



AVL CARE™

Relying on global competences

AVL List GmbH

A SERVICE PORTFOLIO IS COMMONPLACE FOR A PROFESSIONAL EQUIPMENT SUPPLIER

OVERVIEW



The Challenge

The AVL Solution

The Added Value



FIX

Hotline Support
Hardware Repair
Spare Parts Management



MAINTAIN

Equipment Calibration
Hardware Maintenance
Software Maintenance
Device Overhaul



USE

Training
Start-up & Operation
Support
Testbed Operations



OPTIMIZE

CAREline Support
Software Subscription
Application Support

INTEGRATED RESIDENT SERVICES



Make or buy

APPLICATION SERVICES



Doing the right things right

AVL CARE™



Connecting with Customer Objectives

SERVICE MODULES

SERVICE SOLUTIONS

YOU HAVE SEVERAL OPTIONS FOR ATTENDING TO YOUR TESTING EQUIPMENT

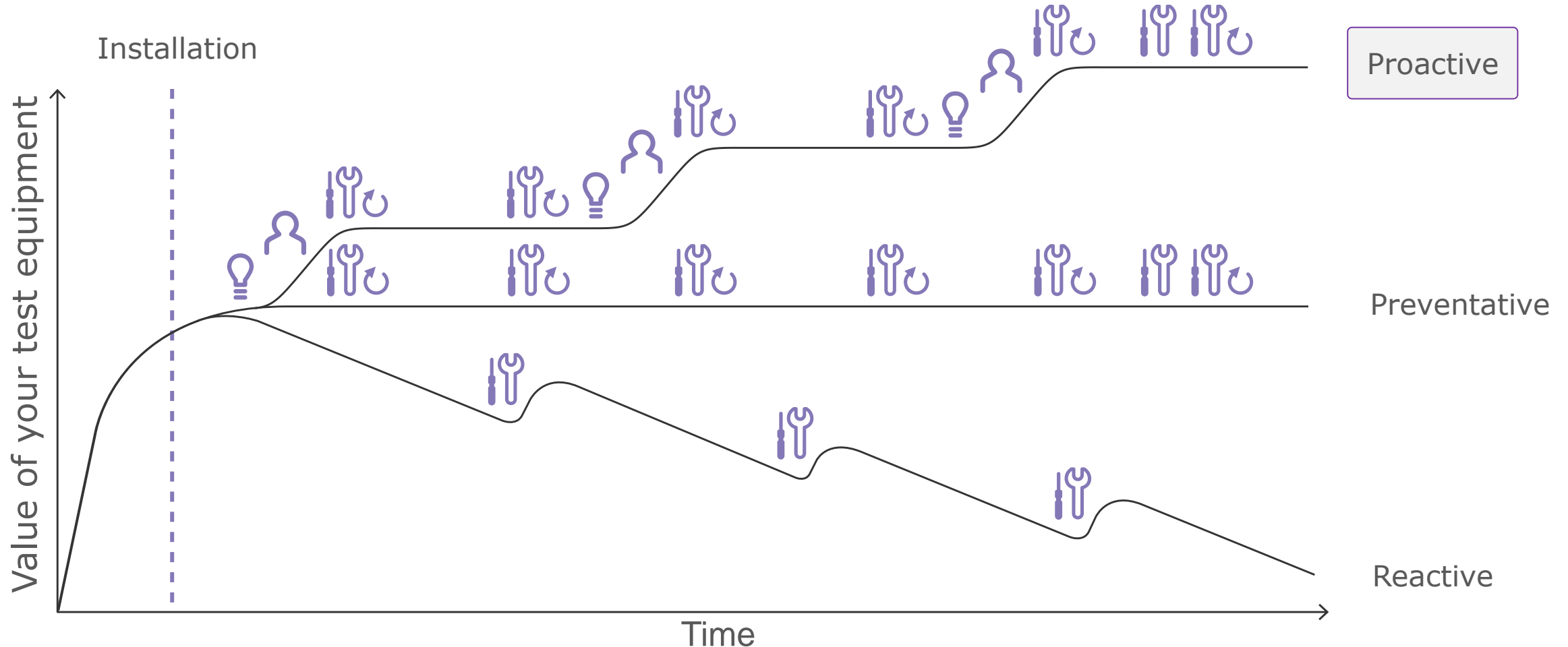
OVERVIEW

>

The Challenge

The AVL Solution

The Added Value



AVL SERVICE SOLUTIONS ARE CUSTOMIZED FOR ENHANCED TESTING OPERATION

OVERVIEW



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Connecting with
Customer Objectives

SERVICE SOLUTIONS

AVL SERVICE SOLUTIONS BOOSTING ENGINE & POWERTRAIN TESTING



OVERVIEW



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Integrated Resident Services

MORE TIME FOR YOUR CORE COMPETENCES



AVL CARE™

RELYING ON GLOBAL COMPETENCES



Application Services

SOLUTIONS ENGINEERED FOR BEST RESULTS

AVL SERVICE SOLUTIONS BOOSTING ENGINE & POWERTRAIN TESTING



OVERVIEW



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Integrated Resident Services

MORE TIME FOR YOUR CORE COMPETENCES



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RELYING ON GLOBAL COMPETENCES



Application Services

SOLUTIONS ENGINEERED FOR BEST RESULTS

WHAT WE WILL LOOK AT


OVERVIEW



The Challenge

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The Added Value



The challenges of new solutions

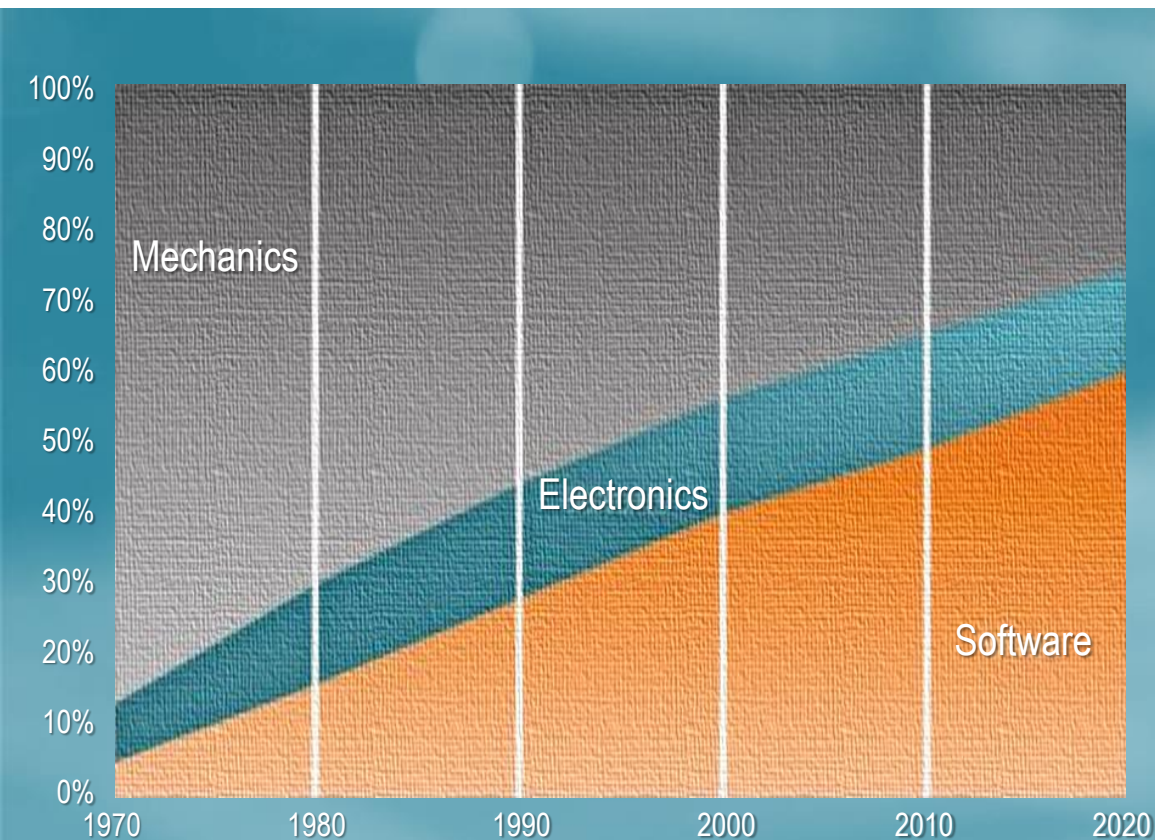


Safeguarding testing operation



Partnering for best performance

NEW SOLUTIONS BRING NEW CHALLENGES



In order to comply with the increasing demands, powertrain development increasingly relies on intelligence provided by software systems.

New (globally available) support models are required.

Source: http://www.kem.de/html/portlet/ext/articles-portlet/articles_content/print.jsp?groupId=32536721&articleId=40093546&companyId=1&accountId=7&version=1.0&p_l_i_d=40335883&articlePk=40093545&layId=296&langId=de_DE

NEW SOLUTIONS BRING NEW CHALLENGES



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The Added Value

Requirements for Powertrain Testing

- **Secure software functionality**
- **Ensure data availability and accessibility (also globally)**
- **Comply with constantly evolving technology requirements**
- **Reduce cost-of-ownership**

IT IS ALL ABOUT BEING IN CONTROL



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The Added Value

Your expectations of (Software) Support Contracts

Simple to access

Single-point-of-contact (Personal Agent) and self-service portal

Fast answers

Defined response time and fast lane solution process

Reliable solutions

Customer specific simulation environment for issue analysis and testing of solutions

Transparency

Web-based case tracking tool, regular review meetings and performance reporting

References

>1600 AVL testbeds supported - with 98% renewal rate - at major automotive OEMs and Tier 1 suppliers

WHAT IF A SUPPLIER COULD ALSO PROVIDE...



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The Added Value

**Combined
powertrain &
equipment
knowledge**

**Support of
global testing
operations**

**Future-proof
testing
solutions**

Service beyond the ordinary!

A UNIQUE SUPPORT SOLUTION

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The Added Value



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RELYING ON GLOBAL COMPETENCES

SAFEGUARDING TESTING OPERATION



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RELYING ON GLOBAL COMPETENCES



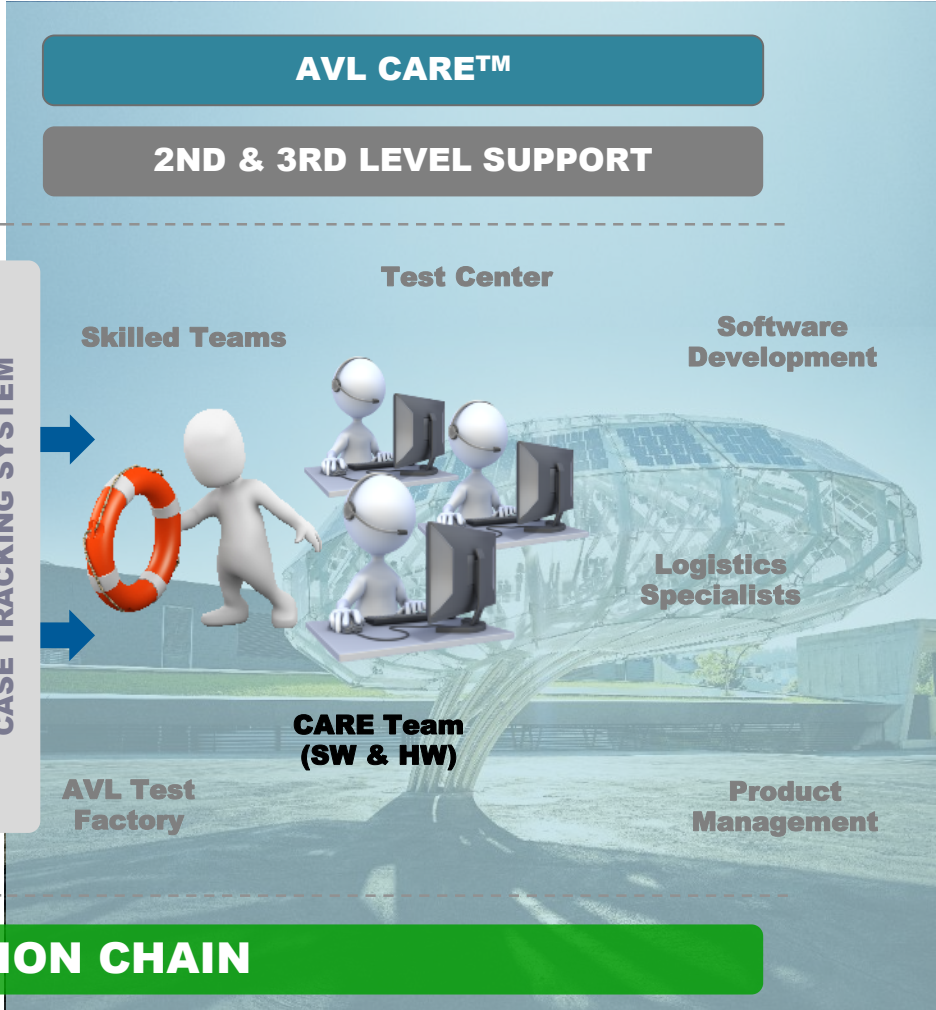
REDUCING OPERATIONAL RISK



RISK MGMT ACTIVITIES	CUSTOMER & AVL TEAM
FAST ON SITE REACTION	●
ISSUE TRACKING	●
SOFTWARE SUPPORT	●
APPLICATION SUPPORT	●
SOFTWARE BUGFIXING	●
SIMULATION ENVIRONMENT	●
EXPERT SUPPORT	●
SOFTWARE INSTALLATION	●
CONTINUOUS IMPROVEMENT	●



- Available
- Reduced Functionality
- Not existing



FACILITATING THE ROLE OF IT DEPARTMENTS AS BUSINESS PROCESS ENABLER



The Challenge

The AVL Solution

The Added Value

AVL CARE™ assists IT departments in providing IT platforms for testing

- **Software releases supporting corporate IT standards**
- **Standardization & harmonization support for testfields**
- **Support activities for secured data availability & enhanced system performance**
- **Mid-to-long-term evolutions for software installations**

WHAT AVL CARE™ DOES FOR YOU

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The AVL Solution

The Added Value



CAREline Support

- **Dedicated Personal Agent**
- **Premium Support**
 - 24/7 accessibility
 - Higher priority
 - Online case status information
 - Performance commitments
- **eSupport: Access to AVL CAREworld**
- **Periodical assessment of testfield harmonization needs**
- **Data backup support**



Software Maintenance

- **Regular deployment of service releases ensuring**
 - Software compliance
 - Software quality
 - Software harmonization
- **Fast elimination of single issues with software patches**
- **Testing in customized simulation environment (virtual testbed) before deployment**



Software Subscription

- **Access to latest software product releases**
 - Use of state-of-the-art functionality
 - Compliance with technological advancements
- **Establishment of software evolution roadmaps**
- **Capex-to-Opex model**

AVL CARE™ – WHAT DIFFERENCE DOES IT MAKE?



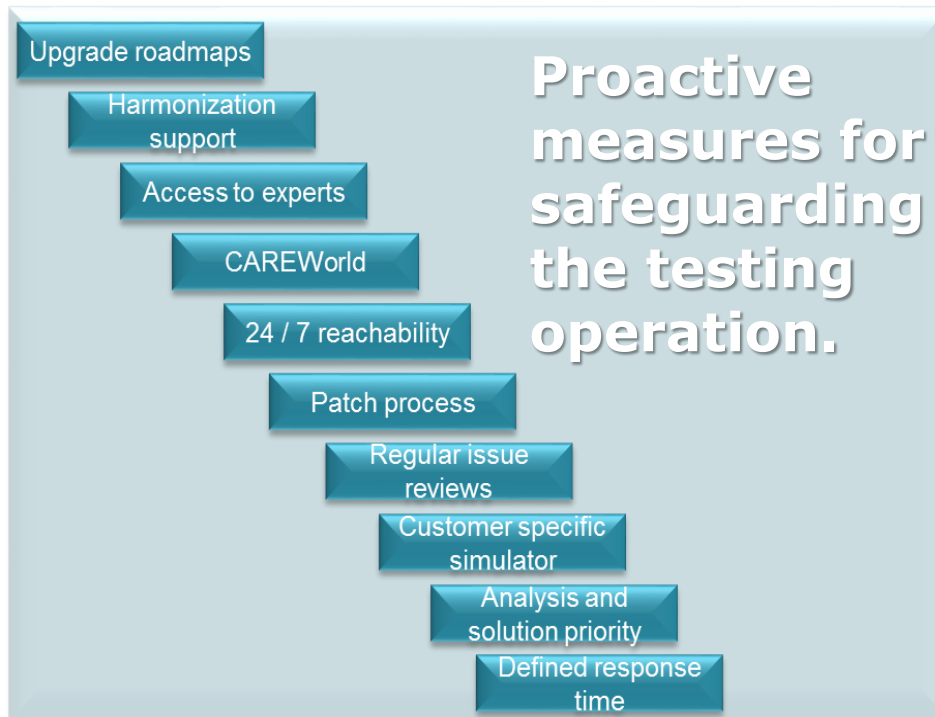
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The Challenge

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The Added Value

STANDARD
SW SUPPORT



SW CARE
SW SUPPORT &
MAINTENANCE

PARTNERING FOR BEST PERFORMANCE



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The AVL Solution

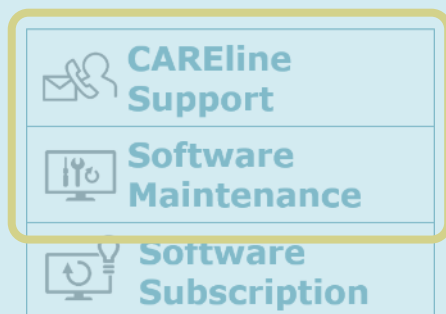
The Added Value



AVL CARE™

RELYING ON GLOBAL COMPETENCES

SELECTED EXAMPLE 1



Contract scope

2 engine TB automation systems
(software & hardware)

1 site

Contract since 2011

Contract targets

Risk reduction with application-specific equipment support

Quick recovery in case of TB standstill

Activities

Software maintenance

Case management & processing
via priority lane

Remote support

Expert workshops

Performance reporting

Impact

No major downtime of AVL
equipment over the last 24 months

Next-day-implementation of work-arounds in 9 out of 10 cases

[illegible]

**CAREline
Support**

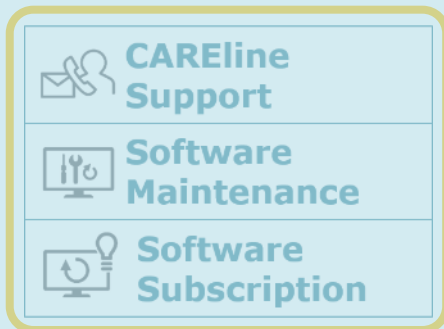
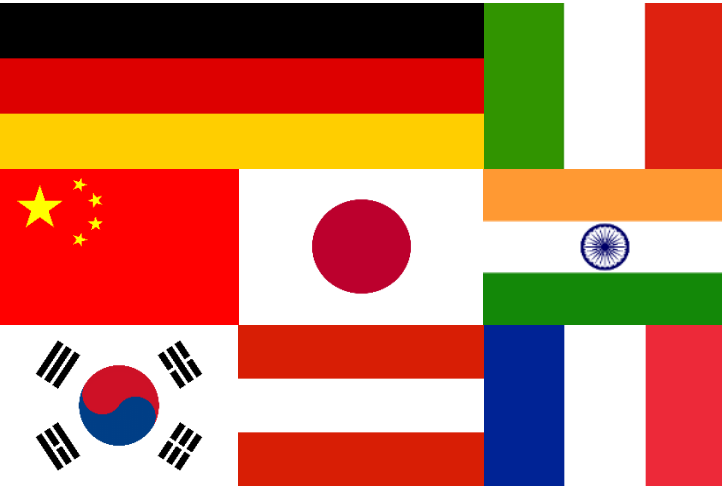


Software Maintenance



Software Subscription

SELECTED EXAMPLE 3 (1/2)



Contract scope

54 engine TB automation systems
26 emission applications
Office software products
9 sites / 8 countries
4 year duration

Contract targets

Reach optimal software stability
Ensure global data compatibility
Leverage of global synergies
Achieve smooth migration to new software generation

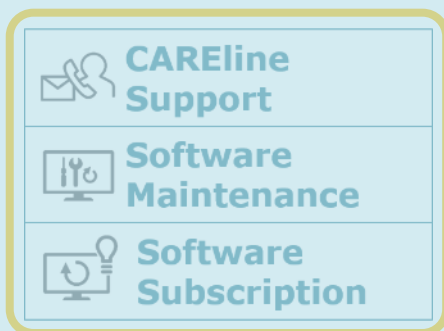
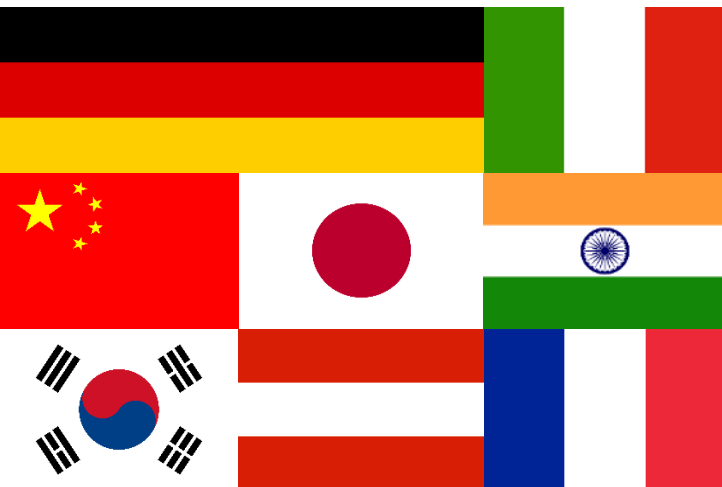
Activities

Software maintenance
Case management (incl. global consolidation) & processing via priority lane
Remote support
Global release upgrades
Realization of enhancement requests
Global performance reporting

Impact

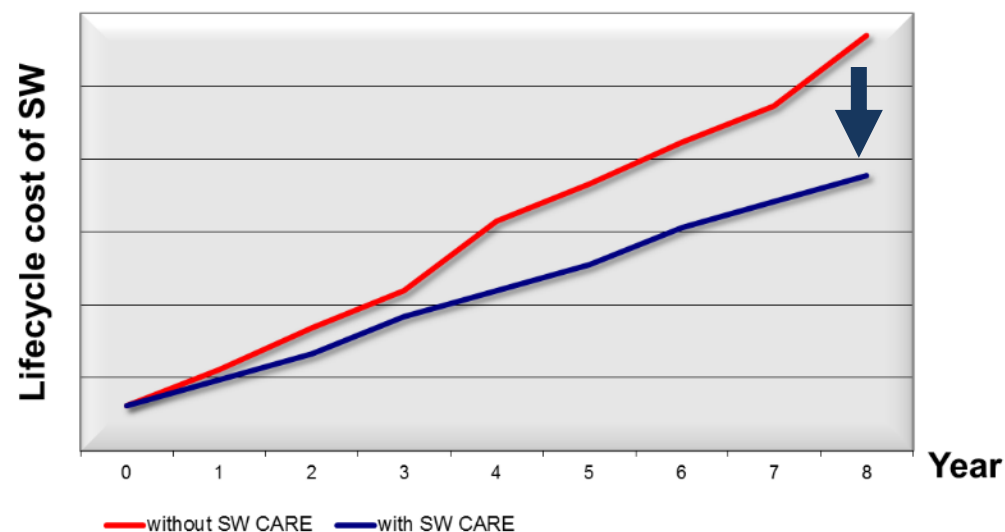
IPHH 0.2 attained
25% TCO reduction potential for software (see next slide)

SELECTED EXAMPLE 3 (2/2)

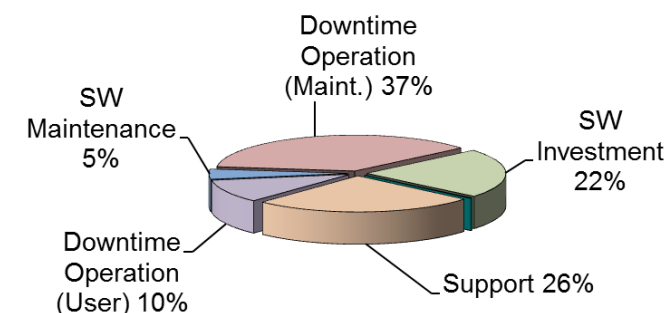


Operating AVL Software at its best. At lower cost.*

Total cumulated cost over time



Cost saving with SW CARE



* Results of joint customer – AVL total-cost-of-ownership analysis. The total savings potential was estimated at approx. 20 - 30%.

SELECTED EXAMPLE 4



Contract scope (global)

333 engine / powertrain /
component TB automation systems
Office software products
8 locations / 5 countries
Over 2000 users
5 year frame agreement

Contract targets

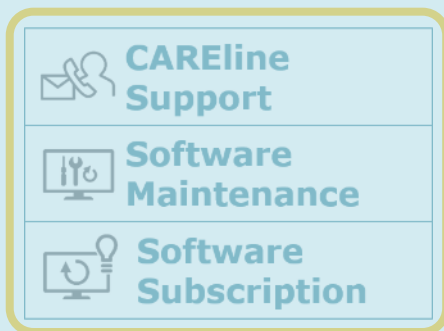
Manage all AVL software globally
Sustain high software quality
Comply with future technology
requirements

Activities

Software support with a dedicated
global team
Software validation incl. customer
applications
Implementation of customer-influenced
product evolutions
Performance reporting
Productivity and utilization monitoring

Impact

10% point utilization increase in 2015
Globally standardized software
platform



AVL CARE™ IS A VALUED SOLUTION



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The Added Value

2/3 of Europe's larger testfields* are covered by AVL CARE™

8/10 leading global automotive OEMs rely on AVL CARE™ services

1600+ testbeds supported by premium AVL CARE™ support globally

* with AVL automation

AVL CARE™ – PARTNERING FOR BEST PERFORMANCE



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The Added Value

The practical benefits of AVL CARE™ are:

- **Safeguarded availability of software functionality**
- **Enhanced data accessibility and availability in customer environment**
- **Future-proof solutions with robust software evolution plans**
- **Reduced total-cost-of-ownership with competitive software support services**

WHAT IS THE “EXTRA” AVL CAN OFFER?

AVL CARE™ >

The Challenge

The AVL Solution

The Added Value

**Experience
in Global
Testing**



**Areas
in which
AVL is unique**

**Combined Powertrain &
Equipment Knowledge**



**Software evolution
programs for future
requirements**





AVL CARE™
RELYING ON GLOBAL COMPETENCES

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