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Engenion

Release Note

Plan Smarter.
Not Harder.

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Release Notes Engenion 2024.2

Version 2024.2

1.1 Release Date

Released December 2024

Overview

The Engenion Release 2024.2 release introduces a comprehensive range of enhancements, setting new standards in usability, functionality, and integration. With a redesigned user interface, the platform delivers an intuitive and accessible experience, complemented by significant improvements to cost unit structures and project management capabilities.

Key Highlights:

Automated Resource Optimization:

This feature streamlines personnel allocation by prioritizing projects based on their importance. The system dynamically adjusts staffing to maximize capacity utilization, ensuring critical projects are adequately resourced while minimizing gaps and enhancing overall team productivity.

AI Assistant:

The integrated AI assistant revolutionizes how users interact with the platform. Seamlessly connected to the user handbook and customer documentation, it provides intuitive, context-aware assistance via document chat. Organizations can choose from multiple large language models (LLMs), enabling flexible deployment tailored to specific hosting and security requirements.

Milestone and Cost Unit (CU) Enhancements:

Updates to CU and milestone status logic provide more accurate real-time tracking of progress and costs, delivering a clearer view of project health and enabling precise adjustments.

Seamless Integration with External Tools:

Enhanced connectivity with platforms like Jira and Power BI facilitates smooth data exchange and collaborative workflows. Teams can access and analyze project insights directly, reducing the need to switch between systems.

Engenion 2024.2 reaffirms its commitment to empowering teams with cutting-edge tools for managing complex projects, driving operational excellence through precision and innovation.

Resource Optimization

The Engenion 2024.2 release introduces Resource Optimization, a feature designed to automate and improve the allocation and scheduling of resources. By utilizing advanced algorithms and configurable rate-based settings, it enables organizations to efficiently assign personnel by prioritizing project importance, evaluating capacity, and aligning roles with requirements

1.3.1 Automated Resource Allocation

The Resource Optimizer streamlines allocation processes to ensure effective use of personnel and budgets. Key capabilities include:
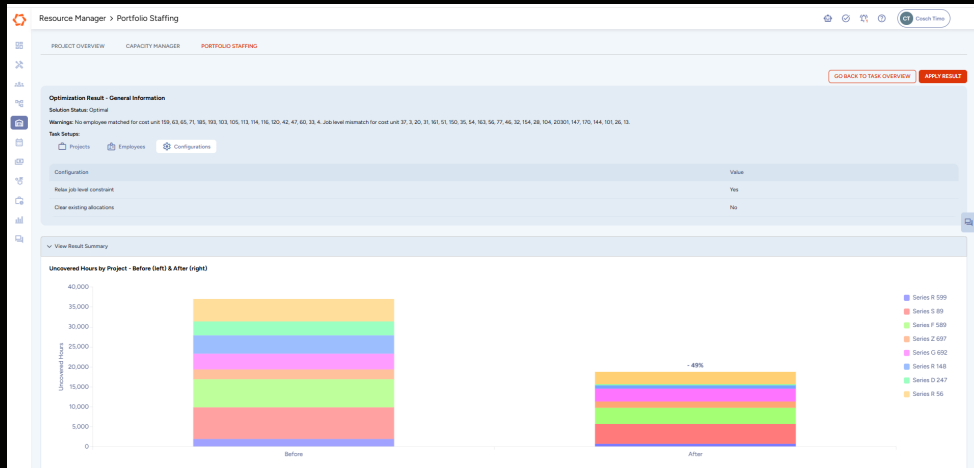
Automated Resource Assignment

The Resource Optimizer bases its allocations on user-selected projects and employees, ensuring comprehensive coverage of workhour requirements for each project. By minimizing the number of employees per project and prioritizing high-priority tasks, the system efficiently allocates resources while respecting employee capacity limits and adhering to project budgets.

Customizable Allocation Logic

The optimizer offers flexible, configurable settings to meet diverse project needs:

• Non-Exact Job Level Matching: When an exact match for a job role is unavailable, the system can allocate employees with a similar role at a different job level, ensuring the necessary skill sets are applied effectively.
• Worktime Assignment Configuration: Users can decide whether to retain or discard existing worktime assignments during reallocation, providing the flexibility to optimize resources without disrupting prior assignments.

Resource Allocation
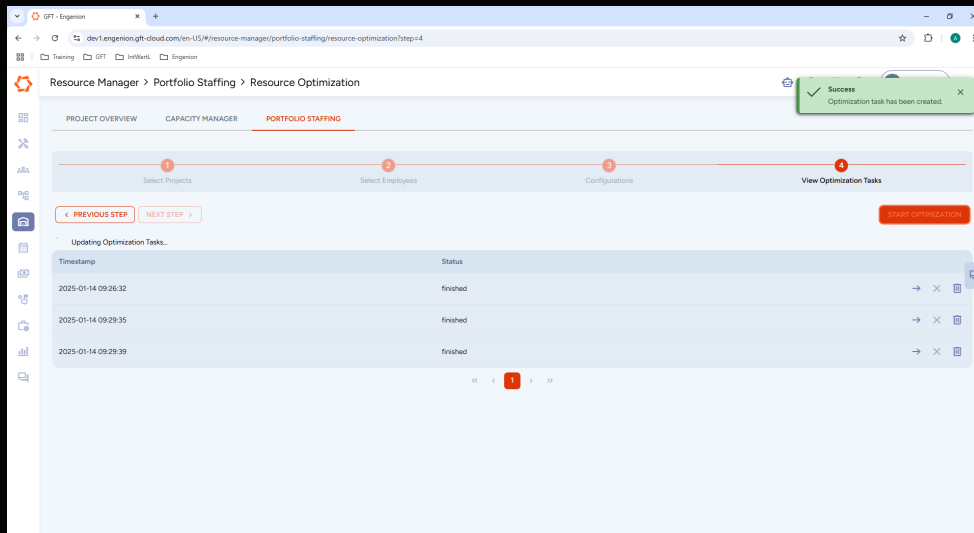
Automated Resource Allocation
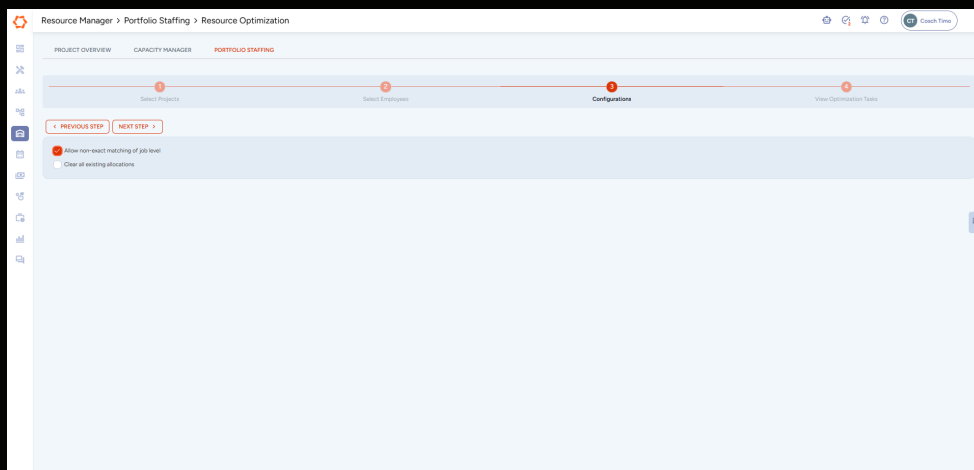
Settings

1.3.2 Actionable Data Visualizations

The results of resource optimization are displayed through intuitive data visualizations, enabling teams to evaluate and adjust their strategies efficiently. Key insights include:

Before-and-After Comparisons:
Highlight reductions in uncovered workhours, providing a clear view of optimization impacts.

Role-Project Gap Analysis:
Identifies resource shortages across projects to support targeted adjustments.

Heatmaps:
Visualize allocation gaps across roles and projects, allowing teams to quickly pinpoint and address inefficiencies.

1.3.3 Flexible Control and Technical Foundations

The Resource Optimizer is built to provide both flexibility and reliability. A Global Enable/Disable Feature Flag allows organizations to activate or deactivate the feature as needed, ensuring adaptability to changing operational priorities. Designed with a robust and user-centric foundation, the optimizer includes advanced error-handling and logging capabilities, ensuring smooth operation and efficient troubleshooting. Secure user authentication protects sensitive project and resource data, while streamlined task management simplifies the configuration and execution of optimization processes, supporting efficient and reliable resource allocation.
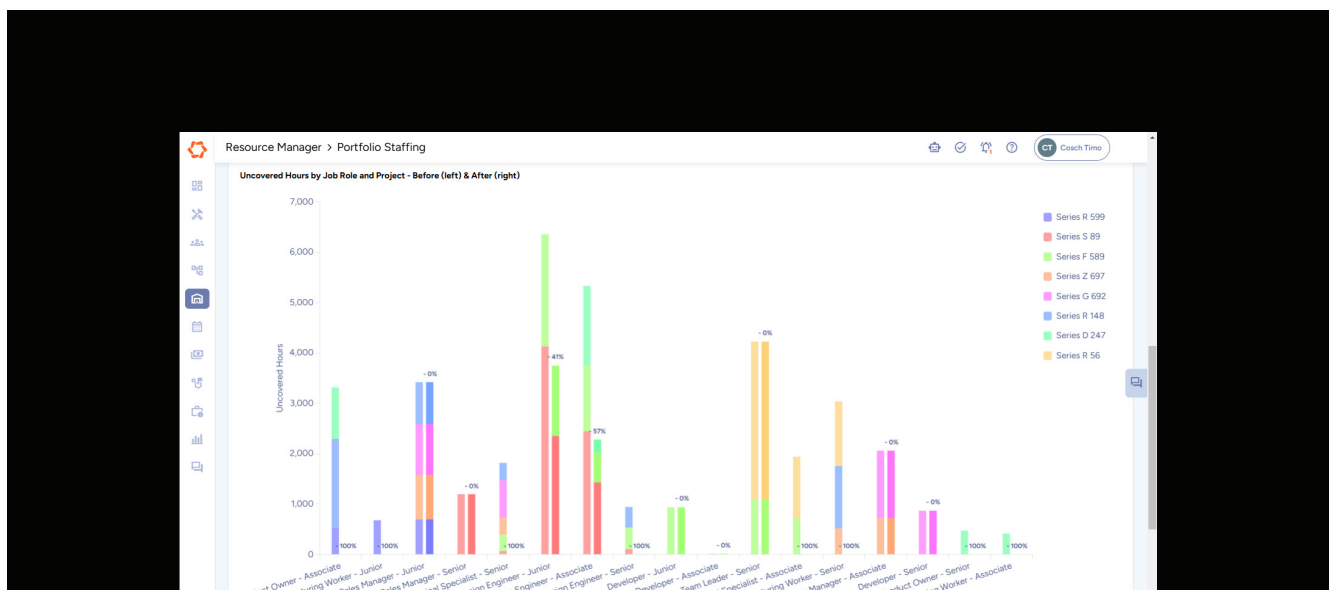
Data Visualisation

1.3.4 Key Benefits

Resource Optimization transforms resource management by automating processes and ensuring critical projects receive the necessary resources. Key Advantages include:

Flexible Allocation Logic:
Adapts to various project requirements and scenarios.

Data-Driven Insights:
Empowers teams to make informed decisions with actionable visual analytics.

Operational Confidence:
Strong authentication and advanced error-handling mechanisms enhance reliability and data security. By addressing resource challenges with precision and adaptability, Engenion 2024.2's Resource Optimization sets a new benchmark for modern project portfolio management.
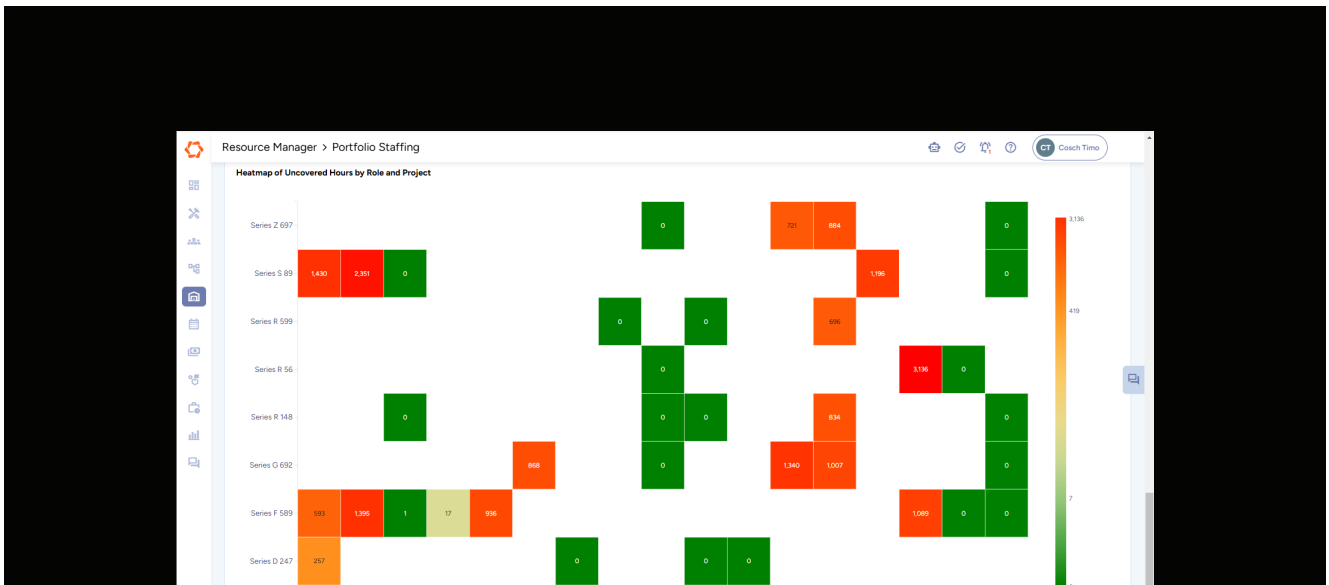
Heatmap

Advanced AI Assistant and Document Support

The Engenion 2024.2 enhances its AI-driven capabilities, offering robust support for users, efficient knowledge retrieval, and improved operational workflows. These features provide flexible interactions with system documentation and enable AI deployments tailored to meet specific organizational needs.

1.4.1 Generative AI/LLM Integration

The updated AI Assistant integrates Generative AI and large language models (LLMs) to deliver advanced natural language understanding and functionality. Organizations can choose between cloud-based models, such as ChatGPT, or secure, on-premise implementations designed to align with their security and operational requirements.

1.4.2 Document Help Features

The document help function offers comprehensive support, enhancing user experience and efficiency with the following capabilities:

AI-Based Document Response

The AI Assistant provides accurate, context-specific answers by referencing the Engenion handbook and Release Notes. Customers can expand this functionality by integrating additional knowledge base documents, such as PDFs or Word files, with guidance from the Engenion team.

Session-Based Chat History

To ensure continuity and a seamless user experience, the AI Assistant retains chat history within sessions, allowing for more personalized and efficient interactions.

Authentication-Driven Access

Data access is tailored to user permissions, maintaining strict security and relevance.

Multilingual Support

The system supports multiple languages, including optimizations for German and other non-English languages, enhancing accessibility across diverse user bases.
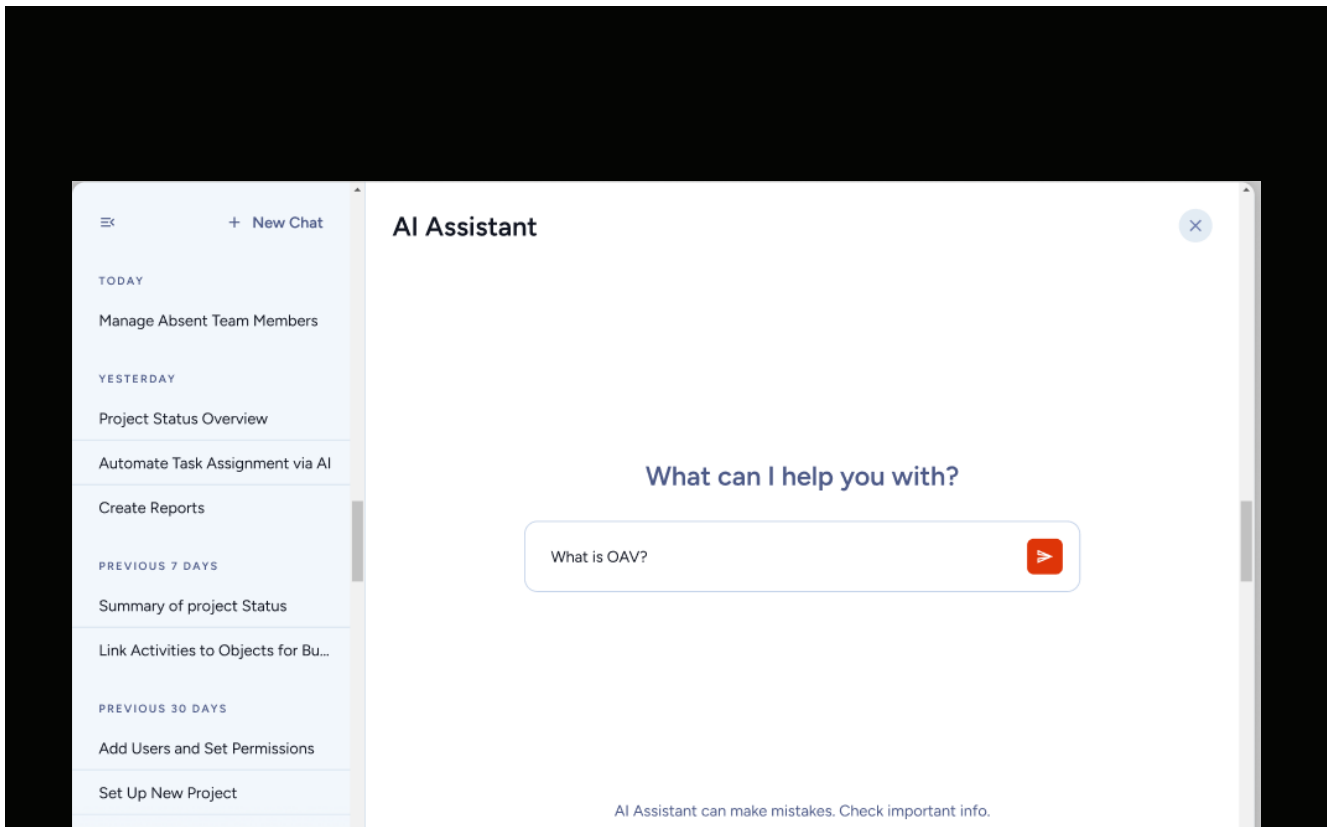
Performance Optimization

Advanced chunking techniques ensure high accuracy in document processing and rapid response times, enabling smooth interactions.

AI Service Configuration

Integration with Spring Config allows dynamic updates to configuration properties, simplifying system setup and management.

AI Assistant

1.4.3 Key Benefits

These advanced AI Assistant and document support features provide organizations with the following advantages:

Efficient Knowledge Retrieval

AI-powered, document-based responses minimize the effort required to find critical information, accelerating decision-making processes.

Continuity in User Support

Continuity in User Support

Secure and Role-Specific Assistance

Strong access controls protect sensitive data by restricting visibility to authorized users, ensuring compliance and security.

Deployment Flexibility

Organizations can choose between hyperscale models for convenience or on-premises implementations for greater control over their infrastructure

Multilingual and Configurable Solutions

Comprehensive language support improves accessibility, while dynamic configurations simplify system updates and management.

These features establish Engenion as a robust, user-focused platform, enabling teams to leverage secure and intuitive AI-driven support for their operations.

Enhanced Milestone and Cost Unit (CU) Management

The Engenion 2024.2 release introduces significant updates to milestone and Cost Unit (CU) management, focusing on seamless progress tracking, dynamic date adjustments, and improved resource allocation. These enhancements enhance transparency, flexibility, and efficiency, enabling teams to effectively manage project timelines, milestones, and resources.
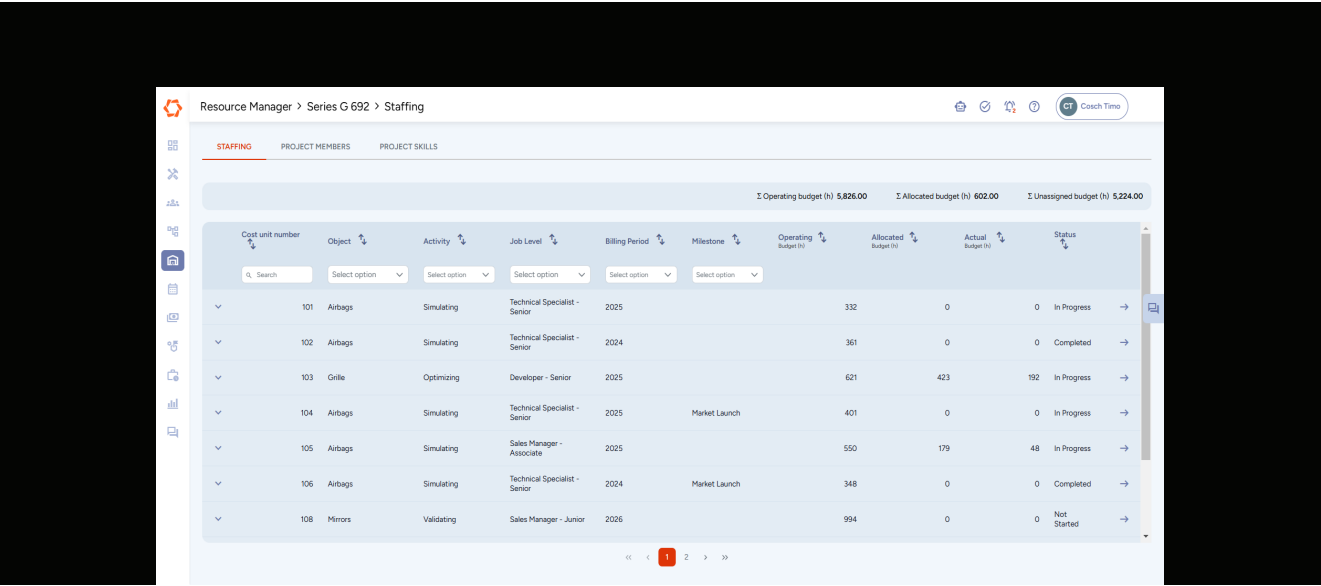
CU Status

1.5.1 Updated Cost Unit Status Logic

New status options for Cost Units (CUs) streamline progress and cost tracking, providing more accurate insights into project performance. The updated CU statuses include:

Not Started

Indicates the CU is in the planning phase, allowing resource allocation without initiating active work.

In Progress
Represents the active work phase, enabling allocation adjustments, bookings, and expense tracking.

Delayed
Highlights CUs that are behind schedule while still permitting bookings, helping teams monitor delays without halting progress.

On Hold
Pauses work on the CU, resetting unused allocations and disallowing further changes or bookings. The status can be reverted to "In Progress" when work resumes.

Complete
Marks a CU as finished, removing leftover allocations. This status can be reverted to "In Progress" for additional bookings or corrections.

Closed
Indicates the CU is archived and permanently set to read-only.
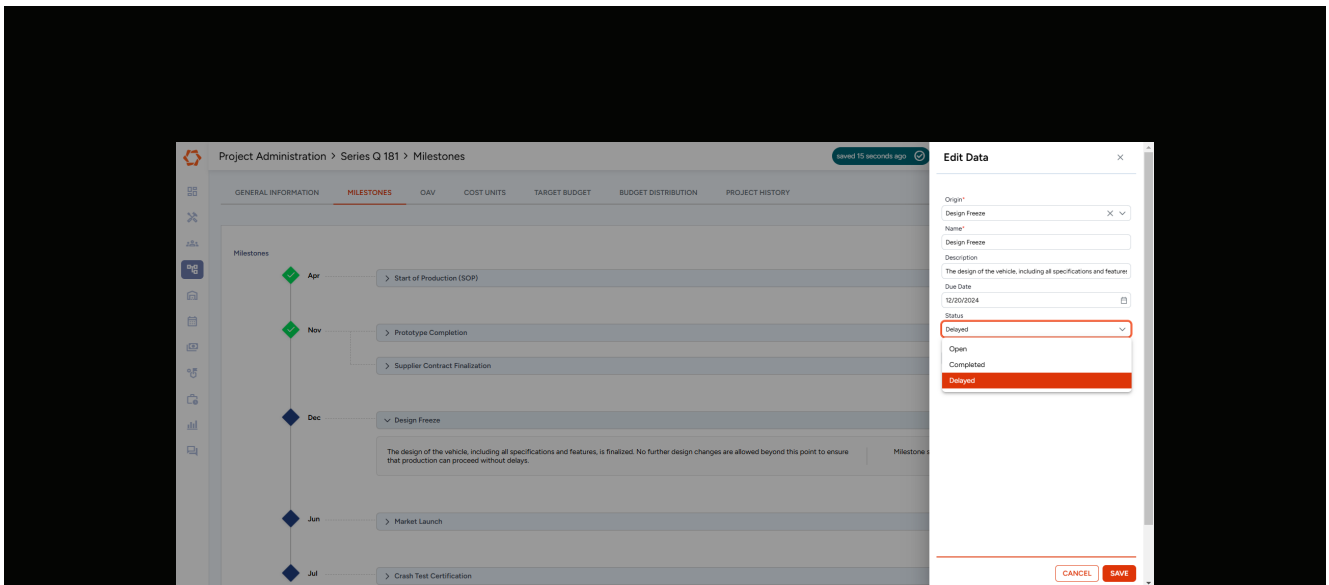
Milestone Status

Teams can manually update CU statuses, providing full control over progression through predefined workflows. Additionally, the system proactively prompts users to adjust statuses at key events, such as start or end dates, ensuring projects remain aligned with timelines and current priorities.
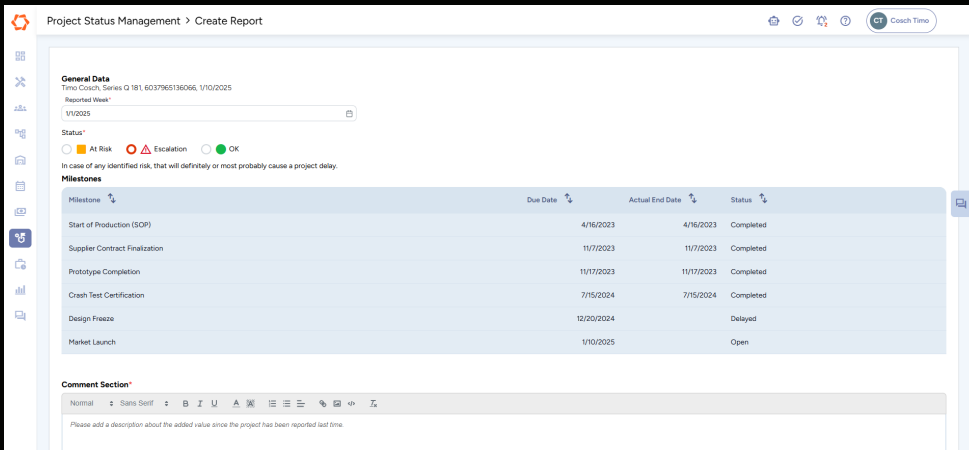
Milestone Status Report

1.5.2 Seamless Milestone Integration

Building on the CU status updates, milestones are now more effectively integrated with the CU struc-ture, providing enhanced synchronization and coordination across project components. This deeper integration ensures that milestones and their associated CUs remain aligned throughout the project lifecycle.
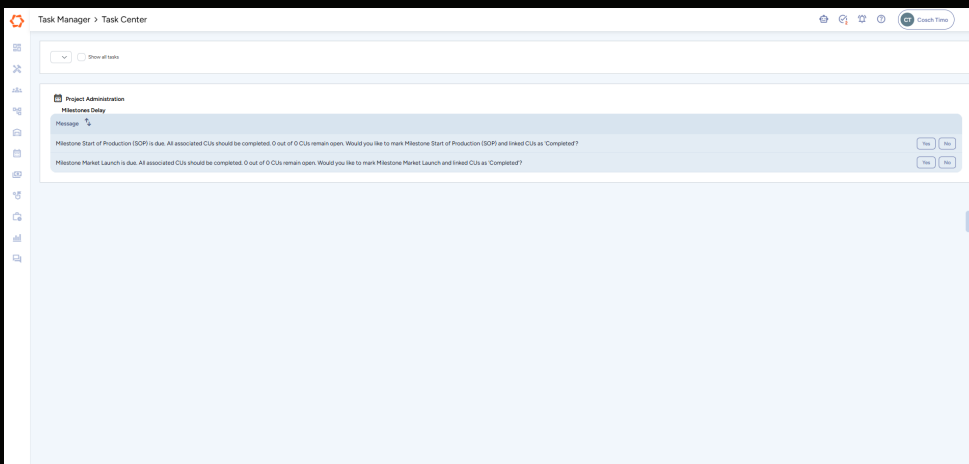
CU and milestone task

Milestone Status Updates

Engenion introduces a new Delayed status to milestone tracking. This addition complements the existing statuses Open and Completed, offering a more comprehensive progress overview. By flagging delays, teams can identify and address potential bottlenecks early, improving overall project management and ensuring alignment with timelines

Quick Actions in the OAV Tree

Milestones can now be directly linked to CUs using streamlined actions, simplifying the process and improving

1.5.3 Dynamic Timeline and Resource Adjustments

Engenion 2024.2 enhances project management by introducing dynamic adjustments to timelines and resources, ensuring greater consistency and efficiency.
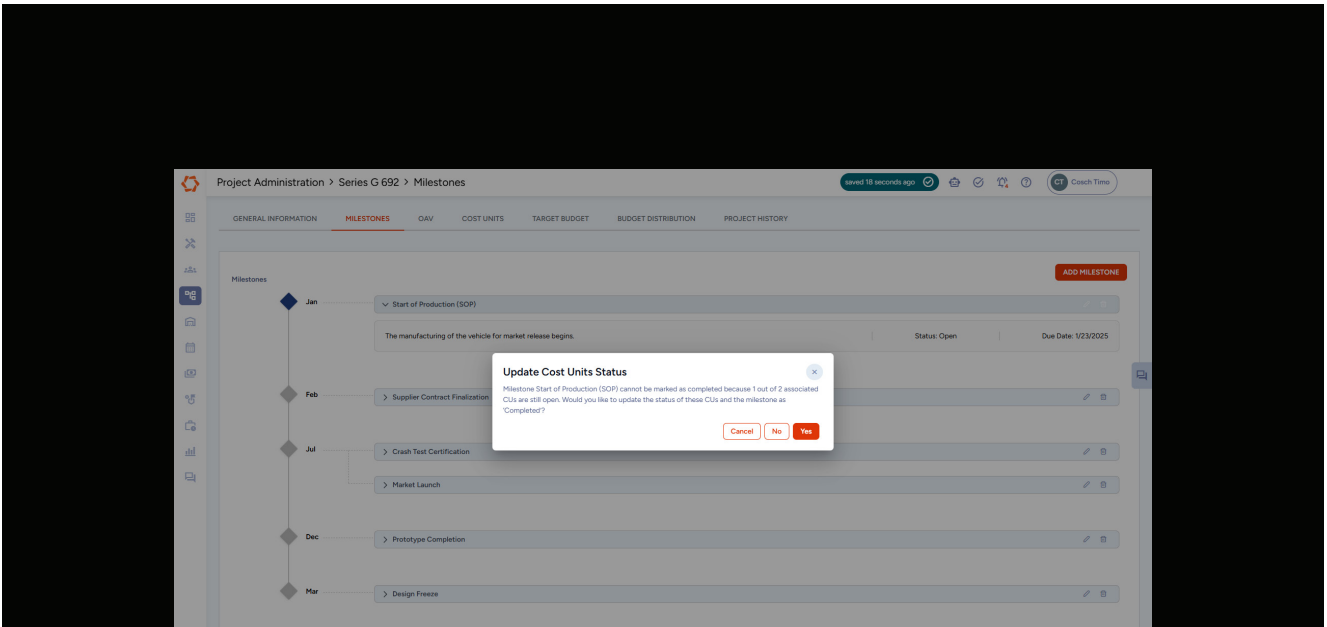
CU and milestone workflow link

Automatic Date Adjustments

Changes to project or milestone dates automatically cascade to associated CUs, maintaining timeline alignment across project components.

CU Duration Adjustments

Adjustments to a CU's duration dynamically recalculate future resource allocations, optimizing resource usage while considering actual bookings.

Streamlined Workflows

Engenion introduces workflows based on planned project, milestone, and CU dates, reducing manual intervention and improving coordination across all project components.

These enhancements reduce administrative effort, ensure consistency across timelines, and improve resource optimization, making project management more efficient and reliable

1.5.4 Key Benefits of These Updates

The updates to milestone and Cost Unit (CU) management in Engenion 2024.2 significantly improve project tracking and resource management, delivering the following advantages:

Improved Project Tracking and Transparency

The new CU and milestone status options enable teams to monitor progress more effectively, identify delays, and make real-time adjustments. The integration of milestones with CUs ensures alignment throughout the project lifecycle, providing a comprehensive view of overall progress.

Streamlined Workflow and Status Management

By allowing manual status changes and proactively prompting users during key events, the system minimizes the risk of missed updates. This ensures timelines remain accurate and current with minimal manual intervention.

Optimized Resource Allocation

Dynamic adjustments to resource allocations based on CU duration changes and milestone updates improve resource utilization. Teams can avoid over- or under-allocation, ensuring resources are deployed efficiently according to project needs.

Enhanced Risk Management

The introduction of the Delayed status for both CUs and milestones helps teams identify and address bottlenecks early, enabling proactive risk management to protect project timelines and budgets.

Increased Flexibility and Efficiency

Automatic date adjustments and recalculations of future allocations reduce manual effort, ensuring consistency across project timelines and improving overall efficiency in resource planning.

These enhancements equip project managers with powerful tools to effectively manage timelines, resources, and risks, resulting in improved project outcomes and stronger alignment with strategic objectives.

1.6 Data Integration and Reporting Improvements

Engenion 2024.2 introduces a range of new integrations and enhanced import/ export capabilities, simplifying data management across diverse sources and systems. These updates enable seamless synchronization with essential external tools, empowering users with more effective data handling and robust reporting capabilities.

1.6.1 API Endpoints for Data Management

New API endpoints expand integration and customization options, enabling efficient management of key entities such as plan data, absences, company locations, cost units, milestones, project attributes, and statuses. These APIs enhance system connectivity and automation, simplifying workflows and improving data interoperability.

Power BI

1.6.2 Excel Import for Master Data

Engenion now supports direct imports from Excel, allowing users to efficiently integrate large datasets or updates into master data. This reduces manual entry and simplifies data handling.

1.6.3 Power BI Integration

Integration with Power BI enables users to connect Engenion data directly for advanced reporting and dynamic dashboards. This facilitates in-depth analysis and visualization of project and organizational data, empowering users to derive actionable insights.

1.6.4 Jira Integration

Enhanced synchronization with Jira ensures consistent updates to project tasks, progress, and related data. This improves collaboration and streamlines project tracking across both systems.

1.6.5 Email Notifications

Automated email notifications provide timely updates triggered by specific events or changes, keeping stakeholders informed about deadlines, system updates, or critical changes. This fosters better communication and team alignment.

1.6.6 Key Benefits

The new data integration and reporting features deliver several advantages, including:

Simplified Reporting

Enhanced filtering, sorting, and data handling streamline reporting processes.

Streamlined Integrations

Seamless connections with tools like Power BI ans Jira improve workflows and create a unified user experience.

Real-Time Insights

Live data integration enhances project planning, decision-making, and resource allocation accuracy.

Improved Communication

Automated email notifications ensure stakeholders remain informed, supporting better collaboration.

These enhancements enable organizations to work more efficiently and make data-driven decisions with confidence.

System Performance, Security, and Monitoring Enhancements

Engenion 2024.2 delivers notable advancements in system performance, security, and monitoring, ensuring a reliable and robust platform for users. Key highlights are:

Enhanced Caching Mechanisms

Improved caching increases speed and scalability, enabling the platform to handle heavy workloads efficiently.

Advanced Security Features

Upgrades to authentication and data protection bolster the safeguarding of sensitive information.

Comprehensive Monitoring Tools

Proactive monitoring capabilities provide detailed insights and enable swift resolution of potential issues, ensuring uninterrupted operations.

These enhancements guarantee that Engenion maintains high performance, secures critical data, and offers continuous oversight to support seamless system functionality even under demanding

1.7.1 System Performance and Efficiency Improvements

To enhance system performance, Engenion 2024.2 introduces key improvements that optimize efficiency and scalability:

Refined Caching Mechanisms

Distributed memory caching with flexible expiration settings reduces server load, accelerates data retrieval, and improves response times. These enhancements ensure the platform operates seamlessly, even during periods of high demand.

Real-Time Application Metrics Powered by Prometheus

Prometheus integration provides detailed insights into system performance, including resource utilization, response times, and caching efficiency. This allows administrators to proactively identify and address bottlenecks, ensuring scalability and adaptability during peak usage.

Real-Time Messaging with SignalR

SignalR integration delivers faster and more responsive communication across the platform, improving overall system interactivity.

Simplified Configuration Setups

Streamlined configuration options enhance adaptability, enabling organizations to easily align system settings with evolving priorities.

These enhancements ensure Engenion remains efficient, responsive, and scalable, providing a reliable foundation for managing complex workloads and operational demands.

1.7.2 Advanced Security and Authentication Feature

The security framework in Engenion 2024.2 has been reinforced with critical updates, ensuring robust protection for sensitive data and secure system operations:

Improved Authentication and User Secrets Management

Strengthens data protection by minimizing the risk of unauthorized access.

Refined CORS (Cross-Origin Resource Sharing) Policy

Enhances the security of data exchanges between systems, addressing potential vulnerabilities and ensuring seamless integration.

API Key Authentication

Introduces API key-based authentication, restricting access to critical API endpoints to authorized users only, thereby improving security for external integrations.

Serilog Integration for Advanced Logging

Offers deeper insights into system activities and health, supporting effective monitoring and issue resolution.

| **Prometheus Integration for Continuous Application Monitoring** | Ensures continuous visibility into system performance, enabling proactive oversight and prompt identification of potential issues. |

These enhancements provide a secure and reliable foundation for system operations, addressing both internal and external security challenges.

1.7.3 Advanced Monitoring and Logging

Engenion 2024.2 enhances its monitoring and logging capabilities to provide administrators with greater visibility and control over system operations:

| **Enhanced Logging and Monitoring with Serilog and Prometheus** | Offers detailed insights into system health and performance, enabling quicker identification and resolution of issues. |

| **Dedicated Health Check Endpoint** | Provides continuous visibility into system operations, improving reliability and ensuring smooth performance |

1.7.4 Key Benefits

The updates in Engenion 2024.2 deliver critical benefits, enhancing system performance, security, and monitoring:

| **Enhanced Scalability** | Advanced caching mechanisms and real-time performance monitoring ensure reliability during peak usage and improve operational efficiency. |

| **Proactive Monitoring and Issue Resolution** | Real-time metrics from Prometheus and comprehensive logs from Serilog enable faster identification of issues, ensuring continuous system health. |

| **Improved Data Protection and Security** | Strengthened authentication, user secrets management, and refined CORS policies safeguard sensitive data while ensuring secure and seamless exchanges. |

| **Continuous Oversight and Reliability** | Integrated logging, monitoring, and health checks provide ongoing insights into system performance, allowing administrators to address potential issues proactively. |

These enhancements collectively ensure Engenion remains a secure, high-performing, and reliable platform, supporting both administrators and end-users effectively.

Financial and Cost Management En-hancements

Engenion 2024.2 introduces a range of updates designed to improve financial management and cost tracking across projects and portfolios. These enhancements streamline budget planning, increase accuracy, and provide deeper insights into financial data at multiple levels.

Improved Cost Breakdown Reports

Users can now track costs across various project and portfolio elements, with detailed breakdowns available at multiple levels. This includes portfolio-level overviews and drill-down capabilities to the OAV (Object-Activity-Rate) level for detailed cost analysis.

Planned Cost Summary Filtering

New filtering options allow project managers to view the sum of planned costs in budget distributions, supporting better cost tracking and more accurate financial reporting.

Enhanced Calculation Precision

Financial calculations now accommodate higher-precision decimal values, ensuring greater accuracy in reports and budget distributions. This level of precision is particularly valuable for managing larger and more complex projects

These updates empower project managers with the tools needed to achieve greater financial control, improve reporting accuracy, and streamline resource management across all levels of their operations.

1.8.1 Key Benefits

Enhanced Financial Visibility

Improved cost breakdowns, coupled with drill-down capabilities to the OAV (Object-Activity-Rate) level, provide managers with a detailed and granular understanding of financial data.

More Accurate Budget Tracking

High-precision calculations and advanced planned cost summary filters ensure project budgets are tracked with greater reliability, reducing errors and increasing confidence in financial reporting.

Streamlined Financial Management

The integration of financial tracking within the OAV framework delivers a structured and efficient approach to managing costs, budgets, and resources across projects and portfolios.

These benefits enable project managers to maintain tighter financial control, enhance decision-making, and achieve improved outcomes for both individual projects and broader portfolios.

Other Enhancements

The latest release of Engenion introduces a variety of updates aimed at enhancing the user experience, improving integration capabilities, and optimizing platform performance. These updates include improvements to UI/UX, reporting functionality, and support for new technologies.

Enhanced UI/UX Design	Modernized styling and layout create a more intuitive interface, improving overall user interaction with the platform.
New Components	Added input text fields, list boxes, calendars, and confirmation dialogs enrich the interface and enhance user engagement.
Enhanced Data Handling	Improved filtering, pagination, and sorting capabilities ensure more efficient data management, delivering better usability across the system.
Improved Tooltips	Clearer and more informative tooltips provide guidance in areas such as billing rates, helping users better understand platform functionality.
Improved OAV Template Management	Users can now duplicate and rename OAV templates, increasing flexibility. Additional explanation text can be added to templates, offering clearer guidance for usage and reporting.
Optimized Report Handling	Enhanced reporting functionality improves data retrieval and presentation, enabling users to create reports more easily. Updates to the report creation process and data visualization provide clearer insights.
Enhanced Resource Management	feature supports portfolio staffing, giving managers a comprehensive view of selected resources.

These enhancements collectively improve user engagement, streamline system workflows, and provide advanced tools to support efficient project and resource management.

Updates

This section highlights key updates to the Engenion platform, focusing on technical improvements, enhanced compatibility, and support for new features.

1.10.1 .NET 8.0 Upgrade

Engenion has been upgraded to .NET 8.0, offering the following benefits:

Package and Dependency Updates

Ensures seamless compatibility with .NET 8.0, improving stability and functionality across the platform.

Apple Silicon Support

Full compatibility with Apple Silicon architecture enables Engenion to run efficiently on a broader range of devices.

Docker Pipeline and Containerization

A new Docker build and push pipeline has been introduced for the Engenion project, including:

• Support for API containerization, with Linux as the default target OS.

• Enhanced database context and data entity support integrated with SQL Server, streamlining development and deployment workflows.

• A new versioning pipeline triggered by branch changes.

1.10.2 Database and Data Management

Engenion has been upgraded to .NET 8.0, offering the following benefits:

SQL Server Integration

Full integration with SQL Server using Microsoft Entity Framework Core 8.0.4 ensures more efficient and reliable data access.

Azure DevOps Pipeline Enhancements

Updated pipelines enhance compatibility with Azure SQL SaaS offerings, enabling smoother and more efficient deployments.

1.10.2 Database and Data Management

Engenion 2024.2 addresses several user-reported issues and system irregularities, ensuring improved platform stability and functionality.

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