



# APPLICATION SERVICES

Doing the right things right

AVL List GmbH

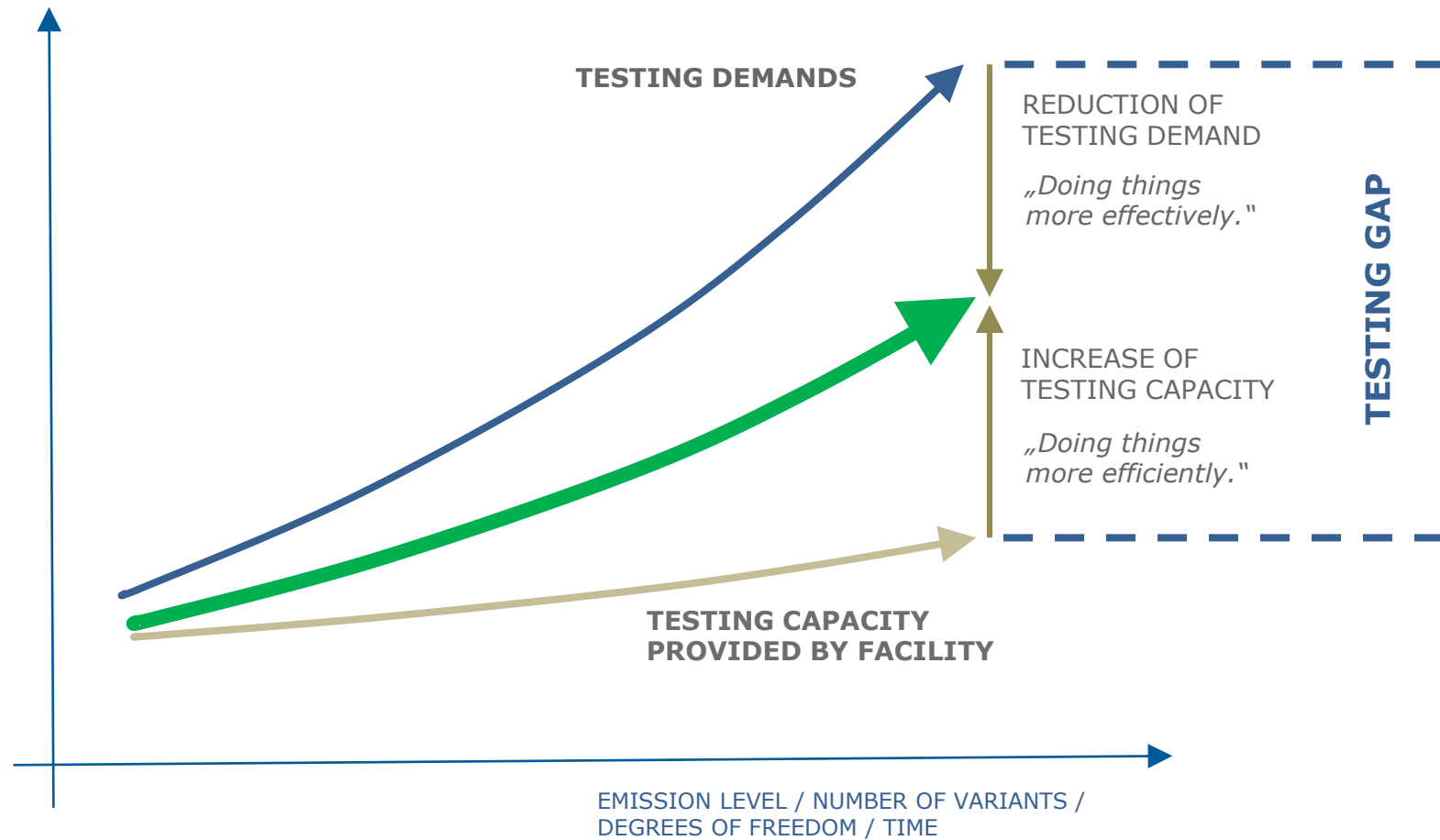
Public

# CUSTOMER CHALLENGES



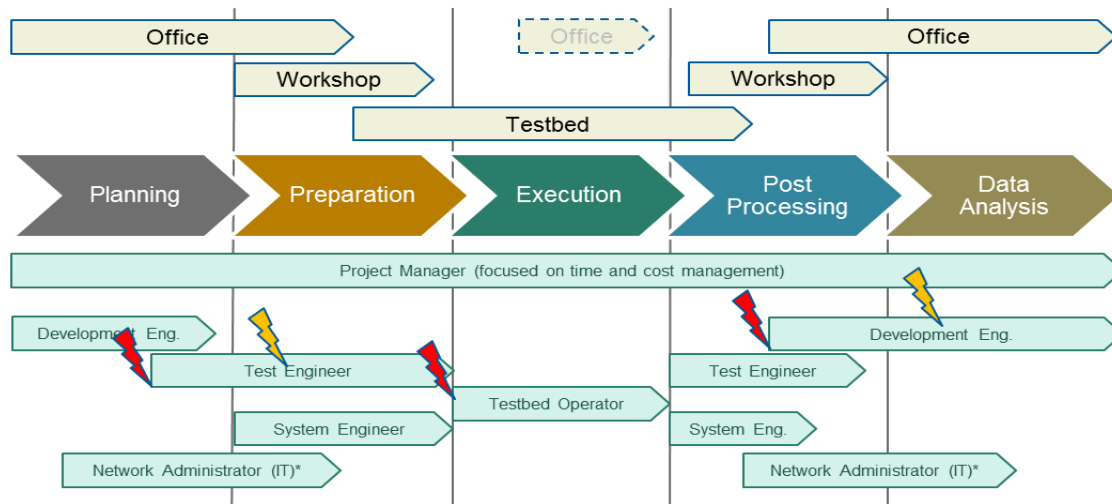
WITH  
**APPLICATION SERVICES**  
CHALLENGES CAN BE HANDLED  
BY  
DOING LESS MORE INTELLIGENTLY



# THE TESTING GAP



**DOING LESS MORE INTELLIGENTLY.**

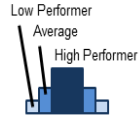
# TESTING GAPS IN THE DEVELOPMENT PROCESS



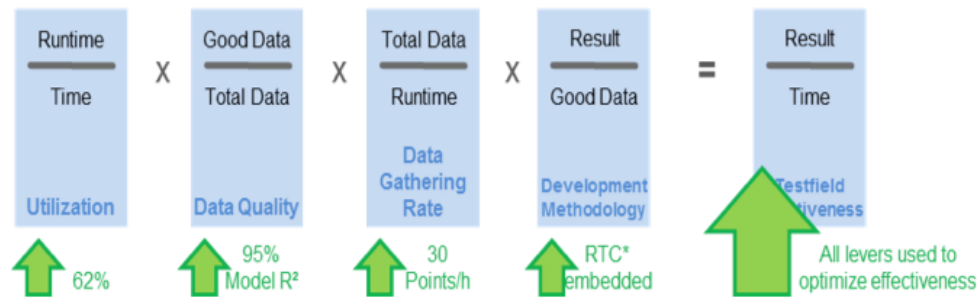
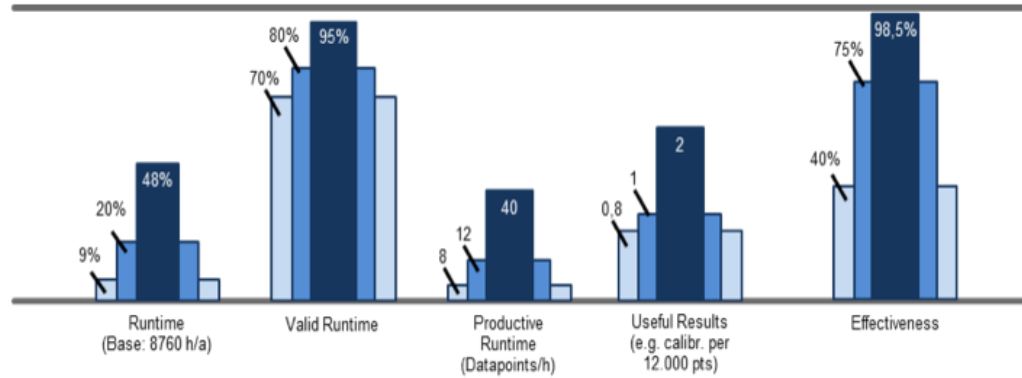
 Exemplary critical interfaces in the process  
 Gaps in implementation and evaluation

- Application Services help to tone down or even eliminate these gaps
- AVL can provide a „long-term expert“ to support and/or improve the whole process
- Or assist punctually (short-term) in specific tasks to find a good solution
- Always in cooperation with the customer

# REDUCED TESTING GAPS – HIGHER EFFICIENCY



## EXAMPLE:



### Runtime:

- System is running (engine turning) – one shift 5 day/week up to 24h for 365 days

### Valid Runtime:

- Engine/UUT is tested, measurements are done – no warm-up / idle / cold run ...

### Productive runtime:

- How many data points per hour are measured

### Useful results:











- How many of the measured data can be used for the testing result / evaluation / development

# CONCRETE OPTIONS FOR IMPROVEMENTS BY AVL

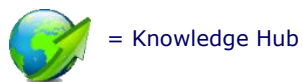
## STAGES OF IMPROVEMENTS:



## AREAS FOR IMPROVEMENTS:

<b>Cost- and time-saving</b> with application of intelligent methodologies	 
<b>Increased testing output</b> due to high degree of automation	
<b>Sound development decisions</b> based on high quality test information	
<b>Mastering the development complexity</b> through know-how transfer and standardization	 
<b>Effective integration of new methods and tools</b> into the customer specific applications & processes	
<b>Optimization within the organization</b> regarding workflow, qualification and interfaces	  

# GLOBAL FOOTPRINT OF AVL APPLICATION SERVICES



1	AS for testbeds (PO automation, stationary, dynamic testing)
2	AS for model based calibration / Cameo (Doe, automation with Cameo)
3	AS for powertrain testbeds (gearbox, powertrain testing)
4	AS for hybrid testing / electrification (BTS/E-Motor / InMotion)
5	AS for productive testing / optimized testbed set-up (increasing testing output / efficiency / new methodologies in testing)
6	AS for test field standards (test field harmonization / intelligent data handling / standardized workflows)
7	AS for Chassis Dyno with Cameo, PO Vehicle (automation, methodology)
8	AS for Emission / iGem (automation, customer specific adaptation)
9	AS for indicating post processing with Concerto (system adaptation, macros)
10	Others (state type)



# THE AVL CUSTOMER SERVICES PORTFOLIO

EXPERIENCE THE ADDED VALUE.



## FIX

Hotline Support  
Hardware Repair  
Spare Parts Management



## MAINTAIN

Equipment Calibration  
Hardware Maintenance  
Software Maintenance  
Device Overhaul

## INTEGRATED RESIDENT SERVICES



Make or buy

## APPLICATION SERVICES



Doing the right things right

## AVL CARE™



Connecting with Customer Objectives



## USE

Training  
Start-up & Operation Support  
Testbed Operations



## OPTIMIZE

CAREline Support  
Software Subscription  
Application Support

SERVICE MODULES

SERVICE SOLUTIONS

## Application Services

- Improving the overall efficiency by doing the right things right

## Contact

- customer.services@avl.com or your next AVL customer service offer



**EXPERIENCE THE ADDED VALUE.**

**CUSTOMERS OBJECTIVES ARE OUR MISSION**

[customer.services@avl.com](mailto:customer.services@avl.com)