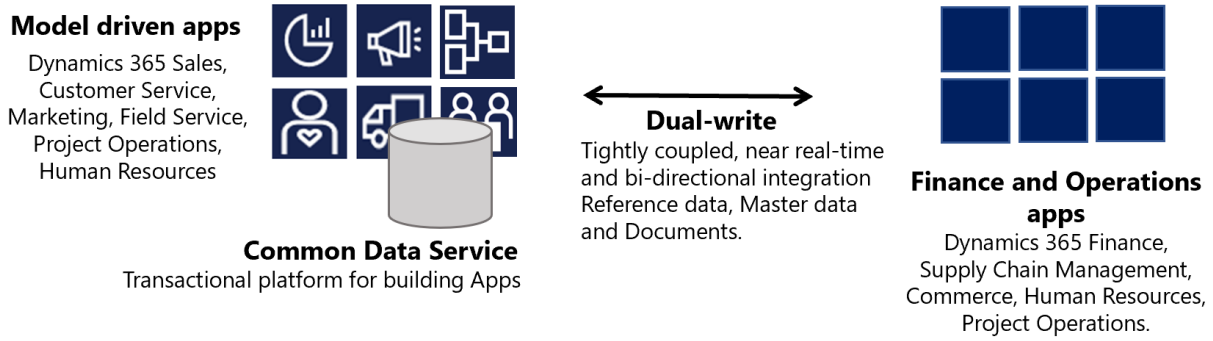
In this digital world, business ecosystems use the Dynamics 365 suite of applications that brings in their business data from people, customers, operations, and Internet of Things (IoT) devices in to one source creating the opportunities for digital feedback loops. Dual-write application orchestration capabilities brings in the unified experience across Finance and Operations applications and Model driven applications (aka Customer Engagement applications) and the data becomes natively available on Common Data Service.  The solution package released today covers master data scenarios like customers, products and vendors; end to end process flows like prospect to cash; on-demand functions like pricing and reference data like ledger, tax, payment terms and schedules. It will continue to expand in future to support more scenarios like party, project, on-hand inventory and so on. The framework is extensible and accommodates customer centric business data exchange through few additional clicks.




## System requirements

Synchronous, bidirectional, near-real time data flows require the following versions.

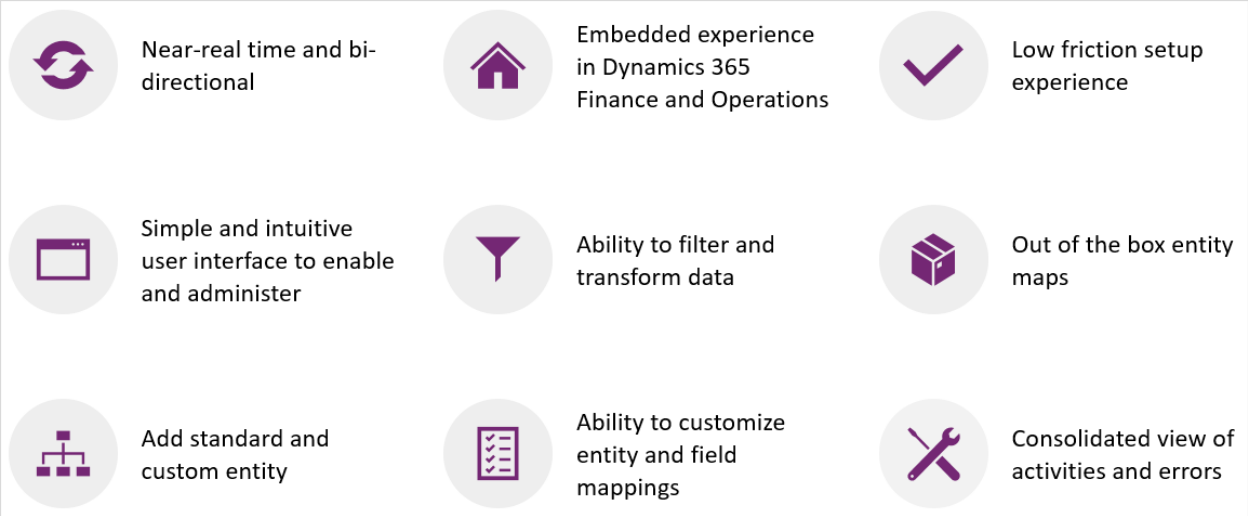
- Microsoft Finance and Operations applications version 10.0.9, Platform update 33 or higher.
- Model driven applications (aka customer engagement applications), Platform version 9.1.0000.11732 or higher.

## Value propositions

Dual-write has two aspects: an *infrastructure* aspect and an *application* aspect.

# Infrastructure

Dual-write infrastructure makes it seamless to maintain same data in both applications.

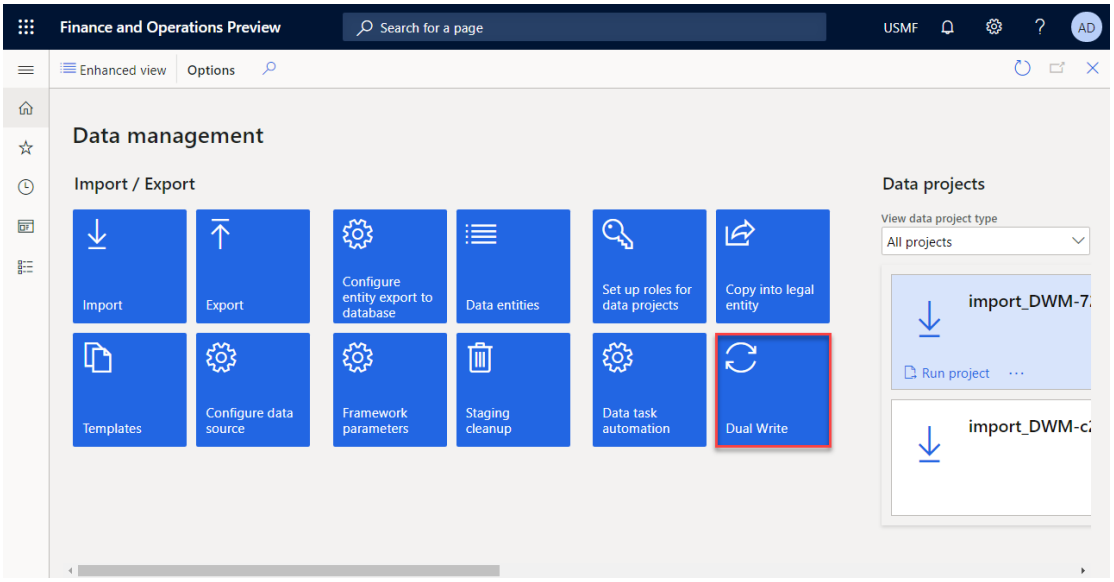



**Near-real time and bi-directional**

Dual-write provides a tightly coupled near-real time and bi-directional integration between the Finance and Operations applications and the Common Data Service. Any create, update and delete change in either of the applications result in writes, in near-real time, to the Common Data Service. Say for example, creating a customer in Finance and Operations application creates an account in the Common Data Service and vice-versa.

**Embedded experience in Finance and Operations applications**

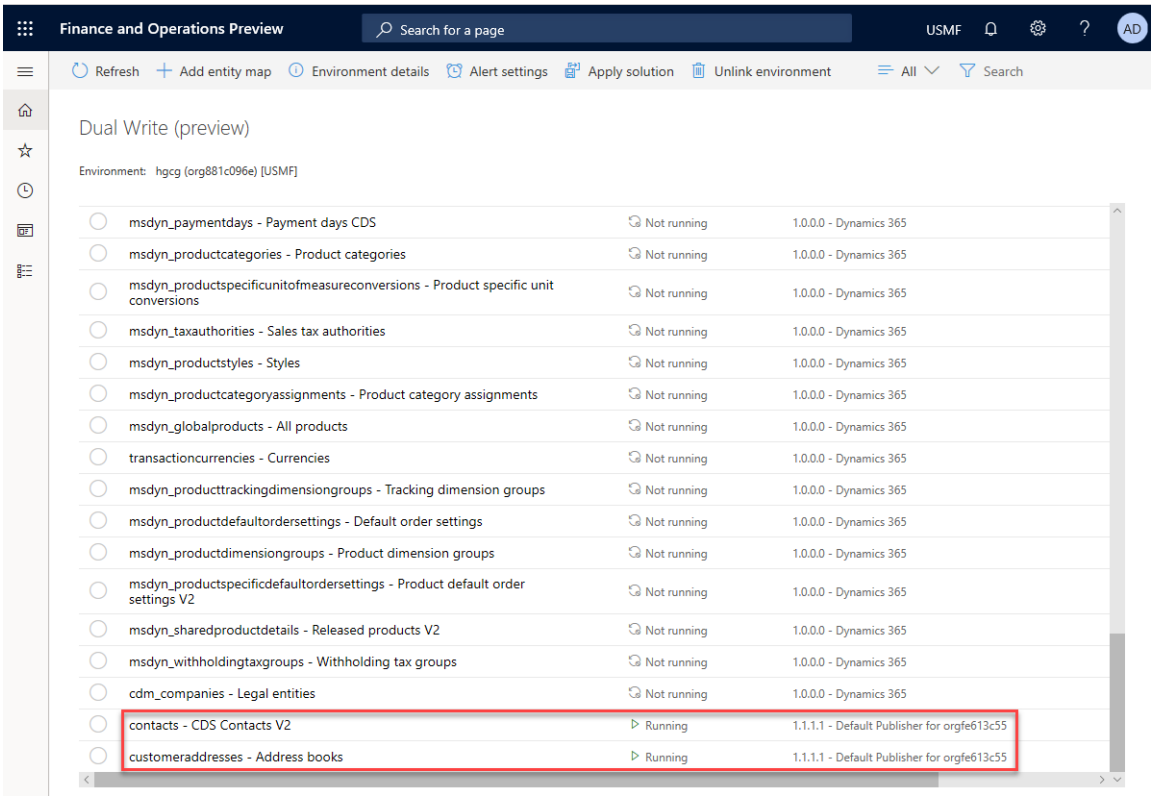
Customers can enable and administer dual-write from within the Finance and Operations user interface that they already use on daily basis




**Enabling dual-write is easy**

Once you launch dual-write from under Data Management in Finance and Operations, you select a Common Data Service environment that you want to link to, select legal entities and as a final step,

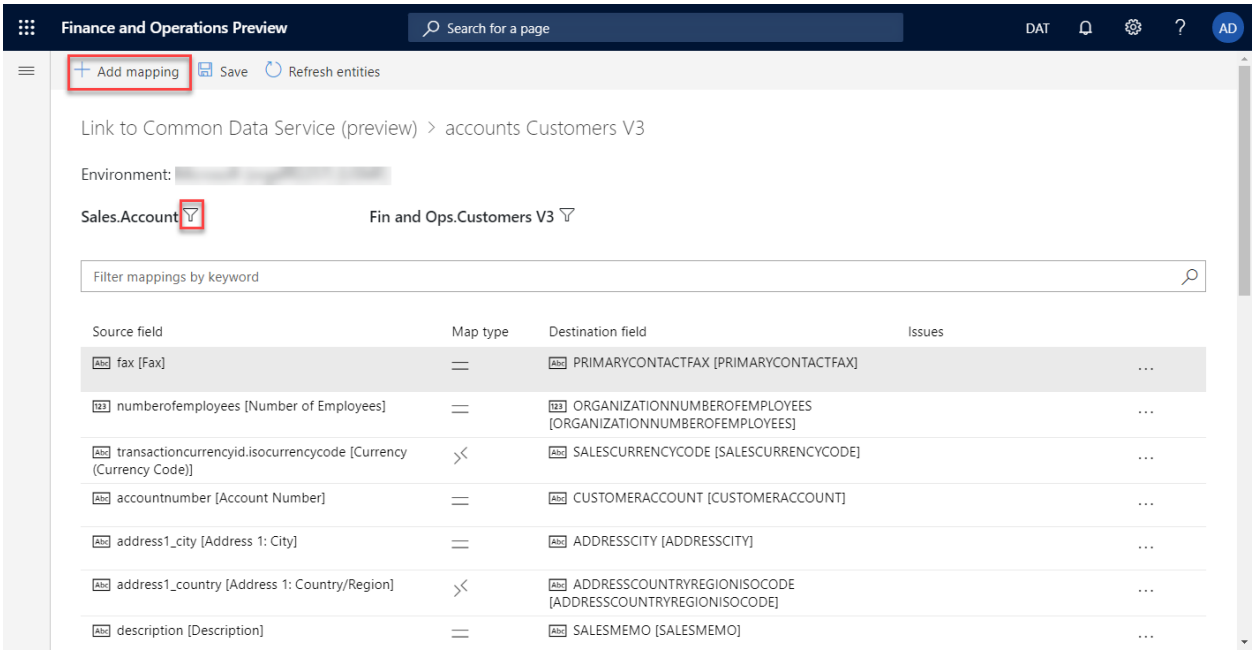
validate your selections – that's it! You are then provided a list of entity maps, out of the box, that you enable for dual-write.




We will keep adding to the list and continue to provide more out of the box entity maps.

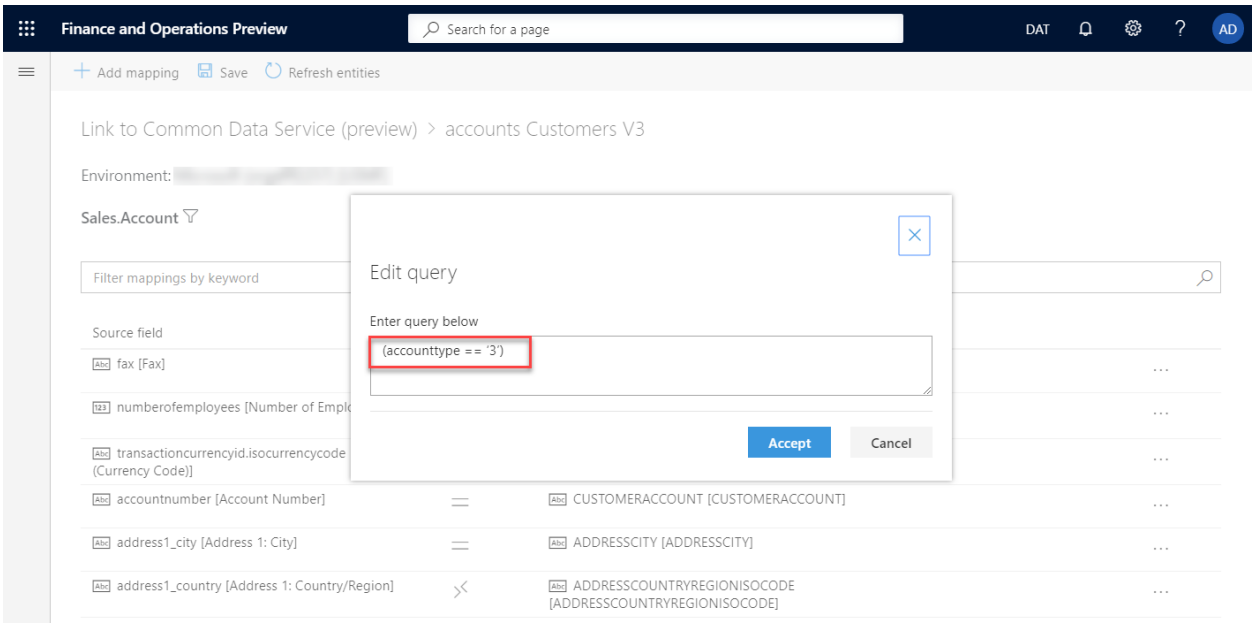
**Ability to customize entity and field mappings**

Every business is different and so we provide you a way to modify and customize entity and field mappings

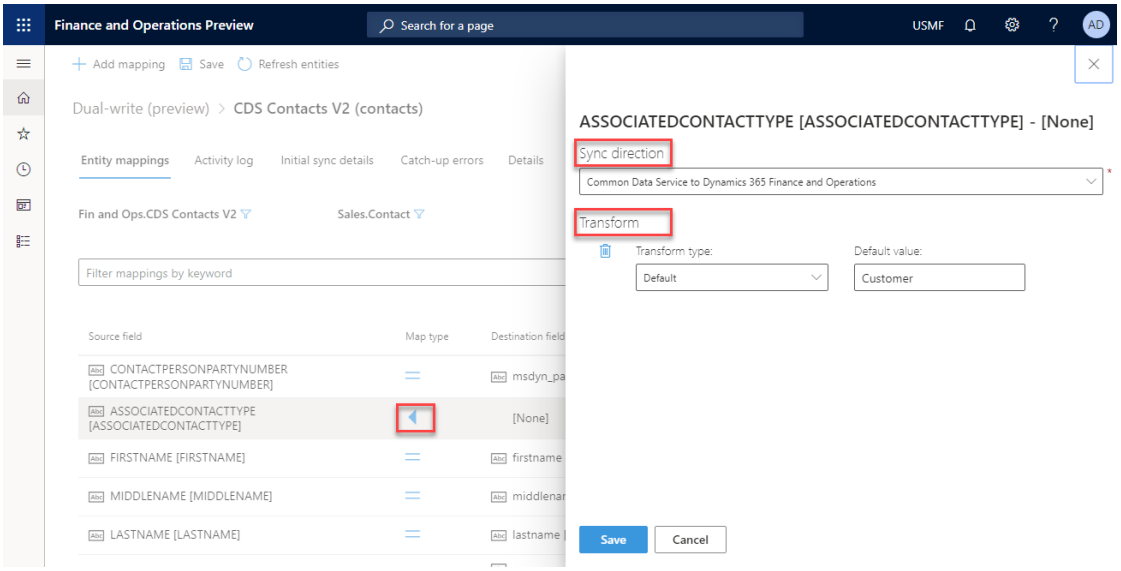



**Ability to filter and transform data**

With dual-write, we are providing you the ability to filter data along with basic transformation



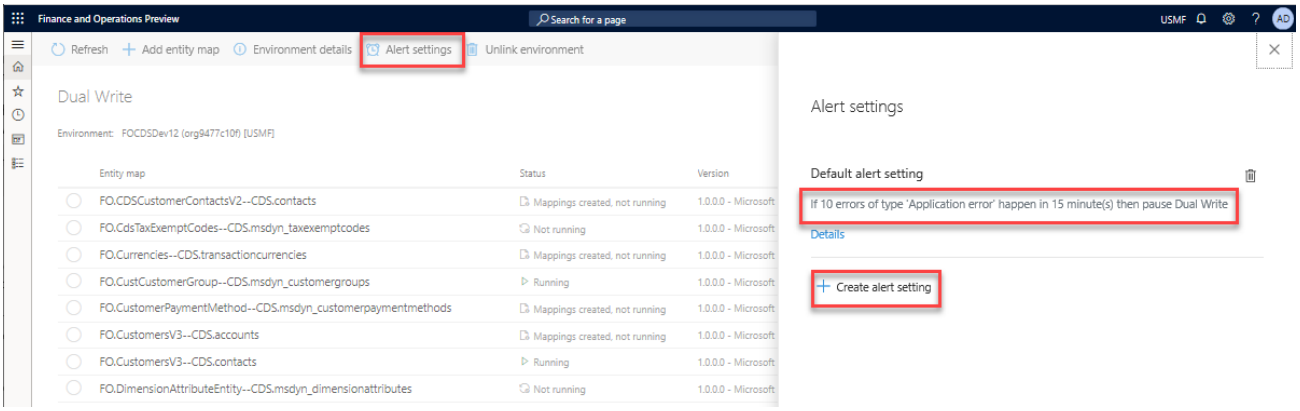

There are additional knobs to customize the direction of field assignment as well



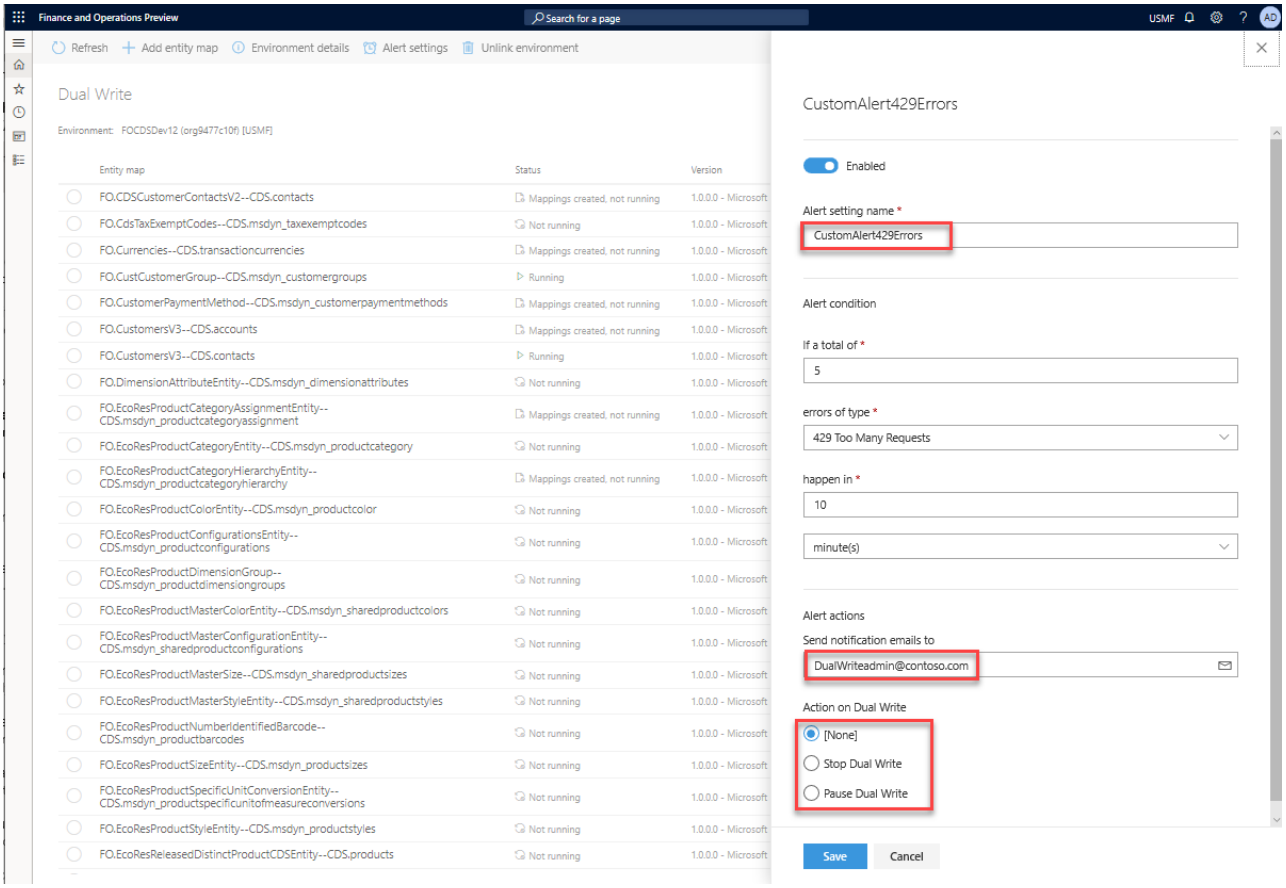

**Consolidated view of activities and errors**

In case of planned or unplanned maintenance, as an admin, you can create one or more Alert settings such that if a certain error threshold is reached, say due to network errors, you have the dual-write system notify you via email or take an action (Pause or Stop dual-write) on your behalf.

Example – In this case you want dual-write to be Paused if 10 errors of type ‘Application error’ happen in 15minutes



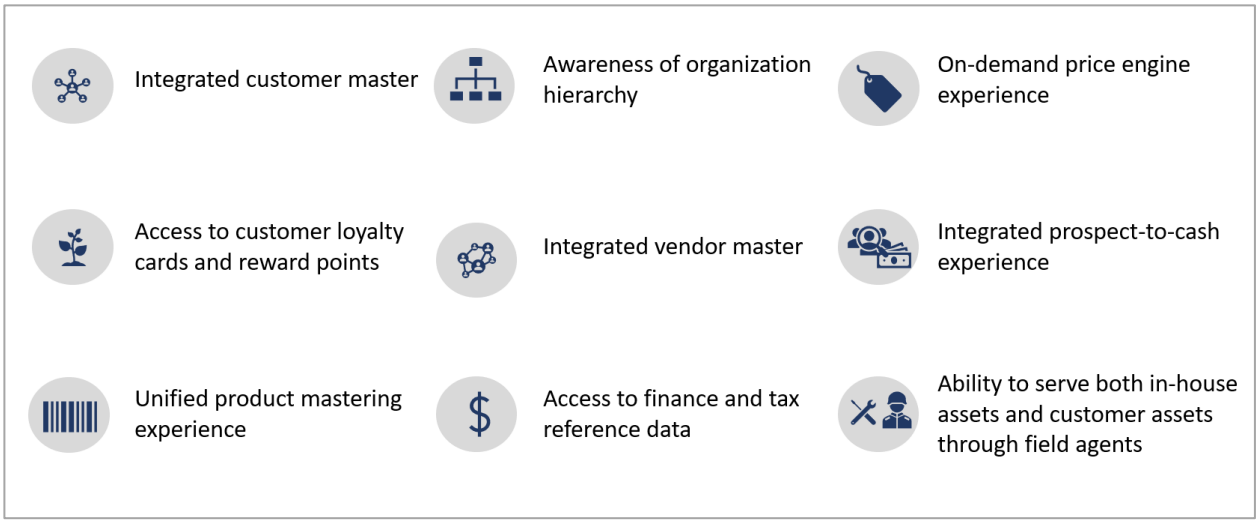

By clicking Create alert settings, you can create more alerts and choose to send notifications to an individual or group and take an action on your behalf




This is particularly useful in case of unplanned maintenance when one of the apps is unavailable and based on your defined thresholds, dual-write goes into a Paused state wherein all new requests are queued (not lost). Once you fix the underlying issue and both apps are running smoothly, you can resume from the paused state and the updates are read back from the queue and written to the recovered app.

# Application Orchestration

Dual-write creates a mapping between concepts in Finance and Operations apps and concepts in model-driven apps in Dynamics 365. This integration supports the following scenarios:




**Integrated customer master**

Customer data can be mastered in more than one D365 application. For example, sales activity by sales agent can bring in customer data through a D365 Sales application, and e-Commerce or retail sales activity can bring in customer data through a D365 Commerce application. Regardless of where the customer data originates, it is integrated behind the scenes.

Integrated customer master helps businesses to have the flexibility to master customer data in any D365 application but provides a comprehensive view of the customer to the Dynamics 365 application suite.

**Access to customer loyalty cards and reward points**

Businesses classify customers and provide sophisticated services based on their shopping and spending patterns. Among D365 suite of applications, Commerce application has got the infrastructure and functions to facilitate and handle customer loyalty cards, reward points, loyalty-based pricing, rewards-based shopping experience etc. When customer loyalty and reward points data from Commerce application is exposed on Common Data Service, it becomes accessible to D365 application suite. Say for example, Customer Service application users can use the data to provide the same sophisticated service through help desk.

**Unified product mastering experience**

When a business ecosystem is made up of Dynamics 365 suite of applications, Supply Chain becomes the source for product data. It is because of the availability of robust product infrastructure which is complemented with sophisticated pricing engine and accurate on-hand inventory data. Few businesses who use an external Product Lifecycle Management (PLM) system for sourcing the product data still channelize products through Supply Chain app to other Dynamics 365 apps. So we have unified the product data model on CDS, so that all D365 application users, including “Power Suite” users, can take advantage of the rich product data coming from Supply Chain app.

**Awareness of organization hierarchy**

Organization is a core concept of Dynamics 365 Finance and business financials are generated and tracked at various levels of an organization hierarchy. CDS doesn't have the concept of an organization hierarchy, but it does have a few loose concepts, such as total sales revenue. Exposing the organization hierarchy on CDS for informational and extensibility purposes will help businesses when required.

**Integrated vendor master**

The term *vendor* refers to a supplier organization or a sole proprietor who supplies goods or services to the business. *Vendor* is an established concept in D365 Supply Chain. But model driven applications (aka Customer Engagement applications) applications doesn't have an explicit vendor concept and so, Account/Contact entity is overloaded to store vendor information. With integrated vendor master, an explicit vendor concept is introduced in Common Data Service. Businesses can either choose the new vendor concept or use Account/Contact entity for vendors. The vendor data is integrated between Supply chain, Sales, Field Service and Power Portal applications and becomes available for Supply chain workflows like purchase requisition, purchase orders etc.

**Access to finance and tax reference data**

Every business operates with a basic set of financial data like fiscal calendar year, currency to transact in, accounts from where the money to run the business comes in / goes out, tax rates and remittance etc. This information resides in D365 Finance but exposed on CDS so that D365 apps can run based on a single source for finance and tax data. This brings uniformity across the business eco-system.

**Experience F&O price engine on CDS on demand**

Businesses rely on D365 Supply Chain for storing and handling prices and discounts required for the business due to its robust infrastructure with functions like trade agreements, pricelist, customer loyalty, promotions & discounts and so on. It has a pricing engine that uses complex rules and derives best price for the given quote/order context. Now, this pricing engine is exposed on D365 applications at the Quotation and Order forms. Model driven applications (aka Customer Engagement applications) users can either choose to rely on pricelist based static price or invoke the pricing engine for best prices through a single button click without logging into Supply Chain application.

**Prospect to cash**

Converting a prospect to a customer over a successful business deal and continuous business with the same customer is the target for most of the businesses. In D365 world, it takes place through quotations or order processing workflows and the financials are reconciled and recognized. Integrated prospect to cash workflow helps the quotation and order to originate in either Sales or Supply Chain application but becomes available on both. D365 users can access the processing states and invoice information on their application interface in real-time. Also, this helps businesses to handle functions like product stocking, inventory handling and fulfillment inside Supply chain application without recreating the quote/order.

**Availability of in-house assets for field servicing**

D365 Field Service is designed to service customer assets. Enterprise Asset Management is designed to service in-house assets. Integrating these 2 applications on Assets helps businesses to use D365 Field

Service application for servicing both customer assets and in-house assets. Also, business get the ability to classify the assets based on functional location or hierarchy and track the servicing at minute level.

For details, please visit dual-write home page.