SAP’s Strategy and Road Map for the Automotive Industry

Holger Masser - Global Head of Industrial Business Unit Automotive, SAP SE
Alteration in the Automotive Industry

1995
- Variety of Models – Platform Strategy
- Economic Cars and Engines

2000
- Car Configuration via Web
- Electronics become standard
- Lean Manufacturing

2014
- Industry consolidation
- Electric and hybrid vehicle emergence
- Global Platforms

2016 ++
- Digital Enterprise
- Autonomous Driving
- Connected Traveler
- Mobility as a Service
- Urban Vehicle
- Digital In Services

R/2 Mainframe Scheduling Agreements
SAP for Automotive
  JIT/JIS-Handling
  Vehicle Sales
  Warranty Management
Service Parts Management
  Dealer Business Management
  Customer Relationship Management

Vehicles Network
  Vehicle Insights
  Driver Portal
  SAP S/4HANA
  Digital Boardroom

Source: discoverindulgence.com
Source: google.com
Traditional value chains are breaking up

![Diagram showing traditional and non-traditional industry segments](Image)

**Traditional Peers**
- Tier-1 Auto Suppliers
  - Delphi
  - Johnson Controls
  - Toyota
  - Daimler
- Auto Manufacturers
  - Denso
  - Magna
  - Google
  - Tesla

**New Entrants**
- Windows Embedded
- Google
- Tesla
- TrueCar
- eBay
- Amazon
- Spotify
- AT&T

**New Business Opportunities**
- Growing relevance of digital components for features of interaction, connectivity and automation
- Digital companies:
  - Manufacturing self-driving cars
  - Retrofitting with self-driving features
  - Introducing innovative vehicle designs and architectures
- B2C retail witnessing increased transparency, with reviews, pricing comparisons and other information to guide purchase behavior
- B2C retail challenged to become increasingly digital
- Large opportunity to shift aftermarket from mechanical support to retrofitting existing fleet to enable digital activities
- Advent of preventive and at-your-door-step services

**“Non-Traditional” Industry Segments**
- Connectivity & Media
  - Traditional Radio Broadcasting
  - Stored Media USBs
- Mobility on Demand
  - London Black Cabs
  - Yellow Cabs
  - Radio Taxis (CDs, Hertz Car Rentals)

**Media & Connectivity providers creating a customized in-vehicle digital ecosystem**
- Mobility services shifting mindset around vehicles as services to be consumed vs. products to be owned

Source: World Economic Forum, Accenture Analysis
SAP to help Automotive Companies to become digital

Source: World Economic Forum, Accenture Analysis
The Digital Framework
A Platform for Simplific

- Workforce Engagement
- Supplier collaboration business networks
- SAP Fiori
- SAP HANA Cloud Platform
- Assets and the internet of things
- Customer-experience Omni channel
- SAP S/4 HANA
- SAP HANA Platform
- Design
- Service
- Production
- Sales
- SAP Fieldglass, SAP Ariba, SAP Hybris

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S/4HANA Enterprise Management
Summary of Key Innovations

User Productivity
- Real-time system with KPIs instantly refreshed
- Focus on real issues
- Intuitive personalization - tailoring to individual work-style

Better Decisions
- Provides pre-evaluated proposals for challenges
- Alternative scenarios simulated before applying it
- 1-click execution of a preferred solution

Differentiate with Service Levels
- Complex applications (ATP, Backorder Processing) are executed directly in HANA
- Always up-to-date view on demand-/ supply-situation across all BOM levels

Focus on exception handling, not daily business
- The MRP Planner gets information in real-time.
- Anticipate issues and focus on mitigation
- Graphical interface for real insights, not just information

Dramatically simplified data model
- All aggregates and history tables (24 in total) removed
- Data footprint reduction
- No Locking times!
- Example: Segment of ONE requires reduced lot sizes down to single items
SAP S/4HANA is at the core of our digital platform for automotive today

<table>
<thead>
<tr>
<th>Collaborative Product Innovation</th>
<th>Manufacturing and Logistics</th>
<th>Responsive Supply Networks</th>
<th>Marketing, Sales, and Aftermarket</th>
<th>Digital Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Orchestration</td>
<td>Operational Excellence</td>
<td>Demand Management</td>
<td>Collaborative B2B Sales Management</td>
<td>Vehicles Network</td>
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<tr>
<td>Product Safety and Stewardship Network</td>
<td>Operational Procurement and Inbound Logistics for Direct Material</td>
<td>Logistics Network</td>
<td>Contextual Marketing</td>
<td>Ridesharing</td>
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<tr>
<td>Project and Portfolio Management</td>
<td>Outbound Logistics</td>
<td>Sales, Inventory, and Operations Planning</td>
<td>Dealer Business Management</td>
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<td>Responsive Manufacturing</td>
<td>Transportation Management</td>
<td>Omnichannel Commerce</td>
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<td>Sequenced Manufacturing</td>
<td>Warehouse Management</td>
<td>Omnichannel Customer Service</td>
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</tbody>
</table>

**Finance**
- Accounting and Financial Close
- Enterprise Risk and Compliance Management
- Finance Operations
- Financial Planning and Analysis
- Treasury and Financial Risk Management

**Human Resources**
- Core Human Resources and Payroll
- Human Capital Analytics
- Talent Management
- Time and Attendance Management
- Services Procurement

**Procurement**
- Contingent Workforce Management
- Direct Procurement
- Invoice Management
- Self-Service Procurement

**Technology and Platform**
- Strategic Sourcing and Supplier Management
- Travel Management
- Application Platform and Infrastructure
- Data Management
- IT Management
- Security Software

Explore our automotive solutions on **SAP Solution Explorer**

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Digital Enterprise
Digital Manufacturing
SAP S/4HANA - MRP

The Challenge
- Increase customer service
- Reduce warehouse and logistics costs
- Manage changed demand
- Reduce stock losses

S/4HANA - MRP Run (PoC)

POC Results (scenario)
Imported order data:
50,000 orders for 100 days
Dependent orders: >300 mil.

MRP run
10 disposition levels
Material planned: 1.5 mil.

RUN TIME
½ hour

Business Value
- React on daily changes
- Higher lead time to fix issues
- Proactive decision making
- Real time inventory monitoring
Lifecycle Costing in Automotive
SAP S/4HANA - PLC

The Challenge

Today the industry is facing significant challenges such as:

• Need to provide innovative, customer-driven products at competitive prices
• Need to establish a transparent, traceable workflow in cost calculations
• Need to perform real-time, consistent calculations

Business Value

• Improve accuracy, transparency and consistency in cost estimates and calculations
• Shorten quotation cycle and time-to-market
• Reduce development costs and increase product margin
• Improve R&D efficiency

Competitive advantage of automotive companies comes from high-speed innovation with optimized costs.
Digital Manufacturing
Supply Chain Control Tower

The Challenge
- Limited visibility
- Siloed data and processes, with no consistent view of the supply chain
- Lack of ability to identify delays and react in a timely manner
- High need of communication to solve issues
- Use of multiple tools

Business Value
- Increase end-to-end visibility
- Increase on-time delivery performance to customer
- Decrease overall inventory levels while reducing risk
- Increase supply chain agility and reduce supply chain cost

Video
Digital Enterprise
The Digital Economy
Disruption and Business Opportunities are Everywhere

Global light vehicle sales will grow to over 111 million by 2020.

>100 billion USD in potential value of mobility services by 2035.

Over 250 Million connected vehicles will be on the road in 2020.
The breathtaking future of automotive – voice of our customer

The Future of Mobility is not just about cars it is about ECO Systems

Mobility will be electrified. Autonomous. Connected. Shared 1)

Service Providers with new business models take control of the value chain

Mobility providers are in touch with customers of all kinds

Competitive advantage with intelligent platforms providing access to customized mobility services

Value add comes from services rather than from products in the future of the Automotive ECO System 2)

Source: 1) CeBIT IT Congress 2016: Mercedes Benz Presentation  2) Roland Berger: Think Act beyond mainstream

Mercedes f015 – Luxury in Motion
Digital Services in a connect world

- Hybris Mobility & Fleet Portal
- SAP Vehicles Network
- Smart City
- Hybris InCar Services
- SAP TwoGo
- SAP Vehicle Insights

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Disrupted Retail
Showcase powered by SAP hybris commerce

The Transformation

- Increase sales of products, solutions, services and parts
- Manage all customer channels
- Provide a differentiating customer experience

Business Value

- Significant increase of vehicle sales for premium cars
- Increased customer loyalty
- Real-time customer insights
- High performance customer segmentation
- Predictive sales
Disrupted Retail
Showcase powered by SAP hybris commerce

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Ride Sharing for Enterprises, Cities, and Institutions
TwoGo by SAP

The Challenge

- The average commuter drives 46 km / workday in Germany
- A lot of idle time of employees
- Need of lots of parking space
- Huge amount of greenhouse gases / person

Business Value

- Cost savings for company’s own vehicles
- More exchange of information, more collaboration and innovation
- Reduction of greenhouse gas emissions and traffic
Automotive Data Marketplace
SAP Vehicles Network

The Transformation

- New business models come with connected vehicles
- Models contain huge potential to increase revenue and profit
- Opportunity to grow loyalty

Business Value

- Extend the value chain with new business model
- Increase revenue by selling new vehicle-centric services
- Deliver a delightful customer experience

VW’s Seat and SAP Try to Ease the Hunt for a Parking Spot

European drivers of Seat vehicles will soon be able to reserve a parking spot from an app on their smartphone

by Aaron Ricadela

February 12, 2016 – 6:54 PM CET

SAP SE is trying to broaden use of its software beyond accountants and inventory planners. The company has teamed up with Volkswagen AG division Seat to develop a software concept that would let drivers reserve and pay for parking spaces from their smartphones.
Digital Enterprise
Connected Service and Maintenance
SAP Vehicle Insights

The Transformation

- Need to leverage full potential of vehicle data
- Integrate business data to enable new business models
- Agile innovation into existing businesses

Business Value

- Provides a broad variety of business case scenarios
- Real-time vehicle data
- None disruptive platform
- Advanced analytics

* available on request
SM!GHT smart. city. light.

The Challenge

- Growing amount of traffic
- Availability of charging points
- High amount of smog in big cities

Business Value

- Transparency of charging point availability
- Real-time traffic and environmental analysis
- Increased use of e-cars due to more charging points
- Less air pollution

Video
SAP’s next steps to turn the digital industry vision into reality

Thought leadership: Whitepaper

Customer scenarios and examples

Digital Industry Reference Architecture

Digital Value Map

Model Company Approach
Digital Transformation
A customer example how a company can get started

THE WHAT:
Using digital technology to transform the customer experience, operational processes and business models

THE HOW:
Successful transformations depend as much on how firms manage digital transformation than solely on implementing new technologies

3 Core Business Topics:
• Product Development & Program Management
• Operations, Manufacturing & Supply Chain
• Customer Management

Enabled by a 4th:
• Human Resources & Communication

Concrete Projects:
• Use Cases
• Technology Drivers & Solution Providers
• Value Drivers & KPIs
Digital Transformation @ Work
Assets on Digital Transformation

DIGITAL WHITE PAPERS

BLOGS
Redefining Products in the Digital Economy

INFOGRAPHICS AND TWEET CARDS

SAP RADIO

“TED TALK” STYLE VIDEOS
Powering the 4th Industrial Revolution

REFERENCES, DEMOS, AND SCENARIOS
SAP IoT Channel

LANDING PAGES

CHECK SAP SOLUTION EXPLORER: https://solutionexplorer.sap.com
In SAP road maps, you can learn about our innovations along three different timelines:

- **Recent innovations**: for our solutions have been launched in the past weeks or months and can already be purchased.
- **Planned innovations**: for our solutions are expected to be launched in the short term or midterm.
- **Future direction**: provides a long-term perspective on high-level development plans on innovations for our solutions – inspired by your requirements.

**SAP Value Map**
- SAP Value Map for Automotive

**SAP Road Map**
- SAP Road Map for Automotive

**SAP Solution Explorer**
- Automotive solution in detail

**High Performance Applications**
- SAP HANA resources for Automotive

**Mobile Applications**
- Integrated Automotive apps for mobile users

**SAP Innovation Discovery**
- SAP Innovations & new functionality
Welcome to Discovery
Discover Innovations

Hello Holger Masser from SAP
Welcome to Innovation Discovery

Find the innovations and features that you can turn into tangible value for your business.

HOT TOPICS

- SAP S/4HANA: 299 innovations related to SAP S/4HANA
- User Experience: 263 innovations related to user experience
- Digital Transformation: 117 innovations related to digital transformation
Customers influencing SAP’s solutions

- SAP Development
  - Improvements
  - Innovations
    - CUSTOMER ENGAGEMENT INITIATIVE
  - Individualization
    - CUSTOM DEVELOPMENT
  - Vision
    - EXECUTIVE ADVISORY COUNCILS

- Customer specific
  - Further differentiation
    - CUSTOMER / CONSULTING / PARTNER Solutions
The Best Practices for Automotive Event is an annual event, held in Detroit, Michigan.

October 17-19, 2016
MGM Grand Hotel and Casino
1777 3rd Avenue
Detroit, MI 48226

The Best Practices for Automotive unites hundreds of professionals to embrace innovative solutions, fresh ideas and best-in-class strategies to improve on overall business performance. The event showcases insights and expertise from case studies and thought-leaders on how to remain on the cutting edge of a quickly changing market.
Thank you

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