

Software &
Testing
Solutions



FLEX-LAB™

A web collaborative framework
for your test cell data



FLEX-LAB™

A web application for test cell data management

The central factor for an efficient test center is the software network infrastructure, and the handling of all data at each step of the process. Through STS's information systems and its connected tools, all projects follow an integrated process. As a first step, the customer specifications and information (e.g. schedule, equipment (engine, ECU etc.) is entered into the database. Then, at each subsequent step (defining the required equipment and test bed, powertrain set-up, programming, testing, analysis of results etc.), new data is added and shared in the same area, automatically, thanks to FLEX-LAB™, the STS solution which collects information from MORPHEE, the automation system installed on each test cell.

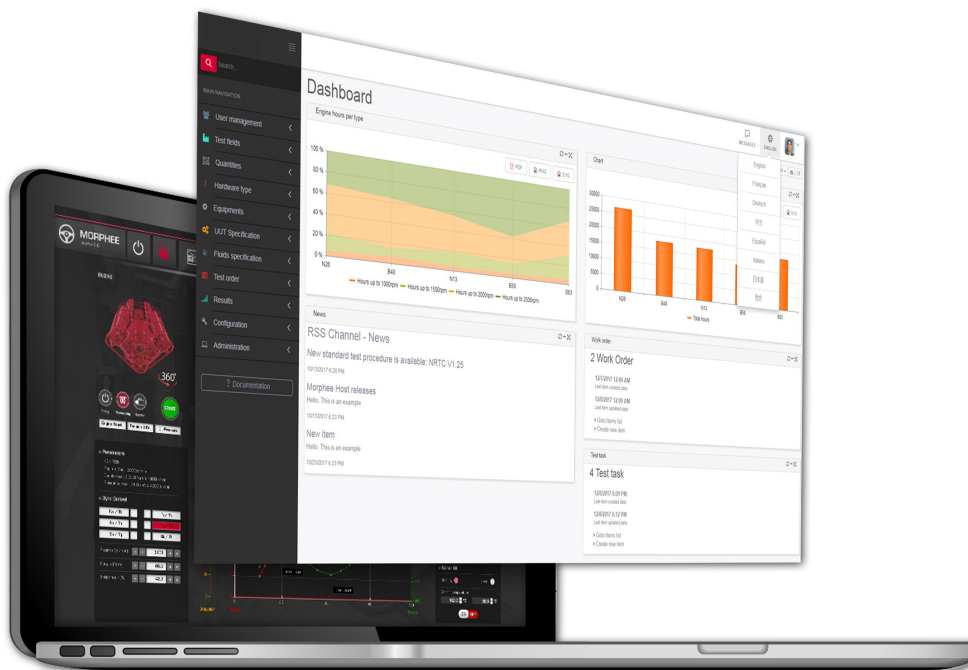
With FLEX-LAB™, boost your test cell management!

THE CHALLENGE:

How can test engineers, maintenance managers, administrators and managers quickly share information? How to improve test cell productivity, improve flexibility in test center management and reduce administration costs? Data management from a test centre or test cell is a major challenge for the workflow.

For example, on the same test cell, different tests are performed, which also involves different configurations and settings of

the equipment. For an entire center, this generates a multitude of data. The test engineer often loses time finding the right test, the right parameters...etc. Similarly, the maintenance manager must be able to be warned quickly and accurately of a problem on a bench, the administrator must be able to distribute and manage information centrally, the manager needs to have immediate access to the information.



THE SOLUTION:

FLEX-LAB™ is a web based technology solution to manage all test cell data. Easy rollout and cross-platform system, it requires only a modern web browser.

FLEX-LAB™ System provides a proven and an open solution for data storage and retrieval, test system utilization tracking, and live monitoring of any system through configurable data schema and dashboards, also, data from every test cell is stored in one central location.

With the FLEX-LAB™ system, and from anywhere:

> The test engineer can define preparation tasks, test requests and have quick and secure access through extensive search capabilities to measurement data.

> The administrator manages test cell data from a single location: Norm-name, formula, libraries, unit under test specifications and parameters, testing equipments...

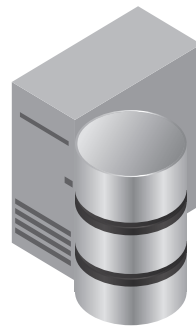
> Support personal can have access to test cell statuses and all logs and data to troubleshoot issues.

> Managers can have access to lab operations status and extract all metrics regarding lab efficiency.

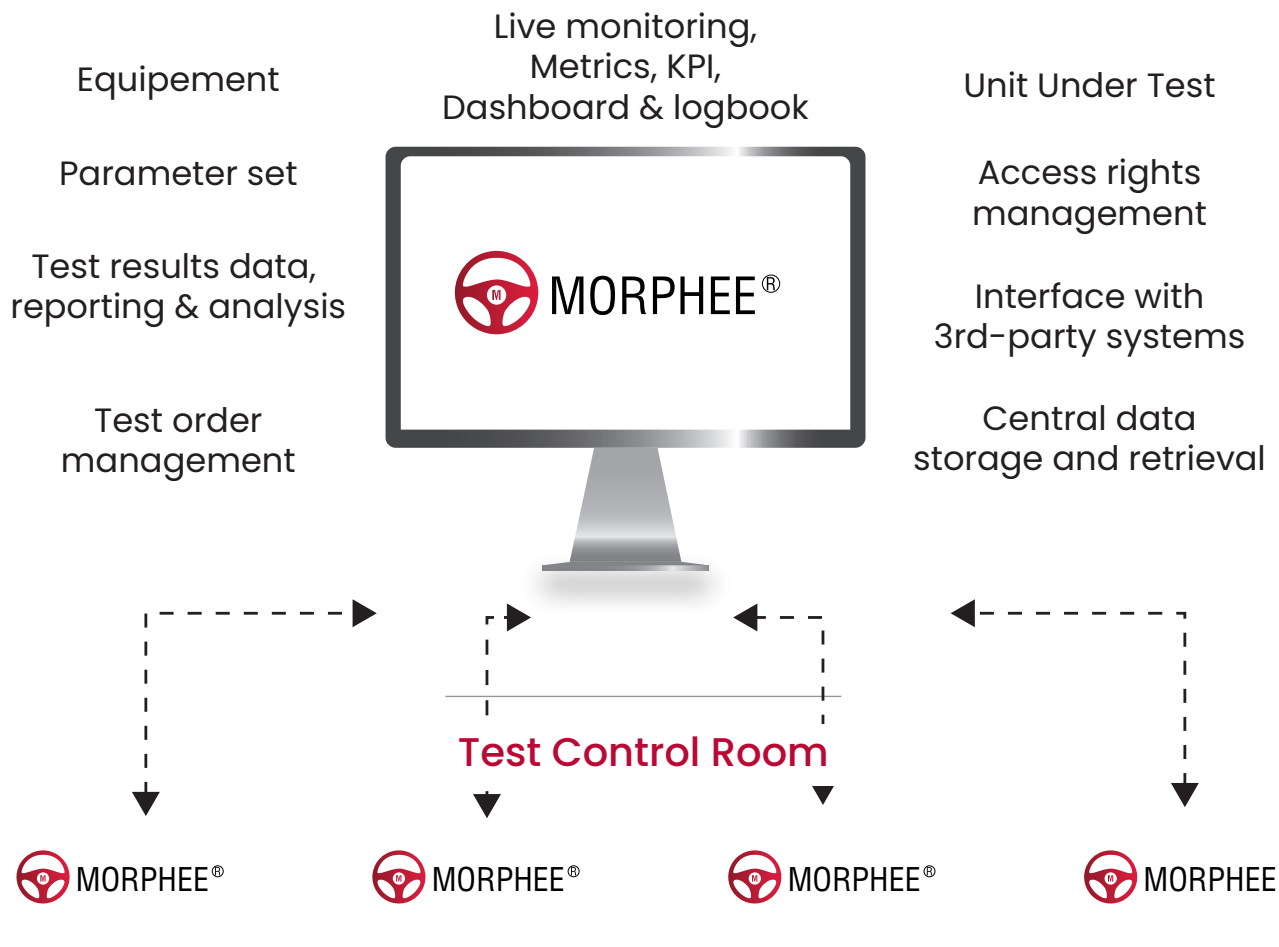
TECHNICAL DATA

Administration & User Handling	<ul style="list-style-type: none"> • Configuration of license setup • Definition of user permissions (per user, group or object) • LDAP integration
Dashboards	<ul style="list-style-type: none"> • Customized GUI • Multiple dashboards per user • KPIs, charts support
Centralizing MORPHEE data	<ul style="list-style-type: none"> • Norm-names • Test cell configuration data • Libraries (A2L, Controllers...) • Test Procedures
Equipment Management	<ul style="list-style-type: none"> • Equipment specification, documentation, attachment and reports • Historic log and maintenance operations • Maintenance Plan
Tasks management	<ul style="list-style-type: none"> • Management of work orders, testing operations • Customer specific data model with properties, parameters & state flows
Unit under Test management	<ul style="list-style-type: none"> • Support of multiple types of units under test • UUT alarms definition
Measurement plans	<ul style="list-style-type: none"> • Measurement plans definition including calculation, alarms and channel log • Assignment of measurement plans to test request
Parameter sets Management	<ul style="list-style-type: none"> • Definition of parameter sets on various levels and context (test requests, UUT...) • Different type of parameters (Numeric, text, files, ...) • Use of custom application to view or modify complex data type (file): Test schedule file, controllers data,...
3rd party systems support	<ul style="list-style-type: none"> • Application Programming Interface (API) that enables seamless integration with third-party automation systems and software
Scheduling module	<ul style="list-style-type: none"> • Resources assignement • Gantt reports • Customized scheduling process
Test monitoring	<ul style="list-style-type: none"> • Test cell live data, including statuses, live variables, log files and charts
Results data	<ul style="list-style-type: none"> • Multi-search criteria combining descriptive data, parameters and measurement channels • Load manually new test data • Secure access to mesurement data
Metrics & Statistics	<ul style="list-style-type: none"> • Track/follow-up operations on equipments, test bed or UUT • Data export capability • Open access by specialized reporting tools (Tableau, Power BI)
Part monitoring & Counters	<ul style="list-style-type: none"> • UUT operation by tracking counters (i.e. engine hours, vehicle hours, testing equipment hours, electric consumption, ...) • Various type of counters (Numeric, Text, Date time, Matrix)
Maintenance plan	<ul style="list-style-type: none"> • Multiple type of maintenance operations for testing equipment, test cell or UUT • Provide an outlook regarding resource availability for a better scheduling • User alerts to signal maintenance operations

Central monitoring - Engineering office



FLEX-LAB™



Testing field - Test cells



Walk-In Chambers



King Size pack



4 to 12 Cells Climatic Chamber



4 Climatic Chambers

BATTERY TEST CENTER CASE

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pioneering software solutions?

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