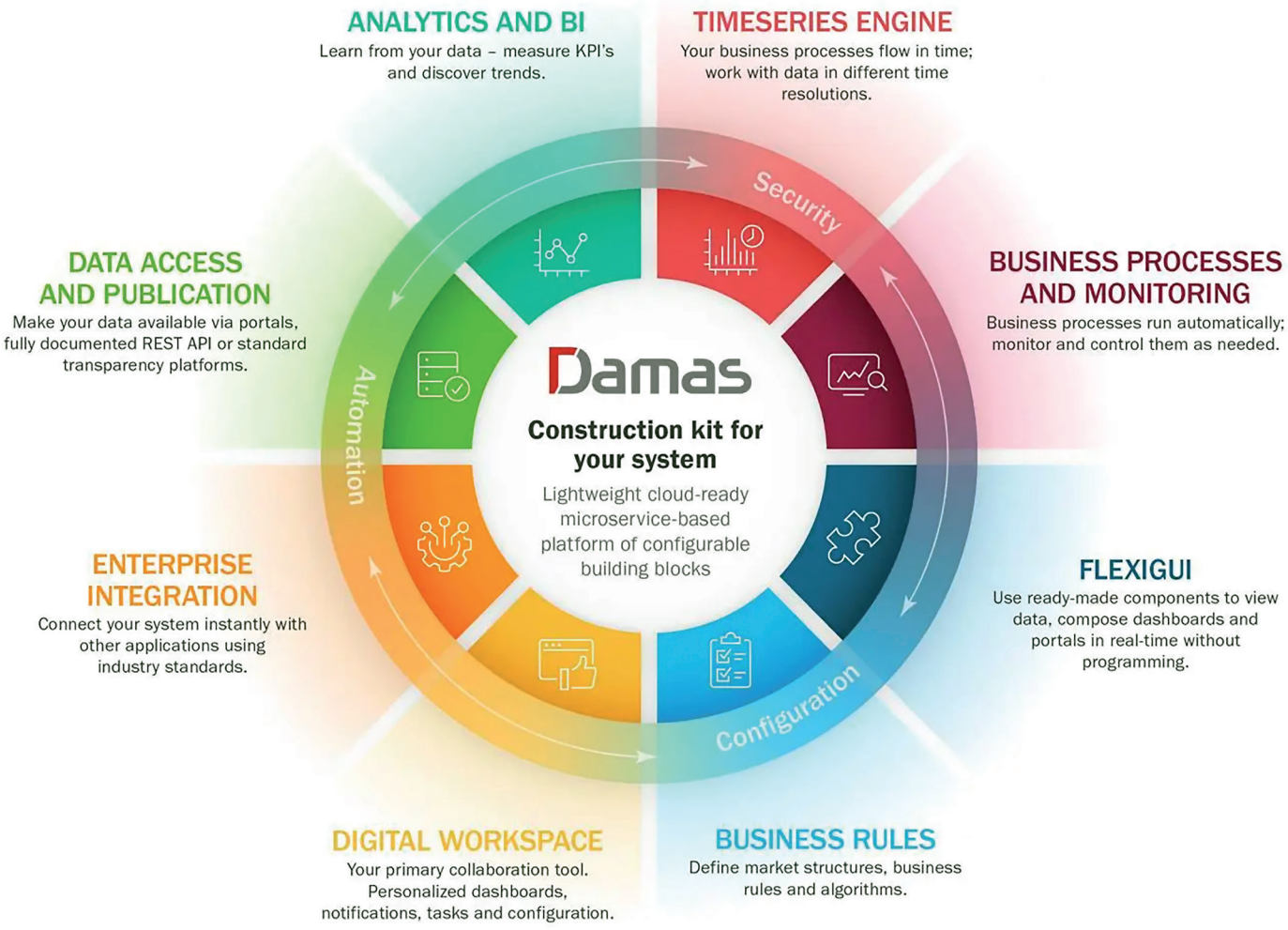
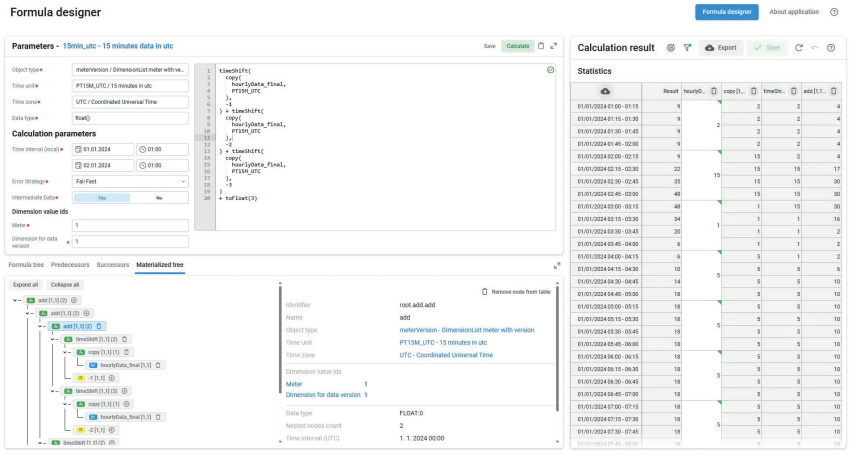
Damas MMS

Market Management Platform

Build your energy solutions quickly, safely and efficiently.



- Leveraging the knowledge and experience gained from 25+ years in the energy sector.
- Modern microservice architecture.
- Unique level of configurability and flexibility.
- Short time-to-market and change-to-market.
- Top security standards.
- Close-to-realtime data support.
- High performance and scalability.
- Advanced analytical capabilities.



Time series formula designer

Damas MMS is our leading product for the energy industry, providing a foundation for building systems that organise electricity and gas markets. It is designed to support the business and technical processes of transmission network operators, submarine interconnectors, and market operators. Built on a purpose-designed technological platform, its key benefit is its flexibility to adapt to customer requirements and ever-changing market conditions.

Damas MMS addresses the challenges of the energy sector with over two decades of expertise. Unicorn has created a platform that integrates open business components and modern IT approaches. It enhances agility, reduces costs, enables rapid low-code development, and automates deployment through cloud computing, DevOps practices, microservices architecture, and containerization.

The Damas MMS construction kit responds to the dynamic energy sector, offering a comprehensive set of components and tools for fast, efficient development. The TimeSeries Engine supports time series data management, while built-in Process Management facilitates automation. FlexiGUI simplifies UI design, and specialized visual components handle time series data. Additionally, the platform features configurable business rules, a digital workspace, enterprise integration via Enelane, data access and publication through REST APIs.

Overall, Damas MMS provides energy organizations with a modern, integrated, and highly adaptable solutions, enabling them to succeed in a rapidly evolving business landscape.

Time Series Engine

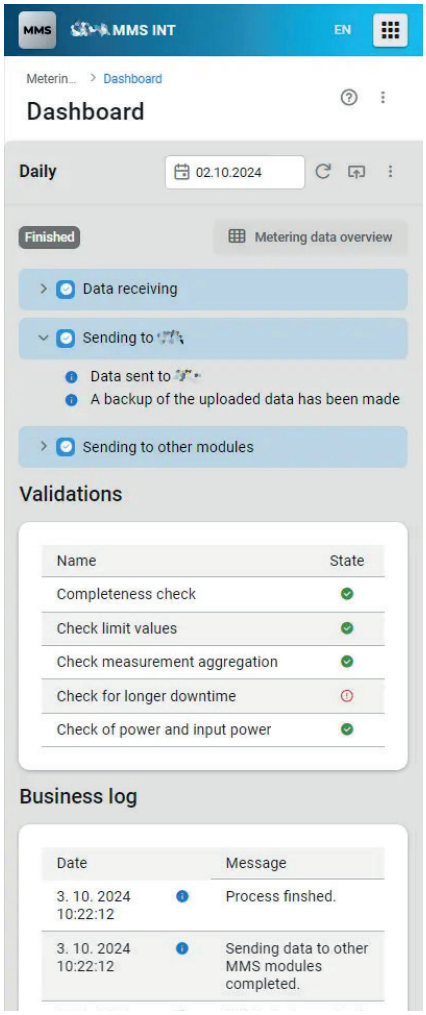
TimeSeries Engine is a **set of applications, libraries, GUI components, as well as development tools** for TimeSeries data management. The TimeSeries Engine facilitates the development of robust and scalable solutions, primarily in the energy sector. Data can be physically stored using various database engines, both open-source and commercial.

Main features:

- Fast, robust, and multi-platform time series storage.
- Defining and debugging dynamic calculations.
- A set of user-configurable GUI components to handle time series in composed FlexiGUI.
- Variety of development tools to support rapid no-code / low-code development and maintenance.

Business Processes and Management (BPM)

BPM controls the orchestration of business processes and their automation.



Example of process dashboard

It glues together inputs from enterprise integration flows, orchestrates all tasks needed to be performed during the processing of important business functionalities, applies business rules, delegates manual tasks for user roles and controls the publication of necessary data via various channels.

FlexiGUI

Damas MMS offers a set of business-specific, configurable components for managing time series data, business processes, notifications, data flows, and master data.

FlexiGUI provides templates for the efficient and consistent development of standard pages such as Time Series View, Process Monitoring, Structured Data Content, and Dashboards. These

templates enable the combination of various content types, delivering a comprehensive view of business processes and related data.

Beyond these predefined patterns, custom pages can be created to meet the specific needs of individual business modules. The Damas MMS platform supports this flexibility with a rich set of components designed for immediate use.

Business Rules

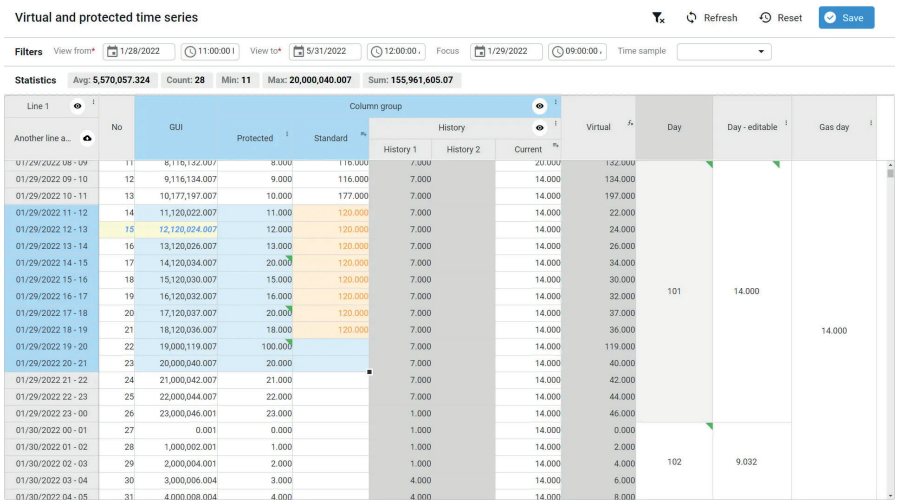
The Damas MMS platform places great emphasis on the business rules to define and control various aspects of the software solution, ensuring its flexibility.

The platform recognises Validation, Workflow, and Computation rules as the main categories of business rules, all of which are configurable.

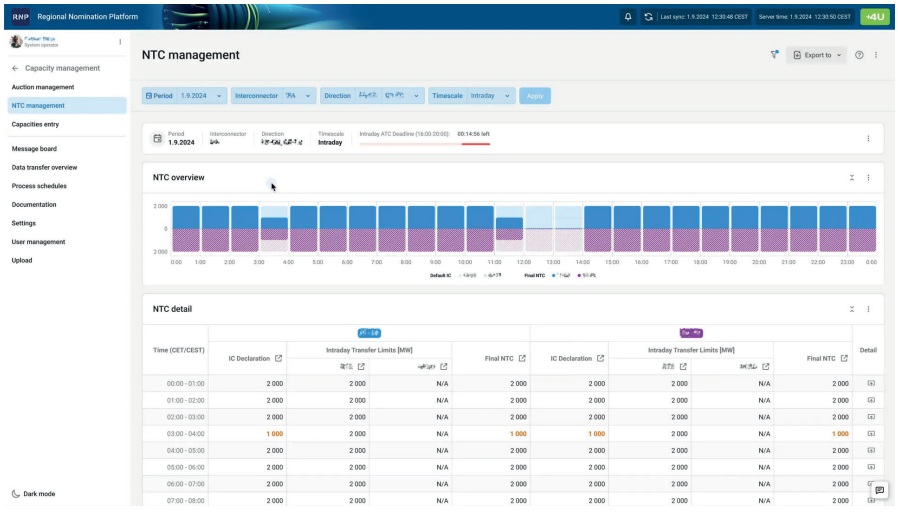
Business rules are often closely linked to master and reference data, particularly market structures, as well as to business process configurations. The Master Data Management component offers a low-code solution for defining data structures and creating a user interface for their data management.

Digital Workspace

The Digital Workspace of the Damas MMS platform centralises all user interactions within the solution. It includes a task list that displays all activities requiring user action, such as approvals or acknowledgements, with configurable views, filters, and grouping options. Notifications inform users of system events via email or SMS, including new tasks, data reception, or anomalies in business processes, all managed by configurable rules. A user action history logs all task-related activities, providing a complete record of approvals, rejections, and readings. Additionally, user preferences are stored, allowing personalised navigation, bookmarks, localisation settings, and custom configurations for individual components or services.



Example of tsView features



Complex page combining various components

Enterprise Integration - Enelane

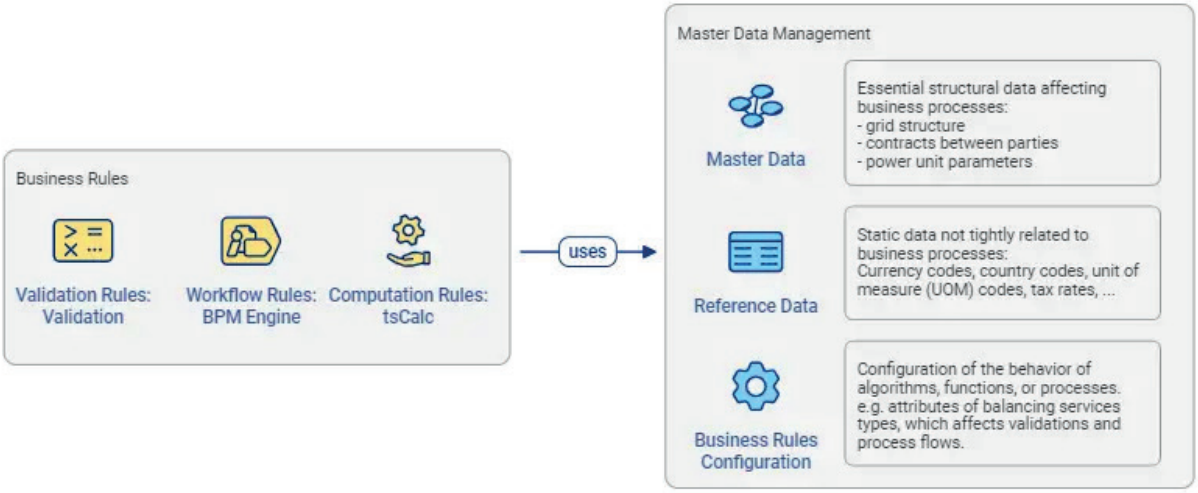
Enelane is a software product that enables integration between various energy IT systems, handling input and output message processing and storage. It typically serves as a data communication gateway between an organisation and external environments but can also facilitate the integration of heterogeneous IT systems within an organisation. Enelane provides secure communication and data flow management, allowing users to monitor interactions and actively manage individual data flows. It supports all standard data channels, protocols, and formats used in the energy industry, transmitting any data type, including compressed and encrypted formats.

Data Access and Publication

Business processes in the energy sector, managed by TSOs and similar institutions, generate large volumes of data that must be made publicly accessible or transmitted to authorities. Damas MMS Construction Kit offers standard mechanisms for providing data in various ways, including Enelane data flows, a standard interface (REST API), and data portals.

Data Analytics and BI

The computation and visualisation features of the in-built time series engine



Business rules

enable the implementation of various analytical and reporting tasks directly within the platform. The time series view can generate data reports, while BPM and notifications can schedule report generation and distribution to users. For more advanced reporting and analytics, Damas MMS is often complemented by third-party reporting and analytical software.

The Architecture

The robust and flexible architecture of Damas MMS is based on the **Unicorn Universe Digital Twin Construction Kit and the Mobile-first IoT-ready AI-boosted Cloud Architecture** that allows to build systems and apps that work on all types of devices, from mobile phones to smart TVs. With a modern technological stack and set of ready components, it increases the flexibility of teams, accelerates the training, decreases risks and time-to-market, and delivering a major competitive advantage.

Unique Added Value

- **High Efficiency for Energy Solutions**
  Configurability and a high degree of standardisation of visual components and data interfaces significantly streamline development.
- **Low-Code Implementation**
  Many features, such as formula definitions, time series visualisation, and reference data management, can be configured directly by business analysts without coding.
- **Modular & Flexible Architecture**
  Components function as building blocks that can be used independently or as a complete system.
- **Customisation & Vendor Independence**
  Any component can be replaced, ensuring adaptability to client needs while preventing vendor lock-in.
- **Easy Third-Party Integration**
  Standardisation and comprehensive documentation simplify collaboration with external developers.

References

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- The GCC Interconnection Authority (GCCIA)
- Transelectrica S.A.

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