

Lab Management Challenges – How to Set Targets in Dynamic Environments?

PDIM 29th November 2018

Wilhelm Graupner, Director Sales & Marketing
Antonio Ciriello, Managing Director AVL Northern Europe
Richard Osborne, Chief Engineer Development Productivity
Kristian Düring, Project Manager Testfield Efficiency



AVL Northern Europe

What are the critical challenges today?

Typical Productivity Improvement Demands

“Product line may include conventional ICE to full electric and every (hybrid) combination in between”

“Testing has to cover integration of and individual components of multiple propulsion and energy sources”

“I have no clear idea what we will have to test”

“How do I protect for this uncertainty”

“How do I maintain/improve testing productivity”

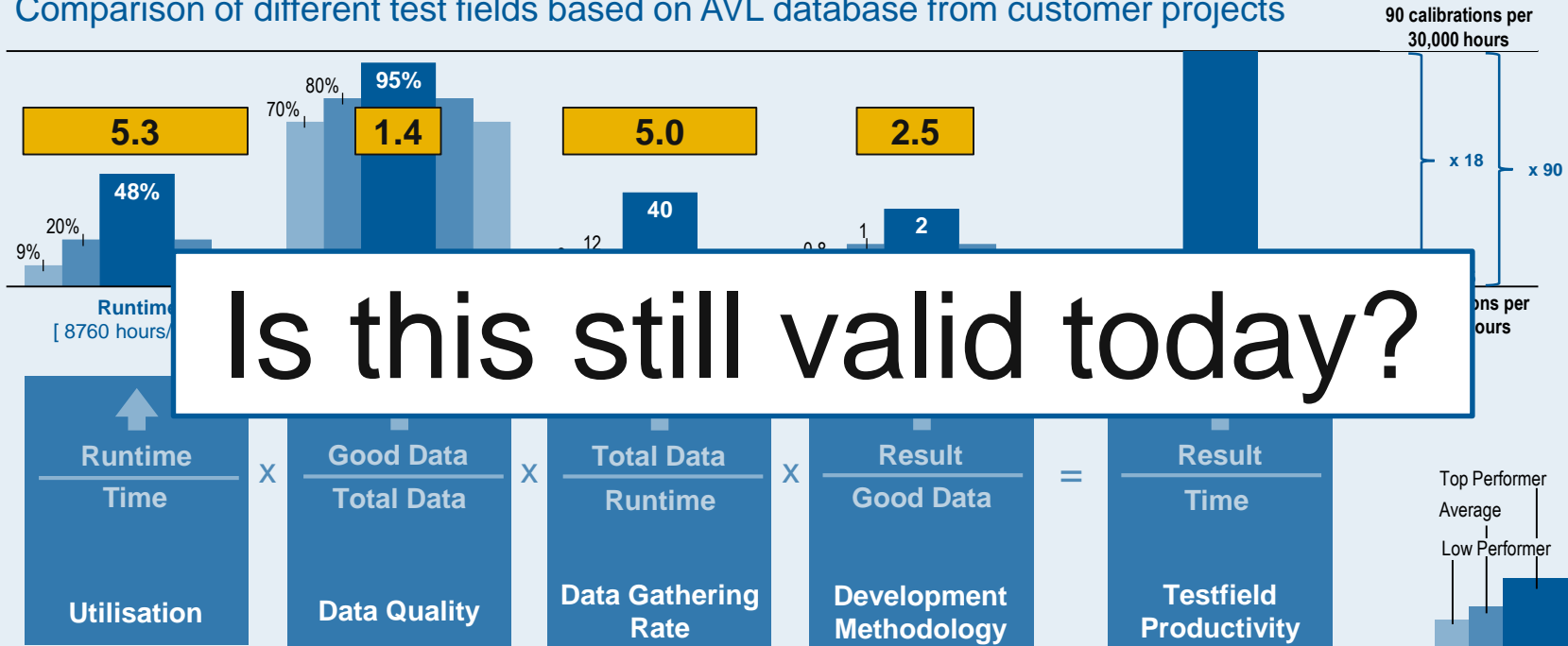
“How do I maintain/improve data quality”

Customers come to AVL for advice

How to Quantify Testing Productivity in 2013

Empirical assessment of 4 Levers

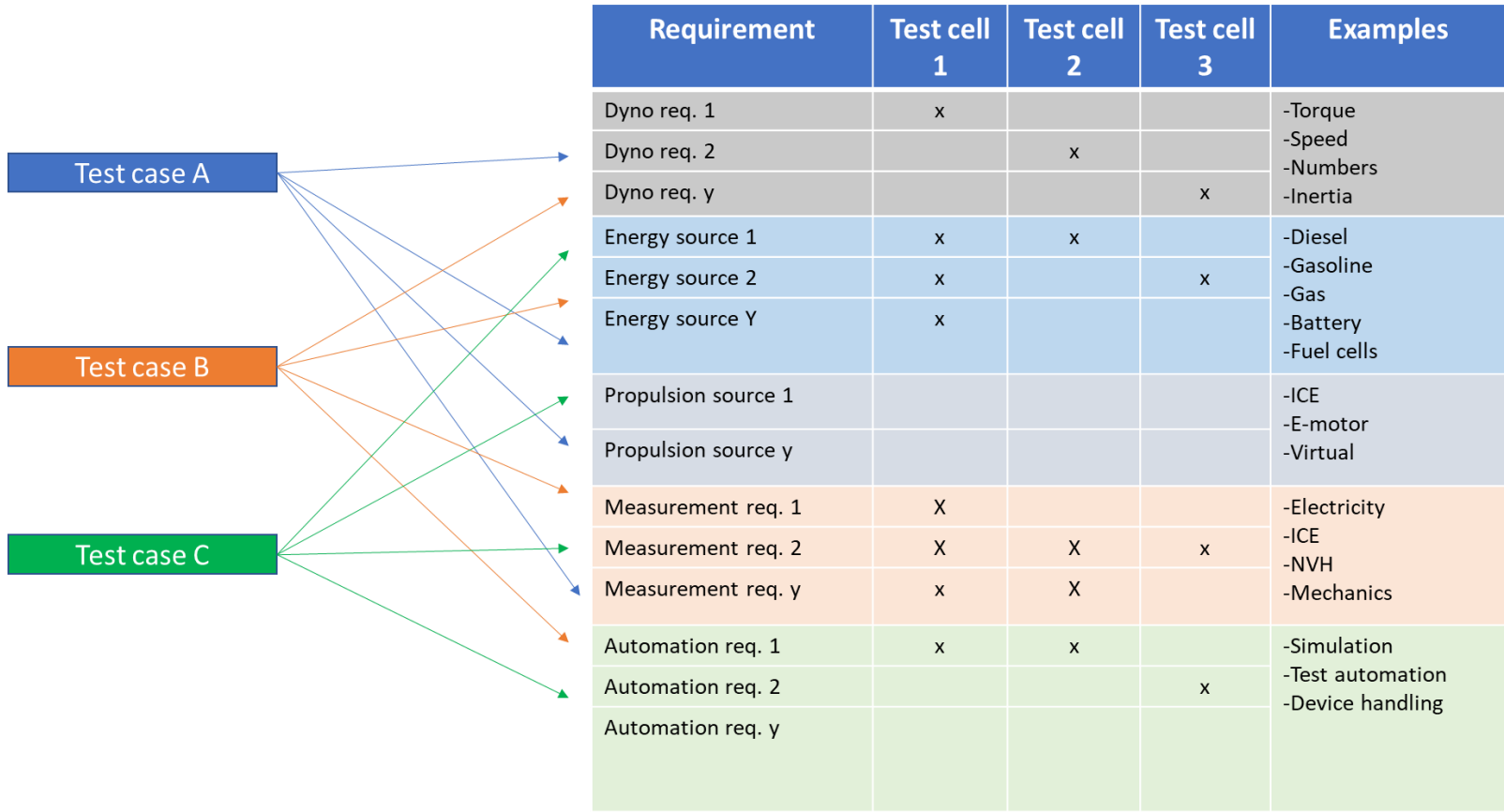
Comparison of different test fields based on AVL database from customer projects



What are the key KPIs and targets to drive the operational expectation in this new dynamic situation?

What would be the best way to measure productivity amid this change?

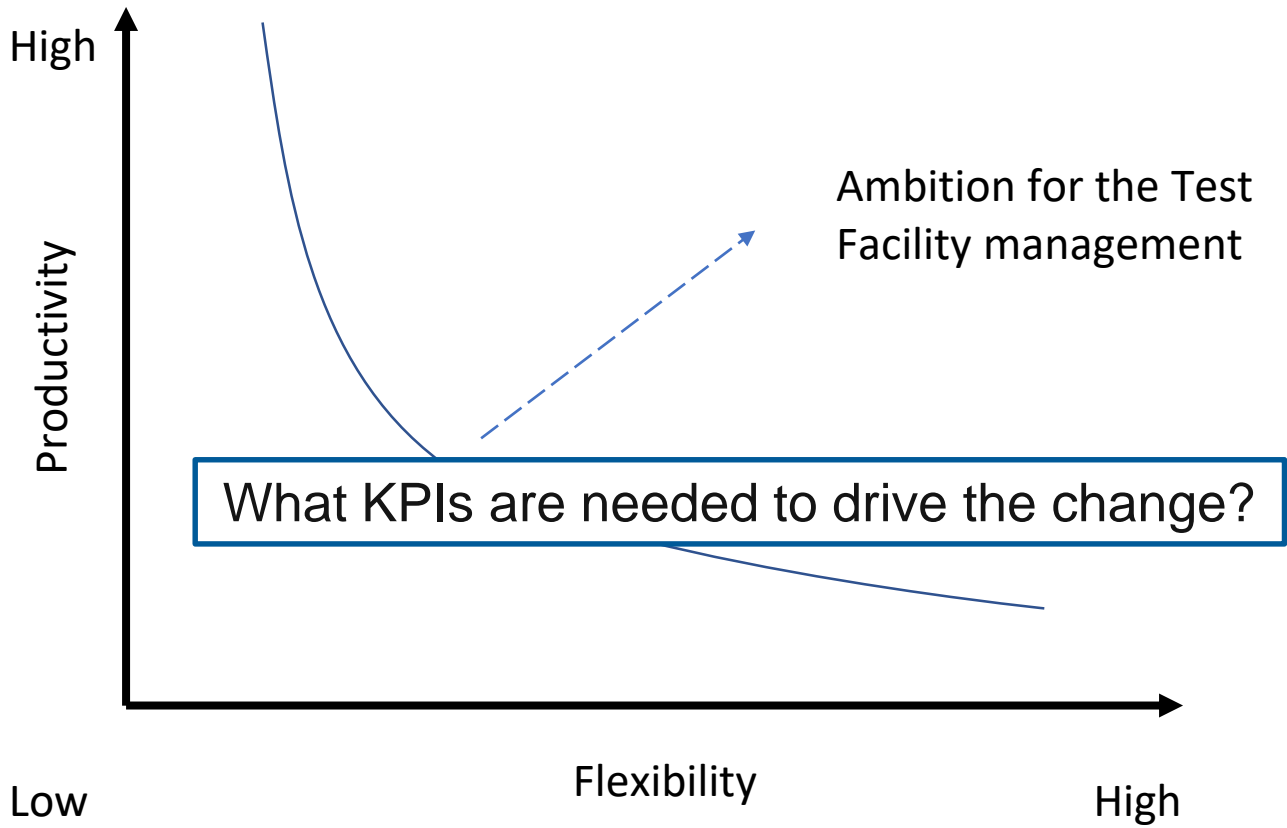
Capability Matrix – Is Fulfilment of this now the primary KPI?



Key Considerations for the future 'flexible' test environment

- **What's on the pallet?**
- **What's on the test cell?**
- **What devices are portable?**

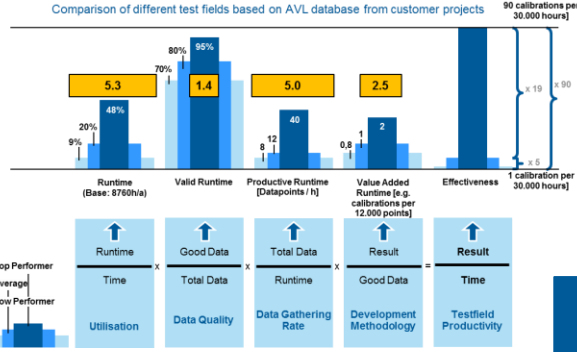
Flexibility versus Productivity Historic Relationship – Can this be Challenged?



Key Considerations for KPIs to drive productivity in 'flexible' test environment

- **Preparation processes for new hardware/software – prep. time?**
- **Fast indication of data quality**
- **Fast integration and quantified confidence of new measurement devices**

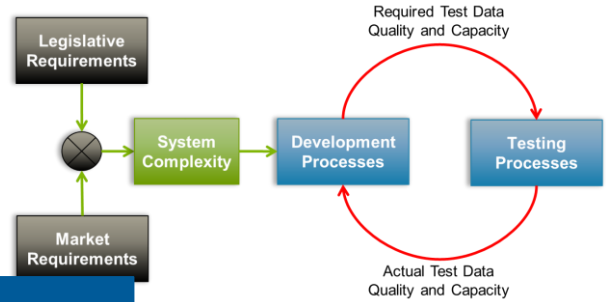
Productivity Improvement - Proven AVL Concepts to Reach Customer-Specific Goals



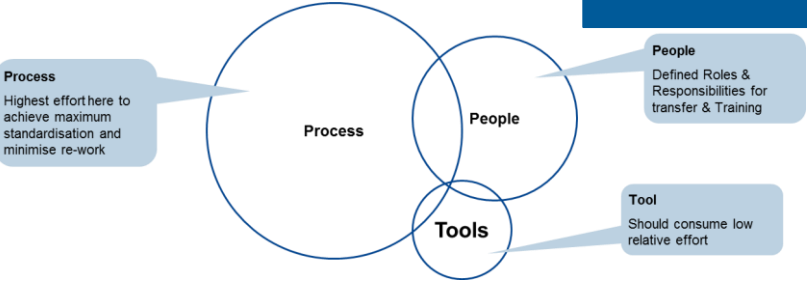
The 4 levers

Productivity Improvement Concepts

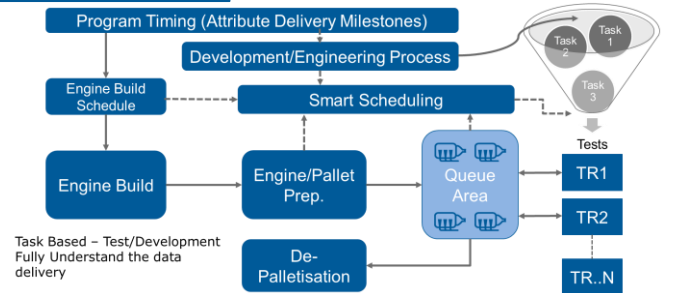
**"We want to double runtime."
"We want to halve the effort."
"We want to triple data production."
"We want perfect data quality."**



Testing & Development Relationships



Organisation & Process



Data Factory Concepts