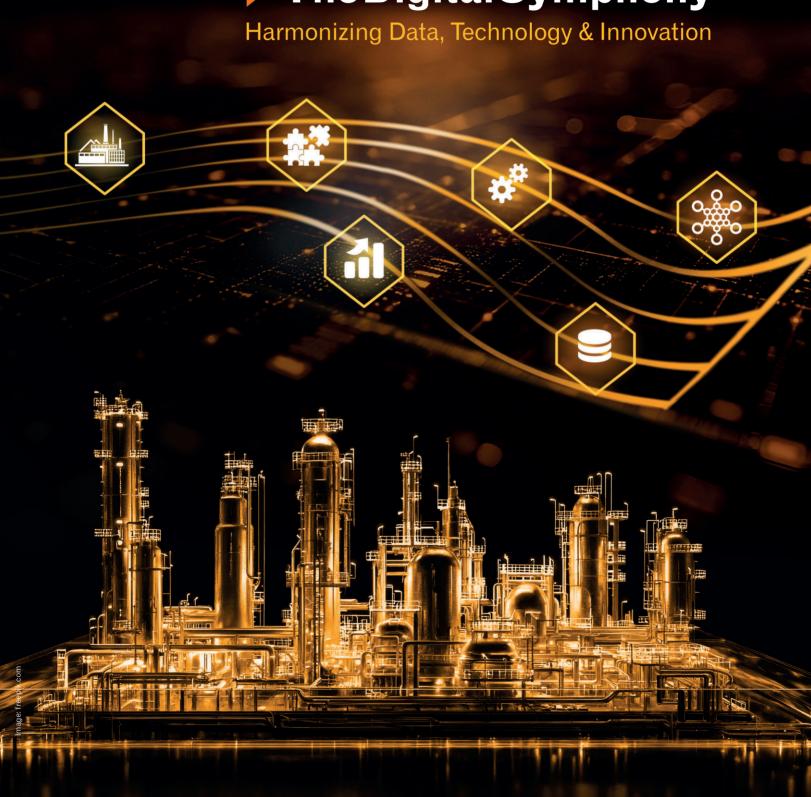
# CADISON WORLD

**EXPERIENCES & NEWS** 

## The Digital Symphony



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#### Imprint

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## **CADISON** 2025: Orchestrating a **Digital Symphony in Engineering**



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Dear CADISON Customers,

Welcome to the CADISON International Conference 2025!

We have a very interesting theme this year elucidating how CADISON has been the music to all the engineering ears! Just like any extraordinary symphony can only be created with diverse individual scores all harmonizing together with an intelligent orchestration, CADISON provides that smart and integrated platform where various independent disciplines, be it P&ID, Isometrics, Electrical, Steel, Catalogues, Project Engineering, interfaces to ERP and other applications; all are harmonized to produce a beautiful digital symphony for your enterprise engineering organization to improve productivity and efficiency.

Our upcoming release CADISON R25 is also loaded with numerous music bytes, the best of which being the automated "PDF to Intelligent P&ID," something which the industry always wished for! We have significantly enhanced our new product Share2Review, which also supports Plant3D, Revit and AutoCAD. We now have the "encryption enabled" version available to ensure you can meet the latest security standards. Additionally, we have improved our CADISON Electrical Designer and also support the NFPA standards aligning with our growing presence in North America. For effective collaboration, CADISON is enabled on Azure as well as AWS Cloud environment, in addition to Citrix. As AI is fast occupying the centre stage, we are ensuing that our solutions as well as our team is powered with the cutting-edge technology.

Thanks to your support, we are continuing to grow our presence globally both in terms of customers and employees. Neilsoft has opened an engineering office in Munich and we are now completely geared up to assist our DACH/European customers in engineering projects with local talent & support.

Enjoy the conference and of course the Digital Symphony of CADISON!

Sincerely,

The CADISON Executive Team

The industry has been entering a new era shaped by uncertainty and rapid digital progress. Success will depend on orchestrating data, technology, and people into one coherent performance. With a data-driven approach – and platforms like CADISON as enablers – companies can move from fragmented processes to a seamless flow that is efficient, resilient, and ready for the future.

he plant engineering sector is in the midst of one of the most profound transformations in its history. Geopolitical uncertainty, demographic change, the push for sustainability, and rapid technological advances are reshaping its foundations. To master these dynamics, the industry needs more than isolated innovations – it requires an orchestrated interplay of data, technology, and creativity. This is the idea behind our theme for this year's CADISON World, *The Digital Symphony*.

In such a symphony, data provides the score, technology the instruments, and innovation the creative spark. But harmony only emerges when everything plays together. Platforms like CADISON, which bring engineering processes and data into one integrated model, show how this principle can be applied in practice and turned into measurable value.

#### Data as the Score for Efficient engineering

Today's environment is marked by volatility, uncertainty, complexity, and ambiguity. Fragile supply chains, fluctuating markets, and cost pressures collide with low profitability. In this setting, a harmonized, data-driven approach becomes indispensable. Traditional projects often suffer from fragmented information, scattered across departments and tools. This slows decision-making, increases risks, and creates inefficiency. Data-driven engineering establishes a single, reliable Source of Truth across the entire lifecycle. From this score sheet, all stakeholders work in sync – reducing rework, accelerating schedules,

and enabling better decisions. With CADISON, for example, procurement lists, construction schedules, and commissioning plans can be generated directly from the engineering model, laying the foundation for modularization and standardization.

#### The Digital Twin:

#### The Live Orchestra of the Plant Lifecycle

A central enabler is the digital twin: a dynamic, virtual replica of the plant that mirrors its real-world counterpart. Supported by IoT, machine learning, and AI, it allows continuous optimization, predictive maintenance, and scenario simulations. In the language of the digital symphony, the twin is the live orchestra – always adapting, always refining.

Even the most sophisticated instruments cannot create harmony alone. Engineers, managers, and operators must embrace new ways of working and understand data as a core asset. Leadership, meanwhile, must provide vision, enable learning, and build trust – so that the entire organization can perform in tune.

#### Playing in Tune and embracing the Future

The road ahead is challenging but full of opportunity. Sustainability, efficiency, and resilience demand more than isolated innovation – they require a coordinated, data-driven approach. With engineering platforms like CADISON as practical enablers, companies can ensure that every note contributes to a performance that is efficient, sustainable, and future-ready.



CADISON R25 has continued to take you from the Magic of Data-Driven Engineering, by enhancing the collaboration and consistency in Plant design to a higher level of The Digital Symphony: Harmonizing Data, Technology & Innovation. The new Version comes with more usability enhancements driven by insights from industry leaders, current trends in the Process Industry, and the Key-user's feedback.

#### PDF to Intelligent P&ID: A Game-Changer for P&ID drawings in PDF

With CADISON R25, users can now instantly convert vector-based PDF containing a P&ID drawing into intelligent P&IDs – eliminating the need for manual recreation or drawings stored as PDF files. Using automated PDF import function, combined with OCR and machine learning, CADISON accurately extracts all relevant information from PDFs to create intelligent drawings. All extracted data is seamlessly stored in the CADISON database, enabling faster processing, improved accuracy, and effortless digital transformation of legacy P&IDs.

#### Share2Review (the Smart Share Hub) with CADISON R25

The Web Review & Redlining functions, first introduced in CADISON R23 and significantly improved in later versions, are now part of Share2Review, a renamed version of SmartShare Hub. Share2Review comes with enhanced capabilities such as:

#### Compare different versions of a file

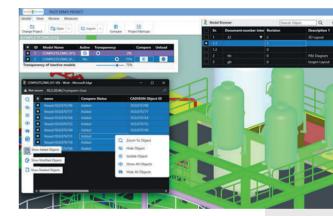
Multiple versions of a file can be uploaded from the Share2Review user-clients. Online Graphical comparison of two different versions is possible in Web browser with ability to show differences at object level

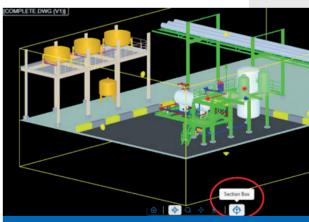
#### Extended comment handling

"Reply" function, enables bidirectional review communication between the designers and the reviewers. Comments and their replies can be seen in the Web browser and in Share2Review clients

#### Add Attachments while adding comments

Any file attachments like a photo of the real plant / real component captured using a mobile device can be added with the review comments. On Share2Review client side, the user can view all attachments provided with the comments.

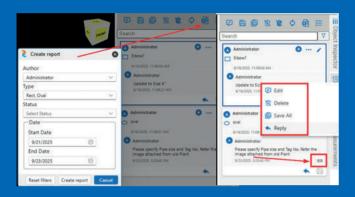


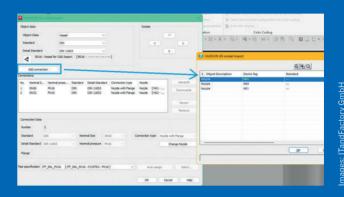


Creation of live section view: By using a section box in the Web browser, you can create section view of a 3D model.

The CADISON R25 Project Engineer also has improved functions for uploading and synchronizing the data of an entire project. It is now a one-button-push operation to upload any changed drawing files or even to synchronize all comments on the server and the CADISON project. When working with the PDF based redlining functions, it is now easier to import multiple PDF files with

- like IfcSite or IfcBuilding, CADISON can import all provided data of these objects
- Based on IFC object class and IFC object data for "ObjectType", it is now possible to define, which native CADISON object should be created instead of a generic IFC object. This allows it to use the correct CADISON object type for the piping material, like





redlining comments using Drag and Drop. By using the file names of the dropped PDF files, CADISON searches for the source drawing files in the project and assigns the files accordingly.

#### **Extended IFC interface in CADISON R25**

The IFC interface of CADISON R25 comes with new features and improvements. The new configuration option allows to create data which is better integrated with native CADISON data and structures.

## Following enhancements are available in the IFC interface:

- With the creation of logical structures and hierarchies during the import, IFC system objects from the IFC file can be generated as CADISON database objects to reflect logical structuring or grouping
- The IFC system object having a pipeline definition and containing all piping materials (fittings), CADISON can create a CADISON pipeline and attach all piping materials to the pipeline. CADISON can also create a default media object and a default pipe specification object for the correct CADISON data structure
- Automatic creation of pipelines after IFC import: In case the IFC file contains only piping material but no pipeline information, it is now possible to use the CADISON function "Organize project" to create pipelines (and a media and pipe specification), based on other piping material object properties
- IFC Import now considers more data of non-graphical IFC objects - For any non-graphical IFC object,

- pipes, arcs & elbows, tees, reducers, flanges, gaskets, etc.
- Support for CADISON Layer Manager: In case the IFC file provides layer information for objects, the IFC import can create the layers accordingly, and CADISON can connect the mesh entities with the CADISON Layer Manager and apply CADISON graphical properties. This process allows to change the object layer by changing the LAYER property, as any native CADISON object

## **CAD** Import and Inventor Import – enhanced functionality

CAD Import or Inventor Import function allows any valid 3D geometry to be imported and linked with existing CADISON objects, like vessels, heat exchangers, pumps, etc.

It is now possible from the Import dialog itself to link the imported geometry directly with a CADISON object. Furthermore, from this dialog, any defined connection can be linked directly with a nozzle of the existing object.

It is extremely easy now to link the imported 3D geometry to any existing object, such as a vessel that is already placed in a P&ID, including all nozzles.

There's a lot more to discover in CADISON R25 — with hundreds of new enhancements waiting to be explored.



CADISON R25 provides new functions which help to convert vector-based PDF files to intelligent PI&Ds. Instead of a manual recreation of P&IDs based on PDF files, CADISON supports the user to create the P&IDs in a much faster way by using automated PDF import. In combination with automated processing, OCR and machine learning features, it takes less time than ever before to convert the PDF file to a digital CADISON P&ID.

#### **Automated PDF import**

Any vector-based PDF file which represents a P&ID drawing can be imported with a new function in CADISON R25 Engineer. The import function does some pre-processing on the imported PDF file and creates a new CADISON P&ID drawing as per the PDF file. The vector graphic of the PDF file is automatically imported in the newly created CADISON P&ID drawing file, and everything will be prepared for further processing of the data.

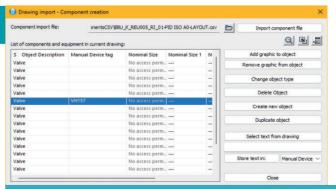
The automated PDF import function extracts all rele-

vant information from the PDF file. Based on the scale factor used in this file, the geometry in the created P&ID drawing can be created with the correct size. In addition, CADISON automatically starts an OCR process to recognize the details about the text provided in the PDF file. Finally, CADISON can also identify and extract information about component and equipment symbols which are shown in the PDF file. All the extracted information is stored in the CADISON database for reference and later processing.

#### Symbol recognition and creation

A new feature for automated recognition of symbols, such as components and equipment, is now in CADISON R25 Designer. Using machine learning, CADISON detects standard components from imported PDF geometry. The geometry of identified components is automatically converted to blocks, and a new CADISON database object is created and linked to each block.

Component and equipment creation is supported by a new, powerful dialog that, based on the machine learning output, offers functions for automatic creation and further semiautomated processing.



Main benefit: The dialog enables the user to define all components and equipment of a drawing in a fraction of the time which would be required to re-create the P&ID manually.

#### Pipeline recognition and creation

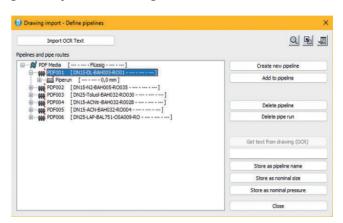
In CADISON R25 Designer, there is a new command to detect pipelines including their pipeline names (pipeline tagging) from the imported PDF geometry. The CADISON Designer offers a new easy-to-use dialog for the processing of the pipelines.

Based on the OCR process, Designer can "understand" pipeline tagging numbers. Based on the location of the identified tagging numbers, the CADISON Designer can automatically identify related pipe routes. For these pipe routes, the system creates new pipelines and applies the identified pipeline tagging numbers.

By using the functions in the dialog, it is possible to do further adjustments on the pipelines. Within seconds, the user can add further pipe routes and components of the pipelines. Plus, the system also enables to specify the nominal size of the pipe routes and pipeline by using the text identified by the OCR process. It is even feasible to create pipe specification information for

these pipelines, based on the name or standard of a pipeline, if this information is part of the pipeline tagging number.

With the help of navigation buttons, the user can easily navigate from the pipeline tree to the corresponding geometry in the drawing and vice versa.

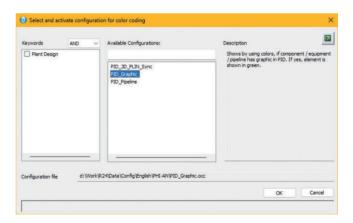


#### Visualization of ongoing digitalization process

During the semiautomated conversion of the analog PDF geometry to a digital CADISON P&ID, CADISON supports the user with a new function in the Designer to activate a so-called color coding.

By activating such a special color coding configuration, the analog and digital elements of a drawing can be easily seen. For example, during component and equipment recognition, it is supported to show all "digital objects" of the current drawing in green, while all "analog graphics" are still shown in their native color. Similarly, when working on the recognition and definition of pipelines, another color configuration can be used, to show "digital pipe routes" in green, while "analog pipe routes" are shown in their native color. In addition to pipe routes, the identified pipeline components (like valves) are shown in orange, as long as they are not assigned to a pipeline. On the other hand,

components which are already assigned to a pipeline, are shown in green. Furthermore, the color configuration functionality can be easily extended. The user can create any number of his own color definitions, based on his needs.



#### The Value of intelligent P&IDs

CADISON R25 turns P&IDs from any PDF-based planning system into fully integrated diagrams with connected data. Even bills of materials (BOMs) can be imported and linked to the graphics, bridging the gap between static documentation and intelligent engineering data.

Manual redrawing is no longer needed: all relevant information is automatically extracted, structured, and stored in the CADISON database. This streamlines workflows, reduces errors, and delivers consistent, reusable data.

For daily work, this means faster projects, lower costs, and higher accuracy. Documentation updates are simpler, even in complex brownfield projects, while operators and engineers can rely on up-to-date, intelligent information. CADISON R25 thus accelerates digital transformation and turns valuable process knowledge into a living part of the digital plant model.

# From Plan to Digital Reality: Data-Driven Engineering in Existing Plants

How HINE Increases Efficiency and Quality in Plant Design with CADISON



When it comes to modernizing existing industrial plants, many planning processes resemble a puzzle with missing pieces: documentation is incomplete, changes from earlier modifications were not recorded, and the actual on-site conditions often deviate significantly from theoretical records. Added to this is the pressure of carrying out modifications during ongoing operations – without time for long shutdowns and with a demand for maximum precision.

This is exactly where HINE AG comes in. The Swiss engineering

firm for process plants specializes in data-driven planning of brownfield retrofits. With an intelligently networked tool stack and the consistent use of 3D laser scans and databases, the company ensures transparency, efficiency, and a significant reduction of error sources.

## Engineering in Existing Plants: Multifaceted Challenges

Unlike classical greenfield projects, planners face numerous uncertainties when it comes to retrofitting or expanding existing facilities. Up-to-date documentation is often

missing, modifications were not updated, and the available records no longer reflect the true state of the plant. In addition, extensive coordination with operations is required – operations staff usually know the plant from a maintenance perspective, but not from a planning one.

"Our customers often say: 'Just build it like over there,' but 'over there' is 40 years old and complies with neither current standards nor the actual conditions," explains Christian Breuer, Department Head of Piping & Structural Design at HINE. This very discrepancy between expec-



tations and reality makes precise and clash-free planning so difficult. On top of that, planning must be carried out while production continues. This means minimizing downtime on one hand, while maximizing planning accuracy on the other.

#### **Specialist for Complex Retrofit Projects**

HINE focuses on the planning, expansion, and modernization of process plants - particularly in the chemical, pharmaceutical, energy, and food industries. Projects range from small-scale modifications to multimillion-dollar CAPEX undertakings.

The company's strengths lie in the combination of interdisciplinary engineering from a single source, early-stage digitalization using CADISON, laser scanning, and CAE, as well as extensive expertise in brownfield projects - even when documentation is incomplete or operations are ongoing. This is complemented by standardized yet adaptable workflows and a pragmatic, solution-oriented approach.

"We operate at the intersection of technology and practice. Our objective is not just to deliver correct drawings but to ensure genuine pro-



"In the past, we had to check many things manually. Today, I trust our data to be correct - and that saves enormous time, effort, and money."

Christian Breuer, Department Head of Piping & Structural Design, HINE AG.

ject security," says Breuer. Especially in projects with tight schedules, high coordination requirements. and limited space, HINE can fully leverage its digital planning depth - through early clash detection, precise integration of new components, or automated bills of materials.

#### **CADISON** as the Backbone of Project Execution

By introducing CADISON, HINE fundamentally redefined its planning logic. The software serves not merely as a drafting tool but as a central data platform for all disciplines. It integrates P&IDs, 3D models, and technical data into a consistent system - the "Single Source of Truth."

#### This offers clear Advantages:

· One-time data entry across all disciplines

- · Automatic updates upon changes
- Elimination of errors from media discontinuities

Role-based data entry masks ensure that each discipline works only with information relevant to them. "This saves time, avoids transfer errors, and improves data quality," says Breuer. The system also scores in documentation: standard formats can be derived directly from the model, changes are fully historized, and redundant entries are eliminated. This reduces both workload and risk.

#### **Decision for an Integrated Solution**

HINE's choice of CADISON was deliberate: not as a replacement for a drafting tool, but as a foundation for seamless data-based workflows.

"In the past, our planning was heavily document-centric. Each discipline maintained its own Excel sheets, drawings, and forms - leading to significant friction losses and transfer errors," explains Breuer. "Our goal was to break down these information silos and create a consistent data basis."

CADISON convinced HINE with its seamless integration of P&ID, 3D design, and database in one system. The software adapts flexibly to internal processes and role logics, offers standardized but configurable libraries and workflows, and provides future-ready interfaces to applications such as Rohr2, Navisworks, or IFC. Point clouds from



3D laser scans can also be easily incorporated.

Unlike many other solutions, CADISON enables structured, object-oriented modeling in which technical properties, positions, materials, and interconnections are directly linked to components. The result is a consistent digital twin of the plant that remains up-to-date and analyzable at all times – for planning, execution, and later development.

## More Than Software: The Key was New Processes

The true success of HINE's digital transformation was not simply introducing new software, but boldly and systematically reworking its methodology. Planning processes were fundamentally rethought to fully exploit CADISON's potential – particularly with regard to the specific requirements of brownfield projects.

"We didn't just implement CADI-SON and continue as before. We completely challenged our processes-from the first inquiry through basic engineering to on-site support," emphasizes Breuer. This included defining clear roles and data responsibilities, developing tailored data masks and templates, and building reusable component libraries.

Structured reviews and approval processes along the digital model were also essential. Today, these measures enable planning with higher certainty, shorter lead times, and better interdisciplinary coordination – especially in critical phases such as last-minute modifications during operations or when working within tight tolerances.

## 3D Laser Scanning for accurate As-Built Capture

Another key element in the data-driven planning process is the integration of 3D laser scans.



These capture the as-is condition of existing plants with millimeter precision. The resulting point clouds are imported into CADISON and serve as a basis for planning new components or modifications. HINE goes beyond mere visualization: relevant geometries are modeled from the point cloud so they actively contribute to planning. "Particularly in confined spaces or complex retrofits, this allows us to detect and avoid clashes at an early stage," explains Breuer.

## The Successes of this data-driven Approach HINE are clear:

- Reduced planning times through standardized libraries and automated functions
- Higher planning reliability thanks to early clash detection
- Less downtime on-site, as planning is more accurate
- Consistent documentation (e.g., bills of materials or isometrics) generated directly from the model Clients also benefit directly: "Many only realize after the first project with us how valuable consistent and reusable data can be," says Breuer. This is particularly true for long-term partnerships where catalogues, pipe classes, or specifications are already in place and don't need to be recreated.

## Lessons Learned: Digitalization requires more than Software

The introduction of CADISON at HINE was not a pure software pro-

ject, but a cultural transformation. Workflows had to be rethought, employees trained, and responsibilities clearly defined. "The biggest effort wasn't the software itself, but tailoring it to our processes," Breuer summarizes.

The rollout was gradual and accompanied by continuous process development. The key takeaway: anyone who wants to work data-driven needs more than just tools – they need clear standards, a suitable project organization, and a willingness to change.

#### Conclusion: data-driven Planning pays off – for all Stakeholders

With its approach, HINE proves that data-driven engineering is not limited to large corporations. Even medium-sized engineering firms can achieve significant impact with a clear concept, the right tool stack, and consistent implementation.

The shift from drawing-based to data-driven planning pays off – not only for HINE itself but also for its clients. Efficiency, quality, and transparency increase, while the risk of errors and rework decreases.

All photos and images: HINE AG.

# **Seamless Collaboration for Smarter Plant Design Reviews**

Three Collaboration Paths. One Goal.



Design reviews are critical checkpoints in plant engineering projects. Yet, too often, teams are hindered by complex workflows, lack of CAD access, or expensive software requirements for reviewers. Share2Review changes the game by enabling seamless collaboration without the need for additional CAD licenses.

With online collaboration, comprehensive review features including redlining, and support for both 2D and 3D

models, the solution ensures a smooth and transparent review process. Standardized workflows integrate both internal and external stakeholders, while all comments are consolidated in a structured and traceable way. However, every project and every reviewer is different. That's why Share2Review offers three distinct collaboration paths, all leading to the same goal: an efficient, streamlined, and user-friendly review process.







#### 1. Review via PDF

Sometimes, the simplest solution is the most effective. With Share2Review, CAD files can be exported to PDF and distributed via email to internal or external reviewers. Using nothing more than a standard PDF viewer, reviewers can analyze 2D and 3D views, add comments, perform redlining, and check metadata. Their feedback is then re-imported into CADISON, where changes are visualized and aligned with the original design. This path makes collaboration accessible even to stakeholders with no CAD knowledge.

#### 2. Review via Web

When large teams and distributed stakeholders are involved, the webbased path offers the greatest flexibility. Lightweight format files of 2D schematics and 3D models with complete geometry and associated metadata are generated and published to a secure web server of your choice, and reviewers receive a link by email. From any browser, they can view, comment, redline, and even see others' feedback in real time. Advanced functions like filtering, searching, and measuring ensure clarity even when handling a large volume of comments. Automated consolidation synchronizes feedback chronologically, giving CAD users full visibility and control.

#### 3. Review within CADISON

For teams already working inside CADISON, Share2Review provides an integrated path. Reviewers can directly view 2D drawings, 3D models, components, and fittings, along with their associated details in an embedded viewer in Project Engineer module, without the need to open the original design files in Designer modules.

#### One Platform, multiple Paths

Whether through universally accessible PDFs, or via powerful web collaboration, or with embedded viewer in Project Engineer, Share2Review adapts to the needs of every project and every reviewer. The result: a more inclusive, cost-effective, and transparent review process that keeps engineering projects moving forward without disruption.

#### Beyond CADISON: Share2Review for AutoCAD®, Plant 3D, and Revit®

Share2Review extends its benefits beyond a single platform. The solution is also available for AutoCAD, AutoCAD Plant 3D, and Autodesk Revit, ensuring the same smooth review experience across the most widely used engineering tools.

- AutoCAD Export 2D/3D PDFs, annotate with any standard PDF tool, bring the feedback back into AutoCAD and see it directly on the CAD drawing.
- Plant 3D Leverage PDF-based as well as web-based viewing and review capabilities. Share piping and plant layouts through a secure browser interface, where reviewers can redline, comment, and collaborate in real time - without CAD licenses.
- · Revit Empower architectural and MEP design reviews with both PDF markup workflows and webbased review features which ensures all stakeholders can access, comment, and consolidate feedback efficiently.

By supporting multiple CAE platforms, Share2Review ensures that teams across disciplines can collaborate without barriers, reduce dependence on costly licenses, and keep all stakeholders engaged in a unified, transparent review process.

> No matter which design environment your team works in, Share2Review makes reviews simpler and more connected.





### **Modules & Interfaces**





#### Share2Review

A CAD - independent platform to publish and share lightweight 2D and 3D models for seamless review, annotation, and approval of plant designs.



Enables integration of CADISON engineering workflows with business systems and document management, allowing external access and dynamic data exchange.

# Specialty Chemicals Manufacturer Kuraray Europe Embraces Data-Centric Engineering

What can be done when costs are rising and fewer employees are available to handle engineering tasks due to demographic changes? Specialty chemicals manufacturer Kuraray Europe is addressing these challenges with a comprehensive digitization strategy and the implementation of CADISON.

igitalization is transforming plant engineering, replacing siloed tools with a data-driven approach built on a single database - the "single source of truth." This ensures consistent, up-to-date information across design, maintenance, and production, reducing errors and inefficiencies. Automated workflows accelerate change management, documentation, and inspections, boosting both efficiency and quality. A central data pool also enables Al-driven optimization and predictive maintenance, making data-centric engineering a key Industry 4.0 technology. Kuraray Europe embraces this strategy to enhance competitiveness through efficiency, accuracy, and adaptability. In an interview, Kuraray and ITandFactory experts share insights into their CAE digitization project, its challenges, and real-world benefits.

## Interview with André Ziese and Ayhan Sidal from Kuraray Europe GmbH, and Michael Brückner from ITandFactory GmbH

## Digitalization is about more than technology – it's about processes and people.

Mr. Ziese, Kuraray Europe has made a significant step toward CAE digitalization at its production site in Frankfurt with the implementation of CADISON. What prompted this move?

André Ziese: Our production facilities in Frankfurt have a long history. Over the decades, data accumulated in various systems, paper documents, and Excel spreadsheets. The biggest challenge was making

data. The parallel use of different systems also led to inconsistencies and problems. We realized we needed a central data platform that enables fast and error-free access.

What role did the IT department play in this project?

**Ayhan Sidal:** IT was deeply involved from the very beginning. One of the biggest challenges was integrating CADISON into our ex-

"One of the biggest technical challenges was integrating CADISON into our existing system landscape."

Ayhan Sidal, Director DX-IT at Kuraray Europe

this information usable in an efficient way. Engineers and technicians spent a lot of time searching for up-to-date plans or technical isting system landscape. We were already using tools like Prodok for instrumentation and control planning and Maximo for asset man-

agement. It was crucial to find a solution that integrates seamlessly and doesn't become just another isolated system. We also had to ensure that system performance remained high - even when accessed across locations.

#### Mr. Brückner, given this context, what advantages does the CADISON platform offer?

Michael Brückner: CADISON was specifically developed for engineering and combines CAD, database, and document management in a single platform. One major advantage is its bidirectional interface with systems like Prodok, allowing for automatic synchronization of data without redundant maintenance. Moreover, its object-oriented data structure transforms simple drawings into intelligent documents.

#### What challenges did you encounter during implementation, and how were they addressed?

André Ziese: The biggest hurdle was organizational change. Digitalization involves not just technical updates but also new workflows and employee involvement. We had to define standards and adapt processes to make the most of CADISON.

"From the beginning, it was clear to us that this is not just about technology, but about the right workflows. Database-driven work requires rethinking and standardizing processes."

automated.

André Ziese, CAE Digitization Project Manager at Kuraray Europe

Data migration was more demanding than expected since we first had to clean up outdated and redundant structures.

Ayhan Sidal: Another challenge was ensuring user acceptance. New systems often face resistance. It was important to us that performance was optimal - a slow or unAndré Ziese: One particularly useful feature is the ability to edit flow diagrams in various formats and convert them without data loss. Process engineers can make guick adjustments directly in Visio, while the engineering team uses more powerful CAD tools. This creates greater flexibility and efficiency.











Michael Brückner

stable system won't be used. We facilitated adoption through training and user-friendly interfaces.

#### What concrete improvements have you already seen?

Michael Brückner: The central database ensures that all departments access a uniform data foundation, which significantly reduces

error sources. Engineers and main-

tenance staff save considerable

time by quickly finding and using

the information they need. Pro-

cesses that were previously manu-

al and error-prone are now largely

#### What's next for the project? Are there already plans for further steps?

Ayhan Sidal: In the long term, we aim to use our data-centric approach to develop a digital twin of our plants. This would provide a complete, always up-to-date digital replica of our production environment - simplifying maintenance

"The central database ensures that all departments can access a unified data foundation, significantly reducing sources of error."

Michael Brückner, Technical Director at ITandFactory

and enabling AI-powered analytics and predictive maintenance.

André Ziese: More specifically, we are currently converting our Redlining processes from analog to digital, using a built-in CADISON tool. Our goal is to reduce the workload involved in modernizations, documentation, and reconciling target vs. actual states. We're also planning to roll out the platform to other sites once the process has been optimized for operational use in the POVAL division. Our experience so far shows that the transition is worthwhile for ongoing operations. Even though the path wasn't always easy, we've now reached a point where we can reap the rewards of our efforts.

# Optimizing Oil & Gas Project Efficiency: Vision Engineering & Consultancy's Success Story with CADISON

Vision Engineering & Consultancy (Vision E&C) is a leading service engineering firm specialized in Detail design and As-Is design using 3D intelligent modeling. Their core services include Design, 3D Laser Scanning, Digital Twin "As-Is" services, Project Management Consultancy, Procurement, Construction Management, Health & Safety Management, Commissioning and Start-up. With operations spanning across Romania, Austria, Serbia, the Middle East, and the USA, Vision E&C is dedicated to delivering high-quality engineering solutions, making them a major player in the Oil & Gas industry. With a portfolio consisting of 80% Brownfield and 20% Greenfield projects, the company has built a reputation of having a 'client-first' approach.

#### **Challenges Prior to CADISON**

Vision E&C's small but highly experienced team faced a series of challenges that hindered their ability to execute projects efficiently and in a cost-effective way:

#### Brownfield Project Complexity:

A major part of Vision E&C's project portfolio consists of Oil & Gas Brownfield expansion projects. These came with unique set of challenges due to limited or outdated documentation availability, either in physical or digital formats, be it the planning and layouts, P&IDs or the 3D models. Laser scan files and point-cloud data required extensive processing for As-Is design modelling, such as importing the laser scan data in .rcp files followed by processing and registering the point clouds and then taking dimensional consideration based on it.

**2** Tool and Process Inefficiencies:

The design tools used earlier were expensive and less userfriendly, requiring extended periods of training which would cause delays in project execution. The team felt it was difficult to grasp the unnecessarily complex functionalities of the existing software, resulting in a steep learning curve which in-turn affected their design and engineering outputs.

- Cost and Schedule Overruns:

  Complex user-interface, inefficiencies in existing design workflows and data management led to a huge increase in project costs and a 30% 40% overrun on project schedules.
- Requirement for Expertise-Based Manpower:

  The existing design tools meant reliance on specialized personnel with specific technical know-how which increased the operational cost overheads.



#### Why Vision E&C Chose CADISON: The Advantage

Faced with several challenges with the existing solutions, Vision E&C began searching for a userfriendly 3D modelling solution that could address their pain points while remaining cost-effective. **CADISON** emerged as the ideal choice due to its:







**Cost Efficiency** 

**User-Friendly Interface** 

**Persuasive Communication** 

**CADISON** offered competitive licensing costs compared to other industry-standard tools.

**CADISON's intuitive** interface offered a short learning curve for their new team members, leading to faster project deliveries.

The CADISON sales and support team communicated effectively throughout the process and provided high-quality support, addressing any initial hurdles during new project execution.





#### **Implementation Journey with CADISON**

Vision E&C had a remarkably smooth transition to CADISON. The implementation process took only a few weeks, during which the CADISON team worked closely with Vision E&C team to ensure:

✓ Easy Installation and Implementation:

The software was configured to align with existing workflows.

✓ Responsive Onboarding and Comprehensive Training:

With a familiar CAD interface, the hands-on training sessions turned out to be quite insightful and interesting for the Vision E&C team.



#### **Key Benefits of Leveraging CADISON**

✓ Effective and Efficient Project & Data Management:

CADISON's centralized database and built-in PDM Module allowed effective data storage which led to enhanced data consistency, efficient project management and seamless sharing of information among team members with minimal design errors. Consistent updates across project stages helped the Vision E&C team to reduce their data losses.

Reduced Modeling Time:

CADISON features such as Construction Set, Tank Assistant, Configuration Files and Mass Edit of object properties, Export & Import of data with Excel spreadsheets along with a strong library of component specifications, pipe classes, material specifications and vendor catalogs required in Oil & Gas projects accelerated the design process, ensuring faster project submission timelines.

✓ Easy & Stress-free Documentation:

CADISON's built-in functions such as isometric generation, 2D GA extraction, section creation and automatic report generation helped reduce manual effort by automating tasks and allowed engineers to focus on high-value activities.



#### The Impact: CADISON as the Ultimate Solution

The implementation of CADISON resulted in significant improvements, addressing both their brownfield and greenfield projects:

✓ On-time Project Delivery:

Utilizing CADISON, Vision E&C saw a significant reduction in engineering manhours by up to 70%.

✓ Improved Project Costs:

Vision E&C achieved a 17% cost saving on their first project using CADISON compared to earlier tools.

**✓ Enhanced Accuracy:** 

CADISON's data-driven design helped Vision E&C minimize manual errors, ensuring high-quality outcomes.

#### ✓ Scalability:

CADISON, based on commonly used CAD platform, reduced dependency on specialized personnels. Now Vision E&C can scale up their design team as per project requirement with almost no training.

#### **✓** Improved Collaboration:

Centralized data workflows facilitated better collaboration across project teams and ensured compliance with industry standards.

#### **Before Utilizing CADISON**



Timelines
Slip by
40%+!

Heavy Reliance on Niche 3D Design Experts!

#### After Implementing CADISON







Cut Manhours by Up to 70%!



No More Specialist Bottlenecks!



"CADISON is a game-changer for our operations. Its user-friendly interface and cost-effectiveness allowed us to streamline our workflows and stay competitive in the Oil & Gas sector. We're confident in CADISON's ability to handle complex projects and look forward to expanding its use across our teams. In fact, we feel that CADISON has the capabilities and the power to be an alternative to well know 3D design software in the Oil and Gas industry."

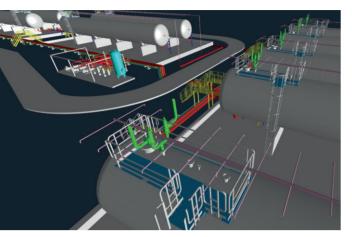
Georgian Marzea, General Manager, Vision Engineering & Consultancy

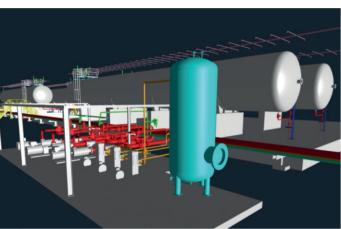
#### Additional Benefit: Plant Design Engineering Services

Despite possessing an adept in-house engineering team, Vision E&C faced resource bandwidth constraints due to simultaneous involvement in numerous projects. This limitation jeopardized timely project delivery. With significant projects on the horizon, Vision E&C recognized the imperative need for a dependable, efficient and domain-knowledgeable external engineering partner and sought a solution to bolster their internal capabilities. After a meticulous evaluation of multiple options, Vision E&C opted for the CADISON team, confident in CADISON's prowess to address their unique challenges and deliver superior results within set timelines.

#### Why Vision E&C Entrusted the Service Project to CADISON Team

- Proven track record as an engineering partner
- Established and robust offshore Project Management System
- Superior customer service systems with transparent communication channels
- A skilled engineering team with domain expertise
- Adaptable team structures to swiftly adjust to Vision E&C's evolving business needs
- Dedication to customer satisfaction, evidenced by active project monitoring and weekly team communications









#### Scope of Work: Detail Engineering

#### Catalog and Pipe Specification Creation:

Development of customized pipe specifications in compliance with ASME standards. Creation of comprehensive equipment and valve catalogs using MATPIPE.

#### Steel Structure:

Steel Structures and Pipe Supports were designed with a focus on structural integrity, safety, and adherence to project specifications.

#### 3D Modeling:

Design of equipment with precise nozzle orientation. Modeling of various equipment foundations and road networks. Development of the loading facility model, ensuring compliance with safety standards.

#### 3D Pipeline Routing:

Routing of pipelines with a focus on both safety and cost efficiency. Strategic placement of inline components, including valves, strainers, and filters. Modeling of the firefighting system in compliance with safety standards.

#### Isometric Creation from 3D:

Detailed isometric drawings were produced to provide a clear three-dimensional view of piping components. These drawings were supplemented with 3D visualizations to streamline the fabrication process.

#### GA Extraction for Detailed Layout:

General Arrangement (GA) drawings were produced to illustrate the comprehensive layout and arrangement of equipment, structures and pipelines within the project.

The CADISON team's expertise, innovation and commitment to excellence, combined with the advanced capabilities of the CADISON software, empowered the Vision E&C Team to confidently meet project deadlines with improved system efficiencies and cost-effectiveness.

This partnership underscores CADISON's ability to provide a cost-effective alternative to traditional 3D Design tools for complex industrial assets while enabling smooth and effortless onboarding, addressing both Brownfield and Greenfield project needs with ease.

In future, Vision Engineering & Consultancy intends to expand CADISON's usage to additional projects and continue leveraging CADISON to stay competitive amidst evolving trends in the Oil & Gas sector.

All images provided by Vision Engineering & Consultancy



Neilsoft, headquartered in Pune, India, has over three decades of experience as a trusted global partner delivering multi-disciplinary engineering and technology-driven solutions. With the launch of our German subsidiary, we are strengthening our presence in the DACH region and extending our focus to the Middle East and North Africa.

Our mission is to combine global expertise with local presence, enabling clients to design, build, and operate complex facilities with efficiency, safety, and innovation. From Munich, Neilsoft GmbH will initially concentrate on multi-disciplinary engineering services for process facilities, with an emphasis on:

- Feasibility Studies & Basic Design delivered directly from our Munich office, providing close client collaboration and alignment with regional standards
- Detailed Design & Engineering Execution carried out in close cooperation with our experienced back-office teams in India, ensuring scalability, cost efficiency, and depth of expertise
- Plant Digitization & Smart Engineering including digital twins, BIM, and intelligent data management to improve project delivery and lifecycle performance

Piping, Mechanical, Electrical & Instrumentation
 Engineering – integrated services supporting safe,
 reliable, and cost-effective facilities

## **Providing Architectural Design Support and Engineering Services**

As our Munich team grows to around 15 employees, we will further broaden our European offerings to include architectural design support, building engineering, and manufacturing engineering services, reflecting Neilsoft's full global capabilities.

The Munich office is designed to be the gateway for our clients in DACH, the Middle East, and North Africa to access Neilsoft's international delivery model. By combining local expertise and client proximity with the scalability and technical strength of our global network of over 1,600 professionals, we provide tailored solutions that balance quality, efficiency, and flexibility. We are excited to begin this new chapter in Munich and look forward to building long-term partnerships with clients, partners, and colleagues across our focus regions. Together, we will drive engineering excellence

and digital transformation in the built environment.

### **POWERING THE FUTURE:**

# How GIA Slovakia Leveraged CADISON to Expand into the Digital Asset Management

GIA Slovakia, spol. s r.o. is a specialized engineering company that provides a comprehensive range of technologies for petrol & gas fuel dispenser, EV chargers and alternative fuel stations. In addition to supplying individual components such as dispensers, totems, cash registers, control systems, power distribution networks, and storage tanks, the company also offers full-service construction and renovation of gas stations on a turnkey basis.

#### **Business Challenges**

One of the key challenges GIA Slovakia faced was dealing with incomplete, outdated, or missing documentation across multiple sites. The facility management companies responsible for maintaining these records and documents often neglected the need for digitalization. The lack of digital and updated records presented hurdles in providing efficient and accurate engineering services and maintenance at sites.

Recognizing this as a business opportunity, GIA Slovakia sought to provide its clients value-added services by digitalizing facility documentation, creating digital twins, and establishing centralized repositories of all the relevant project data for enhanced asset management. To accomplish this, they required a versatile and automated engineering platform that could streamline their processes and integrate the existing designs & documents in their system.

#### Why CADISON?

During their evaluation process, GIA Slovakia identified two primary factors that made CADISON the ideal choice:

- Versatility CADISON offers a comprehensive suite of engineering modules, catering to different disciplines within a single platform.
- Automation The solution allows for the automation of commonly used design processes, reducing manual efforts and accelerating project timelines and accurate deliverables.







The company prioritized an "All-in-One" solution to streamline engineering operations. CADISON's integrated workflow and ability to support multiple disciplines: process, mechanical and electrical aligned perfectly with their requirements. Additionally, automation of frequently used design tasks played a crucial role, enabling faster and more efficient design execution.

By adopting CADISON, GIA Slovakia could now perform multi-disciplinary engineering within a single, unified platform. The solution's seamless integrated approach for project and document management, mechanical design, process design, piping & steel structure modeling, drafting electrical schematics, vendor catalog management along with customizable deliverables, significantly improved their workflow.

#### **Results & Benefits**

#### The adoption of CADISON delivered tangible improvements, including:

## EFFICIENT PROJECT MANAGEMENT

through a built-in database, integrated workflows and automated design processes

## ENHANCED COLLABORATION

with a structured, digitalized engineering process

## STREAMLINED DESIGN EXECUTION

by leveraging multidisciplinary engineering capabilities

"It is now possible to do various discipline engineering in one tool."

#### **Customer Experience & Support**

GIA Slovakia values the exceptional customer service provided by the CADISON team, highlighting support in integration, training, and ongoing assistance. Their pre-sales and technical support experiences were also positive, with quick resolutions to compatibility issues ensuring smooth operations.

#### Conclusion

By embracing CADISON, GIA Slovakia successfully transformed its approach to engineering and asset management, turning a critical industry challenge into a strategic business advantage. With a fully digitalized, centralized, and automated engineering workflow, the company has not only enhanced operational efficiency but also expanded its service offerings to provide innovative digital asset management solution. CADISON's versatile, all-in-one platform has empowered GIA Slovakia to streamline multi-discipline

engineering, improve collaboration, and deliver faster, more accurate designs. As a result, the company is now better equipped to serve its clients with cutting-edge digital twin solutions, setting a new standard for the future of fuel station infrastructure management.

With CADISON as a trusted technology partner, GIA Slovakia continues to drive growth, efficiency, and digital transformation, ensuring a smarter, more connected future for the industry.

## **CADISON** Around the World



#### **Transforming Plant Design with Data-Driven Magic**

November 2024 · Bad Soden, Germany

100+ customers, partners and industry experts explored engineering innovation at **CADISON International Conference 2024** 



**CADISON University** 

February 2025 · Mumbai, India

Keynotes, customer talks & CADISON preview



#### **CADISON** at World Hydrogen North America

March / April 2025 · Houston, Texas, USA

Introducing CADISON at the leading hydrogen congess. to global industry experts



#### **Global Sales Conference**

April 2025 · Pune, India

International teams of Neilsoft and ITandFactory aligned on BIM for engineering, data-driven plant design & strategy



**Hydrogen Future Event** 

April 2025 · Edmonton, Canada

Showcasing CADISON at North America's largest hydrogen convention



#### **Pipeline Technology Conference**

May 2025 · Berlin, Germany

ITandFactory sales team joined the Neilsoft booth for PTC, to highlight CADISON's advantage for in pipeline projects



#### **Team Spirit in Action**

May 2025 · Sulzbach / Frankfurt, Germany

Annual Kick-off: All ITandFactory colleagues shared learnings & new initiatives

### **Customer Voices**

From Pune to the World: What Drives Companies to Choose CADISON. Insights from MEDAS and ChemVap Engineering, India and ASSCO Engineering AG, Switzerland.



"Working with CADISON has been a game-changer! The software helped us overcome challenges with section layouts, P&IDs, and BOM revisions, ensuring better integration and fewer inconsistencies. CADISON team's prompt and reliable support made project execution seamless. A great partner for our needs."

- Abhay Chaudhari - Managing Director, MEDAS EnggDesign Pvt. Ltd. (MEDAS), Pune, India.

MEDAS is a leading process solutions company which offers single point services to the alcohol/ethanol industry, food and beverage industry including dairy and fruit processing.



"CADISON has been instrumental in enhancing our engineering capabilities for Evaporation and ZLD systems. Its integrated engineering tools help us execute complex projects with speed, accuracy, and reduced rework. The platform supports seamless collaboration across disciplines, making it a key asset in delivering sustainable and efficient process engineering solutions."

- Satyavan Bhumkar - Managing Director, ChemVap Engineering Pvt. Ltd. (ChemVap Engineering), Pune, India.

ChemVap Engineering is a leading process engineering company delivering endto-end solutions in evaporation, ZLD, distillation, and water & wastewater treatment - from concept to commissioning.



"The interaction between P&ID and 3D planning is of enormous importance for us. CADISON allows us to work in parallel with several colleagues from different disciplines on the same project. And this largely without loss, since the data is stored centrally and everyone involved has access to it."

- Marco Bascio - VDC Manager, ASSCO Engineering AG, (ASSCO), Dietikon, Switzerland. ASSCO Engineering AG is a Swiss-based Process Engineering company that has been delivering end-to-end engineering solutions across chemical, pharmaceutical, food, and cosmetic industries for decades.

#### **FOLLOW US!**

Stay connected with CADISON and the ITandFactory team. Get the latest updates, insights, and news on our social media channels.











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