Capital Market Days 2020
Strategic Action Field: Architecture and Networking
Leading the Way Toward Software-defined Vehicles

Ticker: CON
ADR-Ticker: CTTAY
http://www.continental-ir.com

Dr. Dirk Abendroth, Chief Technology Officer, Automotive Technologies
December 8, 2020
Strategic Action Field: Architecture and Networking
Leading the Way Toward Software-defined Vehicles
Leading the Way toward Software-defined Vehicles
Complexity and Functional Growth Is Limited by Current Approach

Going forward

Up2now

› Conventional architecture and functions
  Based on gateway, body controller, other ECUs

› Function-defined architecture
  Based on ICAS1 High Performance Computer (HPC)
  Scalable across platforms
  New functions & value streams
Leading the Way toward Software-defined Vehicles
Complexity and Functional Growth Is Limited by Current Approach

Up2now

Patchwork architecture

› Up to ~100 ECUs, limited computing power
› Functionality isolated in ECUs
› Lots of wires
› Limited cloud-based functionality

Function-defined architecture

› Few HPCs and zones, significant computing power
› Functions defined by SW (HW abstraction)
› ~50% reduction of wires
› Always connected

User expectation: pleasure, safety and convenience

User expectation: smart IoT device
Leading the Way toward Software-defined Vehicles
Vehicle as De-facto IoT Device – New Value Streams Across Lifecycle

Value per vehicle\(^1\)

System Integration
Electronics & Software

Value per vehicle\(^1\)

System Integration
Electronics & Software

Up2now

Going forward

Vehicle purchased
Vehicle end of life
Vehicle purchased
Vehicle end of life

Complexity & functional growth

Cloud services
New features and functions
Software maintenance

Value per vehicle\(^1\)

1 Not to scale; for illustrative purposes only
Leading the Way toward Software-defined Vehicles
We Are First-to-market and Top Player in X-domain Computing Solutions

HPC projects won and in acquisition (#)
Total order intake so far: > €4 bn LTS

SOP 2020 2021 2022 2023 2024 2025

- ADAS
- Safety & Motion
- Body
- Cockpit
- Cross Domain
- Awarded to Continental
Leading the Way toward Software-defined Vehicles
Why We Have Been Winning: Providing Solutions that Capture Value

Customer Challenges

Continental Solutions

Integration of complex systems

› Capability to provide fully pre-integrated and cyber-secured functional stacks

Lack of software expertise

› Superior capabilities component to system
› Established agile development & collaboration methods & tools

Managing new business models

› Enabling new recurring value streams
› Covering complete vehicle lifecycle

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Leading the Way toward Software-defined Vehicles
Unique Capability to Provide Fully Integrated Functional Stacks

<table>
<thead>
<tr>
<th>Domains</th>
<th>Body</th>
<th>Cockpit</th>
<th>AD/ADAS</th>
<th>Safety &amp; Motion</th>
<th>Cloud</th>
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<tbody>
<tr>
<td>Vehicle Services</td>
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<td>Middleware</td>
<td>Platform Services</td>
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<td>Cloud API &amp; Services</td>
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<td>HAD Services</td>
<td>Safety &amp; Motion Services</td>
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<td>Operating System</td>
<td>Linux</td>
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<td>Cloud Abstraction (Alternatives)</td>
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<td>Region-specific Cloud</td>
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<td>HPC</td>
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<td>HPC</td>
<td>Cloud Platform</td>
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Building blocks from Continental
3rd party blocks integrated by Continental
Leading the Way toward Software-defined Vehicles

Unique Capability to Provide Fully Integrated Functional Stacks

Building Blocks

- Cloud
- Application
- Middleware
- OS
- Hardware

System Integration

- Services / Applications
  - Body
  - Cockpit
  - ADAS / AD
  - Safety / Motion

Automotive SW Platform

- Differentiating
- Non-Differentiating

Continental HPC Platform

Toolkit

PMT
House of Solutions

Tool Framework

- Data Mgmt.
- Dependency Mgmt.
- API Mgmt.
- SW Distribution
- Continuous Integration & Deployment
Leading the Way toward Software-defined Vehicles

Strong Business Growth Enabled by Future Architecture Competency

Sales in Action Field¹ (€)

<table>
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<tr>
<th>Action Field</th>
<th>2020E</th>
<th>Mid-term</th>
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<tbody>
<tr>
<td>Body and Cockpit HPCs + zone ECUs</td>
<td>~ -8%-pts</td>
<td>~ -3%-pts</td>
</tr>
<tr>
<td>Connectivity</td>
<td>~ +5%-pts</td>
<td>&gt; +100%-pts</td>
</tr>
<tr>
<td>Legacy ECUs</td>
<td>&gt; +100%-pts</td>
<td>~ +5%-pts</td>
</tr>
<tr>
<td>Other products</td>
<td>~ +3%-pts</td>
<td>~ +3%-pts</td>
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Expected Outperformance²

- \( \sum \sim +3\%-pts \)
- \( > +100\%-pts \)
- \( ~ +5\%-pts \)
- \( ~ -8\%-pts \)
- \( ~ -3\%-pts \)

Additional growth across all strategic action fields

- **Additional HPCs**
  - ADAS/AD
  - Safety and motion
  - Cross domain

- **Software and systems**
  - System integration
  - Software maintenance
  - New features and functions
  - Cloud services

1 Based on mid-term IHS light vehicle production (LVP) forecast from November 2020
2 Mid-term organic sales growth above IHS LVP
Leading the Way toward Software-defined Vehicles

Summary

First in market to realize paradigm shift to new E/E and SW architecture

Pole position for growing connected vehicle and HPC opportunities across all domains

Strong full stack offerings available make us strong partner of choice for customers

Synergetic capability to design, integrate and partner on full stacks across domains and cloud

Monetizing new business models and recurring revenue streams with major growth potential
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