

Manufacturing X
Sales Platform



Manufacturing X Release Notes

| Key Features and Enhancements

1908

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1. Introduction

With the 1908 release of the Manufacturing X Sales Platform (MX), In Mind Cloud focuses on outstanding usability of the system to maximize the value of existing features for our customers. Numerous features, e.g. Quote Overview, Configurator, Opportunity Pipeline and Product Catalogue have been re-designed to enhance usability and efficiency. MX also introduces a new, eminently flexible user interface (UI) framework, which enables customers to have a highly customized UI to support their special needs to the full extent.

To serve our manufacturing customers better, which often require tight integration with their existing backend systems such as ERP, In Mind Cloud further enhanced its integration capabilities to support CRM and CPQ processes even better. Examples are a newly introduced account and business partner synchronization, supporting scheduled jobs for custom tables, as well as views and enhancements on the backend pricing integration. Another significant milestone for the integration is that MX now offers open APIs, which for instance allow the usage of MX's robust configurator and pricing engines in third party user interfaces, such as building e-commerce front-ends.

2. Usability Improvements

2.1. UI Widget – Task-driven Dashboards

Manufacturing sales processes often involve monitoring, reviewing and completing multiple different types of tasks, from recording a customer request, to quote negotiation and approvals, and to final order creation.

There should be no delays due to miscommunication or overlooked tasks. System emails, reminders and notifications per task level help to keep all stakeholders informed. However, per user or role level, it is still necessary to have a task-driven and personalized dashboard available to ensure all the assigned tasks are closely followed, in order to streamline especially cross-departmental processes. Such dashboards require to be highly tailored based on each user's role and the tasks assigned in the sales process.

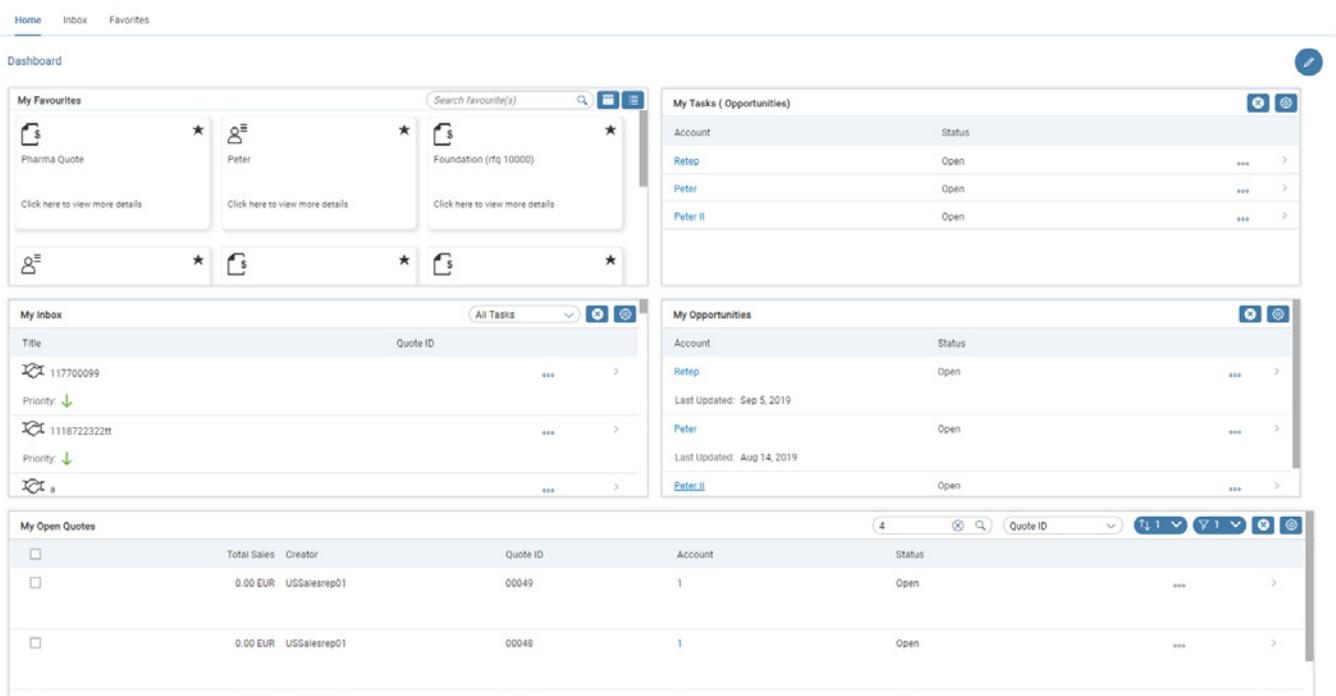
With above considerations, MX introduces a highly customizable **UI Widget** feature which is part of MX's User Interface Framework. In MX, a UI Widget is a pre-built user interface control that performs a specific task.

Use case examples are:

- A table control that shows "Open Quotes"
- A table control that shows "Opportunity in Quotation phase"
- A graph control that shows quote header information, e.g. pricing date, currency and total quote amount

In our 1908 release the UI Widget functionality applies to the MX homepage, which is the entry point for each user. It will be further extended to other application areas in the future. More task-driven UI Widget controls will be continuously added into the framework based on demand.

Figure 1 : Homepage with UI Widgets



2.2. Classic Line-Item View

To improve the performance on the quote line item view, In Mind Cloud introduces the **Classic Line-Item View**. This view can be enabled via a setting. It is optimized for desktop usage and supports all features of the

responsive view. This new line-items Grid View can support rendering for 1000+ line items much faster than the responsive line item view and gives desktop users a much clearer overview on hundreds of line items.

Figure 2 : Line-Item Grid view

Position	Name	Quantity	Discount	Currency	Cash Disc. / Unit	Base Price / Unit	Options / Unit	Unit Price	Total Price
	Forklift - FX50	3.00	0.00	RMB	15,150.71	114,363.80	37,143.34	136,356.43	409,069.28
	Forklift - FX50	5.00	0.00	RMB	29,916.90	114,363.80	35,220.68	119,667.58	598,337.92
	FORKLIFT_TYRES_EXTRA	4.00	0.00	RMB	104.78	2,095.60	0.00	1,990.82	7,963.28
	FORKLIFT_PREMIUM_SERVICI	8.00	0.00	RMB	304.20	6,084.00	0.00	5,779.80	46,238.40
	FORKLIFT_TYRES_ELASTIC	4.00	0.00	RMB	77.74	1,554.80	0.00	1,477.06	5,908.24

2.3. Quote Overview Page Re-Design

To improve access to quote header information, the former **Quote Overview** and **Additional Attribute** views have been merged into a combined Quote Overview tab. In Mind Cloud also introduced a separate Pricing Information section to view and control data for pricing scheme/procedure determination, which is related to the Pricing Determination feature discussed later.



Figure 3 : Quote Overview page

Quote Information

Quote ID: 00160 | Title: Q_150_Forklift_Construction & Mining | ERP Id: | Creator: Falk Brauer | Expected Closure: May 28, 2019 | Effective Date: May 22, 2019

Requested Date: Jul 16, 2019 | Pricing Date: May 22, 2019 | Reference: Q 7293 | Time Zone: (UTC-02:00) Coordinated Universa | Price after Line Item Discount: 978,184.00 | Total Price: 978,184.00

Description: Quote for Mining Equipment. The customer wants to buy ASAP.

Pricing Information

Type: Quotation | Sales Organisation: MX Industrial Machines | Distribution Channel: Non SAP DC | Division: 00 | Pricing Procedure or Scheme: Direct Sales

Additional Information

Account: Construction & Mining LTE | Opportunity: Q_150_Forklift_Construction & M | Address: Hans Lorenz Ring, 34, 12323, Sing | Contact: | Industry: Mining | Sales Office: MX Industrial Machines

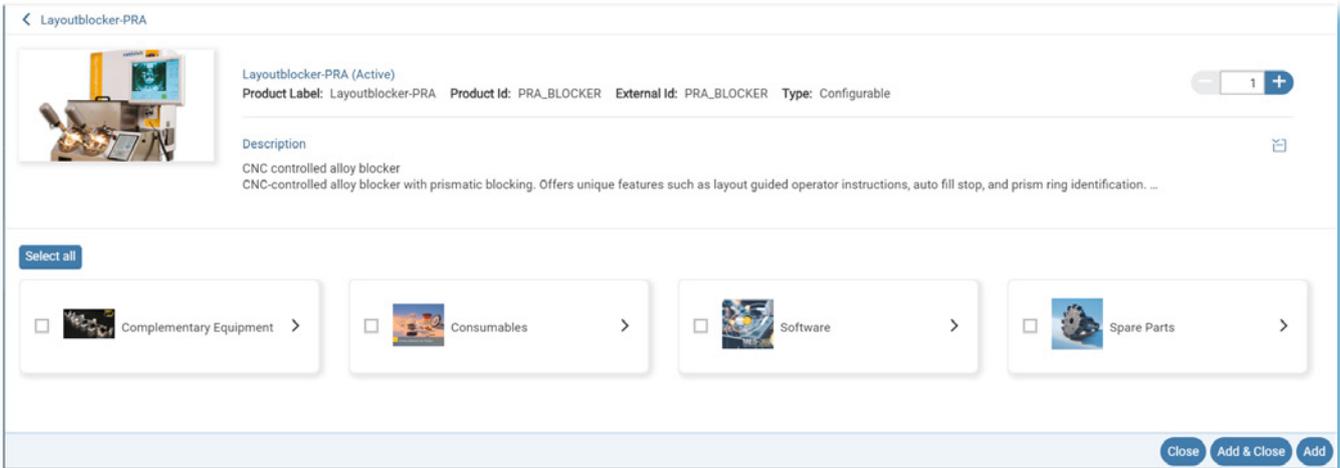
Payment Terms: 30 days net | INCO Terms: Ex works | INCO Terms Location: Singapore

2.4. Product Catalogue Re-Design

With the 1908 release we are also introducing a leaner design of the **product catalogue detail view**. To have a consistent user experience, users from multiple entry

points to the product catalogue will now view the same design.

Figure 4 : Product Catalogue Detail Re-Design



2.5. Opportunity Pipeline Re-Design

With this release, the **Pipeline View** has undergone a re-design, making it much easier to find the latest and most relevant information on the sales pipeline, and therewith empowering even faster sales cycle times.

It also comes with easy-to-use filters on the top left. The **filter criteria** are now visible on the top right so users will be able to clear them directly without going into the filter selector.

Figure 5 : Opportunity Pipeline view

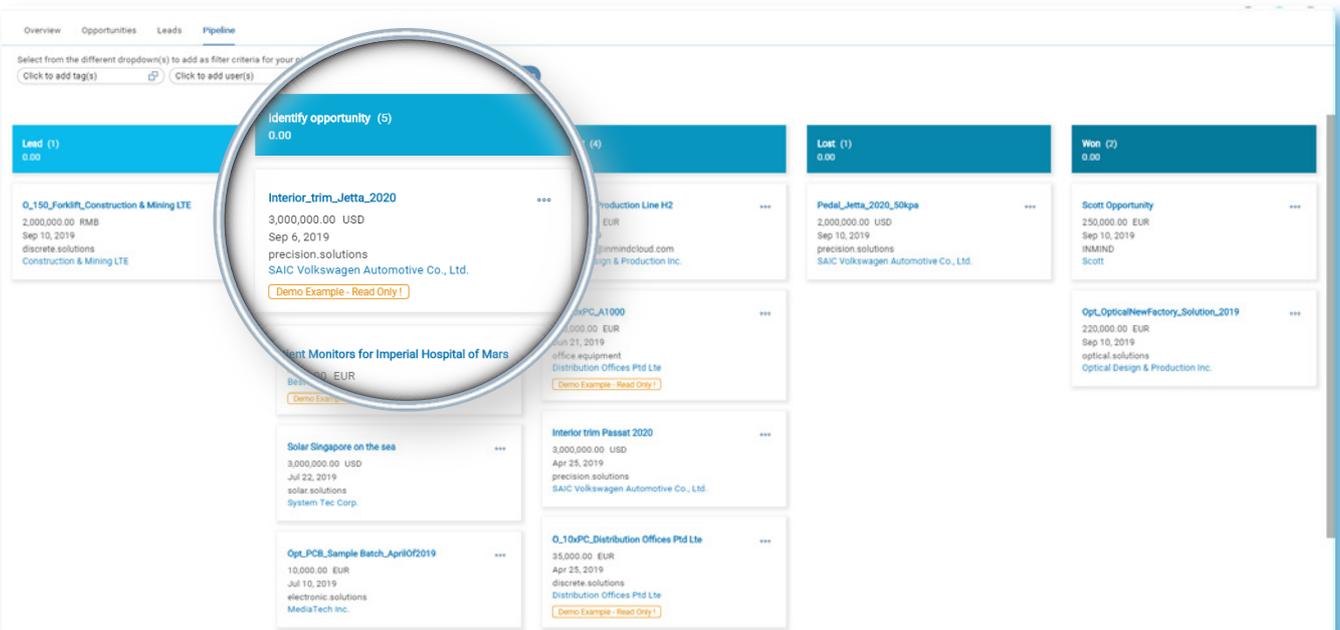
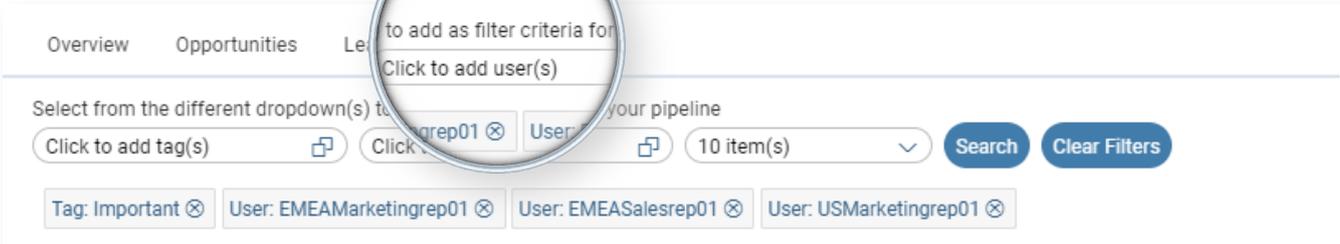


Figure 6 : Opportunity Pipeline filter



2.6. Configurator paginated view enhancement

The **configurator page** is in many scenarios screen where users spend most of their time. We have been constantly reaching out to our customers, to get feedback and continue to improve the configurator's usability.

In the 1908 release of the Manufacturing X Sales Platform, below fine tunings have been implemented:

- Ability to list all sub-groups of a group within one page
- Make the paginated view the default one

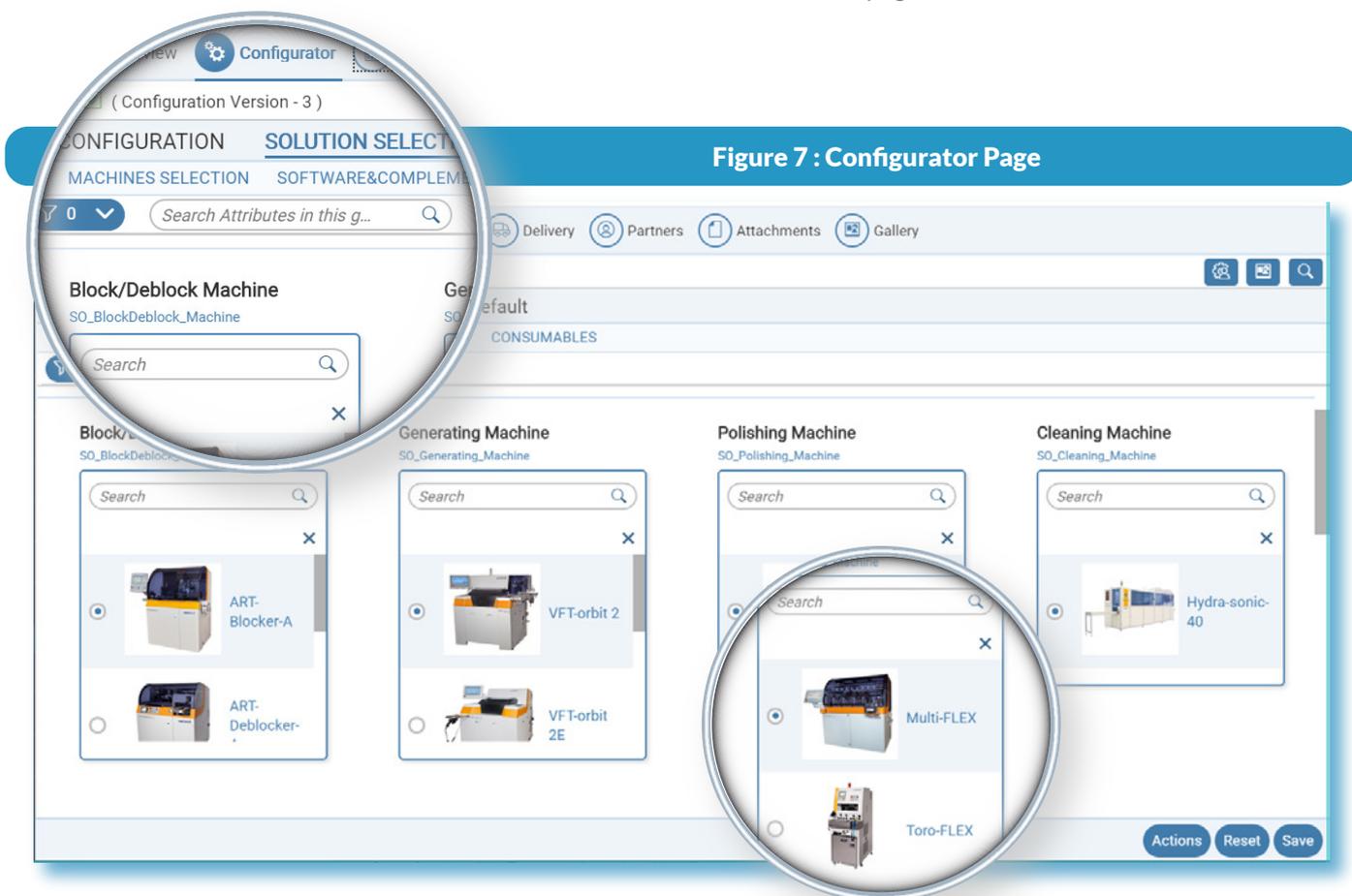


Figure 7 : Configurator Page

3. MX Core Features

3.1. Similar Quotes Check

Finding similar quotes, let it be by customer, sales area, product or even product configuration is a frequently requested feature. Especially if your business model is more indirect e.g., via value-added distributors, who are involved in the same project, it becomes an essential part of the sales process to ensure a consistent offer and pricing for all distributors bidding for the same tender. Hence, it is critically important for sales representatives to have a holistic picture about the tender/project so that they can make informed strategic decisions.

To cater for these use cases, MX introduces a **Similar Quotes Check** feature which provides very detailed capabilities to search for similar quotes. Users can search based on quote header data, quote partner functions, line items (i.e. products) and specific product configurations. The results are not only exact matches. They are ranked with respect to the similarity to the user search criteria, i.e. by the number of criteria a certain quote fulfils.



Figure 8 : Define Similar Quotes Check criteria

Figure 9 : Similar Quotes Check results page

Find Similar Quotes 18 matching Quote found

Matched (%)	Quote	Document Type	containsCreator	Sales Org	Distribution Channel
100%	Q_200xPC_A1000	Order	office.equipment	MX Office Equipment	General SAP Sales
87%	Q_10xPC_Distribution Offices Ptd Lte	Order	discrete.solutions	MX Office Equipment	General SAP Sales
50%	Office Equipment Large Order	Order	INMIND	MX Office Equipment	General SAP Sales
25%	Ophthalmic Solution	Order	global.distributor		General SAP Sales

3.2. Approvals directly from Email

Approvals are time critical for providing an outstanding customer experience. Next to the task-driven dashboard mentioned above, MX introduces with the 1908 release a direct email approval functionality. Eliminating the

need to log into the application it will speed up quote turnaround times. This feature also meets latest standards on security to prevent misuse. A one-time link is generated that has an expiry time, which can be controlled by an administrator.

Figure 10 : Email Approval

Approval needed for Quote 18025-071

Notifications
 To John
 Wed 6/19/2019 12:07 PM

Reply Reply All Forward ...

If there are problems with how this message is displayed, click here to view it in a web browser.

Dear John,

Your approval for Quote **18025-071** is needed. Please review the document at [MX Link](#).

You may also review the attachment, and then Approve or Reject accordingly by clicking the following buttons:

This is a system generated message. Please do not reply to this email.

3.3. Pricing Scheme/Procedure Determination

A global organization needs a differentiated costing and pricing approach across regions or sales channels. To better support our customers, In Mind Cloud further enhances MX's both internal and external pricing engines. With this release, MX can support multiple **pricing schemes/procedures** and determine the relevant one based on quote header attributes (i.e. sales organization, distribution channel, division and document type) and the customer account selected. This has significantly enabled our customers to have much more flexibility to implement various pricing strategies.

3.4. Price Items enhancements

The 'Price Items' concept i.e. a detailed cost and price break-down, enables customer to have complex cost and price calculation per line item. To further improve the usability of the cost and price breakdown, MX delivers the following changes with the 1908 release:

- Ability to show and change a price condition type's base unit and unit of measure
- Showing the condition type ERP ID on the Price Items screen
- Showing a pricing condition's status, i.e. active and inactive
- Ability to trigger ERP pricing from Price Items screen

Figure 11 : Price Items screen

ID	ERP Id	Price Item Type	* Amount	Per	Target Amount
<input type="checkbox"/> ✓ 110001	PR00	Price (\$)	700.00 EUR	1.00 PCE	700.00 Euro
Price					
<input type="checkbox"/> ✓ 200001	VA00	RAM - Price per GB (\$)	10.00 EUR	20.00 PCE	200.00 Euro
Variants					
<input type="checkbox"/> ✓ 200002	VA00	Casing - Tower (\$)	120.00 EUR	1.00 PCE	120.00 Euro
Variants					
<input type="checkbox"/> ✓ 1100001	RA00	% Discount from Net (%)	10.00 %	1.00 PCE	102.00 Euro
% Discount from Net					
<input type="checkbox"/> ✓ 1100002	RB00	Discount (Value) (\$)	-122.00 EUR	1.00 PCE	-122.00 Euro
Discount (Value)					
<input type="checkbox"/> ✗ 9400001	VPRS	Cost (\$)	0.00 EUR	1.00 PCE	0.00 Euro
Cost					

4. Integration Features

4.1. MX APIs with OAuth based authentication

MX has powerful built-in product configuration and pricing engines. To extend the capability to third party applications, MX proudly announces that all APIs, which have been previously used only MX internally, are now open to third party applications to consume. The APIs are accessed via an **OAuth based authentication**. Consumers can register their systems with an MX instead and get a client ID using which the client will be authorized. This enables various use cases such as building custom, highly specific user interfaces for product configuration for specialized e-commerce scenarios or supplying data from or to any other application that is used in a sales process.

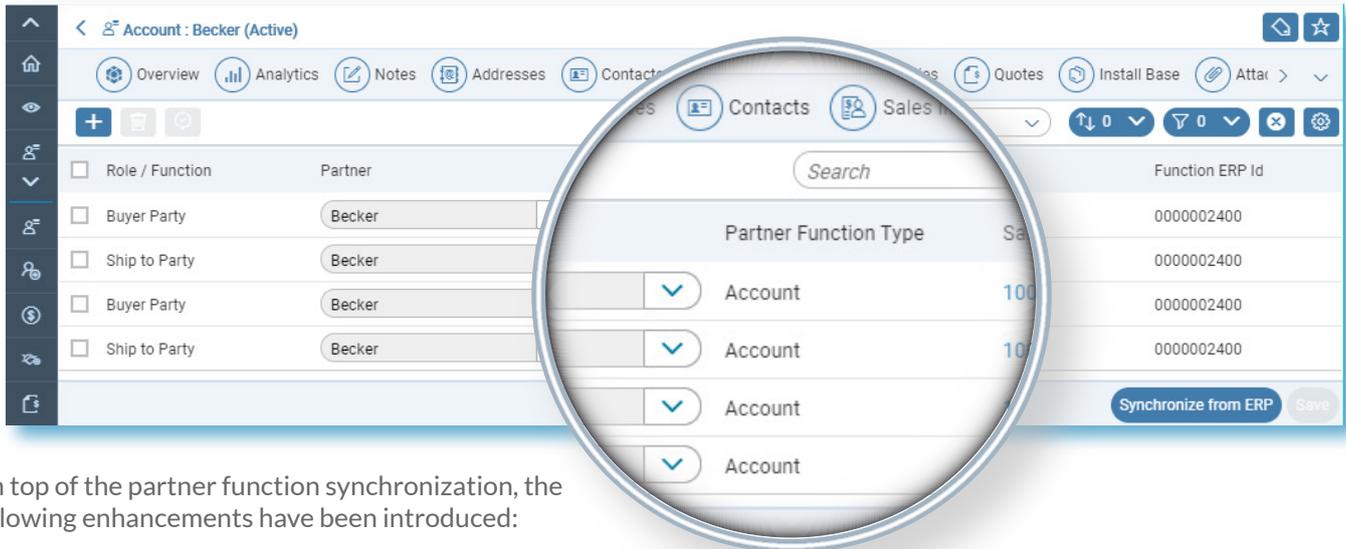
With the open APIs, MX once more underlines its platform capability to enable third party applications, especially customers' existing systems to leverage on MX's powerful features.

4.2. Account and Partner Function enhancement

The ERP Account and Partner Replication introduced in the 1904 release of MX was extended.

MX now replicates an account's partner function list from ERP. This data is used to ensure that correct ship-to, bill-to and other partner functions are set on an opportunity and quote which is essential for globally operating companies.

Figure 12 : Account Partner Functions



On top of the partner function synchronization, the following enhancements have been introduced:

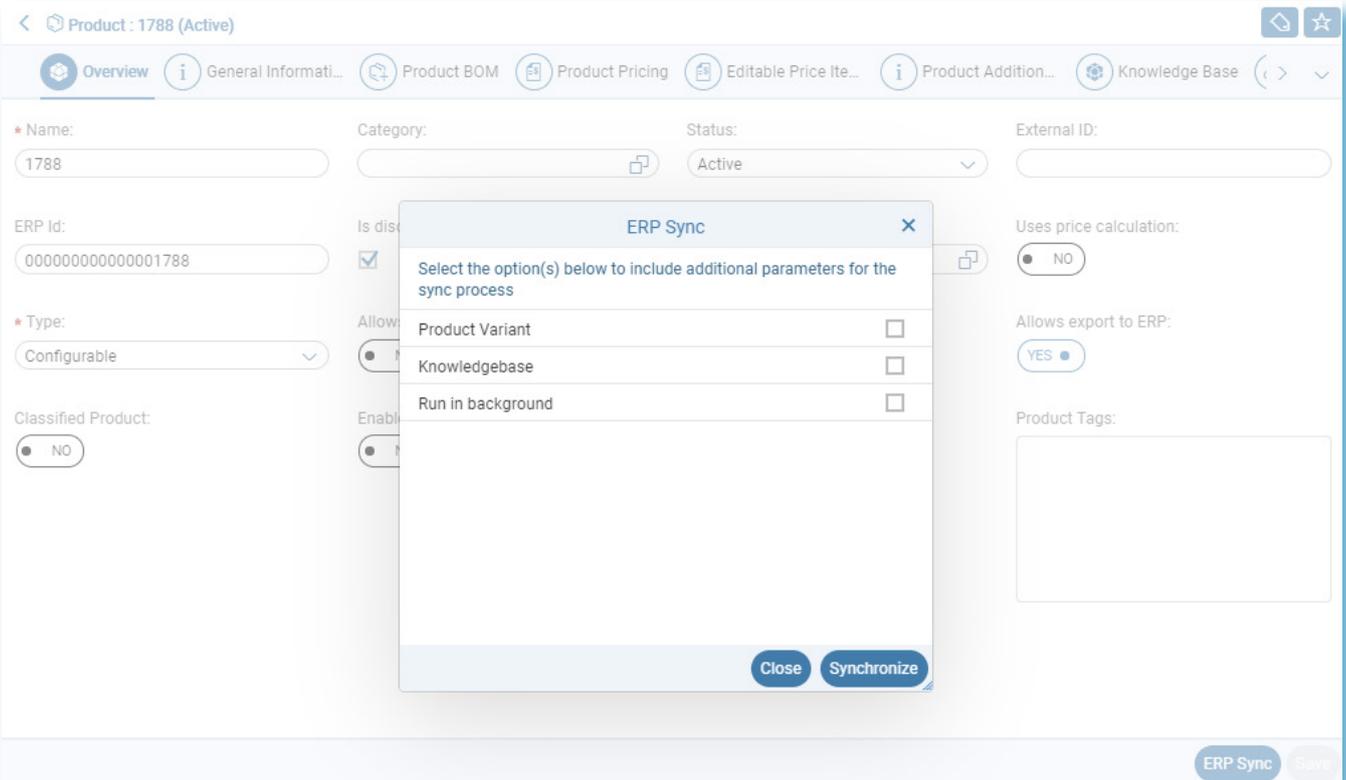
- Additional data points (like main address country and city) at below places
 - o Accounts page
 - o Account selection screen under Create Quote view
- Enable pagination for Partner selector in Create Partner view under account
- Relax the rules to allow a quote to be created with different accounts under the same opportunity to support certain distribution sales scenarios
- Allow quotes to be assigned to an existing opportunity

- Enable opportunity selector in Create Quote screen
- Enable pagination for Opportunity selector under both, Quote Overview page, and Create Quote screen

4.3. Product Configuration/Knowledge Base synchronization enhancement

To support a high degree of business agility and ensure maximum data accuracy, MX introduces two additional options for manual ERP product data synchronization, i.e. to refresh the knowledge base which refers to the product configuration data and the product variant data from ERP.

Figure 13 : ERP Sync for knowledge base and product variant



5. Tool Support

5.1. Enable administrator to set system/user preferences

To support a truly customized and tailored sales journey, MX already allows a user to set his/her own user preference, for instance for email notifications, default quotation templates, system parameters and configurator settings.

In the 1908 release, MX further extends this capability to enable administrators to set system preferences and to mass-update the preference on behalf of users. This can be extremely helpful for initial setup and to support non-tech-savvy users from the IT side.

Below are the system/user preferences that an administrator can change:

Notifications

- Receive Email
- Receive Approval Email
- Receive Routing Email
- Receive Notification Email

System

- Default Language
- Default Currency
- Time zone
- Enable interactive pricing

Report Templates

- Save Proposal as Attachment

Configurator

- Label Font Size
- Hide Sub-label
- Hide comment button
- Configurator Attribute Single Row mode
- Label Width
- Configurator Pagination Mode
- Use Fluid Layout
- Value Option Threshold
- Show Attribute Positions

Figure 14 : User preference update for System

The screenshot shows a user preference update interface for the system. It is organized into several sections:

- Notifications:** Four radio button options, all set to 'NO': 'Receive Email', 'Receive Approval Email', 'Receive Routing Email', and 'Receive Notification Email'.
- Report Templates:** A dropdown menu for 'Save Proposal as Attachment' set to 'YES'.
- System:** Three settings: 'Default Language' (empty), 'Default Currency' (empty), and 'Enable Interactive Pricing' (radio button set to 'NO').
- Configurator:** Multiple settings:
 - 'Label Font Size': A slider with a 'View Live Label Size Change' link.
 - 'Hide Sub-label': Radio button set to 'NO'.
 - 'Hide comment button': Radio button set to 'NO'.
 - 'Configurator Attribute Single Row mode': Radio button set to 'NO'.
 - 'Label Width': A dropdown menu with options 'Narrow', 'Wide', 'Wider', and 'Not set' (selected).
 - 'Configurator Pagination Mode': Radio button set to 'NO'.
 - 'Use Fluid Layout': Radio button set to 'NO'.
 - 'Value Option Threshold': An empty input field.
 - 'Show Attribute Positions': Radio button set to 'NO'.

A 'Save Changes' button is located at the bottom right of the interface.

Figure 15 : Preference update for users

The screenshot shows a preference update interface for multiple users. It features a list of users on the right and preference settings on the left:

- Users List:** A table with columns for 'User Name', 'First Name', and 'Last Name'. The listed users are:

User Name	First Name	Last Name
Alexander.Peukert@inmindcloud.com	Alexander	Peukert
Beck.Tan@inmindcloud.com	Beck	Tan
cakra.hendra@inmindcloud.com	Cakra	Hendra
Dario.Cagnotti@inmindcloud.com	Dario	Cagnotti
- Preference Settings:**
 - Notifications:** Three radio button options, all set to 'Not set': 'Receive Email', 'Receive Approval Email', and 'Receive Routing Email'.
 - Report Templates:** A dropdown menu for 'Save Proposal as Attachment' set to 'Not set'.
 - System:** Three settings: 'Default Language' (empty), 'Default Currency' (empty), and 'Enable Interactive Pricing' (radio button set to 'Not set').
 - Configurator:** Three settings: 'Label Font Size' (slider with 'View Live Label Size Change' link), 'Hide Sub-label' (radio button set to 'Not set'), and 'Hide comment button' (radio button set to 'Not set').

An 'Apply' button is located at the bottom right of the interface.

5.2. System Tasks enhancement

MX already supported scheduled synchronization jobs for products and accounts from ERP. Now it further extends this capability to lookup tables, which can be used for various use cases to control application behavior. This has significantly further improved MX's integration and customization capability. Now, customers can synchronize customized data sets automatically based on scheduled jobs. This ensures MX always provides the latest data sets and business logic to manufacturing users.

From the administration user interface, MX consolidates the previously separated product, account and report synchronization screens into a central screen to allow easy administration. MX also introduces a monitoring dashboard to show which tasks are running and which process units have completed their runs.

Below is a summary of the types of tasks that are supported:

- Account Sync Job: To sync accounts from ERP
- Delete Sync History job: To delete the Sync History (introduced in 1908 release)
- Product Sync Job: To sync products from ERP
- ERP Table Sync Job: To sync tables from ERP (introduced in 1908 release)
- Report Sync Job: To sync MX report data to external systems

Figure 16 : Master Data screen under System Tasks

<input type="checkbox"/>	Name	Label	Task Resource	Lookup Table	Status	Cron Expression	
<input type="checkbox"/>	SyncTable_KOND	SyncTable_KOND	ERPTableSyncJob	KOND	Active	0 30 2 ? **	>
<input type="checkbox"/>	SyncTable_KOTD001	SyncTable_KOTD001	ERPTableSyncJob	KOTD001	Active	0 0 2 ? **	>
<input type="checkbox"/>	SyncTable_KOTD502	SyncTable_KOTD502	ERPTableSyncJob	KOTD502	Inactive	0 0 4 ? **	>
<input type="checkbox"/>	SyncTable_LanguageKey	SyncTable_LanguageKey	ERPTableSyncJob	LANGUAGEKEYS	Active	0 0 1 ? **	>
<input type="checkbox"/>	SyncTable_MKVE	SyncTable_MKVE	ERPTableSyncJob	MVKE	Active	0 30 1 ? **	>
<input type="checkbox"/>	SyncTable_TVARCT	SyncTable_TVARCT	ERPTableSyncJob	TVARCT	Active	0 0 2 ? **	>

5.3. Other tool support

- **Groovy extension data interface enhancement**
All quote related groovy extension points can now access the entire quote data and execute any actions on the quote. In addition, more data points are made available in the groovy interface.
- **Groovy extension on change of quote currency and/or pricing date change**
This is a new extension point introduced to default or control currency and price date.
- **Groovy extension for creating ERP material, bill-of-material and routing**
The creation of material, bill-of-material and routing are now fully customizable via Groovy. This is done to support customer specific needs more efficiently.
- **HTML Audits for configuration engine**
More HTML audits are made available for both configuration and pricing engine. In addition, the output structure and folder naming has been standardized.
- **Simplification of configuration rule creation**
The user friendliness of creating configuration rules has been increased greatly. Users do not even need to type and can perform the action by simple clicks.
- **SPARQL drop/alternate for quote**
Starting from 1908 release, there is little to no need of using SPARQL on quote. Users can use IMCScript to compute documentHeaderPrice and itemHeaderTotalPrice.
- **Pricing scheme – Excel-based definition**
Starting from 1908 release, users can download a pricing scheme in Excel format, make changes and upload it back into the system. This makes it very easy for a non-IT user to create, understand or change a costing or pricing scheme. Also, it allows to easily compare costing and pricing schemes or to move them across tenants.

6. Performance Improvements

Below is performance improvement that have been done in 1908 release:

- **Save and reload ERP configuration cache from database**
MX can now save the last cached data in configuration and pricing data from ERP. The data is saved into the database and upon system start, it is then restored back into MX's engine cache. This significantly reduces the time taken to reload the data from ERP after a release upgrade or hotfix deployment.
- **Save time in load of attribute meta data from configuration engine**
Previously most of the meta information from the configuration engine was reloaded on every transaction. This has been improved and now requires to be loaded only once.

7. Other Enhancements

Other enhancements include:

1. Reduce data in cached data set, i.e. TimeZone, IMCScript.
2. Filter of inactive users in case of tagging.
3. A Sales Item for which an ERP material is created cannot be deleted.
4. Quote has TimeZone is now defaulted based on user time zone or sales_system_instance timezone in that order. Users have the option to change the time zone, too.
5. Default Quote language based on Account language or user language (in this order).
6. Enhancement to support Google Maps API upgrade
7. Enable copy of an active IMCScript from browser.
8. Allow users to be searched by their first and last names as well if searched in user object name only.

9. Read the symbolic value image path from IMCScript.
10. Making a line item optional is supported in any quote status.
11. Quotes do not need to be saved until change happens
12. CRM quote import/export enhancements related to import of product with ERP External ID and with product list price if any in CRM
13. User has the option to save a quote without seeing the pricing pop-up screen. This can be achieved using a setting: SettingDisablePopupOfPricing.
14. Quote type is no longer mandatory on quote creation
15. Support ERP BOM explosion and line item ordering
16. Others.

ABOUT US

In Mind Cloud (www.inmindcloud.com) is an independent provider of an innovative manufacturing sales platform. Their solution "Manufacturing X" combines CRM and CPQ with production expertise and intelligent insights to transform the profitability of manufacturing and engineering businesses. Based on the SAP Cloud Platform their solution is deeply integrated into manufacturing processes and front-end sales operations. In Mind Cloud is operating globally through its offices in Germany, Singapore, China and a high-value partner network.

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