GLOBAL SAFe® SUMMIT

A BOSCH TRANSFORMATION STORY:
THE ETAS JOURNEY TO SAFe®
Our **motivation** – what drives us

Invented for life: we want our products to spark enthusiasm, improve quality of life, and help conserve natural resources.
Bosch – a global network

Bosch Group

- Mobility Solutions
  - One of the world’s largest suppliers of mobility solutions
- Industrial Technology
  - Leading in drive and control technology, packaging, and process technology
- Energy and Building Technology
  - One of the leading manufacturers of security and communication technology
  - Leading manufacturer of energy-efficient heating products and hot-water solutions
- Consumer Goods
  - Leading supplier of power tools and accessories
  - Leading supplier of household appliances

€ 77.9 billion euros in sales
410,000 associates

Share of sales

60%

40%

* as of 12.17
San José
automated on-demand ride-hailing service (SAE Level 4/5)

The future is here and now!
Automated driving

External Partnerships are the New Normal

**Automated Driving System**
Fully automated driving kit for shared automated vehicles in urban areas

**Automated Driving Car Computer**
Integrating GPU power to an AI enabled, high performance car computer

**Video Camera Technology**
High performance image sensors for next level automotive video cameras

**Connected Automated Mobility**
Establishing a technological ecosystem and utilizing high-end sensors to enable Bosch road signature in China

**Relative Localization**
Creating HD maps with Bosch Road Signature to enable feature-based localization using surround sensors

**Absolute Localization**
Making highly-precise GNSS correction data available for automated driving

**Open-source Development Tool Chain**
Initiative for an accepted industry-wide tool chain and interoperability between tools based on open interfaces
SAFe® Rollout @Bosch

Since 20 years grass-roots and bottom-up initiatives increasingly fostered by top-down support and protection
SAFe® Rollout @Bosch
SAFe® Rollout @Bosch

Solution Trains  3
Agile Release Trains  7
Employees  0750

GB1  GB2  GB3
SAFe® Rollout @Bosch

SAFe® is our fastest growing framework for scaling agile!
Powered by dedicated agile organizational coaches – building and maintaining a corporate wide expert network.
Bosch Mobility Solutions

Bosch brings together comprehensive expertise in vehicle technology with software solutions and services to offer complete mobility solutions.
“Change before you have to.”
Jack Welch, former chairman and CEO of General Electric

ETAS story of change:
2011 – First SCRUM teams
2012 – SCRUM @ SW Development
2014 – SCRUM @ HW Development
2015 – first scaling approaches
2016 – ETAS as an agile organization
The organization is performing very successfully, but critical introspection shows: **Something was wrong!!**
Lack of confidence in management

Missing knowledge about the strategy

Missing alignment at all levels

Changing priorities
What is the right approach? Go SAFe®.
The Roll-out strategy

Heatmap:
We identified the most valuable SAFe elements for our business and then applied „WSJF“ thinking – find the shortest way to the most valuable elements – that’s our roll out strategy!
Summary of introducing SAFe ®

CHALLENGES & LEARNINGS

• 1st Art is doomed to success
• BAP²O Business - Architecture - People & Processes - Organization
• Take your time in starting ARTs – quality over quantity
• Cross functional, sufficient stuffed change team
• Don`t accept bypasses around Release & Solution Trains
• Define clear business responsibility

SUCCESS STORIES

• Increase motivation and employee satisfaction
• Increased productivity (app. 18% per ART in the first year)
• Better planning & predictability (from 60% to 90% predictability)
• Better transparency on fulfillment of commitments
• Better organizational alignment on strategy through PI Planning of ARTs and implementation of solution train level
• Higher employer attractiveness by offering an agile working environment (focus: software experts)
Holistic Transformation

Organizational Setup & Leadership
- Organizational Setup
- The role of Leadership
- Leadership Mindset for agile roles

SAFe® Rollout
- 80% of development in SAFe®
- Solution Trains cover Business development
- Service organization integrated in Solution Trains

DevOps
- Test duration reduced >80%
- Deployment duration reduced >90%
- Build execution time reduced >55%

Digitalization
- Business intelligence center for operations
- Tooling for agile scaling
- Requirement & Document Management

Lean Portfolio Management
- Introduction of Zonal Management
- Innovation Management & SAFe®
- Lean Startup & SAFe®

Requirement Management
- Introduction of MBSE
- Requirement Engineering process in SAFe®
- Maturity model for MBSE
Traditional Portfolio Management: How it felt!

Image source: https://www.cicero.de/innenpolitik/debattenkultur-demokratie-streit-streitkultur-widerspruch-filterblasen/plus
Slice it!

Business Planning is a permanent task (On Portfolio, Solution & ART level)

Rolling planning/ forecast instead of calendar years

Synchronized to the ART planning cadence
No one fits all!
First Understanding:
Too many emerging items- for too long time!
New for us: entire business responsibility in the Value Stream –
Expert team (horizon 3,2,1) support in investment/de-investment decisions & project execution
Organizational incorporation of Horizon 2 topics

**Case 1:**
Innovation can be broken down to an incremental development
- Features are developed in existing Teams

**Case 2:**
Innovation has similar architecture/needs similar competencies
- New Team or ART

**Case 3:**
Innovation has distinct architecture - needed competencies available in VS
- New Product Team directly attached to Solution Level

**Case 4:**
Innovation has distinct architecture, and/or distinct Business Case, and/or needed competencies not available in VS
- New Product Team directly attached to Portfolio Level

**Key Take Away:**
- Individual solution driven by Architecture
- Competencies, Business Case
- Solution and Portfolio Level is not for managing purpose only - there are Teams productizing innovations
Holistic Transformation

Organizational Setup & Leadership
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- The role of Leadership
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要求管理
- 引入MBSE
- 要求工程过程在SAFe®
- MBSE成熟度模型

DevOps
- 测试持续时间减<80%
- 部署持续时间减<90%
- 构建执行时间减<55%

数字
- 业务智能中心用于操作
- 工具用于敏捷扩展
- 要求和文档管理

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Lean Portfolio Management
- 引入区管理
- 创新管理 & SAFe®
- 简单创业 & SAFe®

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Skeleton = organizational structure

- Hierarchy
- Line Management
- Reporting
- Superior Manager
- Leadership

Muscles = operational structure

- Business
- Development
- Agile
- SAFe®
- Value generation
How does our new organizational model look like?

Organizational structure
-provide the right people

Customer Value

Operational structure
-do the "right thing"

SAFe®

Chapter = Groups people with similar competencies, roles, tasks

Chapter Lead = Disciplinary responsibility
Functional Excellence
People Management

SAFe® Release Trains / Solution Trains
- Target responsibility - Solution & Product Targets
- Content Management (Priorization & Backlog)
- Solution & Product budget

Chapter Lead
- Disciplinary responsibility
- People Management
- Functional responsibility (Functional Excellence)
- Use content management
- People budget

Chapter: groups people with similar roles, tasks, competencies

Customer value (opportunity return on invest)
Why did we decide for a Matrix?

Benefits
- Functional/ Methodical excellence
- Avoids SAFe Silos
- Focus on Leadership by relief of Line Management
- Flexible structure over spanning ARTs
- Scale able for further growth

Drawbacks
- Distributed Leadership
- Valuable Feedback
- No single point of contact for employees
- High # of leaders
How do we mitigate the drawbacks?

Distributed Leadership:
- Clear role descriptions
- Clarity about touchpoints – who leads whom, when?
- Defined collaboration and alignment events

Valuable Feedback:
- Feedback enabling concept for all
- Feedback is more than a sandwich
- Daily business accompaniment by change manager

High # of leaders:
- Increased span of control: Group manager 10-15 hc; Chapter Lead 15-35 hc
- Basic guideline: No increase of structural cost

No single point of contact for employees:
- Unresolved
Payback period for introducing SAFe® < 2 years

Solution & Portfolio level is not a management sandbox – there is work to do!

No rush!

Captain on deck!

No agile scaling without Digitalization!

Business Architecture

People

Processes

Organization

be clear on P&L responsibility in SAFe®

Build in Quality is not an accident

MBSE / structured requirement engineering processes help

Monitor Lead Times in horizons, especially horizon 2 – don’t consider money burned!

Take care about your organizational structure as well!

SAFe® is part of employees DNA and company culture, anchored in the strategy since 2017.

It became the standard method framework for product development.