

Herbst Kongress – Success Factory

Lean & Six Sigma at AT&S

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AT&S

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Agenda

AT&S Introduction

Quality at AT&S – iPOK was initiated

What is iPOK?

Data, Number & Facts

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AT&S – a world leading high-tech PCB company

AT&S

High-End Interconnection
Solutions
for
Mobile Devices, Automotive,
Industrial, Medical Applications

Continuously
Outperforming
market growth

3
in High-End Technology
worldwide

9,165
employees

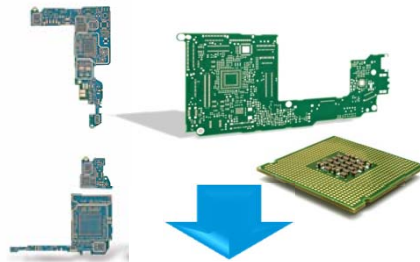
One of the
most profitable
Players in the
Industry:
EBITDA margin of 22%
in FY 2015/16

€ 762.9m
Revenue in FY 2015/16,
5.2% organic growth

1
manufacturer in Europe

Cost-competitive production
footprint with
6
plants in Europe and Asia

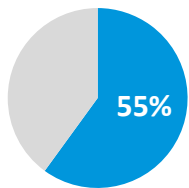
High-end PCBs for high-end applications



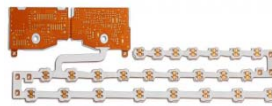
Mobile Devices & Substrates



Smartphones, Tablets, Ultrabooks, Wearables ..



55% Revenue share



Automotive



Navigation, Advanced Driver Assistance Systems, Infotainment..



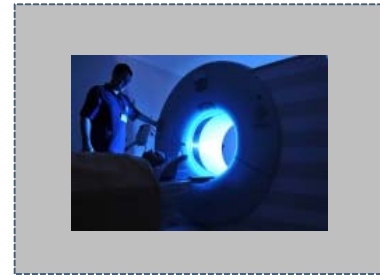
Industrial



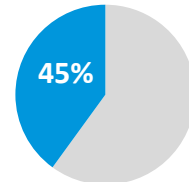
Machine-2-Machine communication, industry computer..



Medical



MRT, hearing aids, pacemaker, patient monitoring..



45% Revenue share

Global footprint ensures proximity to supply chain



- European production facilities: high mix/low volume
- Asian production facilities: high volume/low mix
- Sales network spanning three continents
- 9,165 employees*



Plant Leoben, Austria
Headquarters

Staff: 951*



Plant Fehring, Austria

Staff: 360*



Plant Nanjangud, India

Staff: 1,108*



Plant Chongqing, China

Staff: 1,826*



Plant Shanghai, China

Staff: 4,556*



Plant Ansan, Korea

Staff: 286*



*Average, FTE, Q1 2016/17; 78 employees in other locations

The world is changing – miniaturization & modularization as main drivers



2003/04



2013



2016



2024



Type	Mobile Phone	Smartphone	System in Package	All in One
PCB	125x55mm	85x20mm	30x30mm	20x20 ?
Form Factor	1	0.25	0.13	0.06 ?
Line/Space	100/100µm	40/40µm	30/30µm	20/20µm ?
Technology	1-n-1	Any-Layer	Any-Layer & Embedding	?

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Introduction

Rubik's Cube (or Magic Cube)

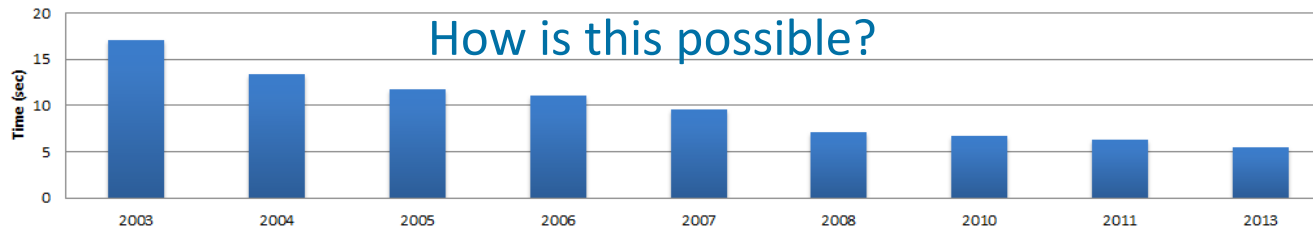
Basic Information (3x3x3)

8 corners, means $8!$ (40.320) ways to arrange them, seven can be orientated independently, the eighth depends on the preceding seven, given 3^7 (2.187) possibilities.

12 edges, means $12!/2$ (239.500.800) ways to arrange them, eleven can be flipped independently, with the flip of the twelfth depending on the preceding ones, given 2^{11} (2048) possibilities.

→ $8! \times 3^7 \times 12!/2 \times 2^{11} = \mathbf{43.252.003.274.489.856.000}$ (~ 43 quintillion) permutations

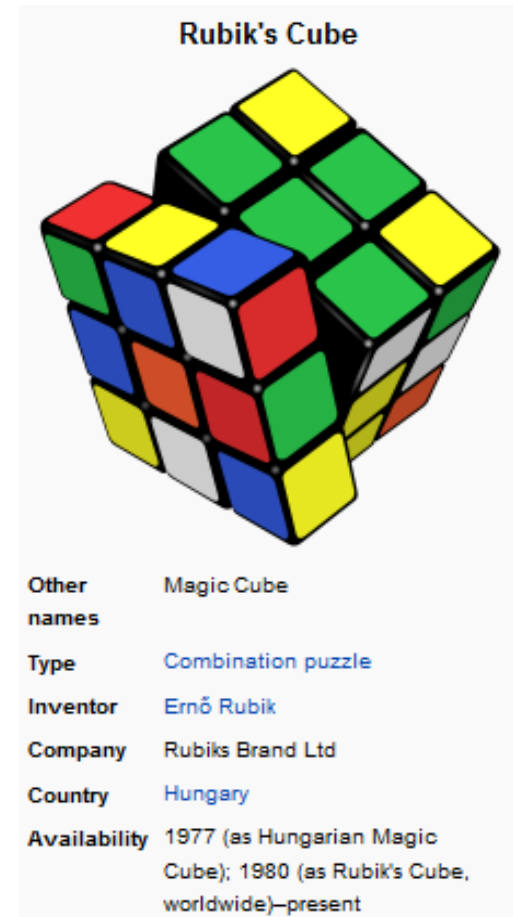
World Record Times



Solving the Cube

A memorized sequence of moves that has a desired effect on the cube is called an algorithm. Algorithm in mathematics mean: a list of well-defined instructions for performing a task from a given initial state, through well defined successive states, to a desired end state.

Several solving methods have been developed over time, each of them include it's own set of algorithm, together with descriptions of what effect the algorithm has and when it has to be applied.



<http://www.youtube.com/watch?v=WCrTrxAUbA>

iPOK – Problem Statement

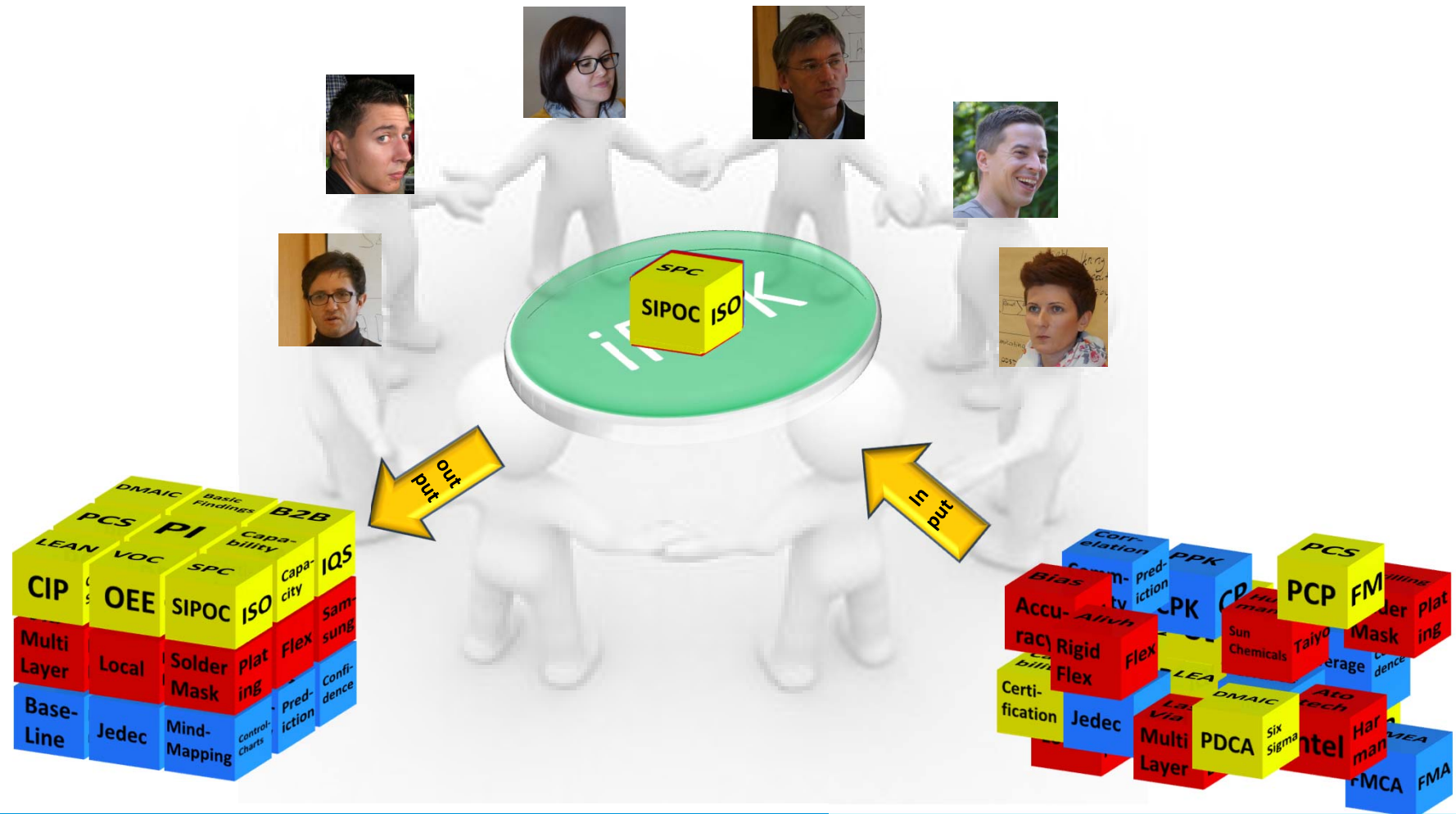
As a consequence of fast changing industry demands, quick development of new technologies and increasing quality requirements – AT&S and its employees meet quite tough challenges every day ...



How to bring structure into the chaos?

iPOK – Vision

Since 5 years now iPOK has generated an omnipresent quality mindset by implementing tools tailor-made for AT&S easy in accessibility & application, by initiating improvement projects and by constantly providing training units throughout all employee levels.



iPOK – Values

Implementation of Practice Orientated Knowledge

- Top Down Approach
- Quality Tools tailor-made for AT&S applications
- Employees achieve highest quality know how & mindset
- Well structured and target-orientated usage of tools
- Easy accessible & available for everyone
- Globally and locally aligned
- Phase out of non-value added & reinforce of value added tools
- Successful project management



V A L U E A D D E D
 P
 O P T I M I Z E D
 L
 S U S T A I N A B L E
 E
 K N O W L E D G E

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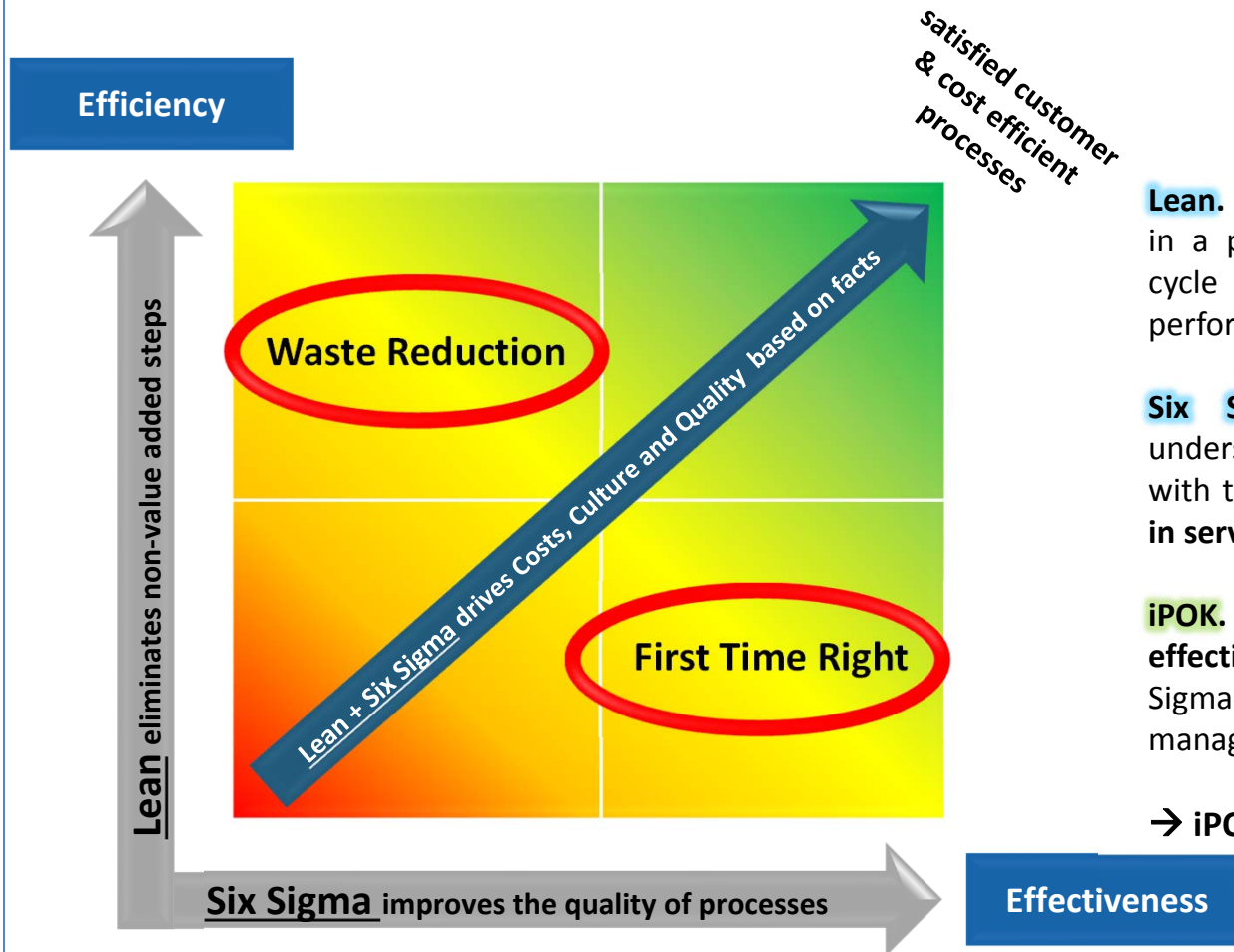
Quality at AT&S – iPOK was initiated

What is iPOK?

Data, Number & Facts

iPOK – Lean & Six Sigma

iPOK = Effectiveness & Efficiency = Improvement of Processes



Lean. Focus in **eliminating non-value added waste** in a process targeting the reduction of process cycle times, improving on-time delivery performance and reducing cost.

Six Sigma. Using statistical techniques to understand, measure and reduce process variation with the primary goal of achieving **improvements in service quality and cost.**

iPOK. An **integrated and balanced combination of effectiveness & efficiency** of both, Lean and Six Sigma to achieve continuously improving business management processes.

→ iPOK is the AT&S way of Lean & Six Sigma

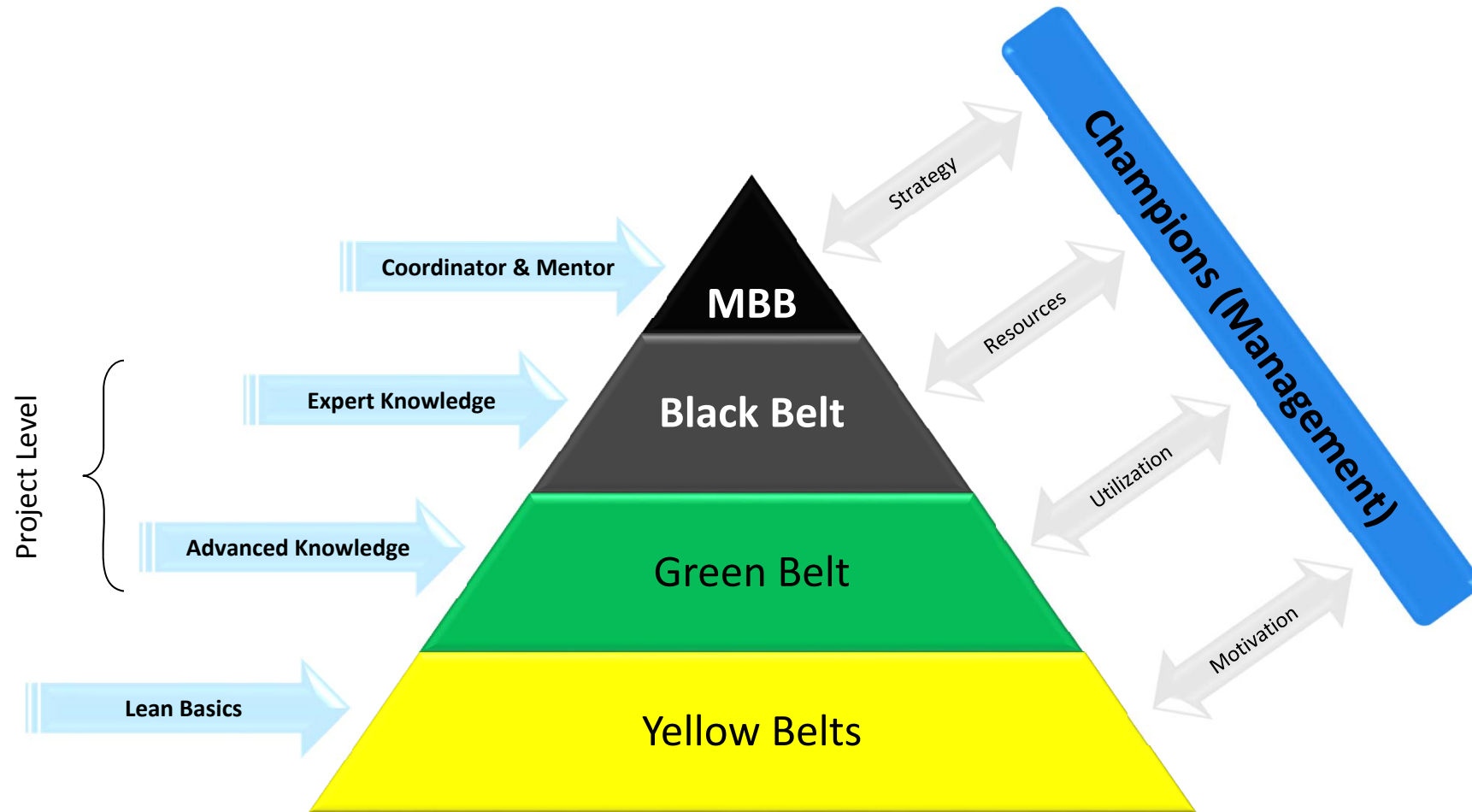
iPOK – Lean & Six Sigma

Which departments are involved?



- Lean Six Sigma:** Production & Quality
- Design For Six Sigma:** R&D & Engineering
- Lean Administration:** Supportive Departments

What are the different levels at iPOK?



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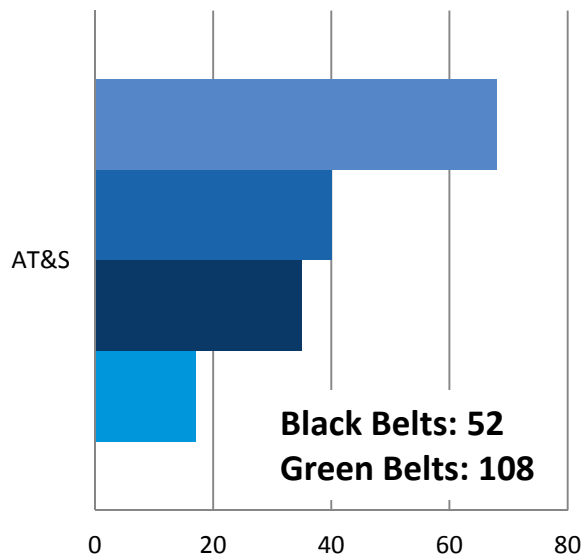
Data, Number & Facts

iPOK – Lean & Six Sigma



Number, data & facts

iPOK Training Overview

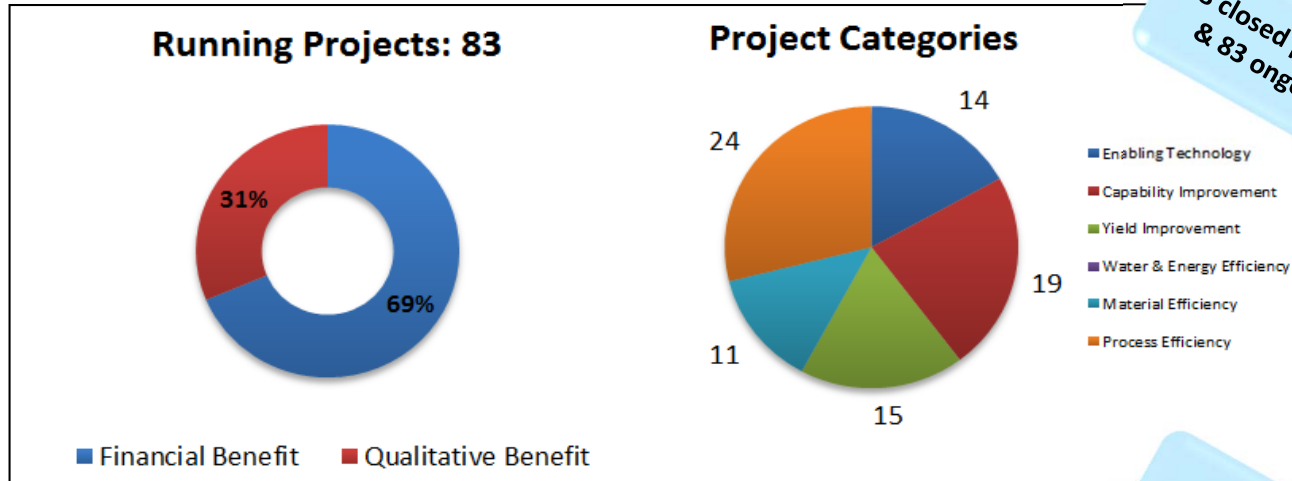


	AT&S
GB training	68
GB certified	40
BB training	35
BB certified	17

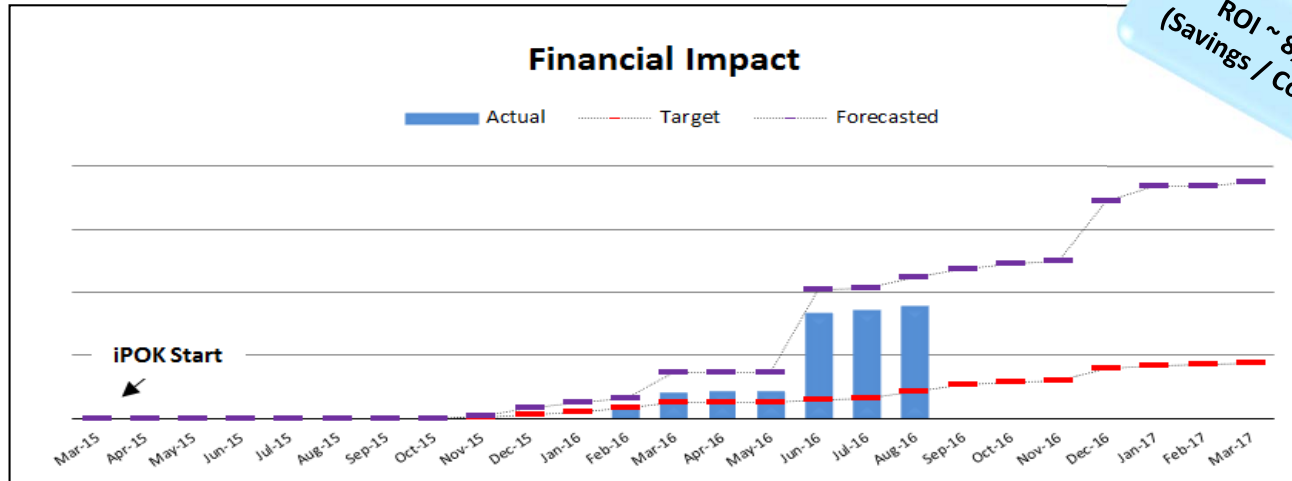
Number of Belts



Number, data & facts



38 closed projects & 83 ongoing



ROI ~ 8,5 (Savings / Costs)

iPOK – Lean & Six Sigma

What are the benefits for AT&S employees?



Networking
Respect
Career Opportunities

Relaxed Work

Education



Yellow Belt



Green Belt



Black Belt

Success



Knowledge



International
Simplification of Work

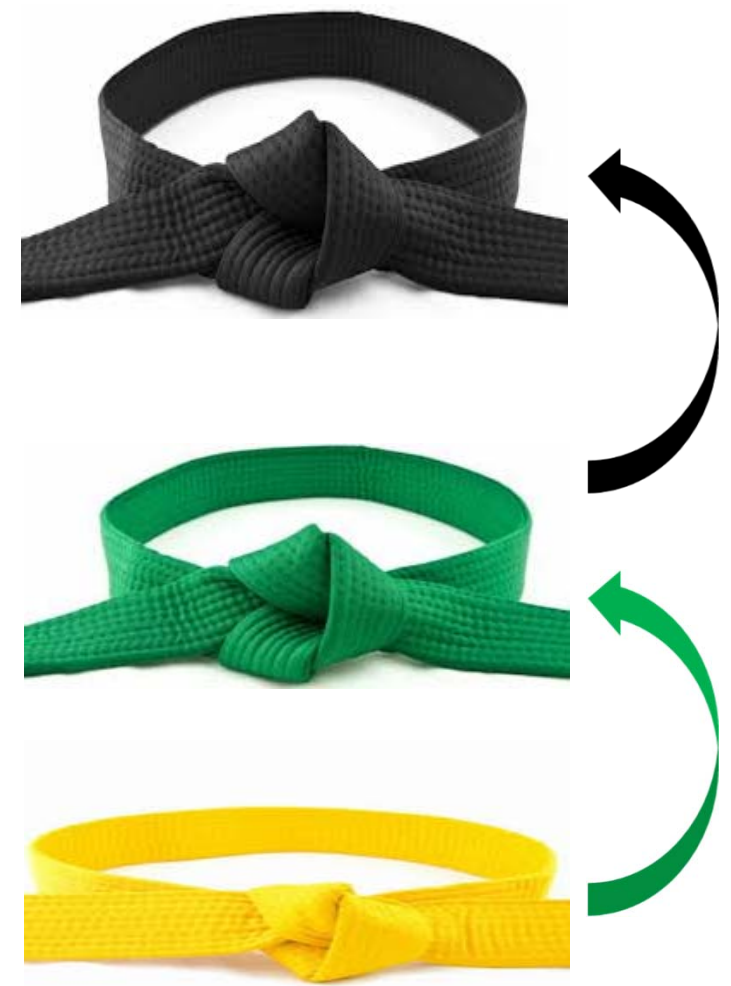
Problem Solving
Communication

How does it work?

- 4 x 5 days training
- Green Belt certified
- 2 closed GB projects
- BB exam & closed BB project

- 3 x 2 days training
- Yellow Belt & statistical knowledge
- GB exam & closed project

- 1-2 days Training
- Everyone who has interest



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Summary

iPOK requires ...

... **commitment** and **involvement**.

iPOK offers ...

- ... a cultural and mind-set change
- ... people who rely on data-driven decision making
- ... plant comprehensive communication and know how exchange
- ... a structured and defined training strategy
- ... improved customer satisfaction, profitability & revenue increase
- ... Optimization of processes
- ... Career opportunities
- ...



Thank you for your attention!

