



MATOFX SPDM™

Your all-in-one platform to design,
run and analyse simulations.

MATOFX SPDM™...

where simulations come together.

MATOFX SPDM™ is an all-in-one platform to organise and democratise your models and for managing the full simulation lifecycle, covering all stages, from setup and execution to analysis and results comparison. It unifies modelling, execution, comparison, and analysis across disciplines and computing environments.

The solution centralises tools, projects and data, making your simulation environment organised, collaborative, and efficient. The platform is engineered to be fully software-agnostic and any model or tool that can be launched from the command line (e.g. Python, R, executables or shell scripts, as well as commercial software) can be incorporated seamlessly on this platform.

MATOFX SPDM™ can be used to execute everything, from lightweight calculators to advanced scientific models, such as:

- **simple computations that run in seconds,**
- **ML/AI and data science workflows, and**
- **first-principles, such as physics-based simulations.**

Whatever models and software you're using, MATOFX SPDM™ offers automated job handling, resource checks, usage statistics and flexible deployment options to streamline operations. With built-in workflow automation, visualisation, and controlled data access, it lets users focus on insight rather than having to learn how to build and use complex models.

By simplifying complexity, automating best practices, and enabling secure collaboration, it enables democratisation of modelling tools. This makes it more accessible and adoptable by your team, empowering people and businesses to innovate faster and gain deeper insights from every simulation.

Flexible and Software Agnostic

MATOFX SPDM™ integrates your existing modelling ecosystem without disruption and since it is fully tool agnostic, you can keep building your models in your software of choice, and then deploy them all in one central platform.

MATOFX SPDM™ can be deployed on Linux or Windows and is hosted on your own on-premise or cloud infrastructure. You can use the default single-server setup or separate out the database (SQLite, PostgreSQL, MySQL etc.) depending on your requirements.

Versatile Job Execution

Simulations can run on an always-on server, on your HPC cluster, or through external web-hosted tools via custom APIs.

Jobs are automatically queued, validated, and submitted using MATOFX SPDM's FastAPI engine, which checks for available CPU, memory, GPU resources, and software licences before dispatching work.

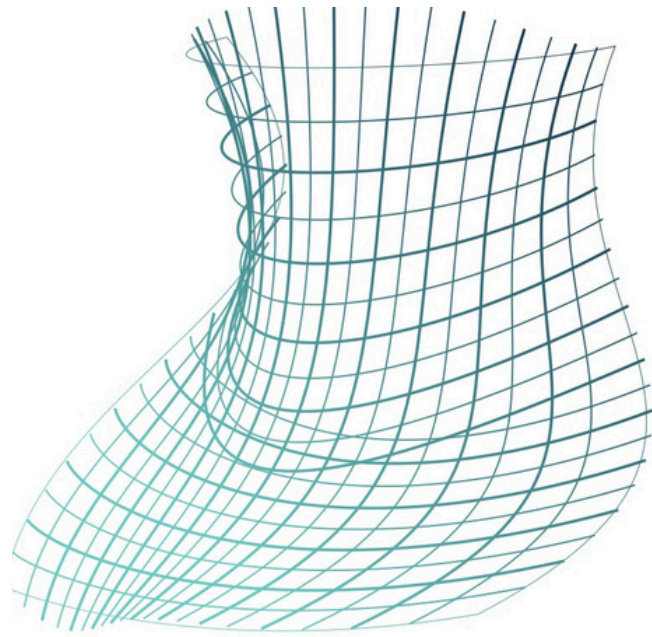
For HPC execution, MATOFX SPDM™ hands over scheduling to systems like slurm or Microsoft HPC Job Manager, ensuring maximum efficiency without added configuration overhead.



Secure By Design

Security is central to MATOFX SPDM™.

With on-premise or private-cloud installation, hashed password handling, and Single Sign-On (SSO) integration, your organisation maintains full control over data, users, and processes ensuring your simulations never leave your infrastructure.



Secure Access, Seamless Collaboration

You decide exactly how simulations and models are shared.

Models can be visible to all users, specific teams, or specific access rights groups, while simulation results data can be restricted by the project owner. Access rights are highly configurable, enabling role distinctions for Super Users, Administrators, Beta Testers, and Regular Users, and any other team you may wish to set up.

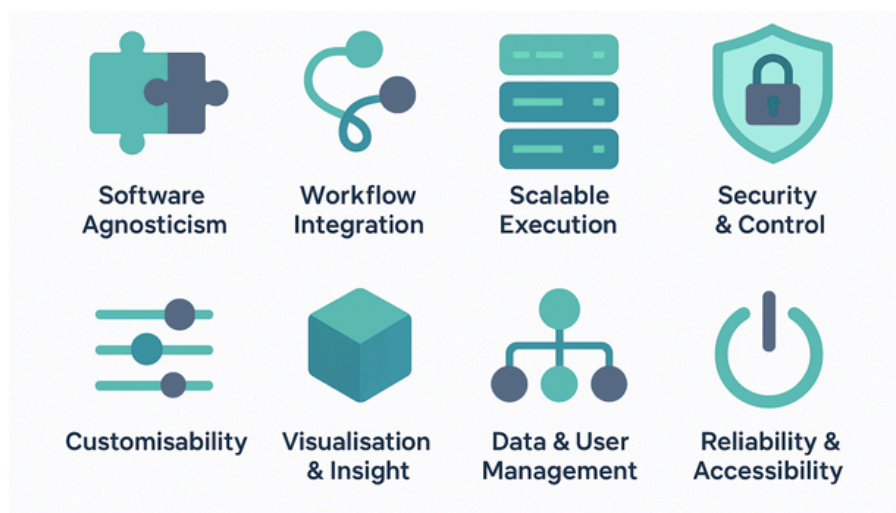
This ensures both flexibility and governance across teams and workflows.

Features That Empower

MATOFX SPDM™ SPDM provides a customisable interface that adapts to your workflow rather than forcing you to adapt to it.

Moreover, you can:

- run single jobs or repeat simulations,
- build and execute fully automated workflows, where outputs from one model automatically feed into the next,
- compare jobs' and workflows' inputs and outputs side-by-side with automatic difference highlighting, enabling you to spot differences in an instant,
- monitor the usage statistics that matter most to your operations,
- edit tools and workflows directly in the interface,
- download any job files, summaries, inputs, outputs, and reports at any time, and
- use Quick Access shortcuts to launch commonly used tools or workflows.



MATOFX SPDM™ also supports advanced visualisation capabilities, allowing you to render:

- **high-quality images, animations, and videos,**
- **3D visualisations/animations and CAD files, and**
- **interactive 2D and 3D plots.**

Visual outputs are displayed automatically and can also be included in reports or comparisons.

Powerful Data & User Management

Manage your entire modelling & simulation ecosystem from one place.

Administrators and Super Users can add and manage users, teams and access rights effortlessly. They can explore database tables, browse logs, clean up unfinished jobs, or add new fields or tables based on organisational needs. Users can create Projects, Scenarios and Jobs intuitively from the dashboard, reuse inputs, copy jobs, or build custom workflows. Scenarios can be auto-closed after a defined period to keep environments organised.

For onboarding and support, personalised tutorials or walk-throughs can be provided on request.

Take Control of Your Workflow

MATOFX SPDM™ gives teams complete freedom in designing their process flows, or build fully customisable ones.

Workflows may consist of stand-alone independent tools or coupled / interconnected models where data flows automatically from one stage to the next. This seamless data flow eliminates manual handling and ensures consistency across the entire simulation chain. Moreover, a single model can receive inputs from multiple upstream models, allowing for complex, multi-source integrations. In custom workflows, the downstream logic is applied automatically, making even sophisticated model dependencies easy to manage, empowering users to focus on insights rather than configuration.



Unified Simulations Ecosystem

A central dashboard for managing users, access, projects, scenarios, and jobs, with tools to reuse inputs, build workflows, and keep environments organised.

Seamless Integration & Deployment

Tool-agnostic and non-disruptive, MATOFX SPDM™ integrates existing modelling environments, supports Linux and Windows, and optimises job scheduling by checking available computing resource and licences in advance.

Adaptive Workflow Interface

A customisable interface that adapts to your workflow enabling automated job execution, result comparison, usage monitoring and advanced visualisations including animations, videos and CAD files.

Controlled Flexibility

Centralised control over data, users, and processes while giving teams the freedom to design workflows, with seamless data flow and automated handling across the simulation chain.

Secure, Unified Platform

A unified and secure platform designed to support effortless collaboration. MATOFX SPDM™ lets you manage your operations on your own infrastructure.

Next-level intelligent solutions

Here at Funis Consulting we create software that solves real-world problems – the kind that make a positive impact.

Learn more:

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