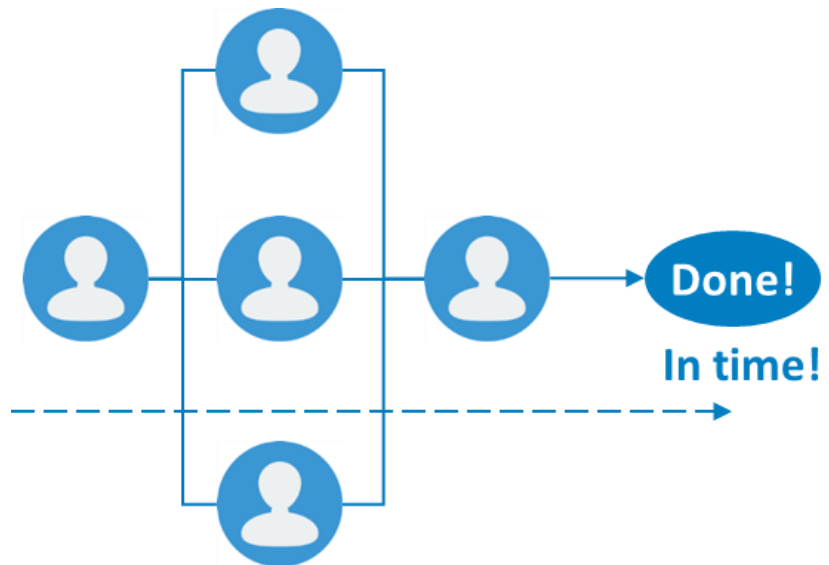


Corzia

COMFLOW

*Fast creation of applications for digital
business processes*



Corzia

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Introducing Comflow

Comflow is a business process and low code platform from Corzia that offers you a large set of capabilities to swiftly create web and mobile applications for new business support or enhancements of your already existing business systems. You simply adapt the information support to the organization in order to create streamlined business processes. Just as you do with BI and reports, but now for the purpose of managing the information and put it back!

In a world where both you and your competitors might have the best ERP solutions for your industry, successfully implemented by the best people according to best practices, how can you use IT to outsmart the competition?

With Comflow, you simply build new web applications exactly as you want them, possibly based on the information and functions you already have. Finally — you can work with the information in your system in a way that suits your organization's and user's needs, using only a web browser. Comflow brings you the greatest benefit through so-called composite applications, so you can swiftly and continuously leverage the value of existing IT investments and gain a competitive edge. In a nutshell, Comflow lets you customize your system without changing the system itself. Since Comflow enables easy information search, workflow and flexible integration, you also can achieve totally new types of applications with hardly any coding.

Most of our customers use Comflow to build solutions for streamlining and accelerating everyday business transactions as well as to obtain optimized, secured and collaborative business processes. These solutions range from isolated, specific functions for certain roles to company-wide deployment of new processes and user interfaces for more or less all the functionality used in an ERP system.

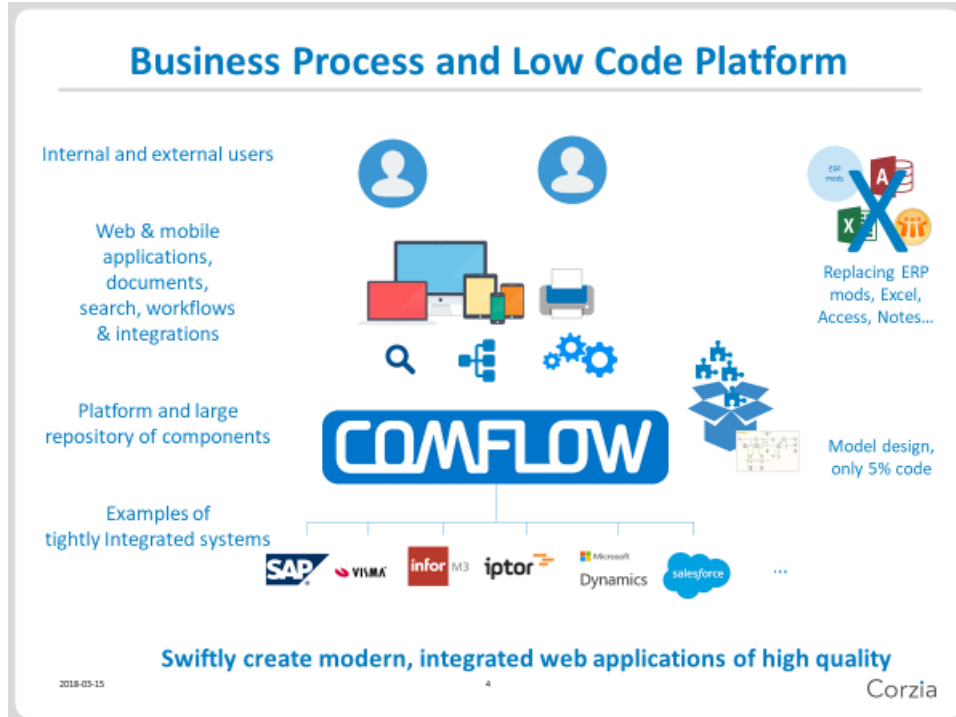
Comflow features broad functionality, rapid development and maintenance of composite applications, and flexible application design and integration to backend systems.

The focus is on just the right business information and functions, exactly when needed and in the right form, both on desktop and mobile devices. Whether your users are current or new, internal or external, by creating these new and intuitive applications you gain streamlined processes with exceptional results. And, of course, happy business application users!



Comflow overview

Comflow technology lets you swiftly link internal and external information resources to new web applications, which you can then use from a variety of devices like PC, Mac, PDA, tablet or smartphone. You can also create information output for printing or emailing, like documents or labels.



Comflow is based on the extensive system integration capabilities of both internal and external applications. But the greatest benefit lies in building composite applications, where information from the various systems is composed into web applications for specific tasks. You can also use Comflow to build totally new applications, with or without integration to existing ones.

You can complement these applications with user-centric business process management, bringing you automated functions, correctly assigned tasks and roles, and a process that always controls the flow and state of information, including real-time flow measurements.

Highly visual and easy to build, Comflow applications can be developed by system analysts — not solely programmers — so you can achieve far more in less time and with less staff than for traditional web development. Compared to traditional development, only 5% is code! This also enables agile, rapid development and allows for greater customer involvement, quicker assessments, and accelerated speed to value.

Comflow is probably the most comprehensive business process platform on the market that eliminates the need for additional products to build custom applications based on existing information and thereby replacing ERP modifications, Notes applications, Access applications and even Excel applications.

Our goal: Happy, productive users

Our goal is simple: To create streamlined user interfaces that reflect your users' workflows, eliminate administrative burdens and create productive workers. With Comflow, you can create new functions on top of existing systems that look and work exactly the way your users want, helping them be happy and productive. But how does it work? Well, it's based on the concepts of composite applications, business process management and true usability.

Composite applications

Your business systems provide a wealth of business information and business logic, packaged as "one size fits all." Think about it: Do you really need more information than what you've already got in your existing systems? Probably not. The information is there, but most likely not presented in the way your users want it to be.

According to Wikipedia, a composite application "expresses a perspective of software engineering that defines an application built by combining multiple existing functions into a new application."

So, based on the information and functions that already exist within (or even outside) your company, you build new applications. This can be to simplify and streamline work across multiple systems, or to enable new internal or external users to work in existing systems. Instead of trying to find a new system that barely manages to meet your requirements and then face cumbersome integration, you'd probably rather build exactly what you need.

Business process management

Business process management (BPM), according to Wikipedia, "has been referred to as a 'holistic management' approach to aligning an organization's business processes with the wants and needs of clients. It promotes business effectiveness and efficiency while striving for innovation, flexibility, and integration with technology. BPM attempts to improve processes continuously."

The approach here takes a process view of the desired information flow of the organization, both internally and externally, and continuously strives to enhance it. You can achieve this in your applications as well as by automating much of the information processing. But the biggest gain is when you start to control the flow of information between people so that it always ends up right where it's needed. That is what BPM is all about.

True usability

At Corzia, we take a broader view of usability that goes beyond look and feel. Comflow delivers both a superior customer experience and a wealth of features for creating streamlined and intuitive applications. This is what we believe defines true usability:

- Enabling users to work in their own language and to use the right terminology based on your own processes, company and industry.
- Using the appropriate device and information output.
- Showing only the information required to perform each task, and not more.
- Using the complete names of statuses and functions rather than codes, as well as colors and symbols to simplify understanding.
- Automating flows and decisions based on company policies, so you can focus more on matters requiring human input or judgment.
- Sharing information in a workflow so that the right people stay informed and can concentrate on what they do best. This drives process efficiency and top information quality.

Creating simplicity and flow in your business

Comflow supports composite applications and business process management, and offers all the built-in features that enable true usability. Simply pick the right feature for the right application. Here are some of Comflow's powerful features.

Streamlining operations = simplifying

Streamlining operations means creating applications that precisely support your company's business processes. User interfaces filter data and functions more successfully than in standard applications, which too often provide a complicated user environment. In many cases this entails replacing multiple screens and numerous keystrokes with a single screen, a few buttons, and recognizable labels that use your own organization's terminology.

Examples include production reporting based on what production looks like at each workstation through easy-to-use interfaces or barcoding, item searches based on the attributes required by the organization for each item type, or goods receiving with integrated quality inspection in a single screen.

The screenshot displays a software interface with several sections:

- Customer information:** A summary box for customer 1306394, FORHÅLTNINGSTENNIKLE AB, including sales amount (27885.71), forecast amount (100000.00), and target sales (0.00).
- History:** A table showing sales and contribution margin data for various periods.
- Forecast:** A table showing forecasted sales and contribution margins.
- Target:** A table showing target sales and contribution margins.
- Diff Forecast vs Target:** A table showing the difference between forecast and target values.
- Rules:** A table showing rules for sales amount, sales share, and contribution level.
- Price list head:** A table with columns for item name, sales, order, price, and forecast.

Item	Name	Item Sales	Order	Sp/U	Price	Nuvarant	Contrib	Nuvarand	Delet	New price	Valid from	Valid to	Planned	New for	Host	SalesPric	Contrib	Salespric	Forecast am	Cost Pric	Cost price	Future	Cost price
20	Price calculation done	1000001	SLAVKYLÄMMÅJABB 148M	20	0.00	0.00	ST	1	4.91	58.61	0.000000	2009-09-27	2013-12-31	0.00	0.00	6.91	54.55	0.00	0.00	2.86	3.14	2013-09-21	
20	Price calculation done	1000002	TEJP VÅV443-48M/KA50M SILVER	20	0.00	0.00	ST	1	119.00	48.13	0.000000	2009-09-27	2013-12-31	0.00	0.00	119.00	57.13	0.00	0.00	61.72	51.01	2013-09-21	
20	Price calculation done	1000005	BRITBLOCK 75-500	20	0.00	0.00	ST	1	0.00	0.00	0.000000	2013-11-30	2013-12-31	100.00	0.00	1001.00	54.56	999.00	100100.00	454.78	454.78	2013-09-21	
20	Price calculation done	1000010	FÖRVARINGSKÄP 150 928-123	50	0.00	0.00	ST	1	492.00	47.25	0.000000	2009-09-27	2013-12-31	0.00	0.00	492.00	44.65	0.00	0.00	259.52	272.32	2013-09-21	
20	Price calculation done	1000011	FÖRVARINGSKÄP 150 918-02	50	0.00	0.00	ST	1	492.00	47.25	0.000000	2009-09-27	2013-12-31	0.00	0.00	492.00	44.65	0.00	0.00	259.52	272.32	2013-09-21	
20	Price calculation done	1000012	FÖRVARINGSKÄP 150 938-01	50	0.00	0.00	ST	1	492.00	47.25	0.000000	2009-09-27	2013-12-31	0.00	0.00	492.00	44.65	0.00	0.00	259.52	272.32	2013-09-21	
20	Price calculation done	1001010	VERKTYGSPANEL 89x648 BLA	20	0.00	0.00	ST	1	388.00	50.98	0.000000	2009-09-27	2013-12-31	0.00	0.00	388.00	53.43	0.00	0.00	190.19	180.68	2013-09-21	
20	Price calculation done	1001058	GARAGEDOKKRAFT 3 TON	20	0.00	0.00	ST	1	2035.00	45.38	0.000000	2009-09-27	2013-12-31	0.00	0.00	2035.00	35.81	0.00	0.00	1111.50	1306.25	2013-09-21	
20	Price calculation done	1001090	VERKTYGSLÅDA 350x250x200	20	0.00	0.00	ST	1	774.00	53.76	0.000000	2009-09-27	2013-12-31	0.00	0.00	774.00	54.18	0.00	0.00	357.87	354.57	2013-09-21	
20	Price calculation done	1001084	VERKTYGSLÅDA 550x220x250	20	0.00	0.00	ST	1	847.00	53.74	0.000000	2009-09-27	2013-12-31	0.00	0.00	847.00	54.33	0.00	0.00	391.76	356.80	2013-09-21	

Cockpits and centralized views

Streamlining can also involve creating cockpits and centralized views that present user interfaces centered around roles or information entities with all related information easily available on different tabs. All the information is visible and easily accessible in one single location, such as a Salesperson Cockpit, a Customer Center or an Accounts Receivable Cockpit.

Some customers have actually built totally new user interfaces around their ERP in order to modernize the interface and, more importantly, shift away from a functional view of work toward more process-oriented methods. For example, instead of managing all types of maintenance orders in a single, complex function, some of our customers have replaced it with multiple web applications that are streamlined according to their own processes for each order type. Simple tasks are supported by a simple application, while complex tasks use a more advanced application. So although the ERP system still manages all orders behind the scenes, you gain a completely new, tailored system without actually replacing it.

Master data management

Master data management is all about ensuring data quality and sharing data with the applications where it is needed. With Comflow, you don't need external applications to manage your master data with cumbersome integrations; instead, you reuse existing data sources and build applications around them. This simplifies data management and reuse of all the logic contained in the existing systems.

Comflow gives you the capability to manage all attributes around your data entities in a single application, even if the data resides in multiple systems. You can easily build mass data management functions where you visualize and filter large data volumes in different ways and enable updates and management, whereas standard applications offer only single entity management. It's like working in Excel, with all the integrity checks to the host systems built in. Examples include price list maintenance, discount model maintenance and item data maintenance.

The screenshot shows a web application interface titled 'Manage Warehouse/Items - TOOLS CENTRALLAGER'. It features a search bar and several tabs: 'Items', 'Phased out items', 'Export', and 'Activation'. Below the search bar is a table with columns: 'Sales Item / Item no.', 'Name', 'Base Supplier', 'Prod. gr.', 'Item group', 'Status MM50X', 'Supplier MM50X', 'Status MM500', 'Planning method', 'Plan. pr. Name', 'Con. rel. chg.', 'Low. Dicit.', 'Reorder pt.', 'Order qty.', 'Order mult.', 'Issue mult.', 'Locator', 'On-hand', and 'Buy'. The table contains multiple rows of data, including items like 'SLANGLAMMA ABA 8-14MM', 'TEJP VAV 46x3 48xMM50M SILVER', and 'DORRSTANGARE T583 8300/1 DORMA'. At the bottom of the interface, there are buttons for 'Save', 'Select all', 'Unselect all', 'Phase out (selected)', '50 to 20 (selected)', and 'Print with label (selected)', along with an 'Add item' button and a 'Print' button.

You can also build workflows for creating, updating and phasing out information, and notify the right people about tasks that require manual input that for some reason cannot be automated. This is a great solution for processes that involve multiple content creators or for approval and authorization workflows. Companies have used Comflow, for example, to create solutions that manage more than 2 million purchase items and price updates each year, with full control of the information being changed. Read more about these types of solutions in the Business workflows section.

Business portals

If you want to extend your information and functions to your customers, agents, subcontractors or suppliers, then look no further than Comflow. You don't need to buy additional software. Just build an application that filters the data and functions your partners need from your business system — and you achieve integration across your entire supply chain.

You might want simple solutions, such as customer delivery approvals, in which the customer simply updates your deliveries with the received quantity, thereby releasing the invoice. Or you might want more advanced supplier portals that require stricter conformity to your own work methods and supply processes, such as sharing forecasts, call-offs, Kanban and JIT deliveries with label printing, in order to streamline your goods receiving.

If your organization operates internationally, Comflow lets you manage these applications in languages that your current business system does not support. We're sure this will make your suppliers in far-off countries happier to do business with you.

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One of our customers used Comflow to create an Agent Supply Chain portal. This portal supports more than 80 service agents who use 600 vans as warehouses, which contain thousands of spare parts, and generates thousands of refill order lines per day. The portal works in 11 languages and manages more than 10 currencies. Now this is what we call supply chain integration!

Mobility

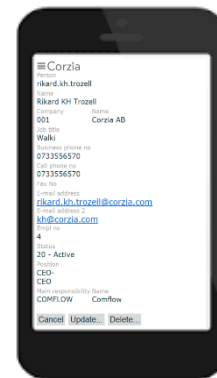
Even if your current systems support web user interfaces, that doesn't mean you can use them on devices other than a PC. This is because of technical requirements, but mainly because they are not adapted for other screen sizes and interaction patterns. Comflow removes these barriers so you can easily build web applications for handhelds and truck terminals, tablets and smartphones, where the view and interaction pattern suits your device.

PDAs

As robust pieces of hardware, handheld devices are often used with gloves on during manufacturing. Of course, you can't tap the screen with your fingers; the interaction mainly consists of scanning information and perhaps entering it using the numeric keypad in order to create true usability in such environments.

Screen size limitations demand a totally different user dialog than what standard applications can offer. Comflow gives you the capability to easily design the screens and the flow required for your handheld operations, such as stock movements, goods receiving, pick reporting, stock receipt and stocktaking.

You can also use the output generation functionality in Comflow to generate printouts with barcodes, like stock documents and labels, to streamline operations fully.

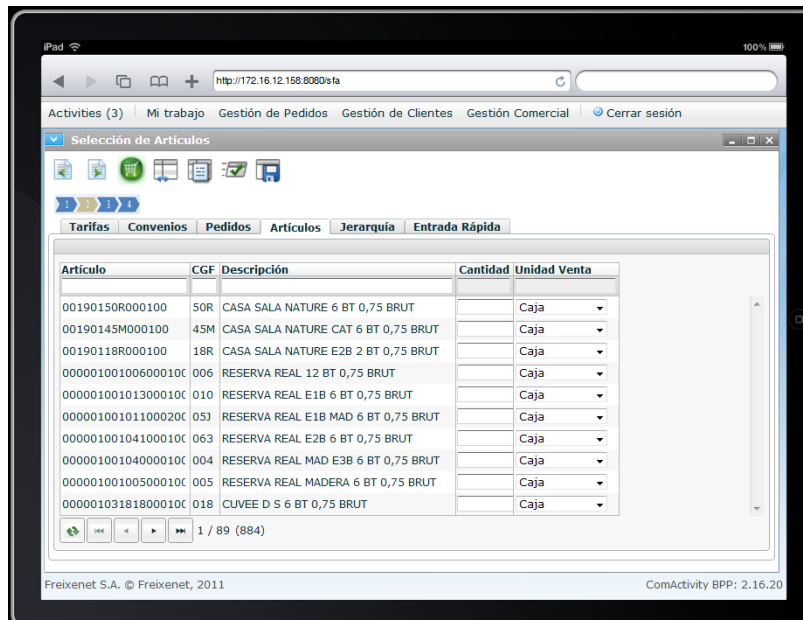


Smartphones

Smartphones combine some of the PDA and tablet features, with smaller screens and finger interaction. Again, Comflow provides the necessary capabilities and you decide which ones to use in your solution.

Tablets

Tablets are handy for field sales and service staff who work out in the field managing large volumes of information. They can use the web to access related product, machine and service information, and with Comflow they can access your ERP system to view business transactions, enter orders or update information.



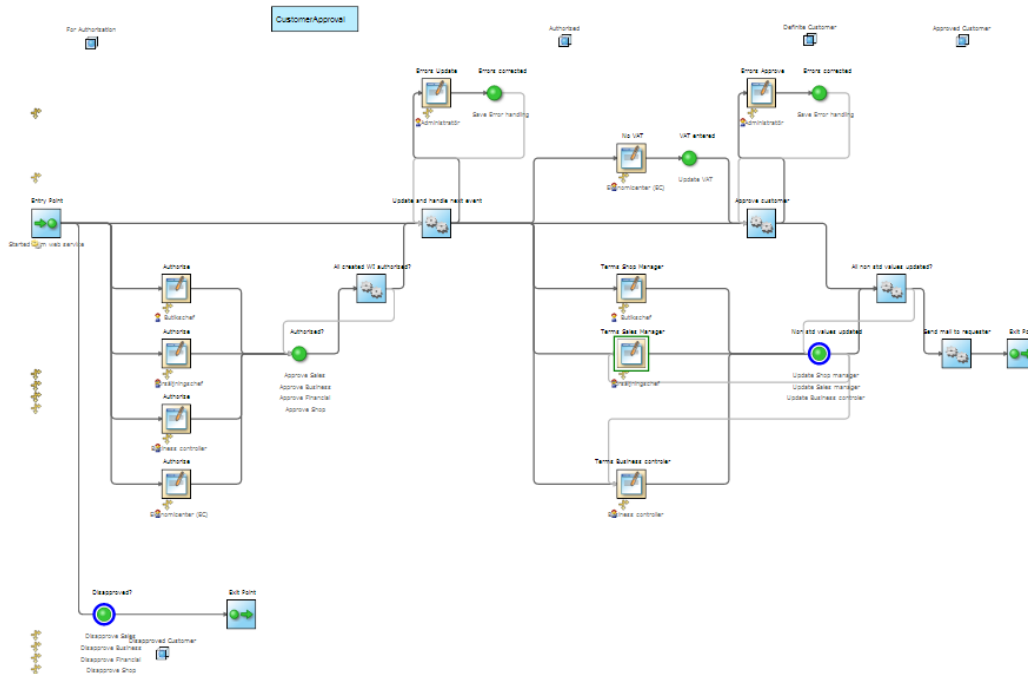
The interaction pattern is designed to support the desired point and click, so you can easily navigate the application in the web browser using your fingers.

Business workflows

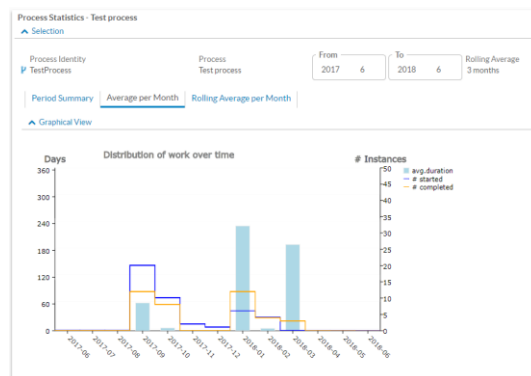
With Comflow's process framework, you can easily create user-centric workflows that let internal and external users with defined roles interact according to a specified flow. These solutions can deliver give exceptional results, as when one Comflow customer slashed the average lead time for its quotation process from 132 hours down to just 1.

The process framework automates and controls the distribution of information and tasks based on an executable process together with adapted user interfaces from your existing applications. This means that in the context of a workflow, users only see the information they need for their tasks, even if the application behind it can show much more. When the user clicks a task, the correct screen automatically appears containing the relevant data and functions. This provides exceptional usability even for the most complex processes. Item entry, customer entry and quotation management are examples of such workflows.

Not only do you achieve streamlined workflows, but you gain access to fantastic features for monitoring the flows. The following image shows a process view with blue marks around the current state of a specific process instance, which can always be accessed by any user who is part of the process. This clearly reveals where the current process fits in the flow.



You also automatically obtain process statistics for every process you create, so you can easily measure efficiency. As the following image illustrates, a helpful graphical view contains measurements for the number of started and finished instances during a certain period. You can also view the mean lead time for the processes for each period in days.



Extended functionality to existing systems

Even if your business system contains extensive data and functions, you might need additional functions. With Comflow you can easily extend functionality to support your processes by integrating with existing data and functions.

The extended functionality can be minor, such as implementing a new type of material allocation, capacity to promise or more advanced, such as complementing the ERP system with functionality for routable spare parts or implementing totally new methods like tact planning. In fact, Corzia has implemented tact planning for customers who lacked this functionality in their ERP systems, helping them improve their delivery precision from 76% to 98%, with 40% less administration.

Born to integrate

The attitude that data always exists somewhere else gives exceptional application integration capabilities, Comflow excels in system integration very much due to the concept of data source meta data model. This means that applications can be easily built, directly integrated with other systems and that you can share or synchronize data in a highly visual manner done with very much reduced coding.

This might involve integrating your internal applications with each other or with external cloud services, such as Salesforce or Projectplace, or even integrating with your business partners. The integration can be tight and direct as well as de-coupled and message oriented.

Technology-wise, Comflow supports both synchronous and asynchronous integration via databases and SQL, APIs, web services or messaging using XML, JSON, EDIFACT or other formats. We've completed successful integration projects of various kinds, like supplier item and price information imports via Excel, invoice distribution via XML, sales order receipt and sales invoice distribution via EDIFACT and transport service integration via flat files.

The basis is a data source model - a meta data model of each system's data sources. Based on the meta data, a sub data model for each interaction is modelled and the data that shall be managed is visualized and rules are easily applied how it shall be retrieved and updated back. The model also manages the differences between for instance SQL-interfaces and web service interfaces via different data source connectors and allows the developers to easily combine the two to achieve the right system interaction.

Due to that the majority of systems have their data stored in Relational data bases, information is mostly read via SQL and Comflow supports a wide area of SQL dialects. The updating is normally done via API's or web services. For those cases where no API's exists, updates can be done directly via SQL, but the ruleset of Comflow secures the data integrity based on the meta data model. All with strong logging capabilities. In all cases the integrations are very visual, are swiftly built, executed with performance and the integrations are easily managed.

Comprehensive features

From our solution examples, you've gotten an idea of some of the key features. But these only represent a fraction of the full functionality of Comflow. The following additional features give you an idea of just how comprehensive Comflow is as a platform for custom applications.

Export to and import from Excel

Any list in Comflow can be configured for export to Excel by the simple click of a button. If the list is designed for input, you can enable direct import of Excel into the list with the same simplicity.

Quick search

Comflow provides a function that enables you to "Google your business data." You define the tables, columns and documents you want to be searchable, the system indexes them, and then you can search throughout your enterprise data. You can also define user interfaces that you'll use to view the search results in detail. And not only can you index the data in a main table, but also the data in related tables. So, you can obtain search hits in sales order lines for an item name, even if the sales order line table only includes the item number and the related item master table contains the item name.

Web portal

The Comflow user interface is based on portal technology, which gathers information from diverse sources in a uniform way and displays it according to the user's role, via a desktop version or handheld version.

Locale and language support

Comflow runtime is available in Swedish, English, German, French, Finnish, Dutch and Chinese. Comflow applications can even be built in other languages and, to a certain extent, imported from your current business system.

Time zone management

Native time zone management is built in, so you can easily manage orders added in one time zone within your own zone and still communicate back your operations in the customer's time zone.

User management

Comflow comes with its own user management, but can easily be integrated with other directory services, such as Microsoft Active Directory, via LDAP interfaces. This also enables single sign-on capabilities and process roles association.

Function and data security

Based on users and users groups, you can control access to functions, function groups and data.

Audit trail and digital signature

Any data that is updated through Comflow can provide an audit trail service, so all changes can be tracked. You can control whether a signature and password are required for certain changes, and add reason codes for the change.

Job scheduling

Comflow provides a job scheduler, so functions can be processed at predetermined times instead of manually.

Job and system management

A comprehensive environment is available for job and system management, offering system administrators full control of the runtime environment.

Process administration

Except for the graphical views of the process monitoring described earlier in this document, you can monitor and control all processes in great detail on the process level, process instance level and work item level.

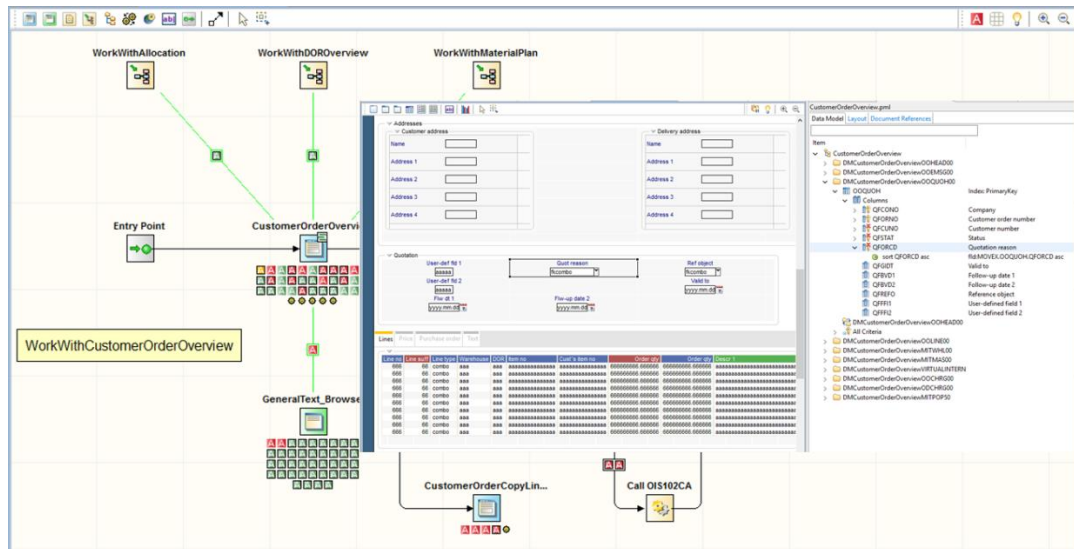
Full integrity at database update

One of Comflow's key features is its ability to make updates in databases controlled by the integrity rules in the data source model contained in Comflow. This means that applications that lack APIs can still be updated in a controlled manner, drastically reducing the implementation cost.

Developing Comflow applications

Based on Eclipse, Comflow Studio uses the concept of model-driven development. XML stands behind most of the technology, with graphical tooling on top, plus the ability to integrate business rules and business services in Java code. Simply put, everything is data models, screens and workflows, with some small pieces of code.

Regarding the application design, you have a data source model at the bottom from which you design screens in the portlet designer and integrate them in interactive workflows. This enables you to use actions to control the user-system interaction. You might also place this into the context of an asynchronous workflow that distributes tasks between roles.



With our graphical development approach and componentization, much of the tedious programming code — more than 90% — is eliminated, resulting in a transparent system and faster payback. It's a breeze to build new applications, but it's even easier to change them. Even developers who did not originally create an application can change one, truly supporting continuous development. Once you've started to build applications in Comflow, you surely won't want to go back to traditional coding.

Technology

Applications are easy to access through web browsers from many devices, and no local installations are required for the applications. You manage all data centrally, so especially for mobile users no data is stored locally, which is why data security relies purely on the server side and the network. This greatly simplifies system management and is the main reason why Comflow bases its user interface on web 2.0 technology via HTML and JavaScript.

Comflow is based on Java and use a service-oriented architecture (SOA) approach. Open standards like Java, XML, SQL and SOAP are adopted together with numerous standard Apache open source components, like Tomcat.

Supported host systems

With our deep and broad expertise in ERP, we understand the architecture inside out. That's why Comflow excels at system integration, especially for ERP systems. Comflow supports integration for SAP and Movex/M3 out of the box but can actually integrate any ERP system based on AS400/System I, Windows or Unix technology.

Cloud deployment

Comflow can be provided as a cloud service from Corzia. It can also be installed in other cloud environments, like Amazon, in order to support our customers cloud strategies.

Hardware and software recommendations

PC client:

- Browser: IE11, Edge, Firefox, Safari, Chrome
- Screen resolution, minimum recommended: 1440*900

PDA client:

- Windows 6.5 or higher
- Screen resolution: minimum 320*240
- Screen size: minimum 4 inches

Tablet client:

- IOS or Android
- Screen size: minimum 7 inches

Smartphones:

- IOS, Android, Windows mobile 7 and 8
- Screen size: minimum 4 inches

Server:

- Minimum 4 64-bit processors, 2 GHz, 12 GB RAM, 30 GB disk
- Windows Server 2012 or 2016, 64 bit
- Windows SQL Server, IBM DB2 or IBM DB2/400 database manager
- Java 8

About Corzia

Corzia was founded in Stockholm, Sweden in 2002 with the aim to build a platform for future enterprise applications.

Our customer base includes hundreds of medium to large companies in manufacturing and distribution industries throughout Europe, Australia and the United States. Our team possesses unrivalled experience and knowledge of enterprise software, and our network consists of more than 150 talented employees and partners.

Our implementation partners are ERP and industry experts in their own fields who can deliver unique Comflow solutions that improve your operations. Their extensive supply chain knowledge, combined with easy-to-use development tools, make it simple to constantly adapt the applications to your ever-changing business needs.

We have partners in Sweden, Norway, Finland, Netherlands, France, Poland, Spain, Turkey, the United States, Chile and Australia. See our websites for more information at www.Corzia.com.

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