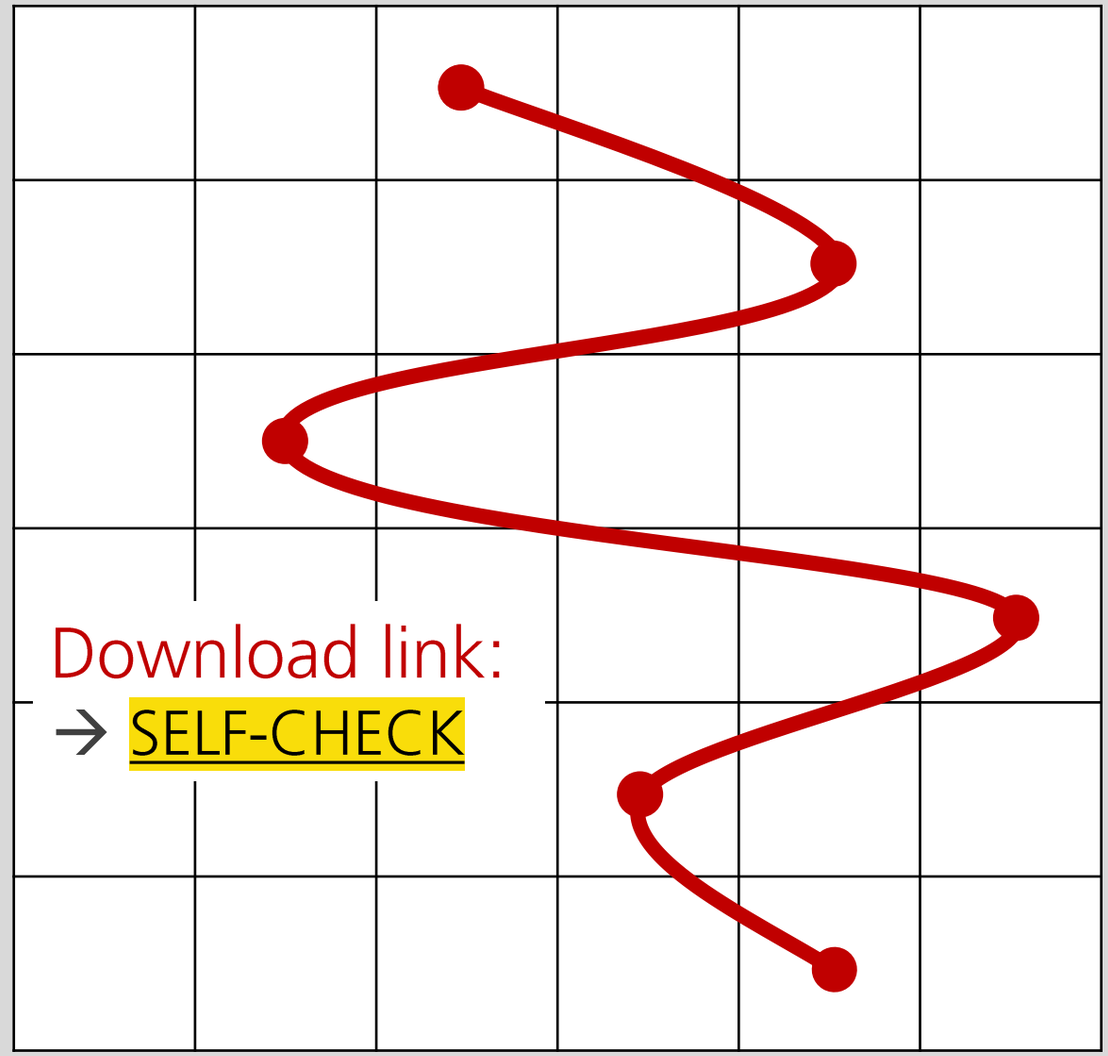
LEAN SIX SIGMA

SHOPFLOOR MANAGEMENT

SIX DELTA

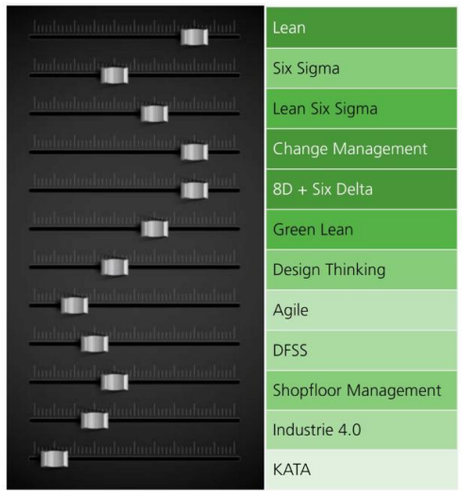
DESIGN THINKING

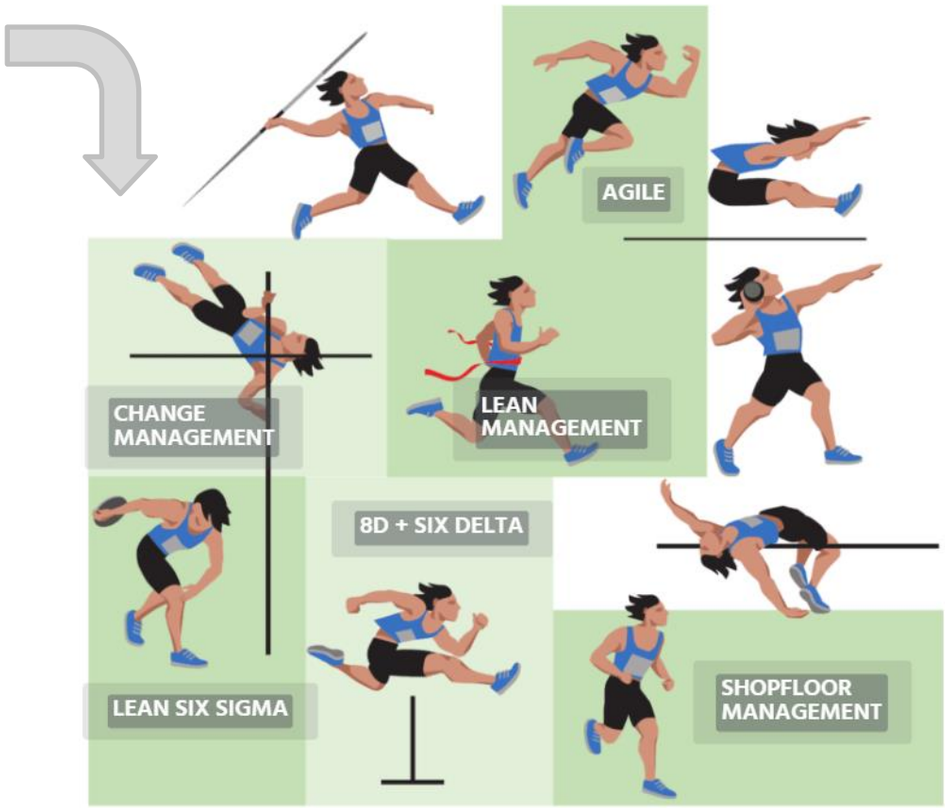
DESIGN FOR LEAN SIX SIGMA



Download link:
→ SELF-CHECK

In our free LEAN SIX SIGMA BUSINESS COMMUNITY, you can learn from comparable companies that have already gone down this path





LeanSixSigma
BUSINESS COMMUNITY

http://sixsigma-lean.community

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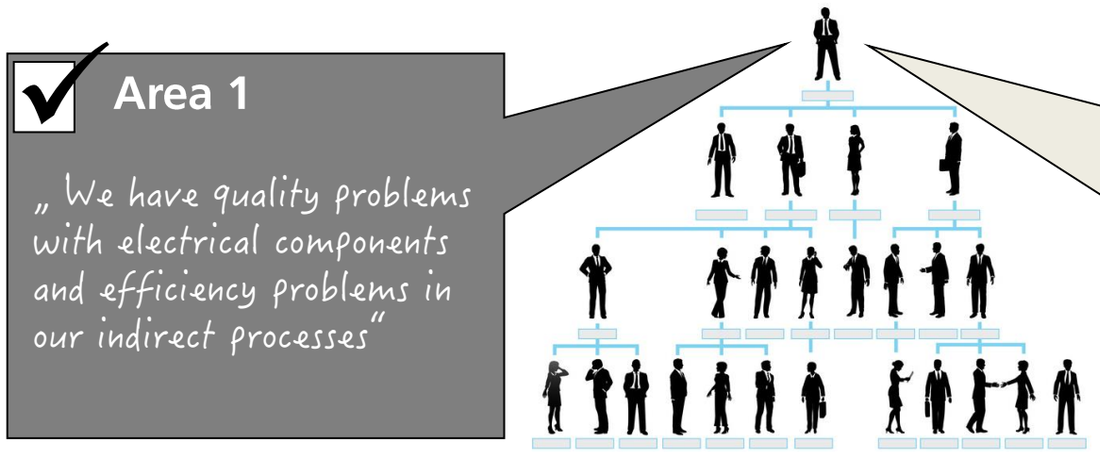
- ✓ **Your impulse generator community for Lean Six Sigma & problem solving**
- ✓ **The best approaches from the automotive industry**
- ✓ **Tailor-made, adapted & customised for your company**

As a community member, you will receive a FREE SITE ASSESSMENT including practical tips for customised implementation in your company



Area 1

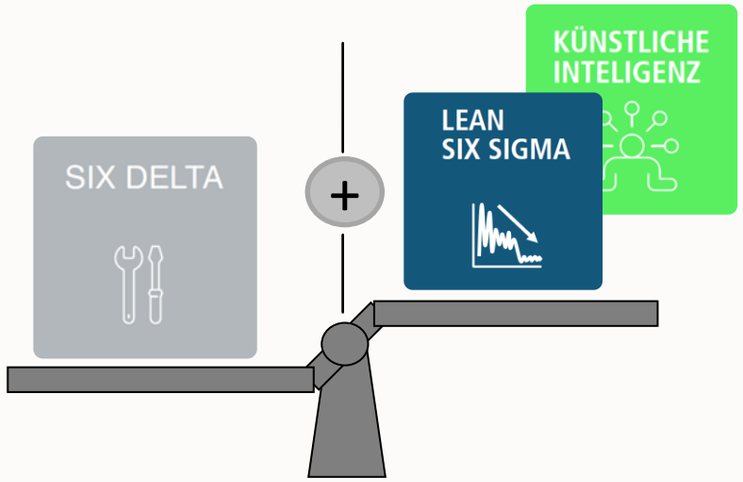
„ We have quality problems with electrical components and efficiency problems in our indirect processes"

Area 2

„ I want to introduce lean for OEE improvement, but also empower my employees to design new processes & products robustly & error-free"

WHAT?! easy!

Training & immediate application area 1

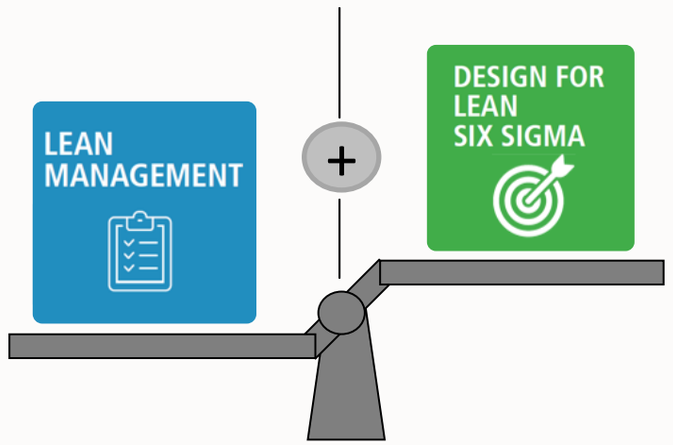


Contrast-based techn. problem solving with pragmatic approaches

DMAIC projects & SFM for visual order control & partial automation with AI

Become a community member HERE FREE OF CHARGE

Training & immediate application area 2



Introduction of SMED, Kamishibai & Visual Management in bottleneck processes

DFSS pilot workshops for new products & new processes to be introduced

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