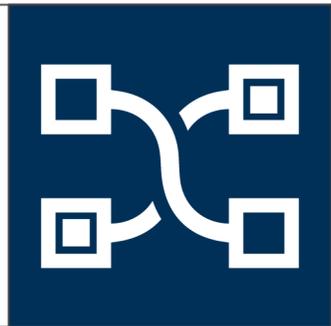


*propel*

# Extensibility Matters:

Future-proof Your Business  
With PLM That Flexes To  
Meet Your Needs



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## Delivering Product Success At All Times



For decades, manufacturers have relied on cumbersome and difficult to customize PLM systems. However, in the wake of accelerated digital transformation, a dynamic regulatory and business landscape, evolving customer expectations, and fierce competition, the need for a modern and customizable product success platform is inevitable. True product success is a reflection of the resilience and business continuity – the R&D (product, engineering, manufacturing, quality), go-to-market (sales, service, marketing) teams, suppliers, and customers – need to handle change at all times effectively. In this eBook, we'll look at Propel's highly extensible, configurable, and integrated cloud PLM platform that flexes to meet your unique needs rather than imposing constraints on your business and workflow.

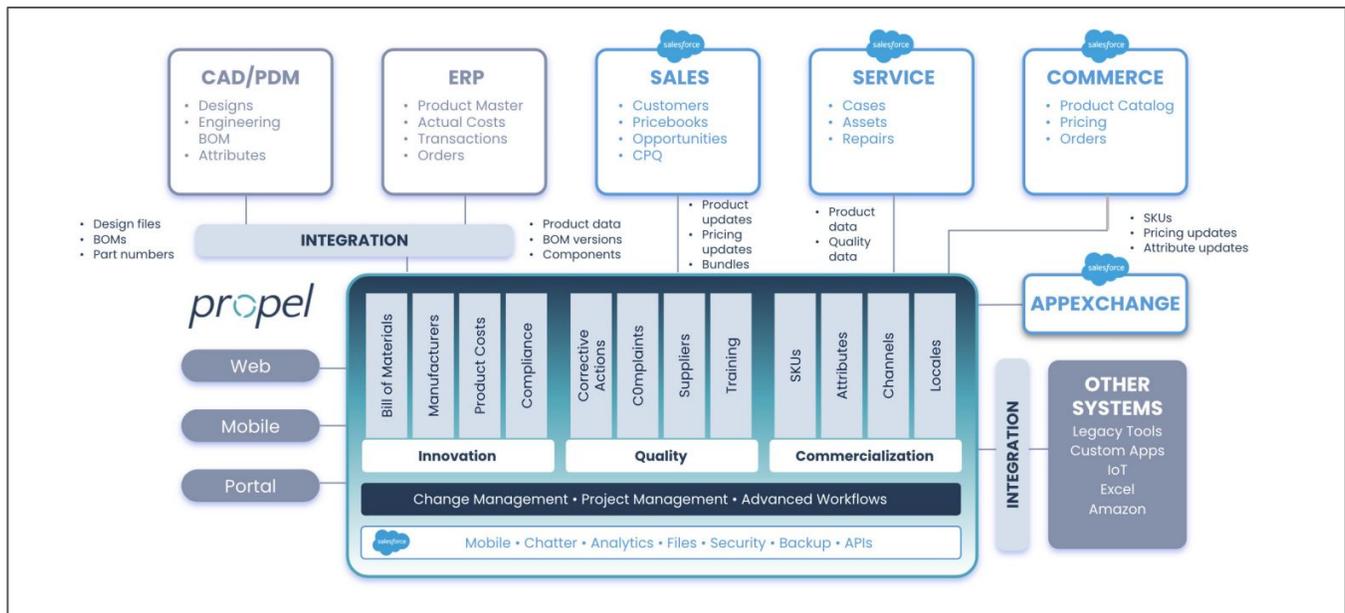
### PROPEL's Extensible Cloud PLM

Characteristics	Capability	Benefit
<b>Flexible</b>	Quickly adapt to support your business needs	Faster time-to-market; achieve business resiliency
<b>Configurable</b>	Clicks, not code via no-code and allow code tools to design, build and configure custom processes easily and quickly	Reduced complexity; enable a wider workforce; faster development cycles; reduced deployment times
<b>Customizable</b>	Customizable via custom code (full-code) to help developers handle complex processes that cannot be defined using no-code / low-code tools	Highly personalized solutions; superior customer experience
<b>Upgradeable</b>	Stay up-to-date with the latest platform releases without breaking existing extensions and customizations	Make informed decisions; achieve business continuity
<b>Integrations</b>	Easily get data into your platform as well as share it with other business-critical systems	Absolute transparency; strengthens collaboration

The above table summarized all the characteristics of Propel's modern extensible system. Now, let's look at Propel's unique solution in more detail and how it seamlessly integrates customer and product records.

## Product 360, Powered by Salesforce

Propel enables **Product 360**, the modern way to take products from concept to customer. Born in the cloud and built on Salesforce, the world's most trusted business cloud platform, Propel helps manufacturers collaborate across the entire value chain to get the right products to market faster and at a higher margin. Powered by Salesforce's multi-tenant architecture, our solution incorporates all the capabilities of Salesforce's modern cloud: data security (at rest and over the wire), flexibility, configurability, ease of use, extensibility, mobility, analytics, and reporting. Our solution also enjoys native connectivity to Salesforce solutions, including Sales, Manufacturing, Service, and Health Clouds, and offers a complete and consistent experience from concept to customer. Propel together with Salesforce enables customers to rapidly adjust their product strategies and execution under all circumstances.



## Types of Extensibility

The extensibility of our platform can be understood along the following dimensions:

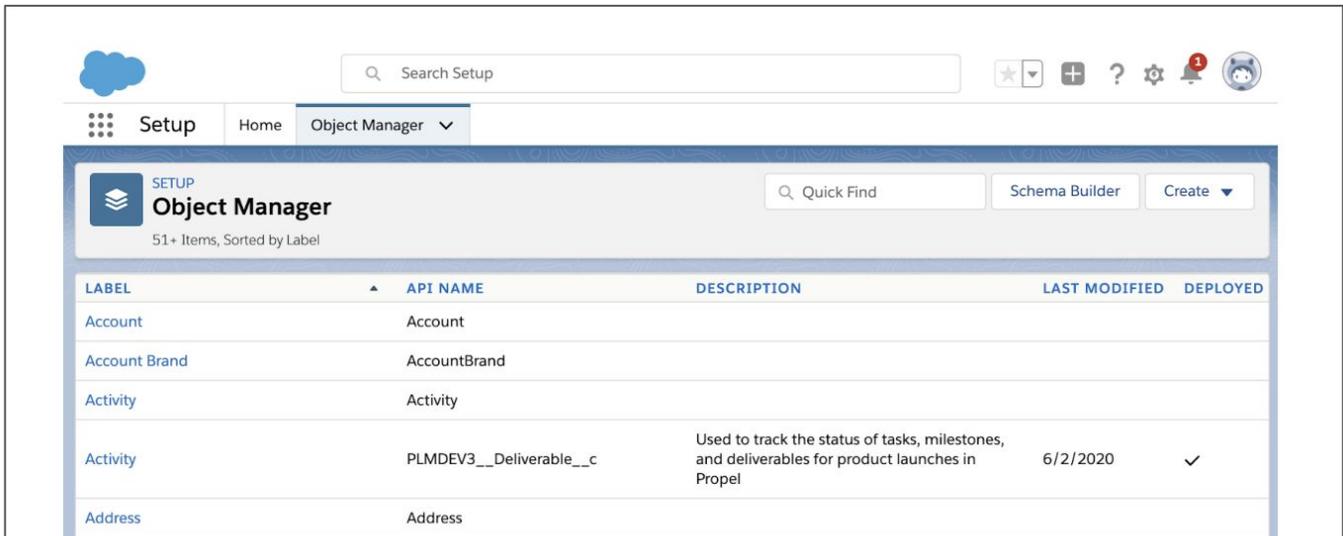


### 1. Data Model

In Propel, database tables are modeled as objects, columns as records, and rows as records. These objects are containers of your information and with every custom object, one gets several out-of-the-box special functionalities such as user interface (page layout, fieldsets, default actions such as edit), reports and dashboards, search, list views, application program interfaces (APIs), mobile UI, and many more capabilities. For example, when you create a custom object, the platform automatically builds a page layout for the user interface.

## 1.1 Object Manager: Manage Custom Objects

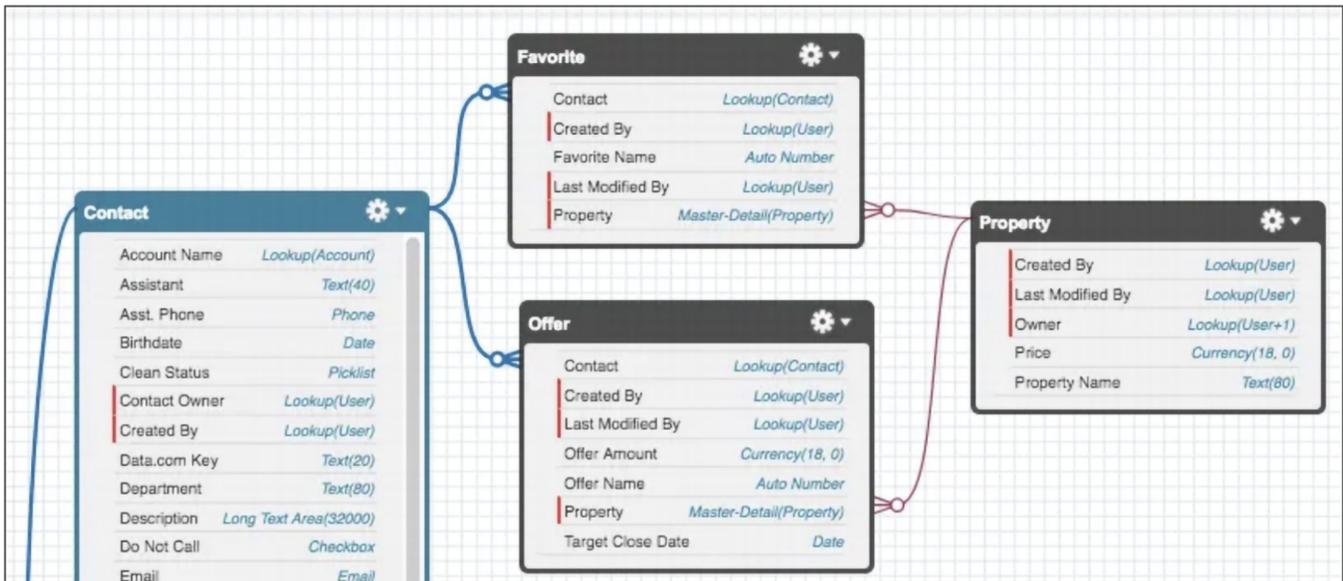
To help make it easier for you to create, manage, extend, and customize your data models to fit the needs of your business, Propel provides an easy-to-use tool called Object Manager. Object Manager enables you to create, view, edit, and delete custom objects, manage fields, manage object relationships, and perform other related tasks.



The screenshot shows the Object Manager interface with a search bar and navigation tabs. The main content area displays a table of custom objects with columns for Label, API Name, Description, Last Modified, and Deployed.

LABEL	API NAME	DESCRIPTION	LAST MODIFIED	DEPLOYED
Account	Account			
Account Brand	AccountBrand			
Activity	Activity			
Activity	PLMDEV3__Deliverable__c	Used to track the status of tasks, milestones, and deliverables for product launches in Propel	6/2/2020	✓
Address	Address			

The Schema Builder is another data modeling tool that provides a visual view of the entire data model to help users better understand how the objects relate to each other.



All common data types, including text and long text, date/time, currency, and formula/calculated fields, are supported by Propel. Fields can also be marked as required and validated when a record is created or updated. Also, the fields may be grouped together as fieldsets. In addition, the Object Manager also supports tools to manage the page layouts, buttons, and fieldsets for the user interface.

## 1.2 Object inheritance using Propel Setup:

Apart from creating and managing completely new record types, Propel objects also support a special field called “category”. Customers can now sub-class a Propel object by defining a new category and specifying fields that are specific to that category.

Item Category Settings

Create New Category

230 Purchased Part

240 Seals

300 PCB Assembly

310 PCB

320 Schematic

330 Panel Drawing

340 Gerber File

350 Mech. Outline Drawing

Category Details

Category Name: 110 Sub-Assy

Parent

Lifecycle: September data for medium file

Autonumber

Inactive: No

Use as Category Group Name: No

PIM Product: No

Restrict Autonumber Override: No

Edit

## 1.3 Configure related objects:

Customers can easily determine use cases for related objects followed by adding a screenshot of the related objects table.

## 2. Processes

A business process often involves navigating multiple use cases within the application. For example, when an Engineering Change Order (ECO) is released, the Items that are released as part of the ECO must be shared with the specified suppliers. Without automation, these mundane tasks have to be performed manually, taking up time and resources and creating the potential for errors. Also, some business processes span multiple enterprise applications and external web services. It is crucial to combine them into a cohesive and seamless experience for end-users.



*“We needed a solution that could adapt to us versus us adapting to them. With Propel, we can mistake-proof our processes to gain business efficiencies and at the same time ensure compliance.”*

**Brent Lewis**  
Director of Enterprise IT Quality and Compliance Systems  
Advanced Sterilization Products

Propel is highly adaptable as it supports multiple visual, no-code, and low-code tools to automate mundane, repetitive tasks allowing end-users to focus on high-value tasks. Events such as updating the content of an existing record or approving an Engineering Change Order can automatically

trigger an action or series of actions - for example: When a new revision of an Item is released, Propel can post a message to your enterprise resource planning (ERP) system, generate a PDF with the Item details, and post it on Chatter to update the other members of your team. These actions can be executed immediately or scheduled to occur at a later time.

**And, the best part** is that you can create these new processes without writing a single line of code. You can also write code whenever required or preferred, but for most processes, you could leverage Propel's no-code and low-code tools such as **Workflow Rules, Process Builder, and Flow** for extending processes.

## 2.1 Workflow Rules

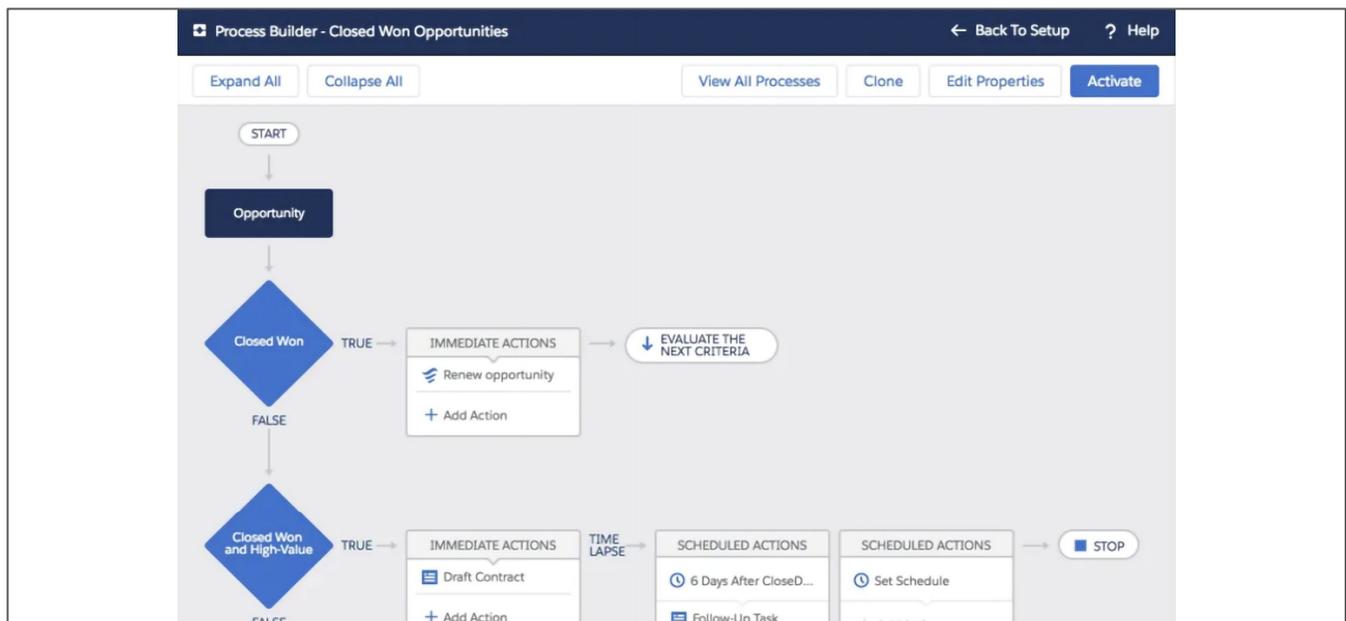
Workflow Rules is a no-code tool to automate simple processes. The below example shows that this tool works very well for simple criteria and for common actions such as field updates and email alerts.

However, for more complex processes, you may want to use the Process Builder or Flow, both no-code tools that let you design complex criteria and choose from a variety of actions.

**Where a field (Status)  
IS  
Set to a value ("Expired")  
WHEN  
A criterion is met (expiry date is past)  
DO  
Action(s)**

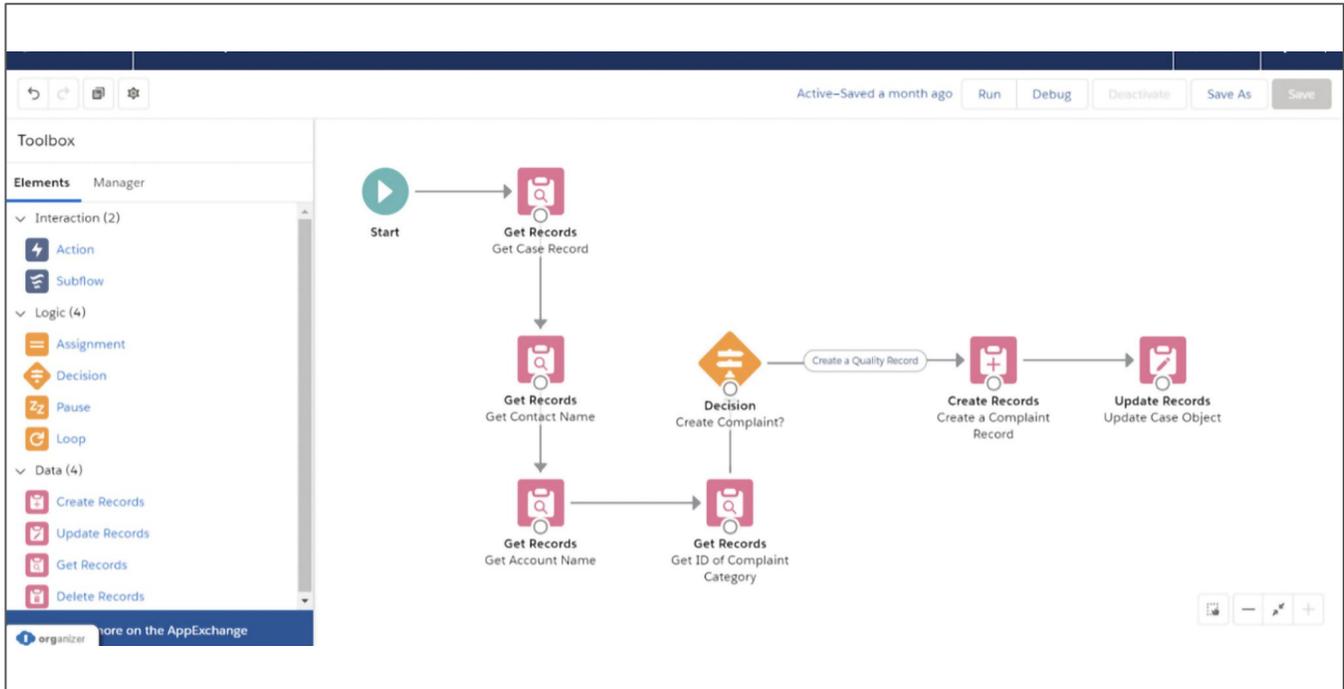
## 2.2 Process Builder

Process Builder is a point-and-click no-code tool that lets you easily automate if/then business processes and see a graphical representation of your process as you build it. The following screenshot shows an example of a process using the process builder UI. The end result is a behind-the-scenes process or service on Propel that will automatically run and perform the action if criteria are met. This enables even non-technical users such as business analysts to easily understand and create more complex, multiple-step processes.



## 2.3 Flow

Flow is the preferred tool when designing processes that require user interactions and input. Flow builder supports the creation of forms and includes several out-of-the-box screen components, like text boxes, radio buttons, and file uploads. This custom UI can be integrated directly into Propel's user experience. In addition, the UI flow may also be configured to invoke a process that was built using the Process Builder or an external web service.



## 3. User Interface

Effective User Interface (UI) needs to be intuitive, performant, productive, and mobile to ensure the success of an application within an enterprise. The IT teams are flooded with questions on whether the UI is extensible, can we configure it to be role-based, or will it support new cases with no coding efforts. Propel's UI is highly configurable, modern, and easy to use. Let's look at it in more detail.

### 3.1 Configure UI using Lightning App Builder

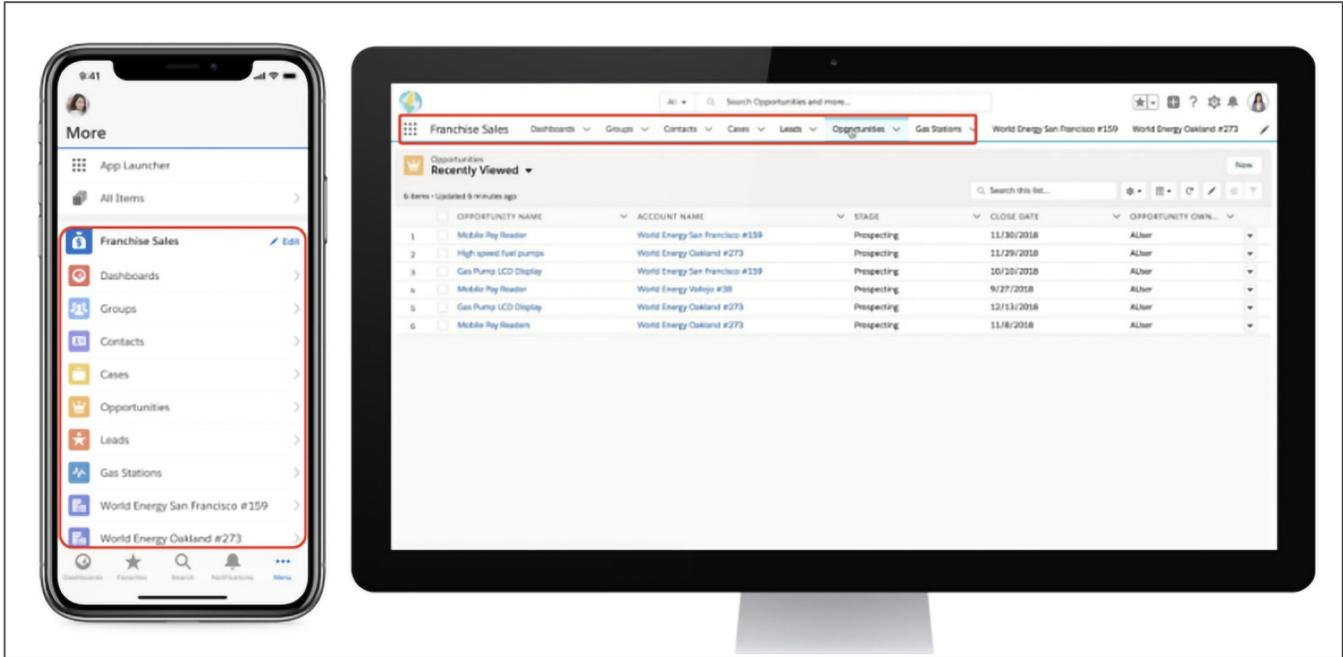
Propel uses the Salesforce Lightning App Builder, a drag and drop, point-and-click development tool that makes it simple to build custom user interfaces by creating and combining Lightning Web Components (LWC) on a single page. A number of pre-defined LWCs are provided by Propel and Salesforce and you can also source third-party LWCs from Salesforce's AppExchange making our UI pages highly configurable.

### 3.2 Training App: Role-based, custom user experience

Propel's UI pages can also be configured to be role-based. For instance, a specific UI page can be configured to be seen only by a subset of users that have been assigned a specific role. Users of training often go through specific steps such as downloading the training documents, taking a quiz, and signing off. These users are often not concerned with other aspects of Propel. This app simplifies the UI greatly for users that primarily use Propel for training.

### 3.3 Mobile

Propel's Mobile Interface uses Salesforce's mobile app to bring the full power of Propel to mobile devices, delivering a seamless, intuitive experience on any device. This helps accelerate adoption and increase usage by ensuring that the user experience is consistent across all devices.



### 4. Integration

The final element of Propel's extensibility is its ability to integrate with other business systems, including ERP systems (e.g., SAP, Oracle, Netsuite), CAD (e.g. Onshape), and others. Propel is extensible and standards-based. Our integration framework supports industry-standard REST and SOAP-based APIs, standards-based authentication such as OAuth, and integration tools such as Mulesoft, Workato, Zapier, etc.

#### Integration Platform



##### Standard-Based

- OAuth 2.0
- SAML 2.0
- SOAP
- REST
- CometD



##### Well-documented

- Sample Code
- Documentation for each API
- Support Forums



##### No-Code, Low-Code, Full-Code Support

- Configurable (Events and API Consumption)
- Custom App Dev

## 5. Summary

Extensibility is a key attribute of an enterprise system. Propel supports enterprise-grade extensibility with a rich set of no-code and low-code configuration and development tools that make it easy for you to tailor your data models, processes, user interface, and integrations to your unique business needs. Propel's highly configurable PLM system also empowers a wider workforce to build and configure custom processes quickly.



*"Propel has been great at giving us a flexible PLM foundation in the cloud that will scale as our business grows."*

**Matt Verminski**  
VP of Engineering  
Desktop Metal

Businesses need to be highly adaptable and must pivot to newer and innovative opportunities in today's dynamic marketplace. Propel's extensible solution enables your product organization to quickly adapt to and address the changes by ensuring business continuity, resilience, and operational excellence at all times.

*propel*

**See the Platform in Action**

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