



ENGINEER  
NEXT

NIDays

The image features a background of diagonal stripes in various shades of blue, green, and orange. The text 'ENGINEER NEXT' is prominently displayed in white, with 'ENGINEER' in a smaller font above 'NEXT'. A yellow graphic element, resembling a stylized 'X' or a folded ribbon, is positioned between the two words. To the left of 'NEXT', the word 'NIDays' is enclosed in a white rectangular box, tilted to match the angle of the main text.



# Standardized Components of Web-based Solutions for Test Planning and Data Management

Dr. Jan Jacob

Werum Software & Systems AG  
BDM Test & Measurement  
[jan.jacob@werum.de](mailto:jan.jacob@werum.de)



Stefan Romainczyk

National Instruments  
R&D Manager for TDM  
[stefan.romainczyk@ni.com](mailto:stefan.romainczyk@ni.com)



# Werum Software & Systems

- Based in Lueneburg, Germany
- Privately held stock corporation
- Capital stock of € 1,100,000
- 120+ employees
- Certified according to DIN EN ISO 9001



# The Process of Testing



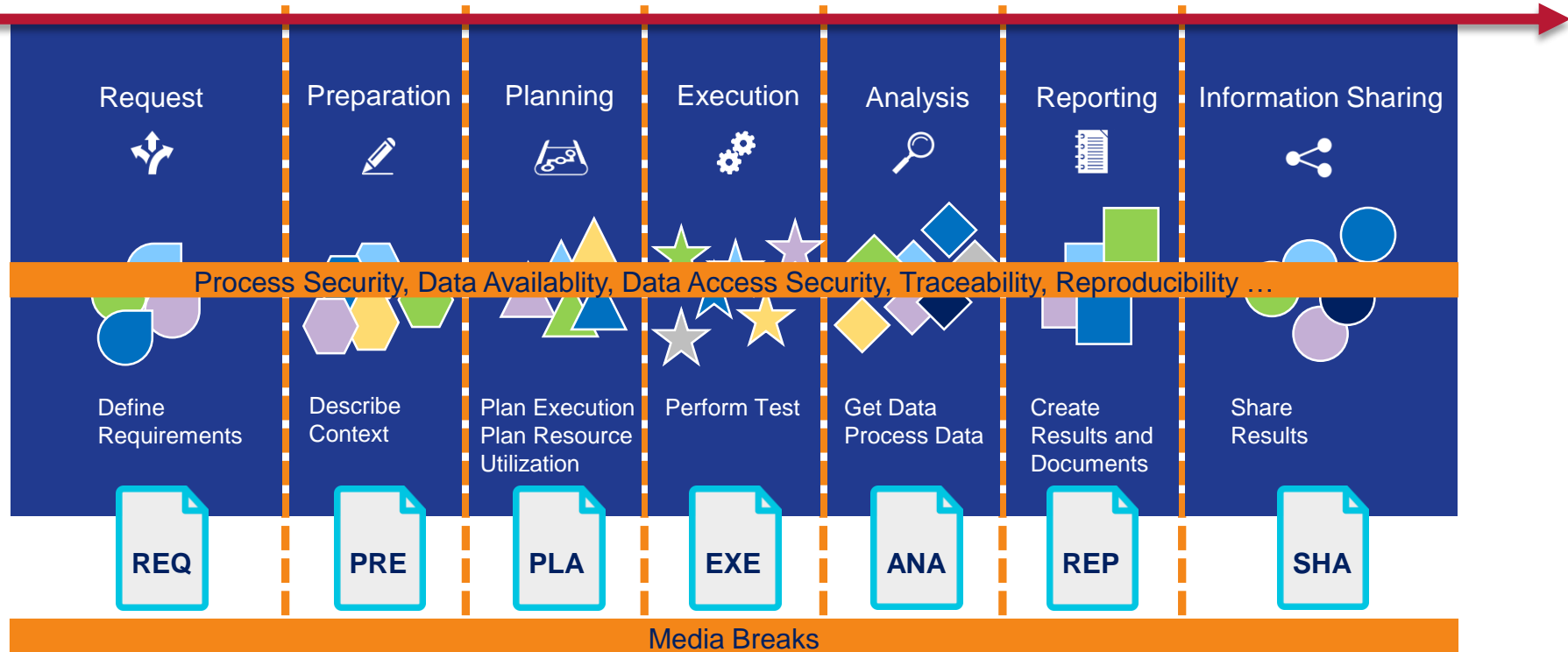
# Challenge – Different Tools



# Challenge – Different Tools



# More Challenges...

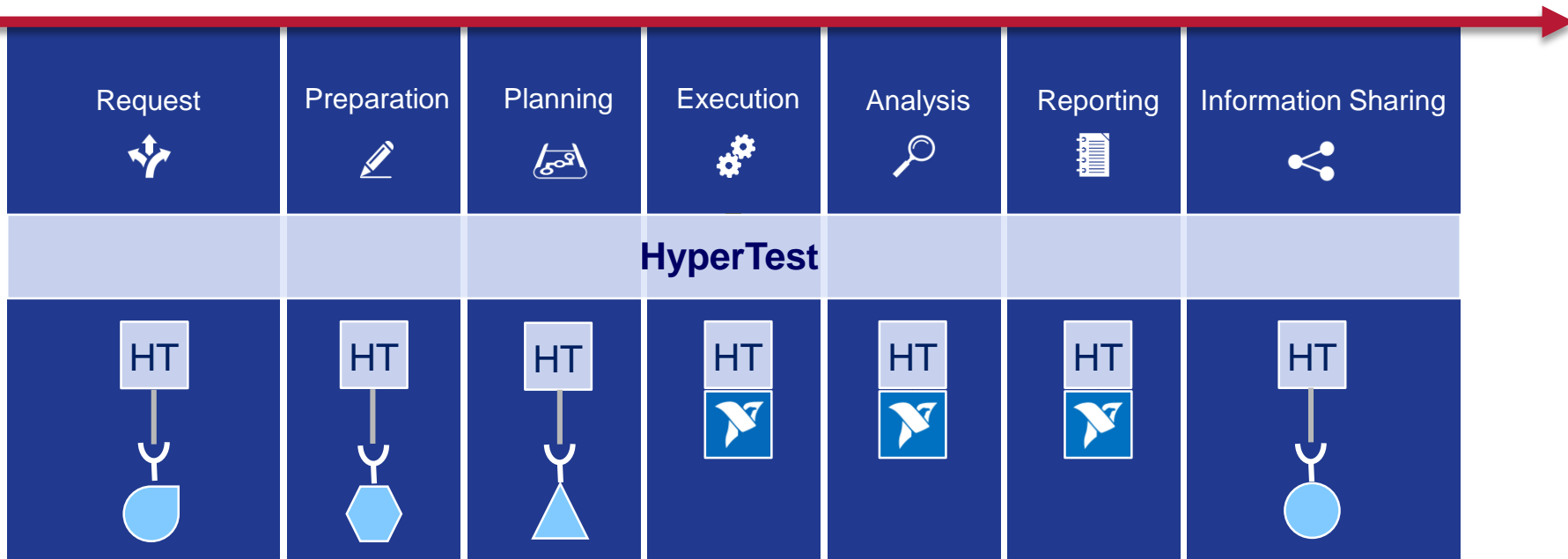




# Strategy: Monolithic System

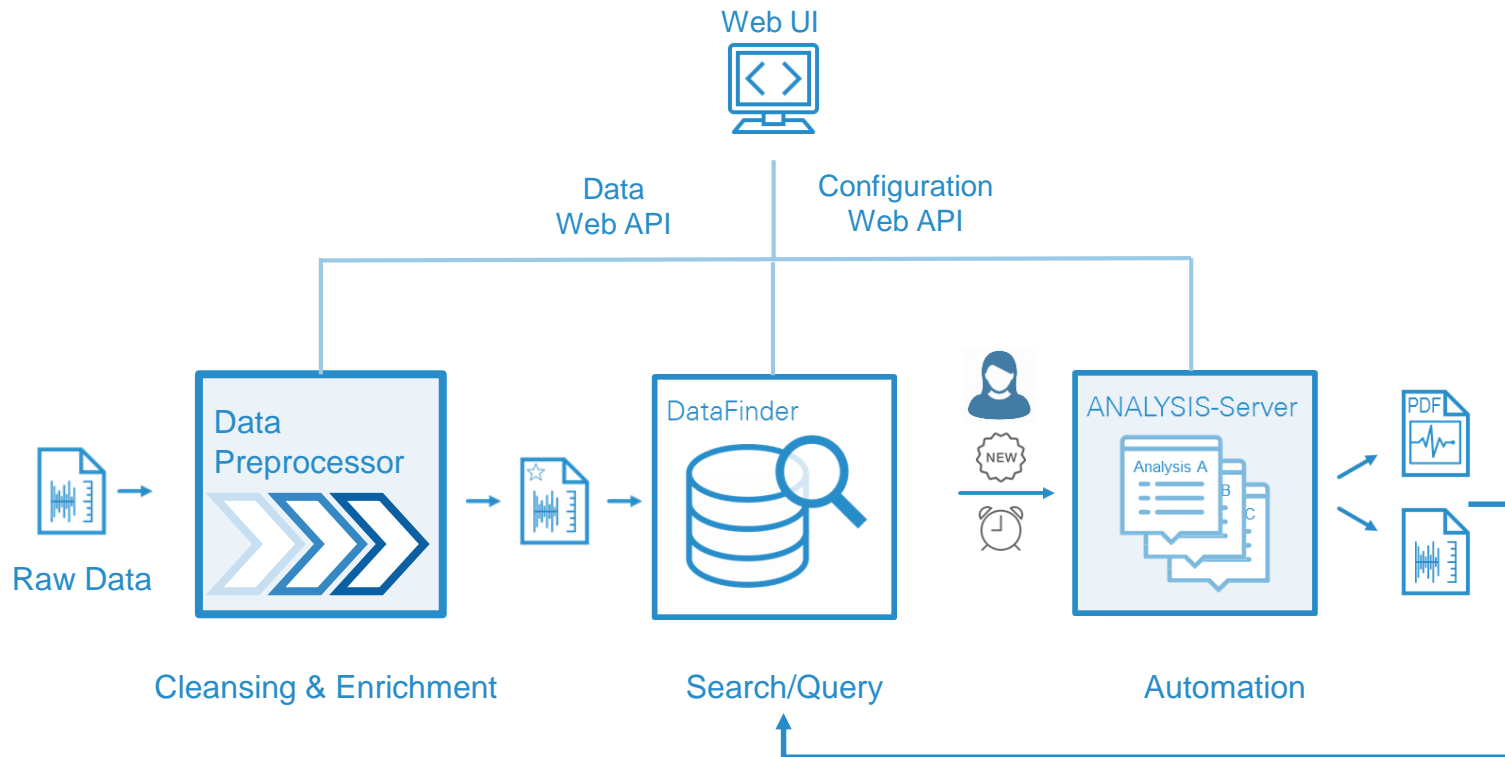


# Strategy: Modular Components



- Common backbone with modular and configurable components
- Integration of third-party components into the solution
- Connection to and abstraction of external systems

# Data Management Software Suite



# AnalysisServer WebServer API

The Analysis Server provides an environment so that procedures defined in DIAdem can be executed on a server.

## AnalysisServers

[Show/Hide](#) | [List Operations](#) | [Expand Operations](#)

## AnalysisProcedures

[Show/Hide](#) | [List Operations](#) | [Expand Operations](#)

GET	/analysisisservers/{as_uuid}/analysisprocedures	Lists all available Analysis Procedures
-----	---	---

POST	/analysisisservers/{as_uuid}/analysisprocedures	Registers a new Analysis Procedure. An Analysis Procedure is represented by a package which contains all relevant runtime files, including: the VBS script that is executed, report templates and all other additional files.
------	---	---

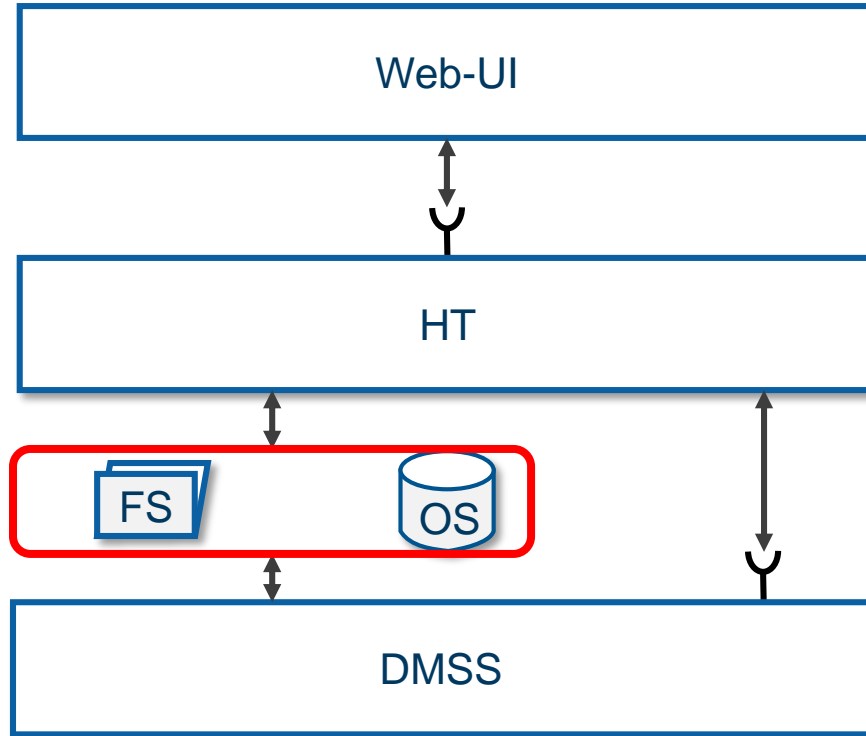
DELETE	/analysisisservers/{as_uuid}/analysisprocedures/{ap_uuid}	Deletes an Analysis Procedure
--------	---	-------------------------------

GET	/analysisisservers/{as_uuid}/analysisprocedures/{ap_uuid}	Gets Analysis Procedure information
-----	---	-------------------------------------

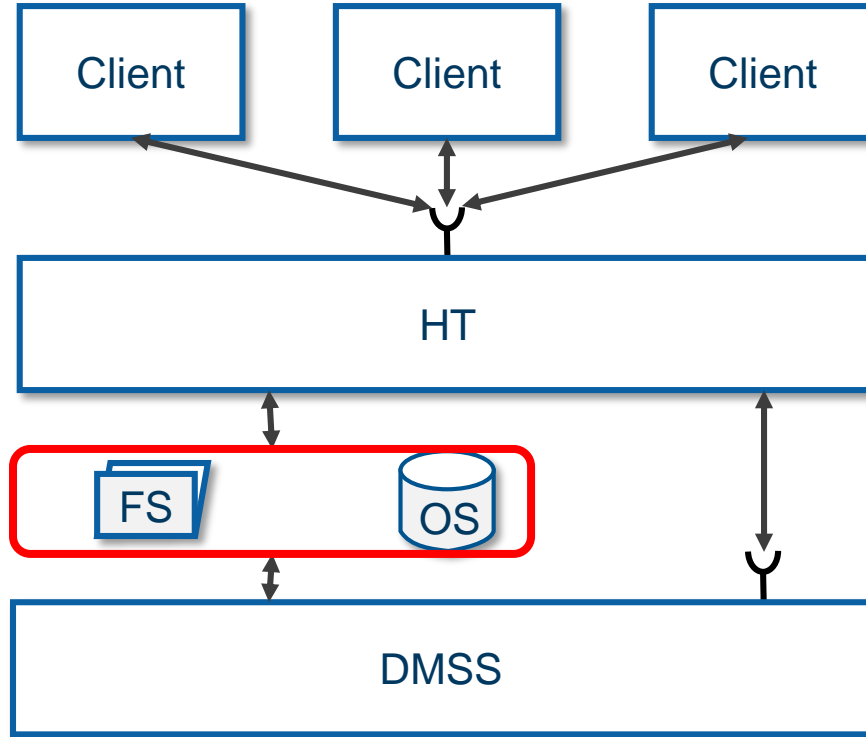
GET	/analysisisservers/{as_uuid}/analysisprocedures/{ap_uuid}/download	Returns the specified Analysis Procedure Package as octet-stream
-----	--	--

POST	/analysisisservers/{as_uuid}/analysisprocedures/{ap_uuid}/update	Updates the existing Analysis Procedure.
------	--	--

# Modular Concept

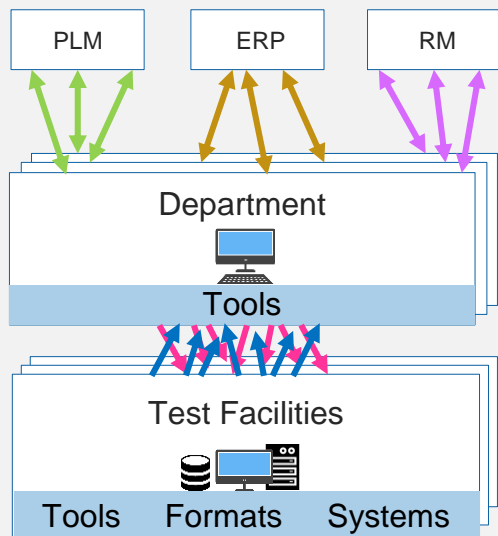


# Modular Concept



# IT Infrastructure Today

## Company Organization

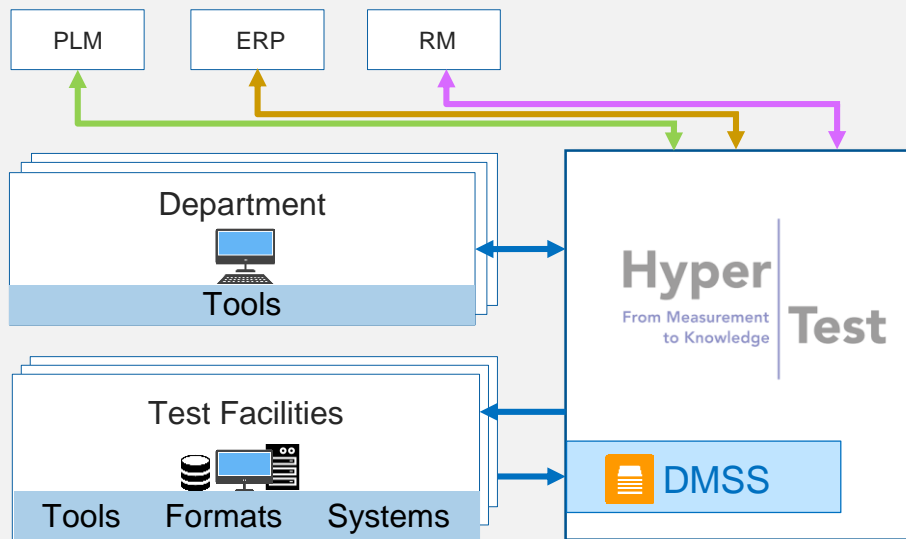


## Data Challenges

- Inhomogeneous systems
- Incomplete processes
- Missing traceability
- Lacking reproducibility
- Uncertain process integrity
- Reduced data accessibility
- Low process security
- Long process times
- Tedious manual tasks

# Sources: DMSS + HyperTest

## Company Organization

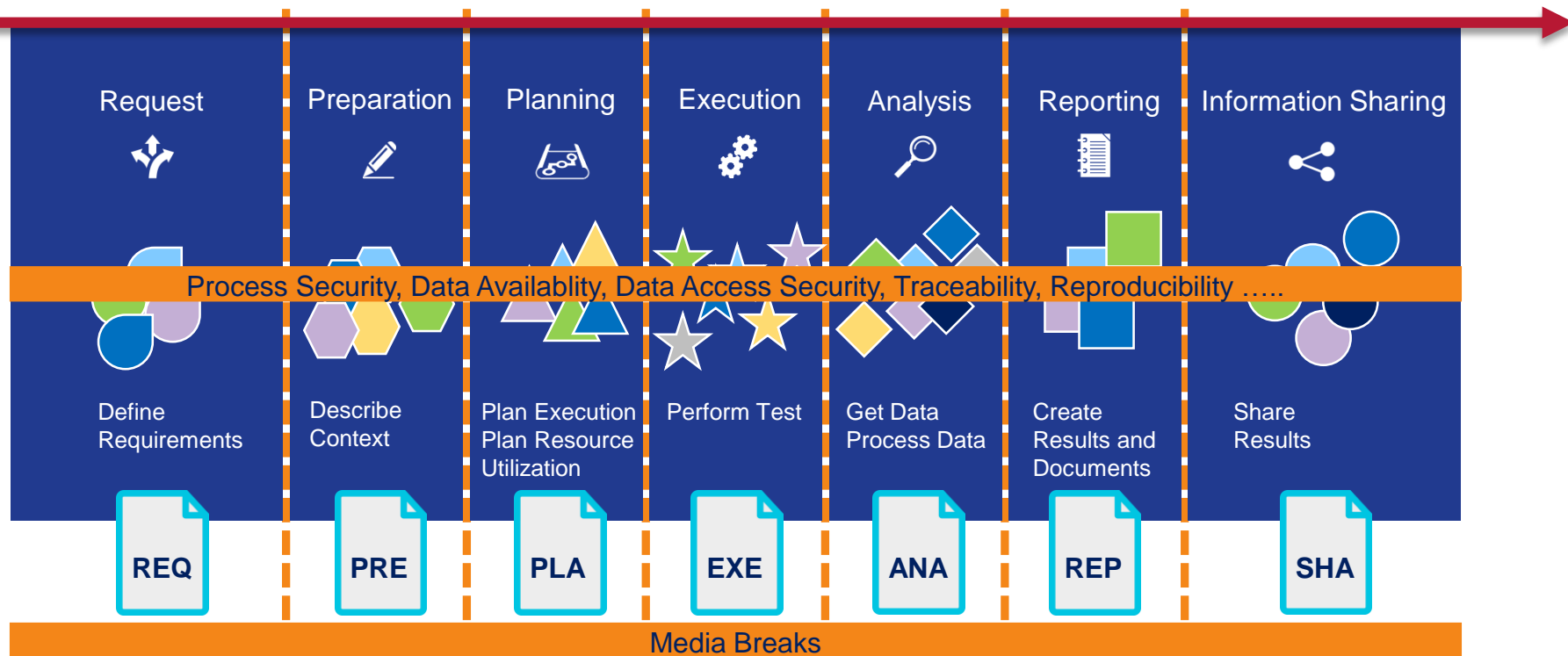


## HyperTest

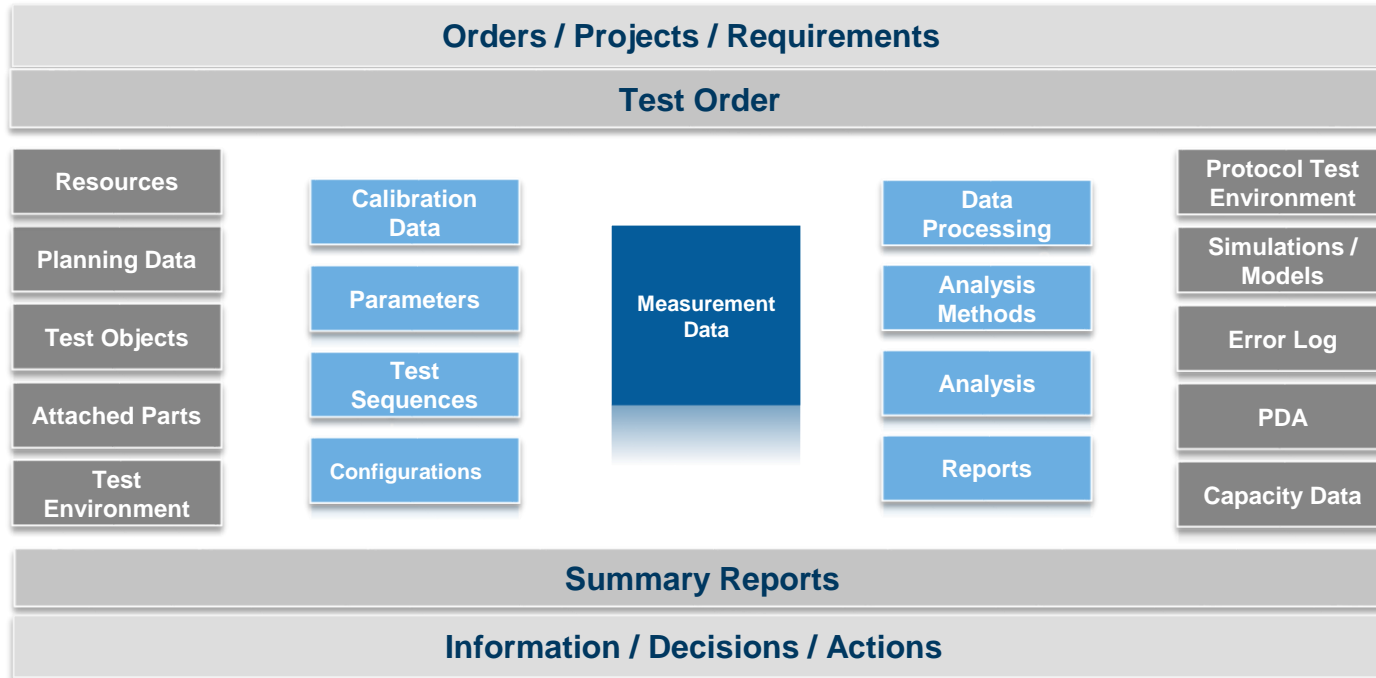
- Integration platform ✓
  - ~~Inhomogeneous system~~
  - ~~Incomplete process~~
  - ~~Uncertain process integrity~~
  - ~~Missing traceability~~
  - ~~Lacking reproducibility~~
- Tenancy ✓
  - ~~Reduced data accessibility~~
  - ~~Low process security~~
- Workflow management ✓
  - ~~Long process times~~
  - ~~Tedious manual tasks~~



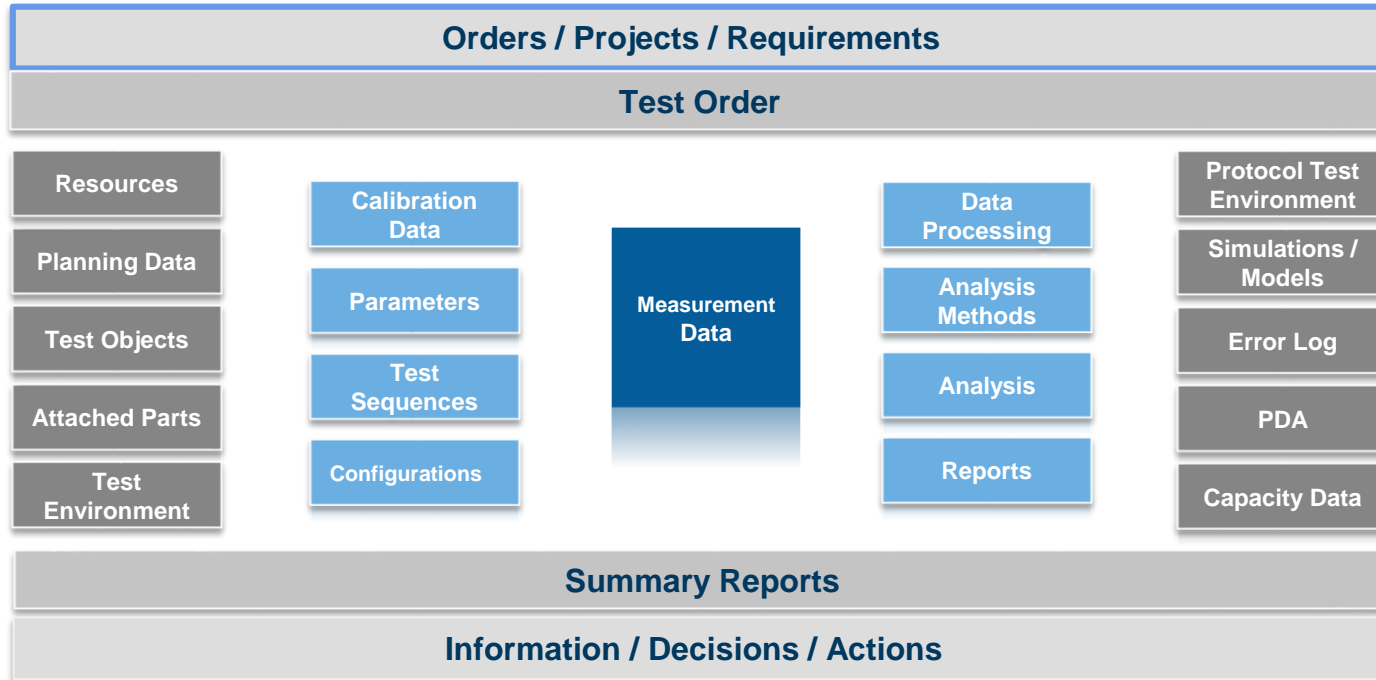
# More Challenges...



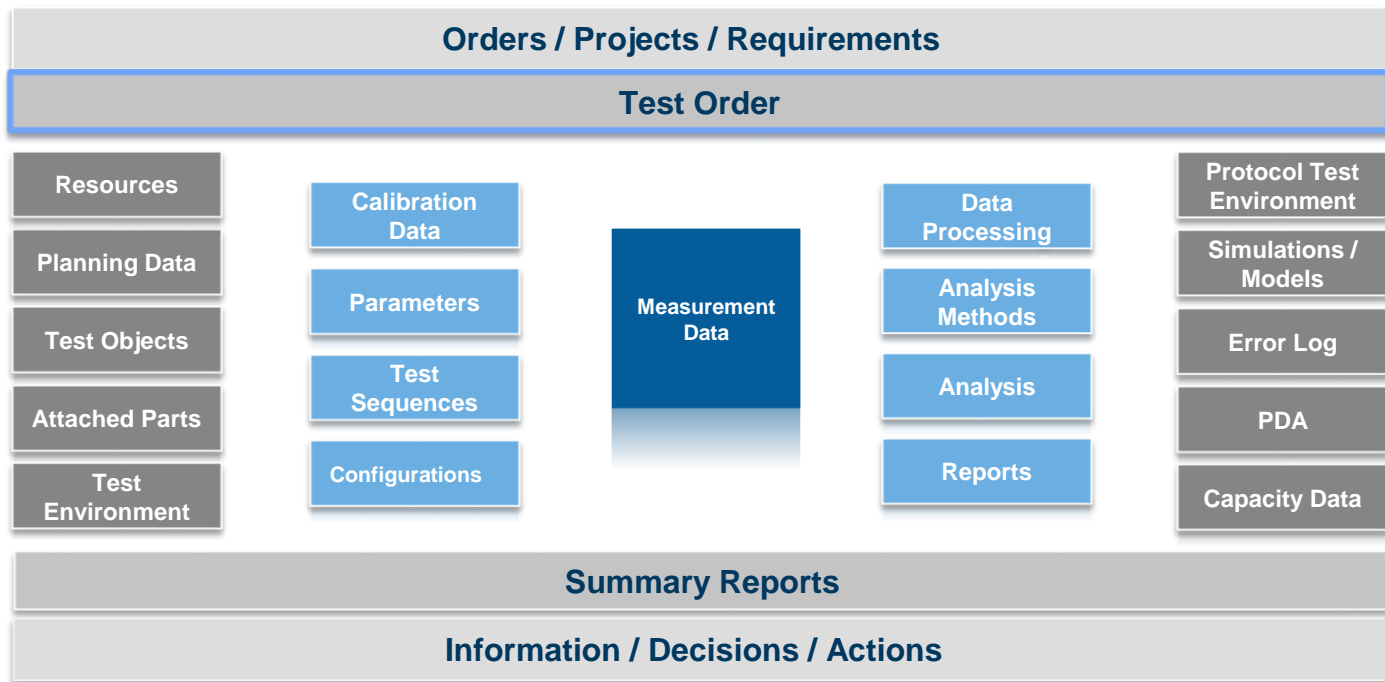
# Content: Process Context



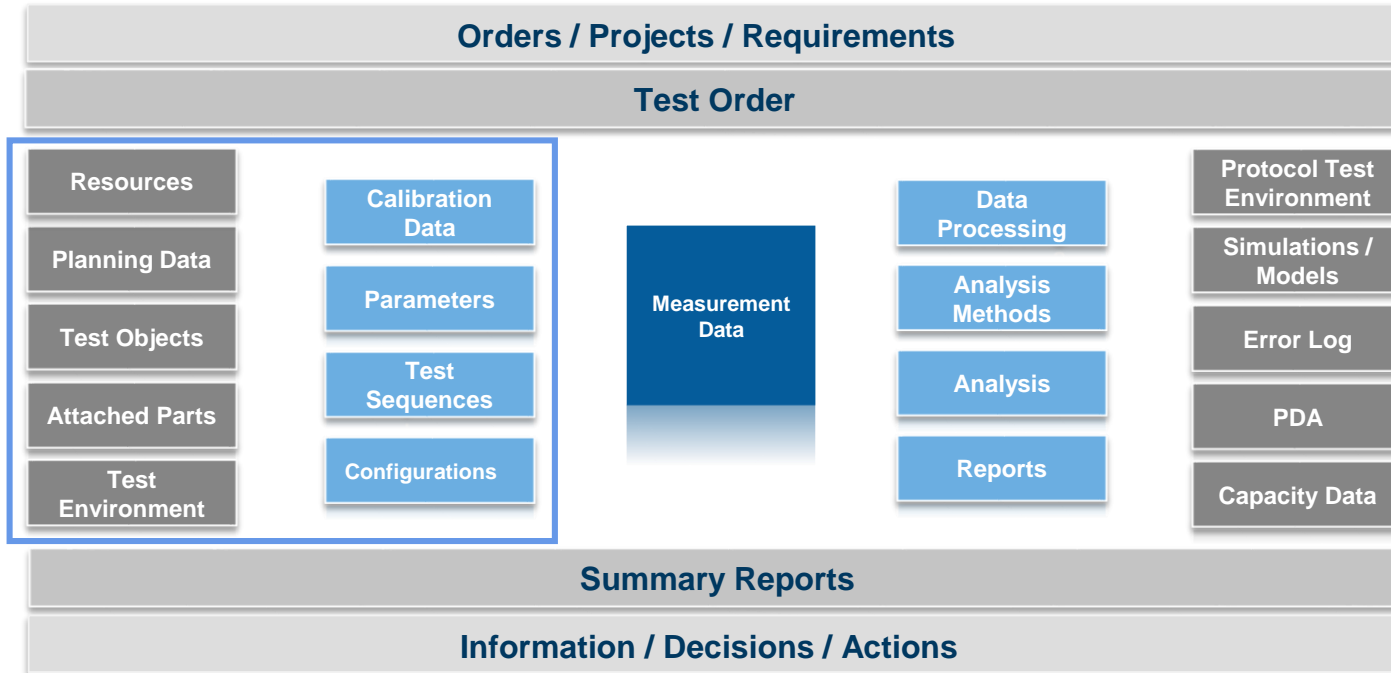
# Content: Process Context



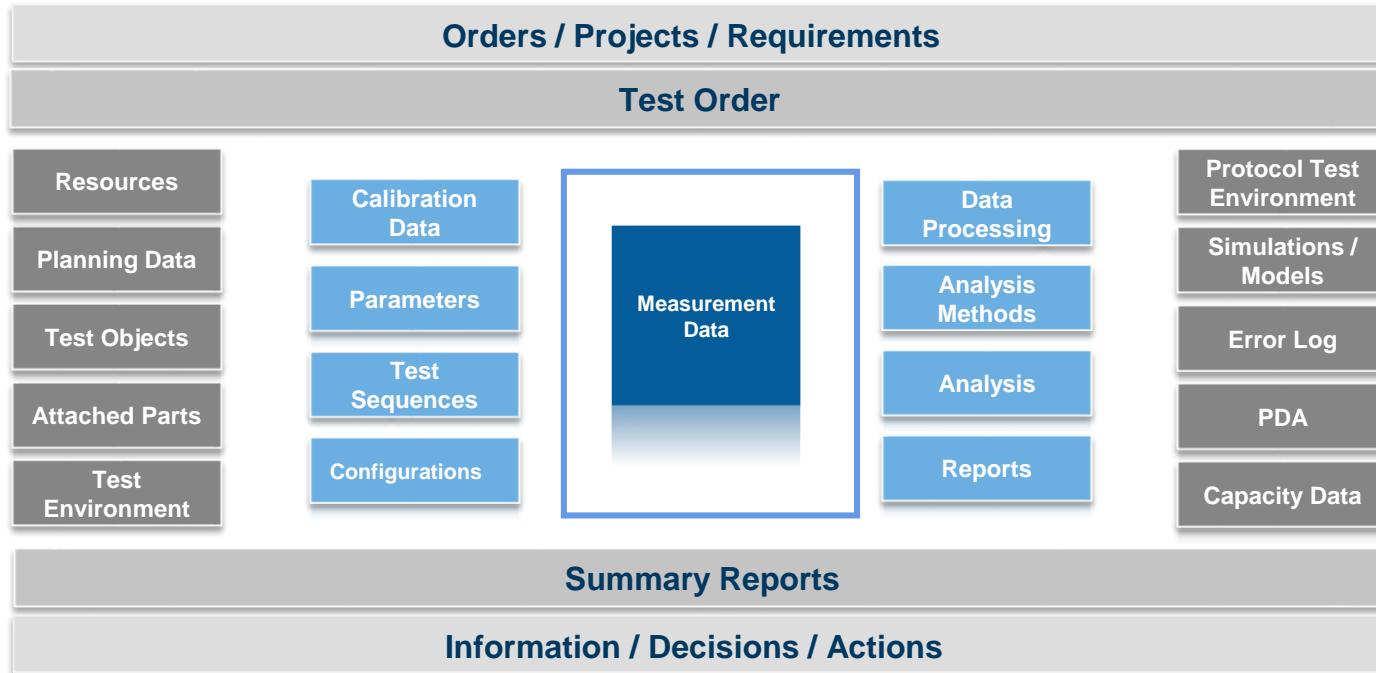
# Content: Process Context



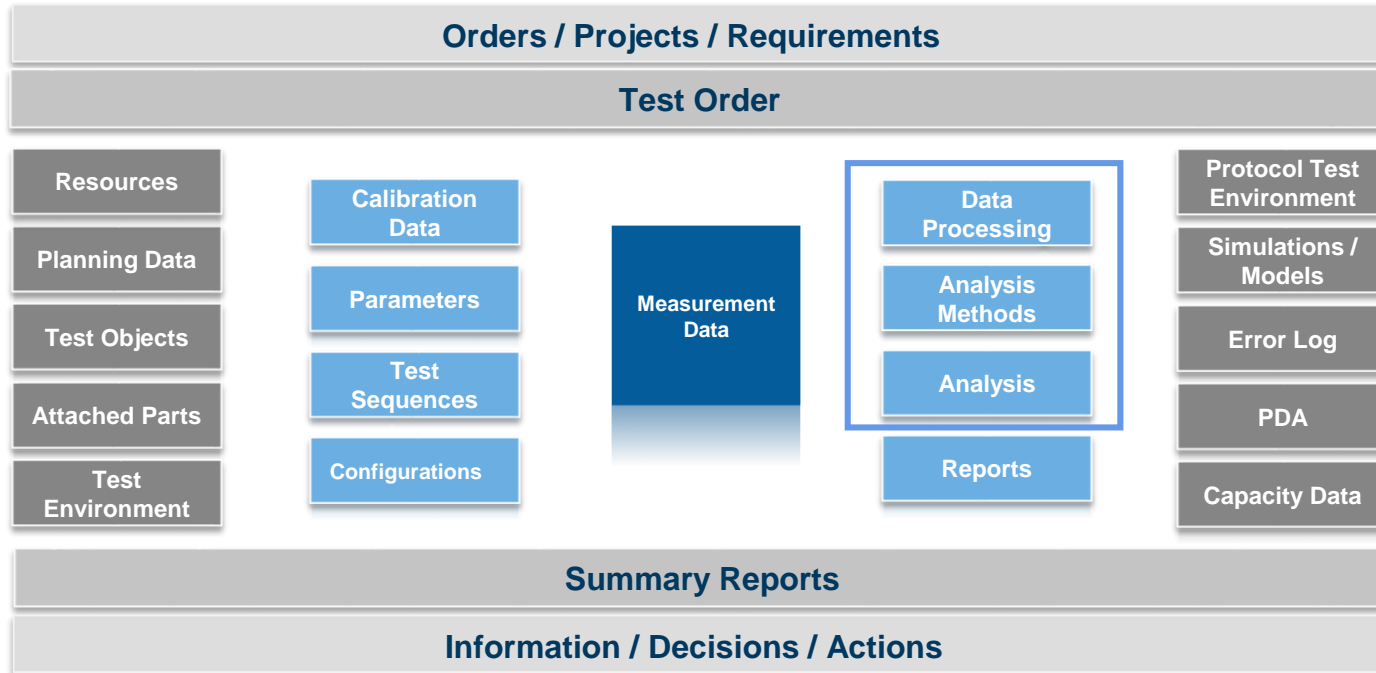
# Content: Process Context



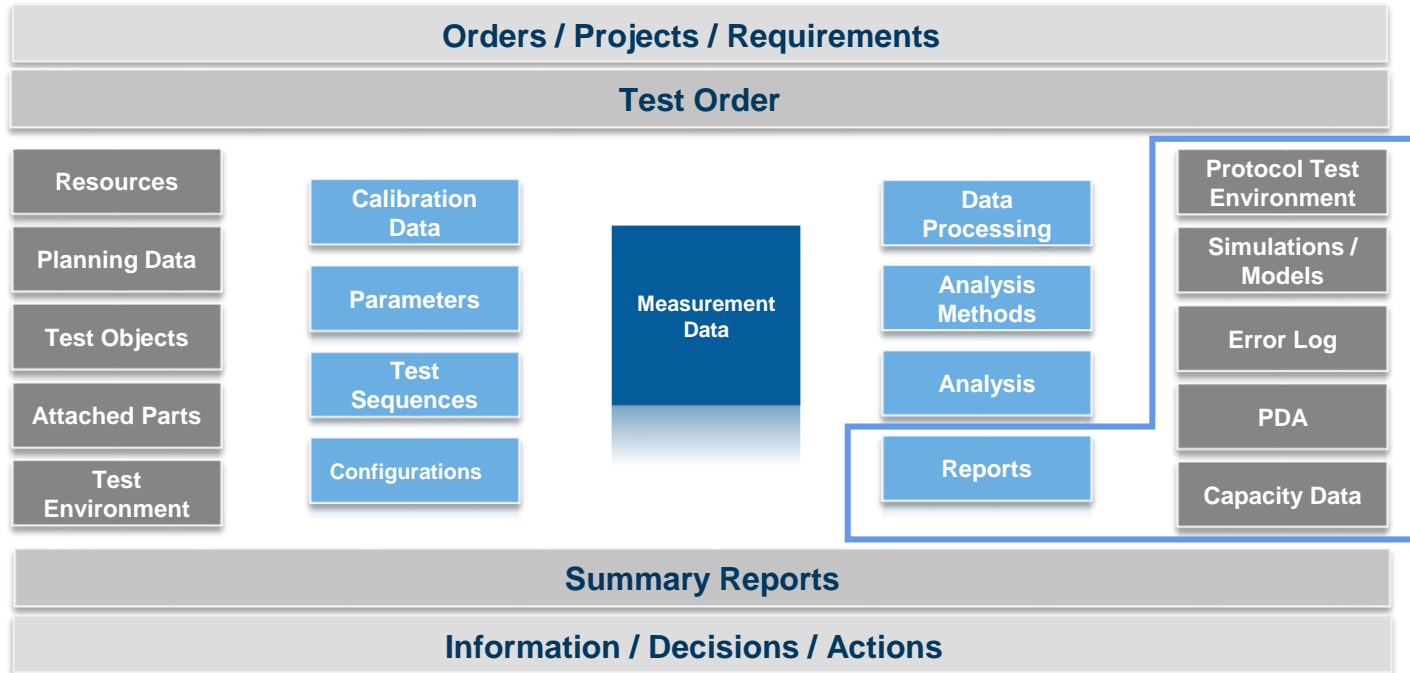
# Content: Process Context



# Content: Process Context

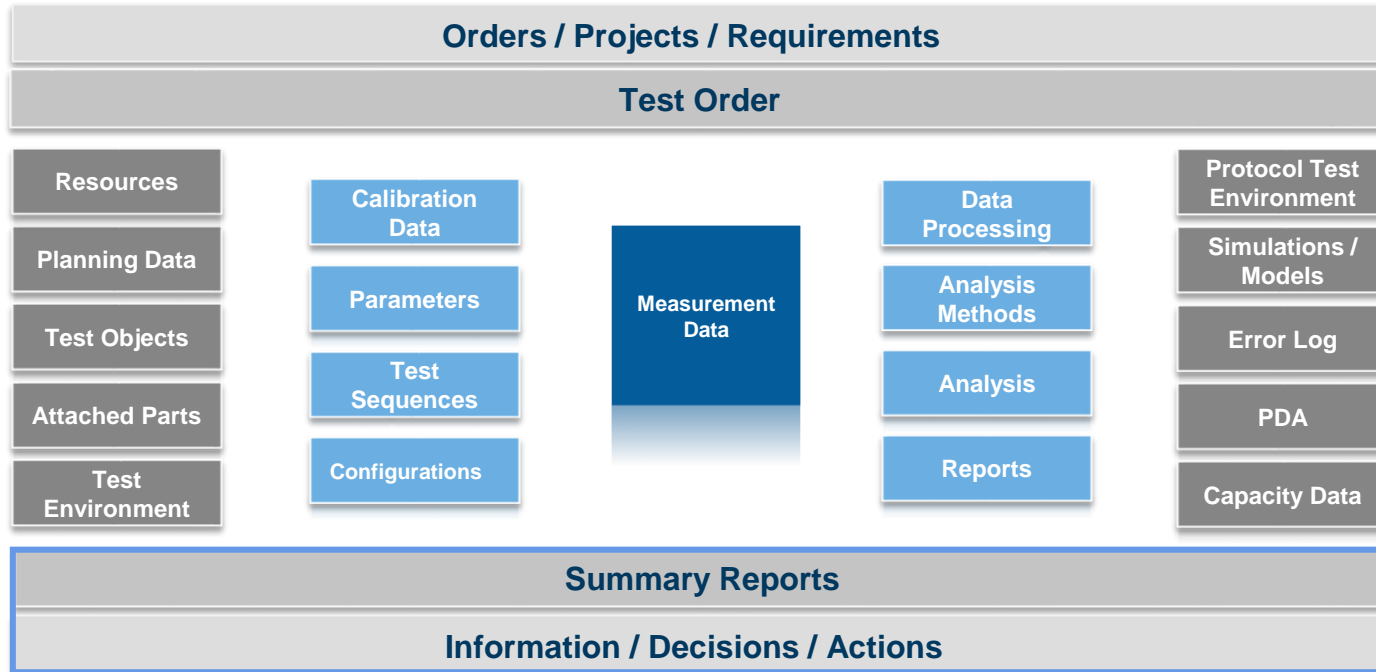


# Content: Process Context

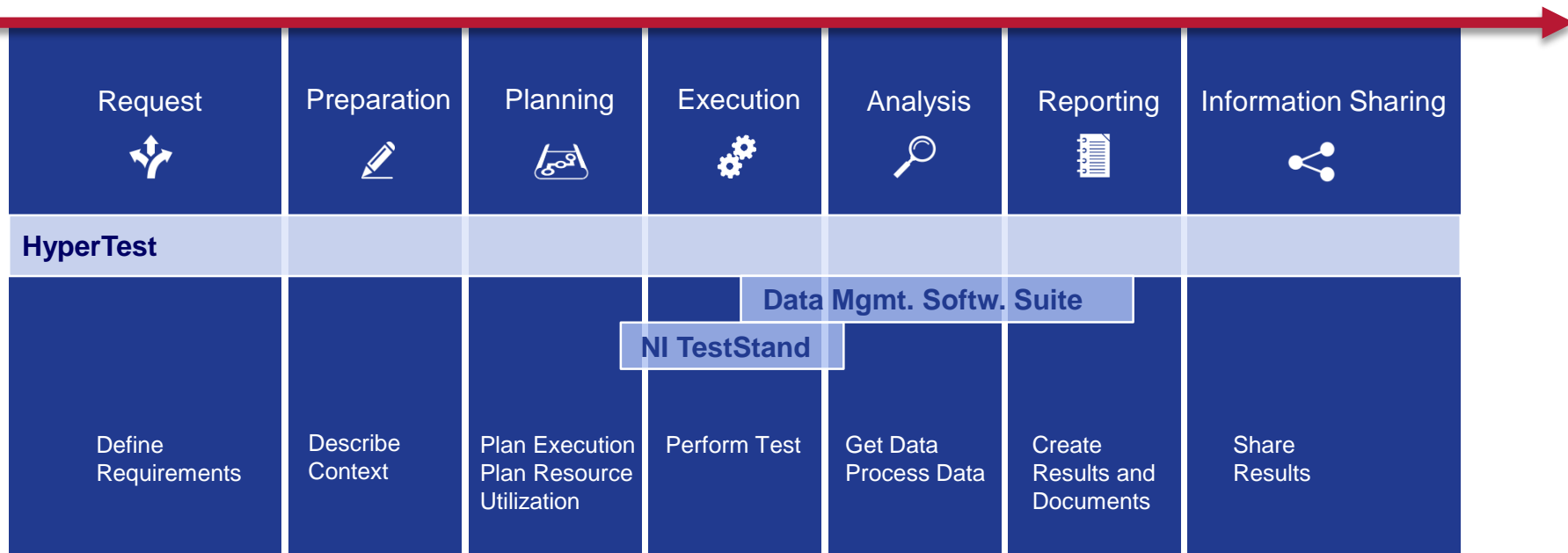




# Content: Process Context



# Strategy: Modular Components



- Modular components with standardized interfaces forming a homogenous system
- HyperTest, Data Management Software Suite and NI Ecosystem work perfectly together forming solutions that meet customers' needs



## Next Steps

Contact us during the coffee break...

NI DMSS: <http://www.ni.com/data-management-software-suite/>

HyperTest: <https://www.werum.de/plattformen/HyperTest.jsp>

## Stay Connected During and After NIDays



[ni.com/niweekcommunity](https://ni.com/niweekcommunity)



[facebook.com/NationalInstruments](https://facebook.com/NationalInstruments)



[twitter.com/niglobal](https://twitter.com/niglobal)



[youtube.com/nationalinstruments](https://youtube.com/nationalinstruments)