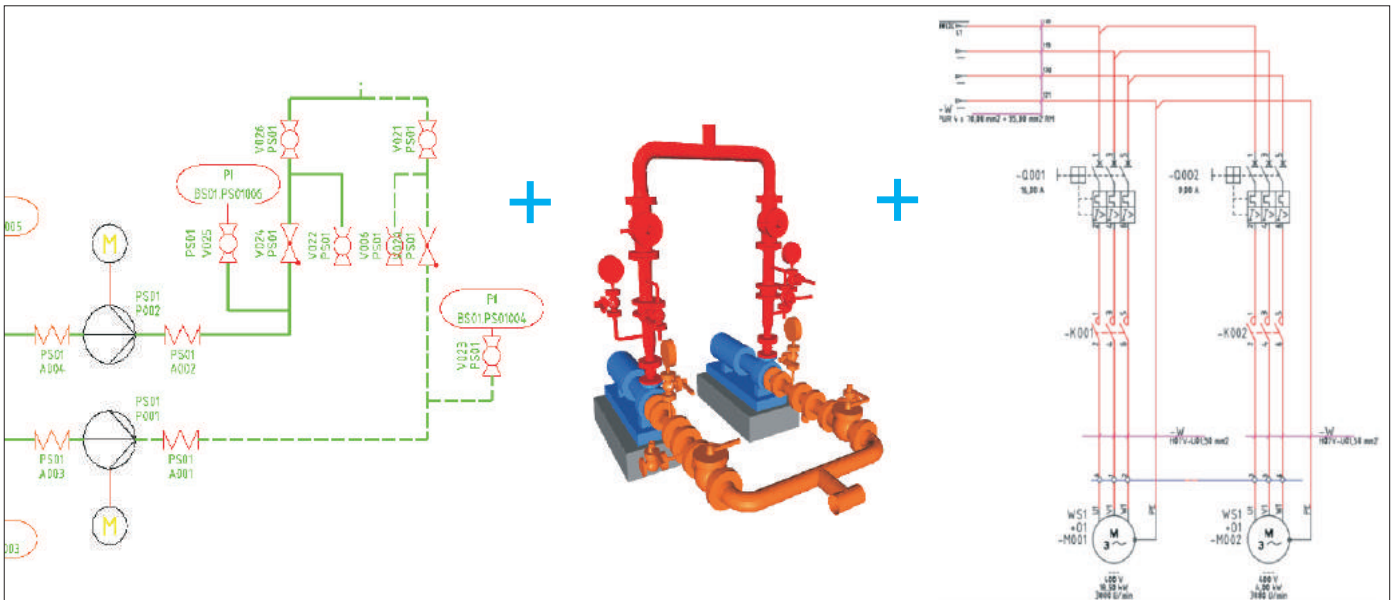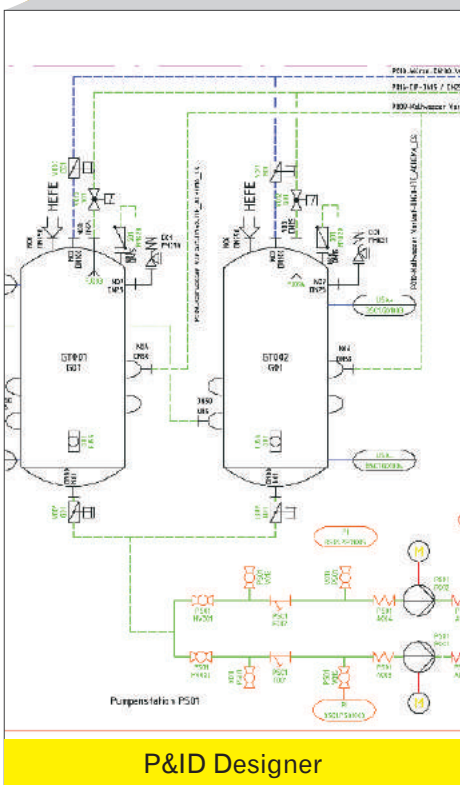# CADISN® WORLD

EXPERIENCES & NEWS

Introducing **CADISON R20**, Enhanced **CADISON** Explorer, Task Container, IFC Revision Management, **CADISON** Administrator... many more
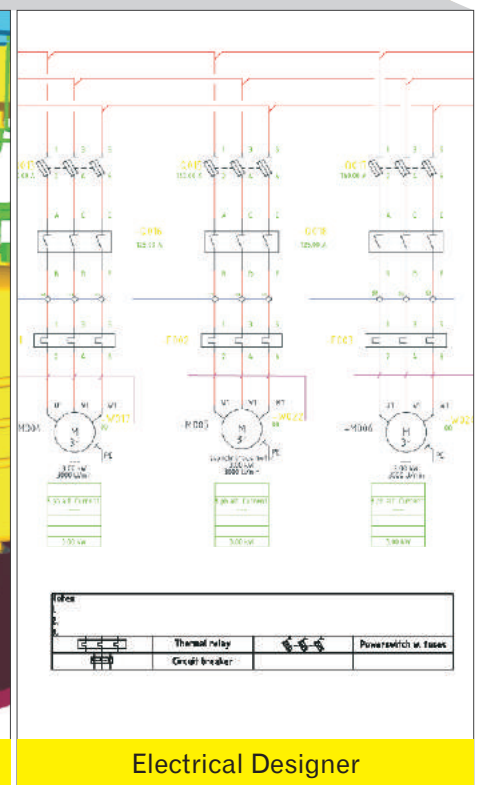

Each discipline uses the output from other team to create a multi-disciplinary Extensible Construction Set and reuse in current as well as new projects

P&ID Designer

3D Designer

Electrical Designer

Reuse Existing Design to Create New Designs

Index

https://www.linkedin.com/company/cadison

https://www.xing.com/companies/itandfactorygmbh

https://www.youtube.com/user/ITandFactory

| Ralf Lehmann | Ajit Joshi | Michael E. Brueckner |
| Stefan Kraus | Falko Meier | Prashanth Chunduri |

Dear CADISON Customers,

Welcome to CIC 2020! These are the unprecedented times when the world is going through one of the most difficult crisis in the recent history. We are witnessing many of the erstwhile Engineering practices undergoing a transformation driven by the safety measures to counter the Covid-19 pandemic. Digitalization, Collaboration, VR and AI are driving more 'Intelligent' systems and CAD led Design is getting replaced with Engineering led Design.

Safety of our employees, customers and their families, without compromising the business objectives & commitments, is of utmost importance to us. We are very happy to inform that all of our customers have been able to work from home quite effectively with CADISON.

While we are continuing to grow the CADISON footprint in our home markets viz, DACH and India over last year, we added new CADISON customers in Italy, Spain, Poland and South Korea. We are also strengthening our team and upgraded our infrastructure globally to service our growing customer base, conducting online trainings, online installation and update services.

We are excited to launch the CADISON R20 in early 2021, which is replete with numerous enhancements of your interest, viz, Updating imported IFC data / revision handling of imported IFC files, Reuse IFC export in CADISON 3D drawings, Enhancements in CADISON Database-Administrator tool, Improved Pipeline designation, Enhanced CADISON Explorer, New Construction Set Editor, Support of CADISON templates in Isometric styles with I-Configure tool and Enhanced Task Containers for status updates.

We are also working to release Partwise Duct Routing in subsequent releases. Recently, we released new modules like CADISON Equipment Simplifier, Process Step Documenter, IFC Interface and Catalog2Cloud. We will release a new solution 'DGRL' for auto-classification of all pipelines and equipment into the category of the Pressure Equipment Directive (RL 2014/68/EU). In future, we will work on VR solutions for Plant Design and enhanced features related to the Skid Designs.

Sincerely,
The CADISON Executive Team

Top Features of CADISON R20

CADISON Database Administration made easy

In response to the requests from some of our customers with a global presence, now CADISON R20 comes with much more easy way of Database Administration.

This is possible with enhanced CADISON Database Administrator which now provides user friendly graphical interface for routine tasks like commonly used database cleaning options, stopping the database, backup database and more.

Other CADISON Administration tools like Database Cleaner, Backup & Restore, System Analyzer are available at one place which makes the navigation through multiple tools easy.

Important information for every database is always in front of your eyes like number of connected users, errors, locks, fill-factor and more information for these can be obtained via context menu options.

Uninterrupted working of CADISON can be obtained by maintaining the health of databases. CADISON's new Database Health Filter helps the administrator to focus on the databases which needs attention.
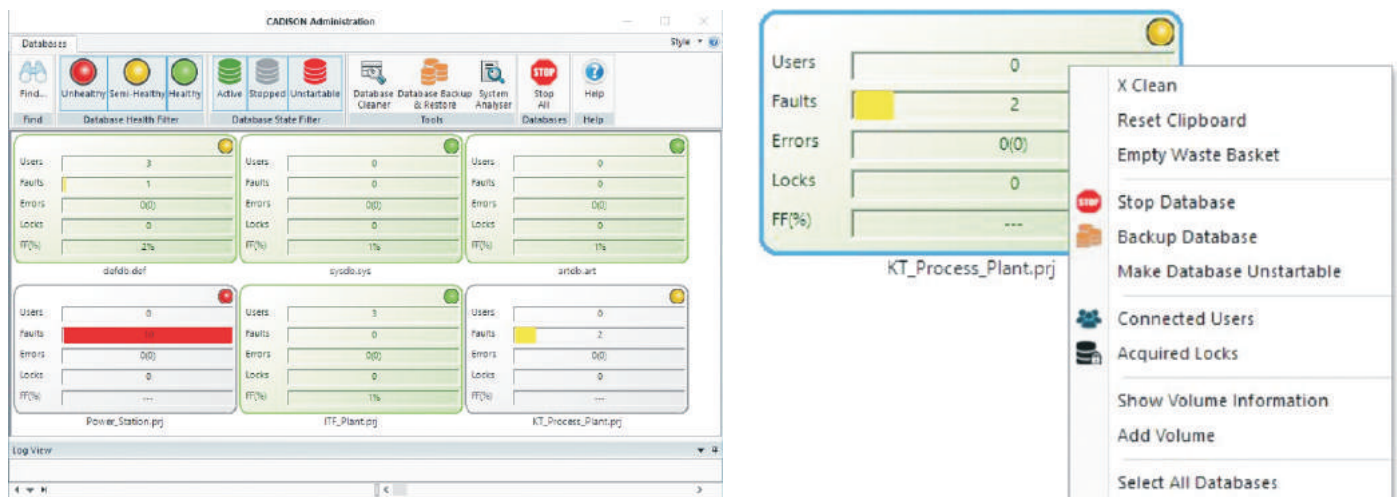
Enhanced CADISON Explorer for better object placement

CADISON Tool tip now shows the information useful for better object placement.

If an object is already present in P&ID or 3D drawing, while placement of the same object in another drawing, tooltip gives the information of its parent object. It makes the synchronizing 2D / 3D graphics easier. Tooltip also gives intelligent feedback if the object is being placed at correct location or not.

For example, if a valve is present in P&ID on pipeline P001, while placement of the same valve in 3D Model, tooltip shows the information that the valve belongs to pipeline P001 and intelligent feedback helps to ensure error-free synchronization of P&ID and 3D Model. In addition to that, with enhanced "Hypersnap" option, now pipeline routing is possible by less number of clicks.
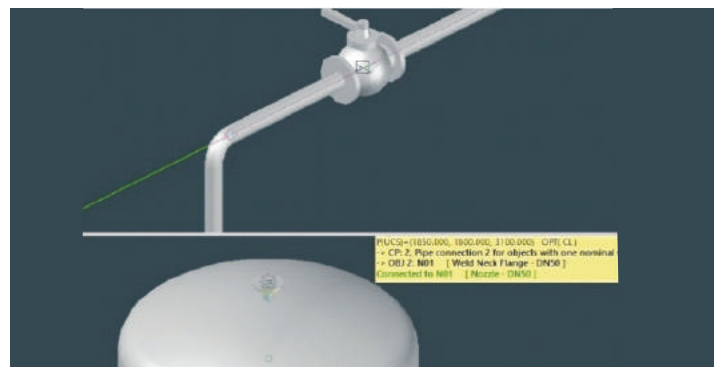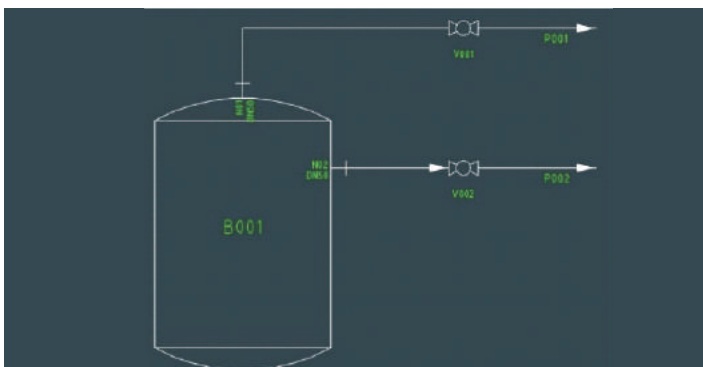
Manage your Tasks in a better way

CADISON's integrated task management helps to keep an eye across all tasks. It makes the task delegation easy and improves team collaboration. It helps to eliminate remote working barrier in this unprecedented time. From CADISON R20, important information for all tasks are available at a single place for better management. Objects related to each task can be added easily in Task Container via drag and drop.
It is also possible add objects inside task container from any CADISON drawing by selecting just graphics of the objects.
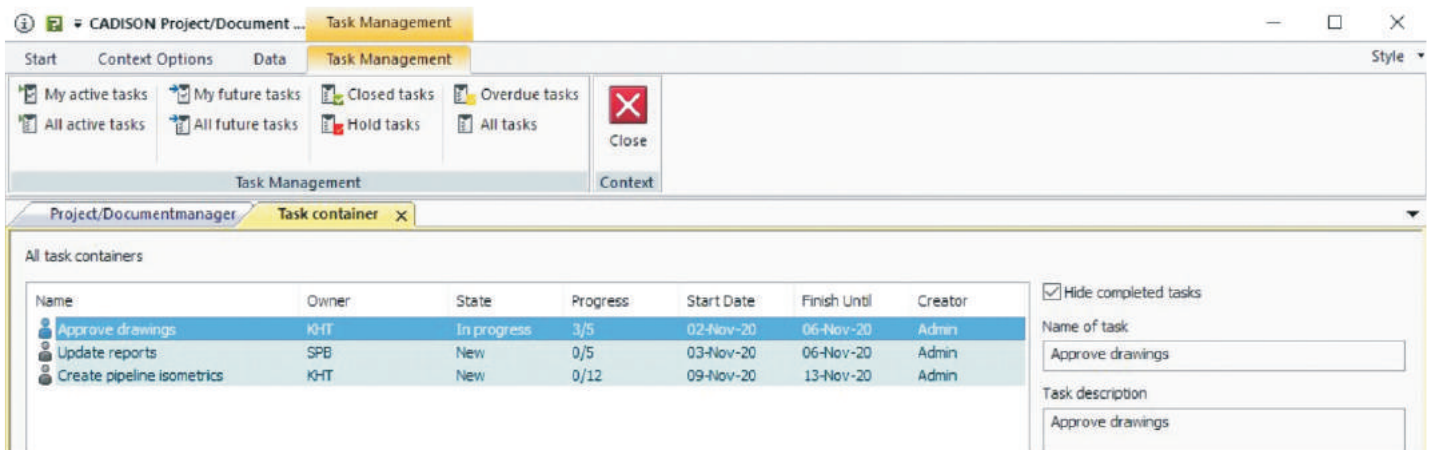
Improved Pipeline Tagging to minimize errors and save time

P&IDs are modified throughout the plant design cycle and the pipeline routing is changed multiple times.
Until now, the tagging had to be corrected manually after these changes.
With CADISON R20, pipeline tagging is adjusted automatically after modifications in P&IDs.
Tagging is assigned to the corresponding pipe segments. If new pipe segment is added or existing pipe segment is deleted, all the tagging is reassigned to the relevant pipe segments intelligently.
Also, if nominal size of any pipe segment is changed manually or by inserting reducer, all the relevant pipe tagging is automatically updated with new nominal sizes.
This innovation will lead to error elimination and saves significant time and effort in overall drafting time.
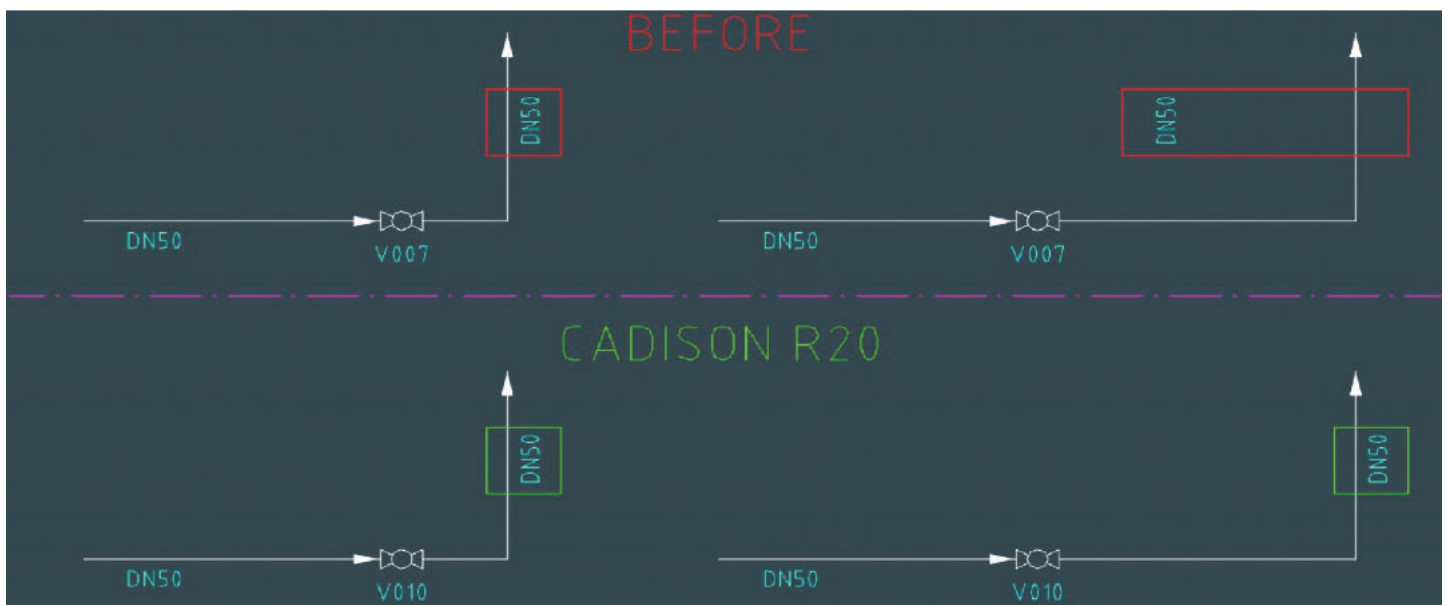
Top Features of **CADISON R20**

Modify Isometric Styles as per backing sheet via Graphical Interface

This new feature utilizes the power of I-Configure to edit the different aspects of isometric style via graphical interface. From CADISON R20, isometric backing sheet as per CADISON title blocks and borders is available inside I-Configure, which enables users to define the position of material lists and weld list in accordance with backing sheet.

The information to be included in these lists can be arranged in a user-friendly interface. This is possible by simple drag-and-drop operations.

I-Configure preview helps to visualize the changes in different aspects of isometric style which improves the quality of work and reduces the time and efforts required.
Default Isometric styles have been adjusted for better support with I-Configure.
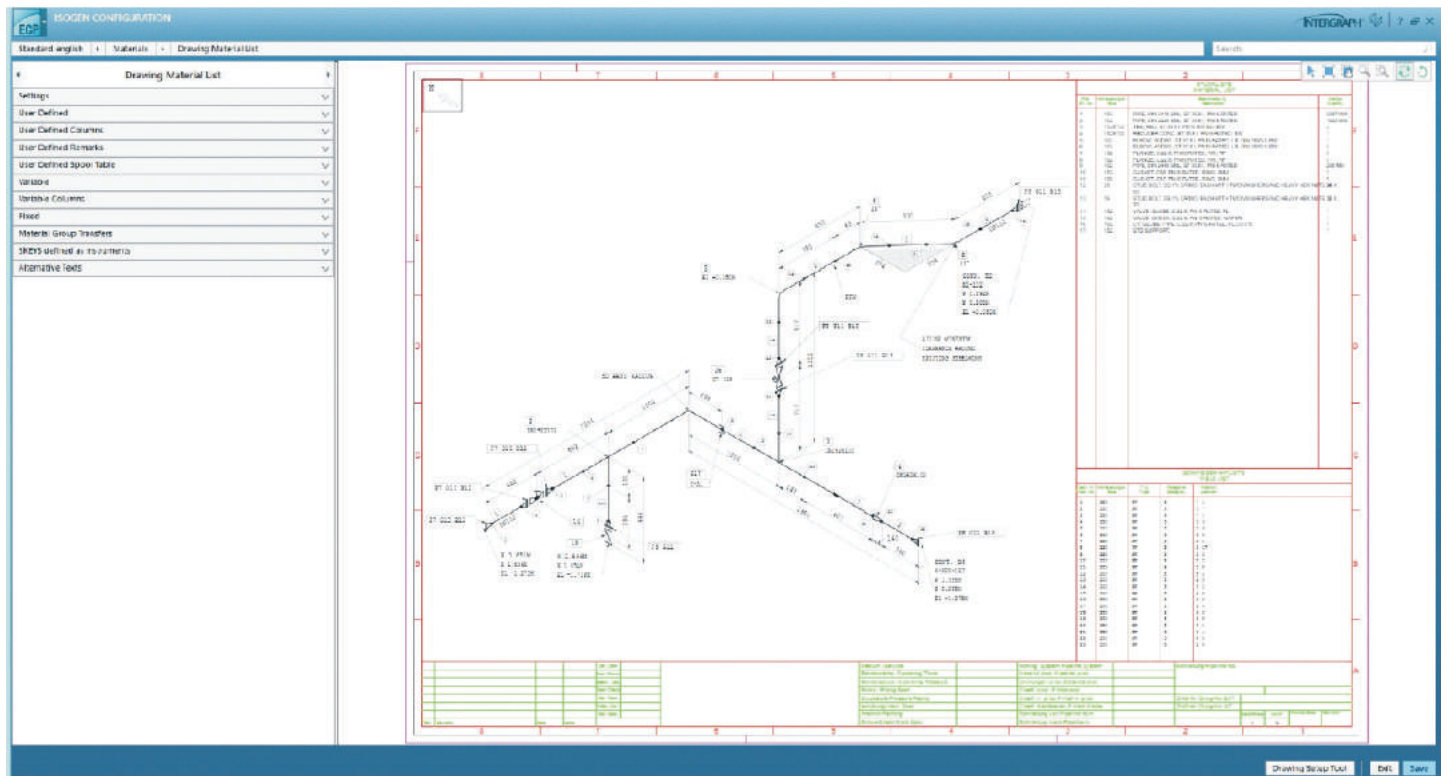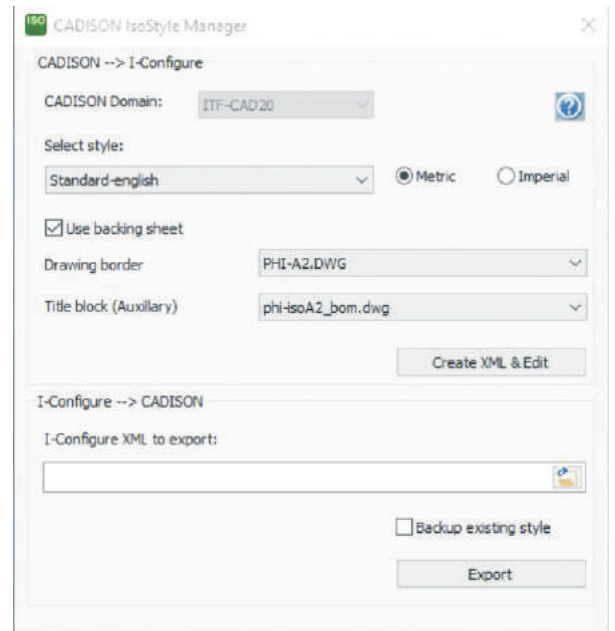
Please keep an eye on our social media channels as well as our email communication for further information as we continue to work out the details.

IFC interface with Revision Management

BIM is about collaboration and IFC format is becoming more prominent to allow this collaboration. IFC enables collaboration of 3D Models on different CAD platforms with attribute information.
Being the BIM solution for Plant Design, CADISON has now taken a big leap forward towards more efficient ways of collaboration.

In last release, we provided IFC interface in CADISON. Now IFC interface supports revision management. With this innovative approach, revision history for all exports and imports are available inside your project. Information for revisions can be added which makes it easy to track the history.
3D Model tend to revise during design process and these revised models are needed to be shared with respective stakeholders. This repeat export/import tasks can be accomplished in single click in CADISON R20.

Imported IFC revisions can be compared graphically with color coding which helps to identify the areas in which modifications are done. User has the option to generate revision comparison report which contains attribute information.
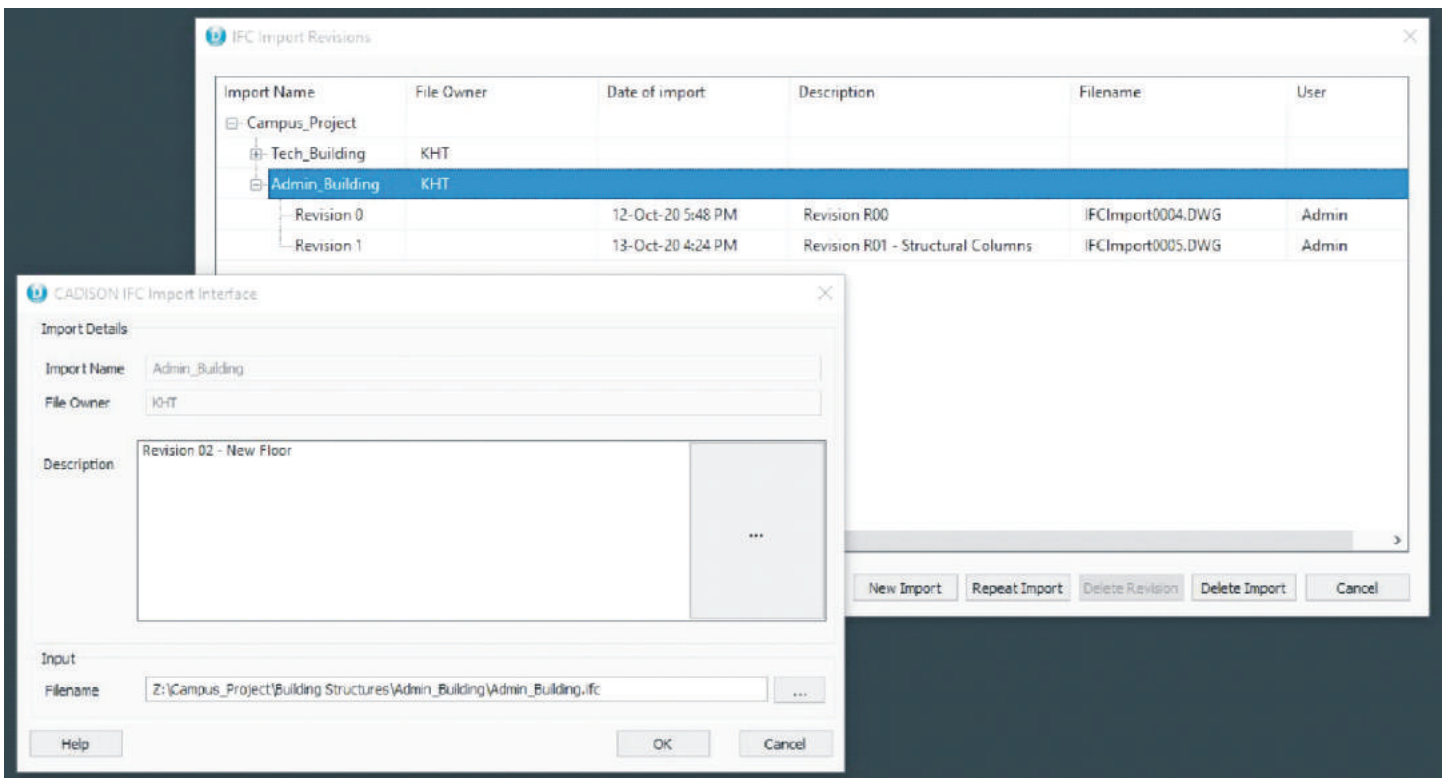
CADISON Electrical Designer adopted as a Complete Design Solution by the Market Leader in the Electrical & Automation Industry

Larsen & Toubro Limited (L&T) is one of the largest and most reputed companies in India's private sector. With over 80 years of a strong presence in World market, Larsen & Toubro Limited (L&T) is one of the largest and most reputed companies in India's private sector. Larsen & Toubro Limited (L&T) business encompasses multiple businesses -Buildings & Factories, Transport Infrastructure, Heavy Civil Infrastructure, Smart World & Communication, Water & Renewable Energy and Power Transmission & Distribution.

L&T Electrical & Automation (E&A) is a market leader for electrical distribution, monitoring and control solutions in the low voltage category. With a wide range of low and medium voltage switchgear, electrical systems, industrial automation, building electrical solutions, energy management solutions, electrical modernization solutions and metering solutions, E&A cater to key sectors of economy like industries, utilities, infrastructure, building and agriculture.

Why L&T Electrical & Automation Selected CADISON as an Answer to all the Design Challenges

Busbar Trunking (BBT) from L&T is highly recommended, adopted, and consulted by many consultants and has become an integral part of the "Green Building Concept" globally. The elements of the route for the busduct system is based on the design of the architectural layout. The Design team realized certain challenges in the process of routing drawing preparation which was being prepared by using AutoCAD. Most of the crucial steps in the old process were done manually, which ultimately led to delayed project deadlines, more time-consuming steps leading to improper revision management and finally impacted their deliverables like BOQs & BOMs. In the old process, based on customer equipment layout and structural details, the busbar trunking system routing layout was prepared manually. The drafting engineer had to refer to the project data offline and used to draw the BBT routes in AutoCAD considering, rating, wire configuration, element type & dimensions, site MEP locations, etc. During the manual process, customer requirements conversion into BBT routing elements, matching of elements in catalog, and getting the right output of BOQ- all these factors comprised a high level of challenges for the quality of the offerings or final output and also for the engineering change management process.

CADISON team along with L&T Users discussed, analyzed and listed down all the drawbacks and problems that could have impacted them in the long run, like the variation in manufacturing and supply quantity, design and specifications mismatch, delays in deliverable, multiple revision of drawings, BOQs, and more. As most of the processes used earlier in the creation of route drawings were done manually adding and editing the annotations and tagging numbers to each component was time-consuming and thus chances of errors were high. Also, Revision Management was cumbersome as it required the manual intervention of the designers. Any revision or change in the elements lead to the manual editing of the tag number; similarly, any change in the drawing required lots of manual effort for an accurate BOQ report. It was a crucial task

earlier for creating Plan Views, multiple Section and Isometric Views for a single route, which has now become possible with few clicks and hassle free as all the views are getting generated from the model directly. Any change in the model reflects automatically in all the views & plan sheets.

CADISON Electrical Designer made the process Simpler with Reduced time & effort for Tagging System and Annotations

In CADISON the elements are generally linked to the route with counting number so instead of editing the text, device tags are pulled out of the model. And once the counting number for the route is updated, the tag number sequence gets updated automatically as per the requirement. CADISON not only achieved the complete automated generation of BOQ but the built-in revision management feature of CADISON Electrical Designer helped our Users to update the current revision level too. CADISON provides the flexibility to customize Workflows, Object Models & Catalogs to the company standards; using the same functionality a new FG Cat no. is created for the client and based on which the BOQs with new parameters get standardized in the organization.

Project Definition	2D Layout import (structural)	Route level parameters definition	Routing design of BBT Elements from 3D catalog
Submission of documents and revision process	Automatic extraction of BOQ with Fg cat numbers	Automatic extraction of 3D & 2D Layouts	Positioning of Components (supports, etc.)
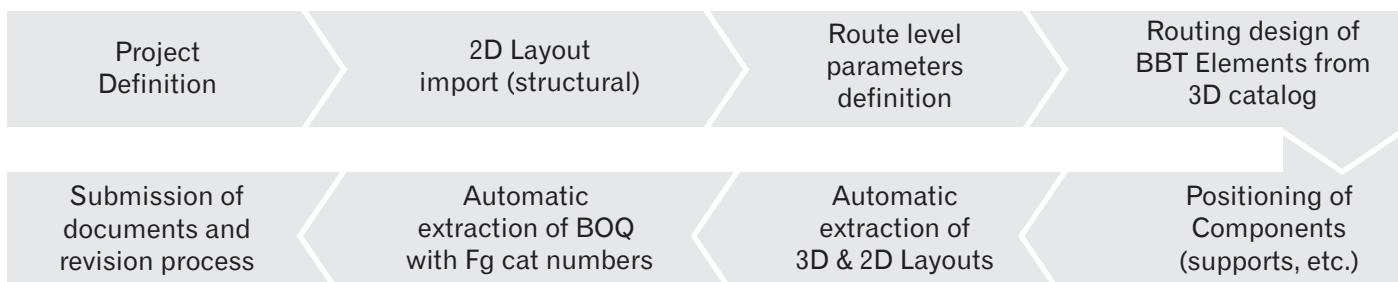
New Optimized Process-flow Created Using CADISON

Advantages of Adopting CADISON Electrical Designer:

- It enables the users to quickly create/route the complex busbar trucking (BBT) system with a simple interface
- Increase in First Time Yield (FTY) and major reduction in Class-A defects
- Built-in S-Line 3D catalog with FG Cat numbers for faster and error-free drawings/BOQ preparation
- Automatic Project numbering system and Tag numbers for route level to ensure correct BOQ
- Automatic extraction of Reports and Deliverables for faster turnaround of designs for review and approval
- User based work assignment and authorization using Project Engineer
- Intelligent features, Engineering workflows, and alignment to existing engineering environment, which is based on AutoCAD platform
- An intelligent solution for building organization-level knowledge repository, enhancing the existing skill sets without changing the base platform and getting value for money
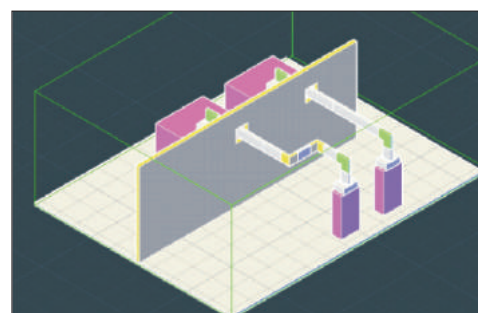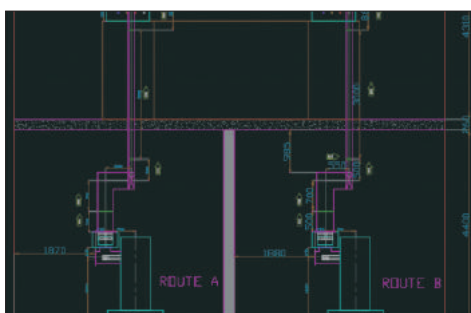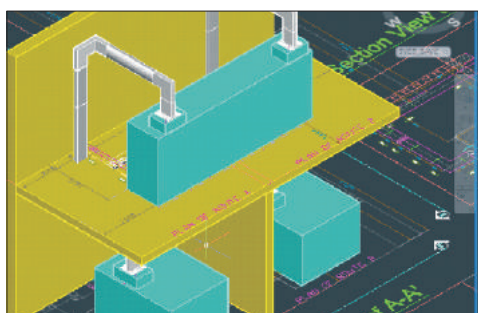
Remote Engineering - The New Normal
Socially Distant, Digitally Closer

The Covid-19 pandemic has certainly brought some discernible disruption to the way we live and work. As the pandemic is changing everything around us, the world of business is moving towards a new way of working, communicating, learning, and networking. In such a crisis situation, the industrial world is reshaping its business model which includes the engineering sector too. Every Engineering business is now realizing the importance of Digitalization and is carving a new path towards the new normal way of working. As an early adopter of Digitalization, CADISON team had realized the importance of the connected business world long ago. In spite of the preliminary challenges, CADISON team made sure that we were better prepared to ensure the smooth functioning of our customer's business with plausible efficiency and minimum turmoil. We have been dealing with this situation quite well; our main focus was and is all about improving the remote working experience and bringing productivity for our CADISON users & customers and to ensure smooth workflow even in the midst of this pandemic situation.

As the CADISON's Client-Server application system has been designed in such a way that every CADISON users can work remotely from their home-to-office workstation using VPN and Citrix connection. With a 360-degree customer support approach, the CADISON team has enhanced the Helpdesk service to be more user-oriented. This enabled us to support our customers and users entirely through remote connectivity methods irrespective of their physical presence around the globe.
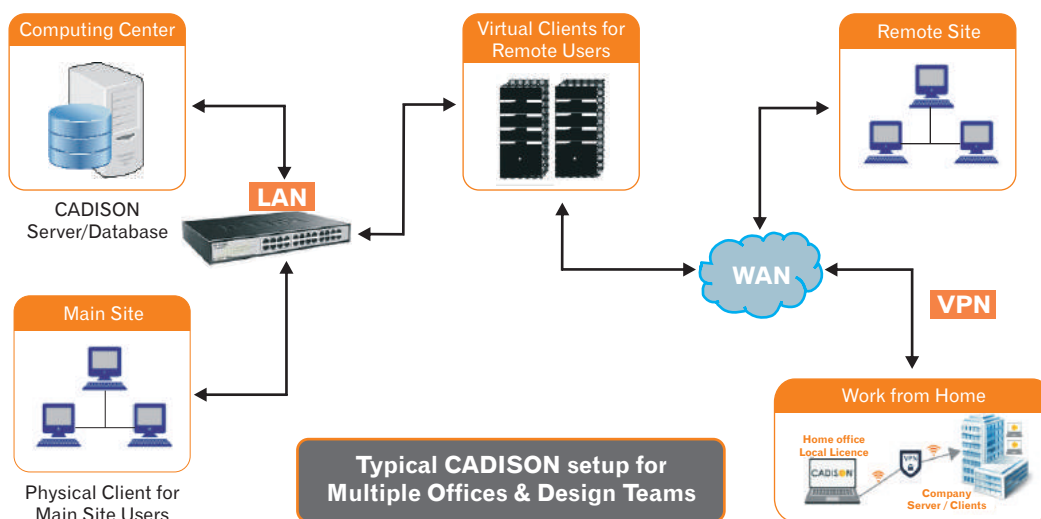
We might be socially distant but by identifying the best Tech Tools for connectivity, we are now more digitally closer e.g. use of tools like GotoMeeting, Microsoft Teams and Zoom for video conferencing or group discussions and brainstorming sessions; Skype for long distance and overseas calls; cloud applications like Dropbox, Microsoft One Drive, Google Drive and CADISON FTP servers to store and share files to the cloud for uninterrupted access to important documents.

This crisis has surely helped us to realize that if we use the recent technologies in the right direction then we can convert the challenges into new opportunities. Even in our technology-savvy industry, it is sometimes approached hesitantly. Yet we are certain that there is much more potential for our customers and for us. In order to fully exploit this potential, collaboration and networking are the most important factors. We together can redefine and reshape the working structure towards - The New Normal; where we are socially distant but digitally closer to each other and more empathetic than ever.

Leading Engineering Consultant Company Selects CADISON as a Complete Solution for Every Basic & Detailed Engineering

Udai Consultancy Service is one of the leading service providers of Basic and Detailed Engineering services for the Chemical Industry. They are capable of providing end to end Design Engineering services like Equipment Design, Equipment Specifications, Layouts, Section Drawings, P&I Diagrams, Piping Plans, Piping Isometrics, and more. The Design Team was working with basic CAD tools for the creation of Piping plans and Piping Isometrics in conventional methods. They were using the manual methods for the pipe routing and isometric drawings which results in the non-intelligent output. It was tedious and time-consuming; they wanted a solution which not only generates intelligent output but also saves time and resources.

They were in pursuit of a solution that is not only reliable and high end with smart features in the market but also cost-effective and economical at their organizational level. Before selecting a tool for the organization they analyzed and compared multiple parameters like their existing engineering platform, available skill set of their manpower, investment on the new tool, training, time saved, return on investment, and ultimately the business goals. Considering all aspects and after detailed analysis they decided to go with CADISON for the organization. Most of the users had expertise in working with AutoCAD Platform, they wanted a solution based on the same platform, and thus training the current resources on a new tool won't be a challenge.

CADISON - a Complete Fit for the Organization – Ease of use, Economical and functionalities as per requirements

Since CADISON is based on the AutoCAD platform, the users could easily and quickly shift to CADISON and were able to become proficient in a short span of time. Another important reason to go for CADISON was the availability of support services locally and round the clock.
Being an Intelligent solution, CADISON has a built-in, centralized database system which helped them to store the design data effectively with seamless integration of design phases & communication between their multiple departments. With CADISON they could automatically generate the Isometrics, 2D GA drawings, Layouts, Section Creation, Report and other deliverables; thus, saved lots of time which they used to spend on manual creation of deliverables. The automated generation of piping isometric drawings is the best part of the solution for them. Piping Isometrics are among the most important drawings for the piping design in construction, as isometric drawings play a vital role in the design process and represent a complete, self-contained specification for the manufacturing of the piping design. With CADISON, it becomes easy to create 3D Piping models and generate isometric drawings from respective 3D Pipe models.It has become simplified and quick. Also the Logic Analyzer capability helped them to run the pre-defined check rules which reduced the erroneous outputs. Thus, Udai Consultancy has achieved to reduce the total man-hours with overall improved efficiency and better deliverables to their customers.
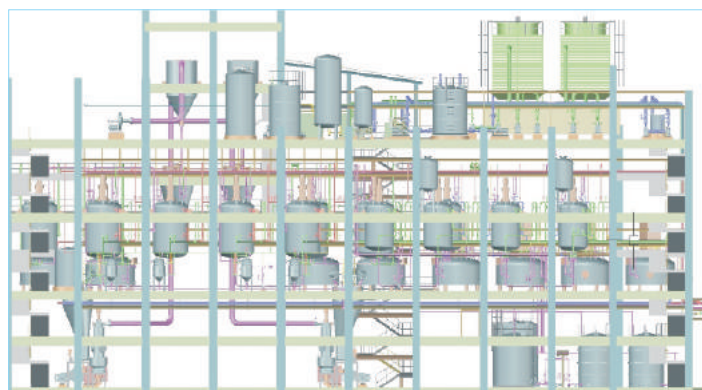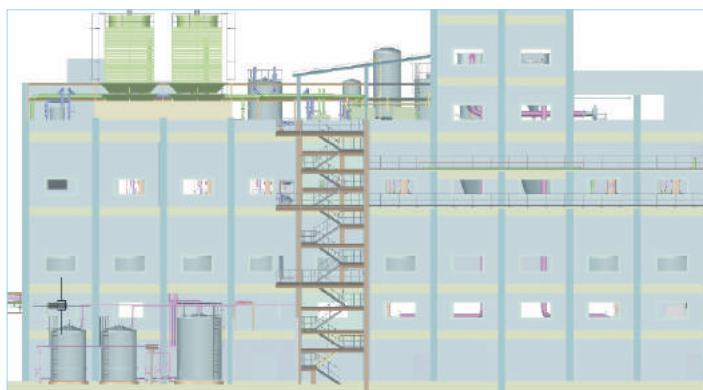
Plant Design & Equipment Engineering Solution

CADISON® Project Engineer: A non–CAD solution for Project Planning, Cost Estimation, Engineering Information & Document Management, Workflow & Change management throughout the Plant Design Life Cycle. It enables managers / leads to plan conceptual engineering, generate bidding proposals and schedule tasks with or without MS Project. This helps to track and monitor the complete project data / information from Concept-to-Commissioning.

CADISON® P&ID Designer: A comprehensive spec-driven module for the 'creation of Intelligent PFDs / P&IDs' and 'Instrumentations (measurements & hook-ups)'. It has the ability to perform Pipeline Sizing and Utility Pump Sizing Calculations for optimum selection of equipment at the P&ID stage. It supports various standards (DIN, EN, ISO 10628, ISA 5.1, ANSI, etc.) and also allows Users to adapt company standards and reporting formats. Pre-configured design rule-based checks for Data and Drawing Validation, built-in capabilities such as construction-set, Auto Legend and Auto Tagging, etc. significantly reduce the drafting efforts.

CADISON® 3D Designer: A complete 3D plant design module for Plant Layout, Pipe Routing, Equipment Modeling, General Arrangement & Isometric Drawing creation and Report Generation (BOMs, MTO & Datasheets). It provides the Users with various time-saving wizard / design assistant such as Section Box for GA drawing creation, 'Tank Assistant' & 'Nozzle Assistant' for creating 3D vessels and tanks. Its ability to synchronize and validate the information with P&IDs caters to process design safety and consistency.

CADISON® Electrical Designer: A comprehensive solution for Electrical Engineering Design, Documentation and Management. Its a unique combination of 2D Schematics & Controls Designs, Sizing Calculations (Cables, Earthing, Transformers & UPS); with 3D Conduits & Trenches, 3D Cable Tray & Panel Layouts. Productivity tools such as automatic generation of Terminal Drawings, Contact Sets, PLC I/O Board Drawings and Reports Generation (BOMs, MTO & lists) reduce the drafting time.

CADISON® Steel Layout: A wizard-driven module for planning and creating 3D Steel Structures like Ladders, Staircases, Platforms, Handrails, Trusses, Water Tanks and Custom Assemblies such as pipe supports, spiral staircases, etc. Its SDNF export interface enables the Users to export steel structure data to Tekla and Advance Steel for further detailing. It is configurable to adapt any standard and custom guidelines for validation of parameters and steel profiles and thus reduces design errors.

CADISON® MATPIPE: A Parametric Catalog Engine for creation and management of Pipe Classes, 3D Catalog Objects and integration of Manufacturer's Catalog with the import & export functionality. Database of Templates, Piping Component Libraries from various Design Standards and an extensive list of Catalogs from prominent vendors are available for ready to use. User Management with Revision Management of Master & Working Catalogs enables to standardize and maintain versions (replica and extended replicas) of catalogs at the organization level.

CADISON® Pipe Support Modeler: An intelligent wizard for Standard Pipe Supports which assists the Users to create and edit different types of pre-defined secondary supports in an easy and intuitive manner. Users can also quickly create non-standard pipe supports manually. Automatic hook-ups (production drawings) creation and reports generation reduce the documentation efforts. It can further be used for Electrical Cable Trays, HVAC Ducting Systems and Bus-ducts Supports as well.

CADISON® Project Navigator: A navigation tool to access engineering data of a project with a user interface similar to the Project Engineer module. It can be used for project review and also for further processing of project data during the plant operation and maintenance, which also serves as a paperless documentation platform.

CADISON® P&ID Designer for Visio: A spec-driven process engineering solution for Conceptual & Detailed Engineering that can be used for Proposal Generation. This is an easy and quick to use tool to create intelligent P&IDs and PFDs using MS Visio® Platform and still all the data is integrated with other CADISON modules in realtime. Its ability to export to AutoCAD, Pipe and Pump Sizing, Generation of Automatic Legend, Tagging, Report and integration with the 3D Designer makes it a powerful tool for the process industry.

CADISON® Archiver & Browser: An independent tool for Archiving of completed project databases from CADISON production environment. Archived Projects can be quickly and easily viewed with CADISON Archive Browser like a knowledge management platform. The archived projects can be re-activated or restored to work on future developments at any time.

CADISON® ROHR2 Interface: It has the potential to transmit all pipeline systems created with CADISON® 3D Designer to ROHR2 for the quick and accurate static and dynamic analysis of piping system. All the required information will be completely transmitted in the form of NTR files for analysis.

CADISON® CAESAR II Interface: This interface has the ability to export the pipeline or selected pipe data from 3D Designer to neutral ASCII format .cii file. It takes into account the several load parameters like weight, pressure, thermal, seismic and other static and dynamic conditions based on user-defined variables and accepted industry guidelines.

CADISON® ERP Interface: CADISON provides interface with well-known ERP systems like SAP, Movex, Infor and others for dynamic data exchange. It establishes a mutual connection wherein Orders like purchase requisition can be directly released and also controlled within engineering workflow.

CADISON® Inventor Interface: It enables the Users to import an Autodesk Inventor part or assembly file along with the inventor properties in SAT and XML format into the CADISON environment as a CADISON object. It gives the ability to import & update an object from the Inventor original / updated model.

CADISON® Equipment Simplifier: A customized wizard designed for the automatic simplification of large equipment models. It reduces the size and complexity of equipment models upto 90% from different CAD formats with (interactive) manual or auto mode options and exports the results in DWG format for CADISON.

CADISON® Application Programming Interface: CADISON API enables the Users to integrate CADISON engineering workflow with business workflow and organization specific document management tool. API developed for external access of CADISON data, contents, structures and even dynamic exchange of data / information.
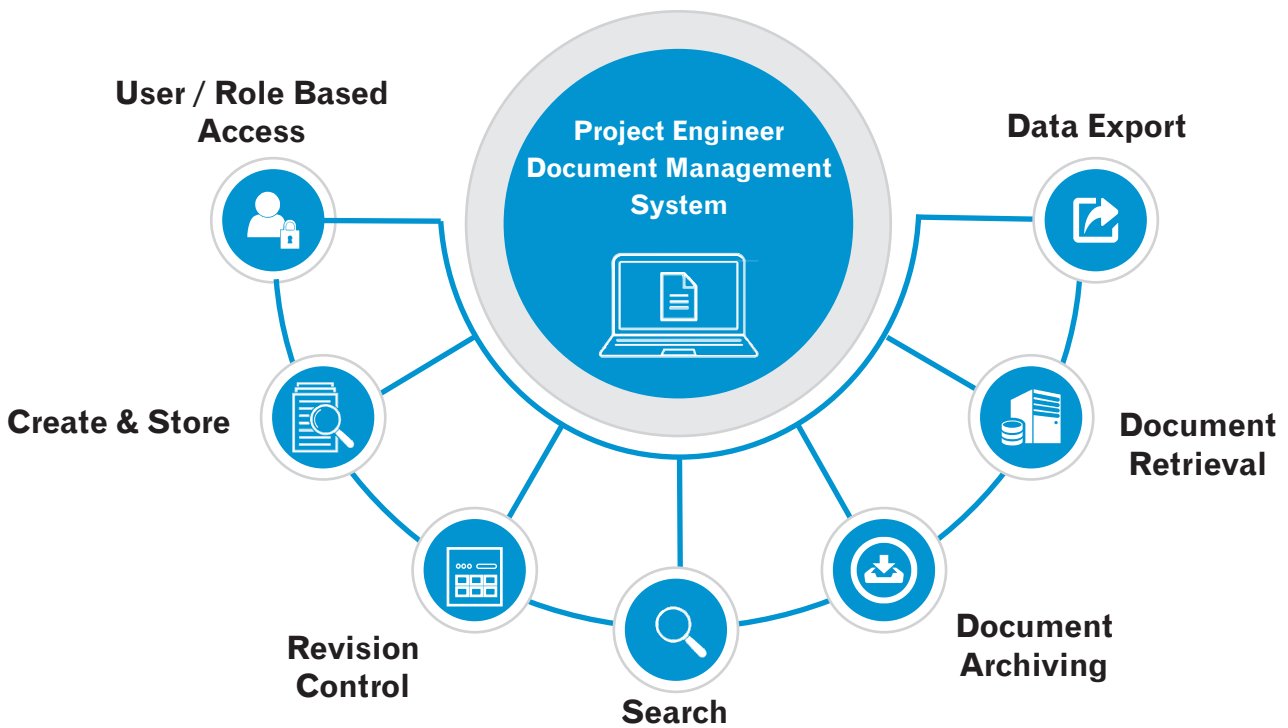
CADISON modules

CADISON®

For Improving your Engineering Efficiency by 30%

CADISON modules
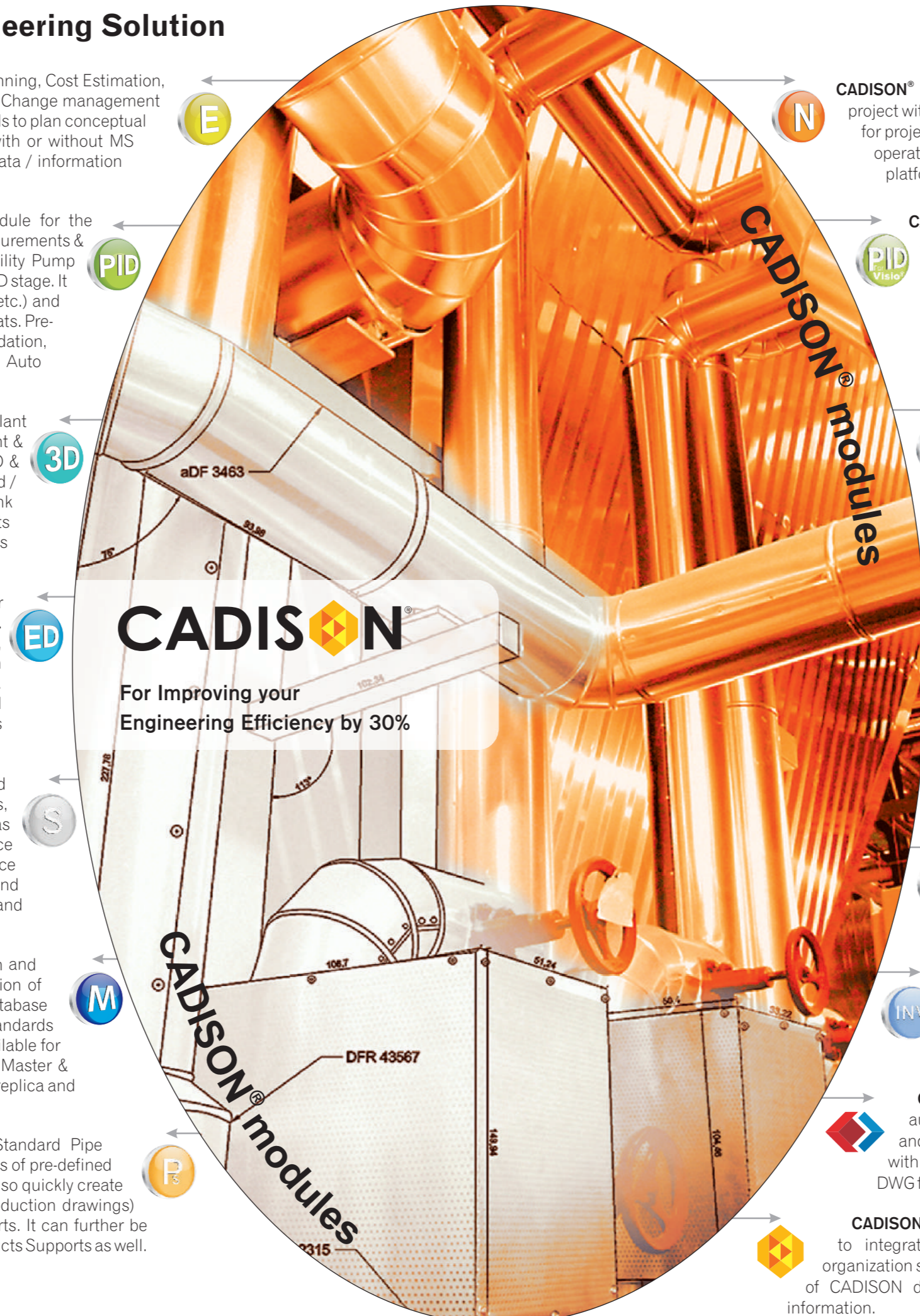
CADISON Project Engineer for Document Management System (DMS)

Today Plant owners, operators and other stakeholders face global competition, low cost operational pressure, tighter construction standards and regulatory requirements and reduced time-to-market requirements to keep themselves in good competition. Also, the dramatic shifts in turnkey contracts and technology-driven design, procurement, and construction of projects to improve overall efficiency and reduce cost(s) is a focus of every organization.

CADISON Project Engineer is a robust Document Management System which is efficient, easy to use and it can perform all the tasks required to create and store documents, allows search and indexing, revision control and role based document access, archival and retrieval of documents and functions like Global copy and paste for new project creation and data reuse for similar projects.

CADISON Project Engineer is a Non-CAD module for CADISON Project Setup and User Access Administration, Costing, Planning, Work Breakdown Structure, Project Status Reviews and Engineering Information Management throughout the Plant Design Life Cycle.
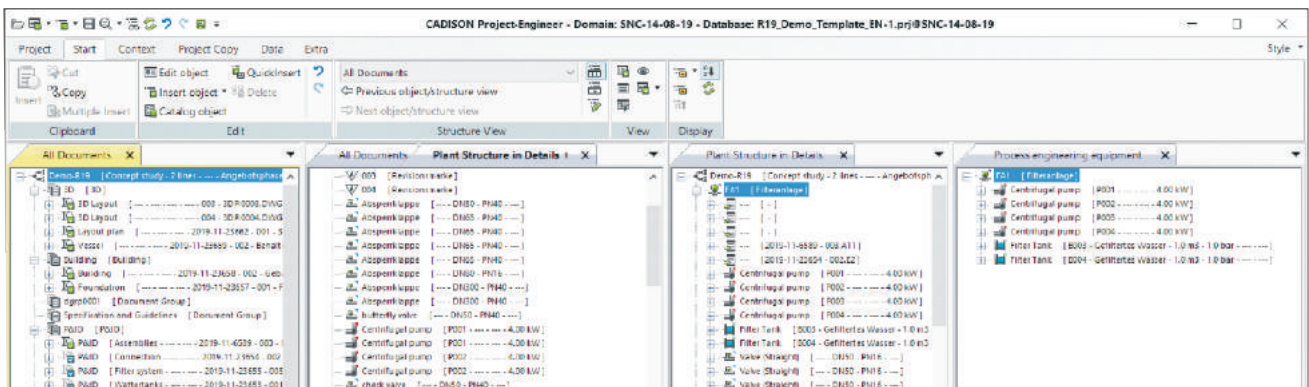

A Project View in Project Engineer

User Management

New User, User-group and role function can be added to the User Management with a button's click. The user or group of users can be assigned to the project either from this same window or by an authorized personnel or creator of the project from with the Project Engineer module. The User Management system can handle complex Object class and Property rights. The configuration is easy, and the control depth can go deeper to decide what the User can see, review, and edit in any Object class like Folder, Document and Project.

Document management

In the Project and Document Management window, a new project, document, or drawing can be added or existing project, document or drawing cane be opened. The Project and Document Management window displays all databases and projects visible to the user, as well as documents, reports, and drawings. A tree structure is defined and displayed here as the system tree.
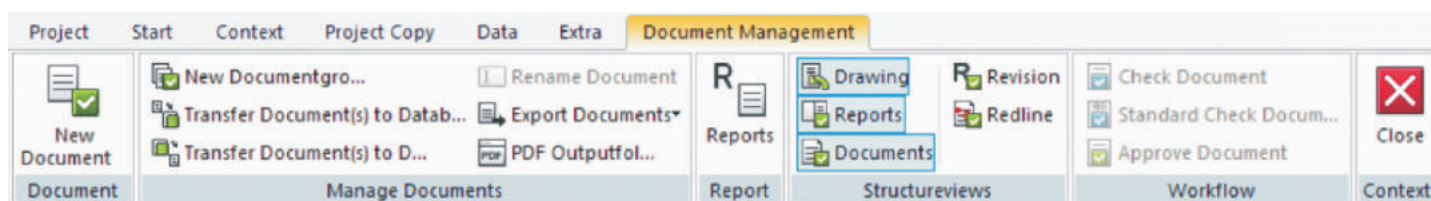
Revision Management workflow

Automatic recording of Document Creator, Creation date, Checker, Checking date, Approver, and Approval date. Alphabetic, Numeric and Alphanumeric revision numbering style can be adopted. Custom document states (No state, Hold, Deleted, and Invalid) and Document issued states (No Issued-state, Pre-Design, Budget, Quotation, Approval, Hazard Analysis, Design, Tender, Construction and As-Built) can be defined. User can also record revision text in the document processing the revisions.

Email Notification trigger

Project Engineer can be configured to send an email directly from CADISON. The automatic notification works with an installed module "MOC" (Modification and Tracing Extension). After a specified event is triggered, like attribute change, object deletion and various others; an email can automatically be sent to previously specified users.

Redlining document and Document attachment

A Redlining document can be created under the original document. Companies typically use this function to attach Markup/ Design review documents or other linked documents to the original document that can be used a reference. This simple function preserves record of all reference documentation and information that is related to the original design or drawing file.

More useful features

The Project Engineer has Task Container feature for Task and Project tracking, Logic Analyzer feature for design validation checks, Form Designer to create User forms for objects. Form Designer is very useful in Multi-disciplinary work environment. Users can also call system functions like Table view, Structure view, Document and Drawing viewer.

Leading South Korean Research Organization Uses CADISON 3D Designer for Momentous Growth in Productivity and Efficiency

The Institute for Advanced Engineering (IAE) is an Industrial Technology Research Association and Industry – Academy Research Cooperation Organization in South Korea. Plant Engineering Center of IAE is leading the development of differentiated technologies based on R&D capabilities and core engineering capabilities in the energy and environmental plant design field. In particular, Plant Engineering Center provides total services of plant business from feasibility assessment to a process design package technology and from core fundamental technology development to practical core technology development.

Its major research areas include high-efficiency clean power generation, clean fuel manufacturing, low-level resources and waste energy conversion, greenhouse gas reduction & conversion and specialized technologies like process analysis, device analysis, economic evaluation, environmental evaluation, reliability evaluation, 3D modeling, data analysis, and more.

IAE has to address simultaneous Engineering and R&D Project Experiment challenges. Full attention to our need was a result of choosing CADISON for our 3D Design Software requirement. IAE was looking to automatically convert 3D Model to 2D Piping Plan. Typically we do 3D Model Design for the chemical plant which includes Process Equipment like Reactor, Heat exchanger, Vessel, Pipeline, etc.

Mr. Yoo, Head Plant Engineering Center, IAE Korea
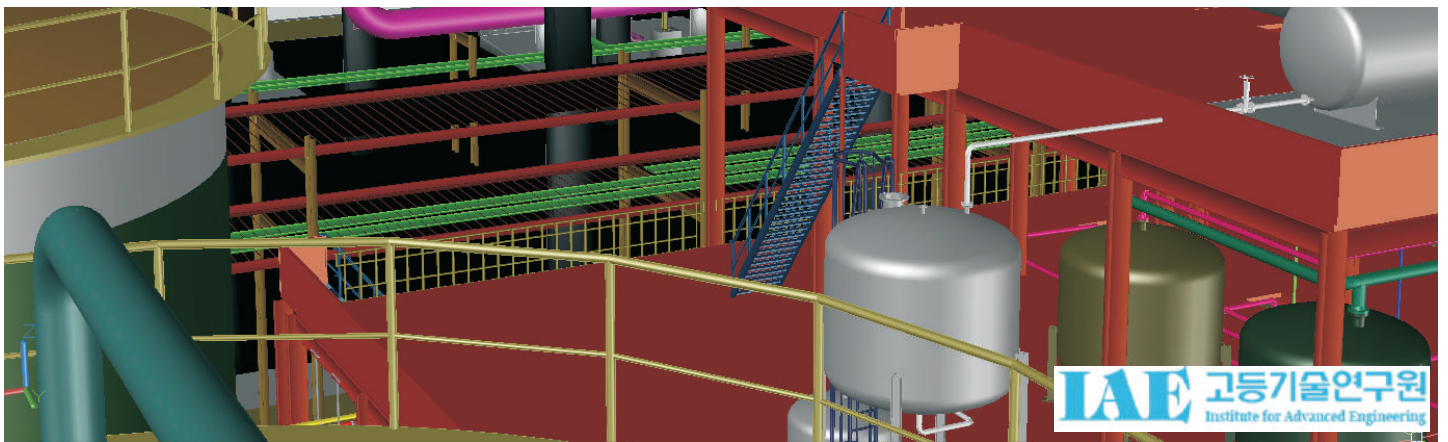
With CADISON 3D Designer, IAE team is now able to generate intelligent 3D Models with GA Drawings, Isometric Drawings, BOM and MTOs and other reports as deliverables. The team has reduced the design & drafting time by almost 30%, which helped them to control the pilot project cost and meet project timelines. The intelligent 3D Model generated in CADISON 3D Designer was being easily used by IAE team as a reference model and dataset for integration with similar projects. The team also used Matpipe online Catalogs for 3D objects to eliminate the inconsistent data between Piping Specifications and 3D Models.

For IAE, it is very important to meet their Korean customer's requirements like to achieve organized and smart plant design. With the 3D pipe routing of CADISON 3D Designer, IAE team has achieved great progress. For example, by defining start and end piping points within the 3D Model, the module automatically proposes collision-free routing.

"This smart feature for pipe routing has made us to finish our work without any error in comparison to our earlier practice. We are working with CADISON team for over a year now and certainly recommend CADISON,"

Mr. Hyo Sik Kim, Senior Engineer - Design & Research

CADISON Helps an Italian Engineering Services Consultancy Company to Align its Overall Project Documentation with its Design

Incotec is an Engineering consultancy services company that provides professional services for plant design consultancy, commissioning, and design qualification, mainly for Pharmaceutical plants and Food industrial plants. The other disciplines where they are expanding their presence nationally are Renewable Energy, Food & Beverages, Cosmetics, Healthcare and Environmental.

As an Engineering consultant and service provider, Incotec was facing some major challenges in terms of managing the continuous modification and changes in the project documentation, mainly related to the engineering design. The man-hours and resources required in reviewing and upgrading the technical documentation manually for a complete project were huge for them. Often following this manual process resulted in documentation errors that used to lead to higher costs, longer & delayed project durations, and hence reduced productivity & profits.

ing. Palerio La Pietra
Engineering & Validation Manager

They were in search of a solution which is Intelligent & Automated and yet cost-effective for them to manage, review, and modify a large number of project documents in a structured manner and can efficiently deal with change management. They found CADISON a perfect-fit solution for their requirements i.e. the CADISON's in-built PDM and Project Engineer module turns out to be very efficient for Document Management & Revision Management and its seamless integration of data across all design phases made the complete Change Management very easy for them.

The Incotec team evaluated CADISON based on the Automated & Real-time capabilities of design and Change & Revision Management. Also, it enables the sharing of the project data across all design phases through its centralized database. CADISON's ability to generate accurate and consistent deliverables like P&IDs, Reports, GA Diagrams, Isometrics and thus improve the quality of the project delivery.
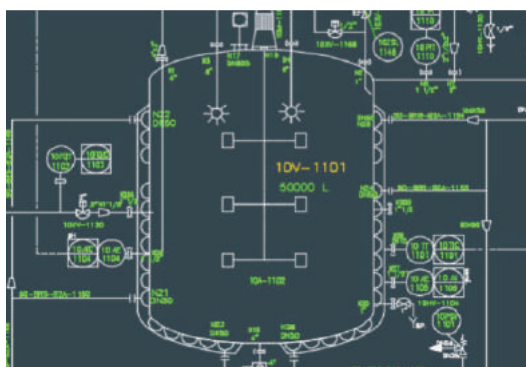
CADISON Implementation: Strategies for the Enterprises

In today's fast-moving and competitive world, the Process Engineering companies wants their engineers to design the products to deliver faster and with fewer errors and at a lower cost for increased profitability. Most of the times, the design cycle is iterative, and reuse of intelligent design data is preferred. The Engineering departments also want to use intelligent design systems which are productive and easy to use. These systems can also help you to share design data with other departments internally and collaborate externally with suppliers and partners. In addition, there are requirements of production process improvements leading to a more efficient system. A detailed planning, analysis, selection and standardization of the process are some of key parameters for successful implementation of CADISON in the organization. Acquiring CADISON is only the first step in improving your business. To get the most out of that CADISON, you must know to use it correctly and examine how it will impact your existing process. This will help you to adjust and improve existing design process and adding steps to use CADISON features to suite the design and production processes.


Without well-planned implementation of CADISON, the Designers and users will not all of the benefits of the new features and functions which can enhance the productivity of the designers. The most successful companies have followed these steps when deploying CADISON:

- **Plan for good hardware and system architecture**: CADISON System requirements are always published with new release of CADISON. You can plan for CADISON installation by verifying the requirements and ensure that all hardware and software requirements are met, and Administrator access rights and services are available for installation. You can also decide if you need a standalone or client-server installation to be done. CADISON installation supports standalone installation as well as network installation with a centrally located database server. Network installation has added advantage of sharing the Project data across design disciplines and supports role-based user management.

- **Define role-based task structure**: By defining the role-based tasks and functions of CADISON early on, you will get better control on Project organization and structure. The response from Project Administrators, Process Designers, and users will also be exciting and early implementation of new

software by using in the areas that are the easiest to implement will provide the better result. Make these determinations before you start training.

- **Develop a Phased implementation plan**: Rolling out a new Engineering system takes time – unless you work with a smaller team to train and implement the new system. It is always recommended to prepare a phased implementation strategy - for training a larger group or if the teams are working from multiple locations. You can build a detailed training schedule and budget and share it with the teams. You can identify champion members in the first group of trainees to start with, without affecting the day-to-day work. The detailed training schedule should be published and shared with the staff, so everyone understands the process and knows when and how they will be trained.

- **Establish Good practices**: Any new system requires new procedures, design standards, rule and practices to be implemented. While you will see many new features, functions, and processes during the implementation phase, start with a clearly defined process and well-documented set of guidelines for using CADISON. You should also periodically review all defined processes, check and adjust them as necessary and discuss with your CADISON consultants for updates.

- **Establish Standardized setup environment and CADISON Data management**: It is recommended to have a CADISON Administrator and a group of Super-users who can guide other users in daily activities. The silent Installer available with CADISON allows you to prepare a standard administrative image with common settings for installation for all users. A common working environment installed on each workstation can reduce training costs and simplifies the process for support personnel in diagnosing the problems and answering questions. Also, an Administrative system can control the flow of the design process. Tools like CADISON PDM and CADISON Project Engineer help you to manage User roles, drawing management, revision management, workflow and task scheduling and help you to prevent conflicts design overwriting or changing the project data of another designer. It also enables designers to identify current revisions, document release and search for the latest design information using keywords.

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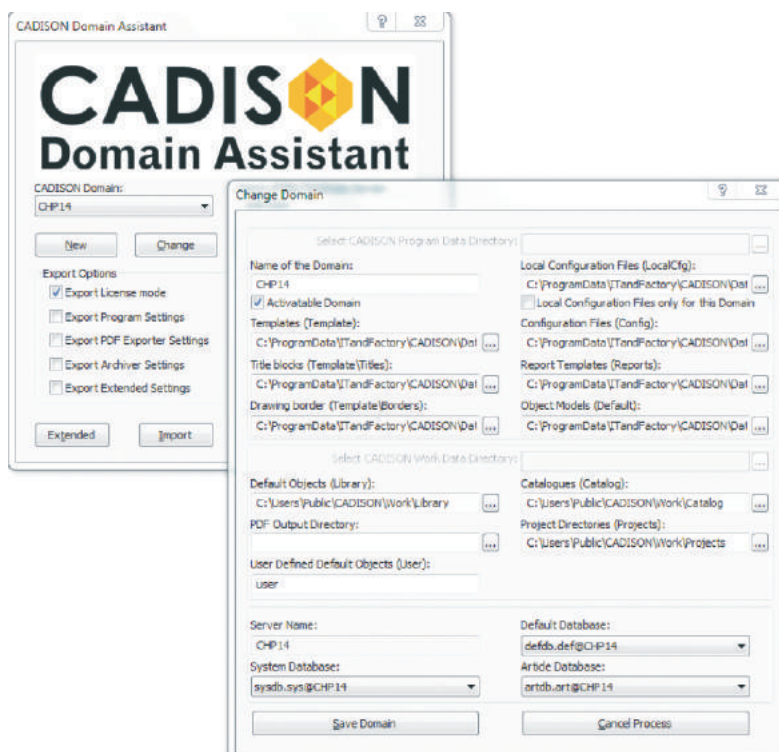
A Leading Poland Based Ethanol Manufacturing Company Selects CADISON for Complete Plant Design

BGW is one of the largest producers of Biofuels in Europe. It is situated in the centre of Poland with an annual output of 80 MLPY of High-Quality Neutral Spirit based on Cereals. Initially, the company based its activity on trading liquid fuels and engine oils. Over the years, through constant investments, it has expanded its activity to the production of ethanol. It has expanded the focus to Ethanol production at the Production Plant in Rąbczyn Poland.

The company's focus was on investing in the modernization of Plant and implementation of latest Technology to enhance the production and overall productivity to meet the growing demands of Biofuel in the global market.

BGW was aiming to improve the production efficiency of this new plant and to avoid project delays which were adding up extra cost in their final costing of their projects. Also, an essential requirement for a system or tool to be selected was consistency throughout the planning, construction and operational phases to avoid unnecessary execution & production delays.

The objective was to improve the overall plant efficiency which can lead the product to quick time-to-market and maximize the production of ethanol with reduced cost & timeline.

Enhanced in-house Engineering Capability

As an owner operator, the completion of Project within the budget is very important and to begin with the production phase on-time is very critical. So, dependency on external engineering source could be a risky business in terms of potential cost overruns, project delays, rework, legal challenges and management of all Engineering Documents / Information about the project.
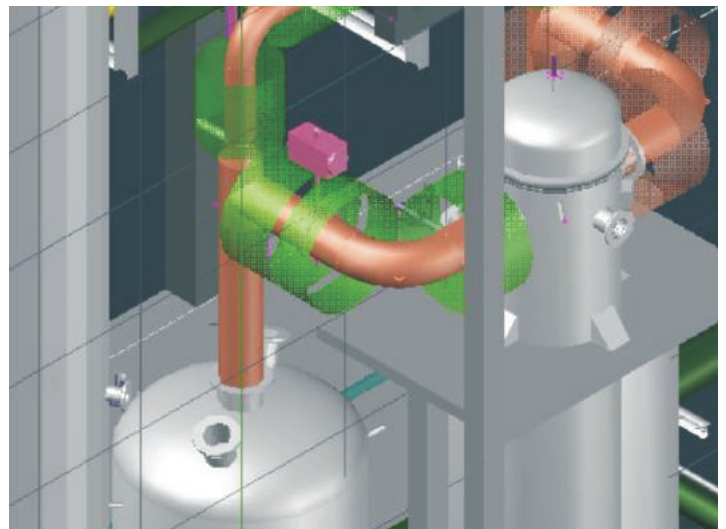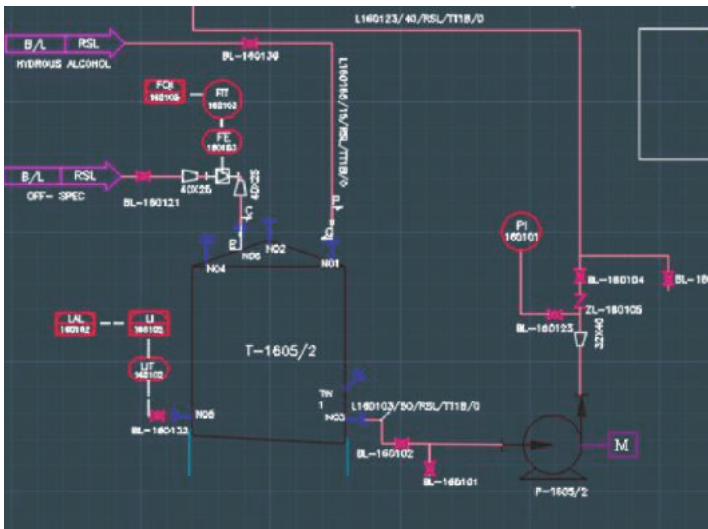
BGW choose CADISON 3D Designer and CADISON P&ID Designer as an ultimate solution, which can enhance their in-house engineering capability in a unified way, where all the departments with different disciplines can work together in real-time basis. Improving the engineering efficiency of a Biofuel plant needs in-depth understanding & assessment of the overall process, equipments, business model and technologies which has been used. CADISON team provided a simpler way for P&ID Design & 3D Modelling of new equipments and installations with seamless co-ordination & interaction between P&ID and 3D platforms.

CADISON is known best for the Biofuel and Process plant due to its Object Oriented Technology and centralized database with multi-disciplinary integration capability. The project data is automatically and immediately available in different disciplines like Process, Instrumentation, Mechanical, Piping and Electrical for creation of P&ID Drawings, 3D Piping Model, Isometric Drawings, GA Drawings, Automatic Reports, etc. through the single database. The "flexibility & modularity" of CADISON helped removing the existing design limitations, and introduces new, multi-disciplinary, silo-free ways of working – in an optimized, integrated design and visualization environment.
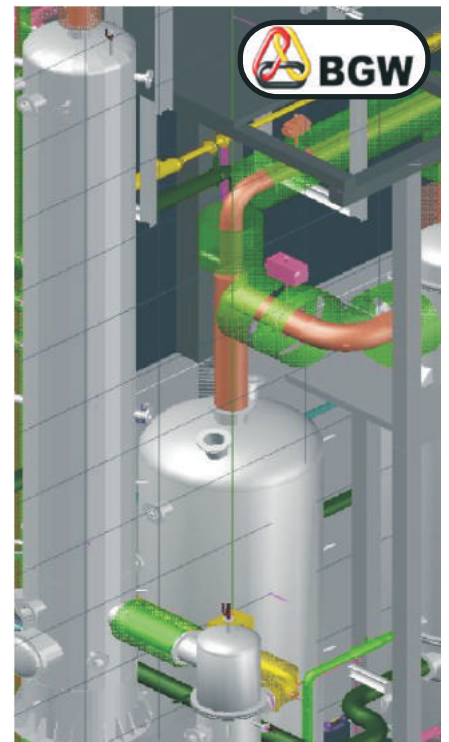
"CADISON'S Inbuilt Database and Integrated Solution really integrates various Plant & Engineering Disciplines gives access to all the users about the updated information of the Project. For us this is a significant development over the conventional Plant Engineering approach. The successful implementation of CADISON helped us to standardize our engineering workflow and the promptness of the CADISON support team helped us save 30% of pre-allocated budget of the project. There is also a sense of pride and ownership from the in-house engineering support team."

Mr. Bartosz Walkowiak - Director, BGW

Improved Performance

With CADISON P&ID Designer and 3D Designer, creation and updating intelligent P&IDs, 3D Designs and Reports deliverables are made easy. BGW has noticed several benefits of using CADISON:

- 30% savings on overall budget in new projects as compared to earlier projects

- Saves time on 3D designing and modifications with ease compared to its conventional equivalents. Specifically, 3D modeling of old equipments for new installation was completed seamlessly

- Automated rule-based approach of CADISON helps to retain the design information intact when model objects are moved and repositioned in the design, thus drastically reducing the amount of rework caused by edits and modifications

- Elimination of manual checking of drawings as drawing creation and model monitoring is all automated and on real-time, which always reflect the current and approved model and drawings

- Ability to create intelligent 3D model with customized reports to aid in the design and construction process for Distillation and Molecular Sieve Dehydration Unit

- Integrated P&ID and 3D design added value in project documentation / information control, engineering workflow and project tracking and allowing access to accurate project information

By improving the quality of asset design, CADISON improves efficiency & saves time and money, while making the plant life cycle seamlessly smarter. The User used the solution to preserve the value of their engineering data while also making the plant modifications that are inevitable during the life of the asset, while ensuring data integrity.

# Catalog2Cloud – Cloud based Solution with MATPIPE

The demand for catalog data is increasing with need to supply the extensive list of intelligent objects, components and the equipments information in Process and Piping industries. In order to meet the demand, MATPIPE Catalog Administrators work hard to provide catalogs to the Design and Planning teams with latest product information, follow strict design rules and standards for faster turnaround time.

Many of our customers with global presence, requested a way to create a standardized & approved database for catalogs with centrally manages space, which can be used by all their distributed design centers. Catalog2Cloud create a centralized data storage (in cloud) so that approved Catalogs can be accessed by all engineering offices. It is a MATPIPE extension for cross-location exchange of catalogs. The Catalog Web Service can be setup on the cloud server or also on an intranet server with IIS service installed on it. The Catalog Administrator can upload and publish the catalogs on the web server, and he can also activate Catalog revisions. The published catalogs can be downloaded from any location by a user having access and configuration of the Catalog web service.

When a user starts the command in MATPIPE, the dialog box for MATPIPE Catalog Web Service Interface opens and the connection to the defined server is established. The User and Administrators have a defined set of tasks which helps them to Manage, Download and Upload catalogs on the servers.
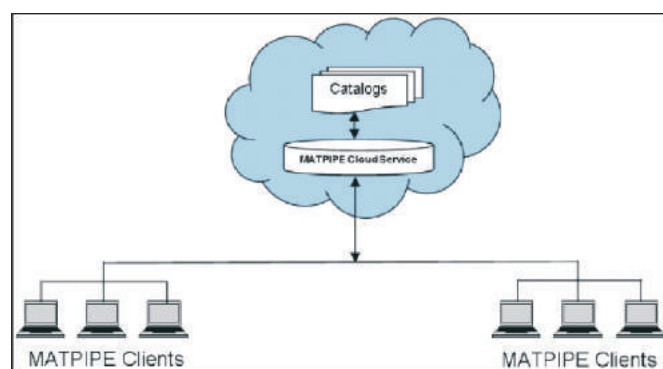
Action / Command	Administrator	User
Search and list approved catalogs on web server	Yes	Yes
Download catalogs from web server	Yes	Yes
Upload catalogs on web server	Yes	Yes
Run the Administrator tool on the server	Yes	No
Find and list catalogs that have not been released or Unpublished on web server	Yes	No
Manage catalogs via the client dialog "Manage catalogs" • Release catalogs on web server (publish catalogs) • Reset release of catalogs on web server • Delete catalogs from web serve	Yes	No
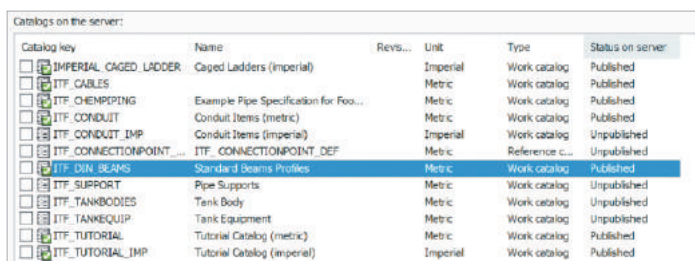
Manage Catalogs: Published and Unpublished Status on Server
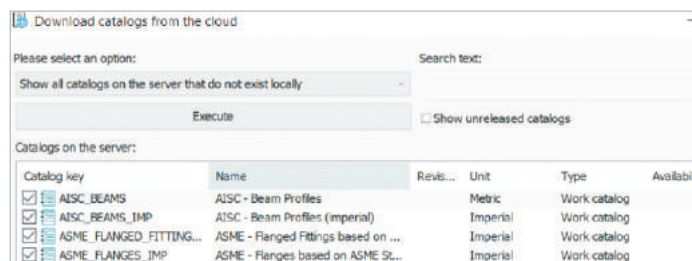
Download Catalogs: displays all catalogs available on server that do not exist locally

CADISON Workshop - Germany

CADISON India Conference - India

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