Simple, Reliable Integrations to Other Business Systems

Dependable integrations keep Autodesk PLM 360 aligned with critical business systems

Introducing Autodesk PLM 360 Connect

No system stands alone. Yet too often systems require people to pull the data together and create useful information. Best in class companies build integrated systems that automatically assemble pertinent data into useful context. Ultimately, these integrations enable closed-loop communications that provide feedback to decision-makers early on and upfront. The Autodesk PLM 360 Connect suite of integration tools help businesses make these integrations simpler and easier to maintain and thus, more cost effective. Furthermore, Autodesk PLM 360 Connect tools can help process owners design smarter integrations to improve the overall flow of information.

Autodesk PLM 360 Connect solution coverage

Autodesk PLM 360 Connect tools allow process owners to move data between PLM 360 and other systems. Broadly, Autodesk PLM 360 Connect tools offer three levels of integration - simple import/export using flat file formats, e.g. text files or spreadsheets, integration using the Jitterbit solution platform, and Autodesk PLM 360 application programming interfaces (APIs). Developers use APIs to program custom solutions or to build connections using other Enterprise Application Interfaces (EAIs). Together, the Autodesk PLM 360 Connect tools make it possible to align with virtually any standards-based information system.

Business process owners direct traffic

Technologies abound for connecting today's traditional enterprise systems. However, business needs – not technology – should dictate the goals of an integration plan. To begin, answer these questions:

- Who needs which PLM-related data and when do they need it?

- Who's best to enter the original data and which system do they prefer to use?

- Among multiple systems, which is best to compute the most accurate value at the requested time?

Most likely, business process owners provide the most credible answers. Aim to design every integration project to put the right data in front of the right people at the right time. Once fully agreed, the next phase of the integration plan introduces new questions to answer:

- Is useful data stored in an old system that simply needs to be 'uploaded' into a new system to live on?

- Is the result an outcome of an iterative process or a computation using data from more than one system?

- On the other hand, do users simply enter the data once and share it among all relevant systems?

Autodesk® PLM 360 features next-generation, cloud-based integrations, too!

- Get started fast using native Autodesk PLM 360 data import/export tools
- Build automated solutions with Jitterbit – a simple, yet powerful application and data integration platform
- Enjoy no-programming approaches that use plain language and point-and-click data mapping
- Customize connections using a wide range of Application Programming Interfaces (APIs)

For more information about Autodesk PLM 360, visit **www.autodeskplm360.com**

Autodesk® PLM 360 Connect
Integrate. Migrate. Consolidate.™
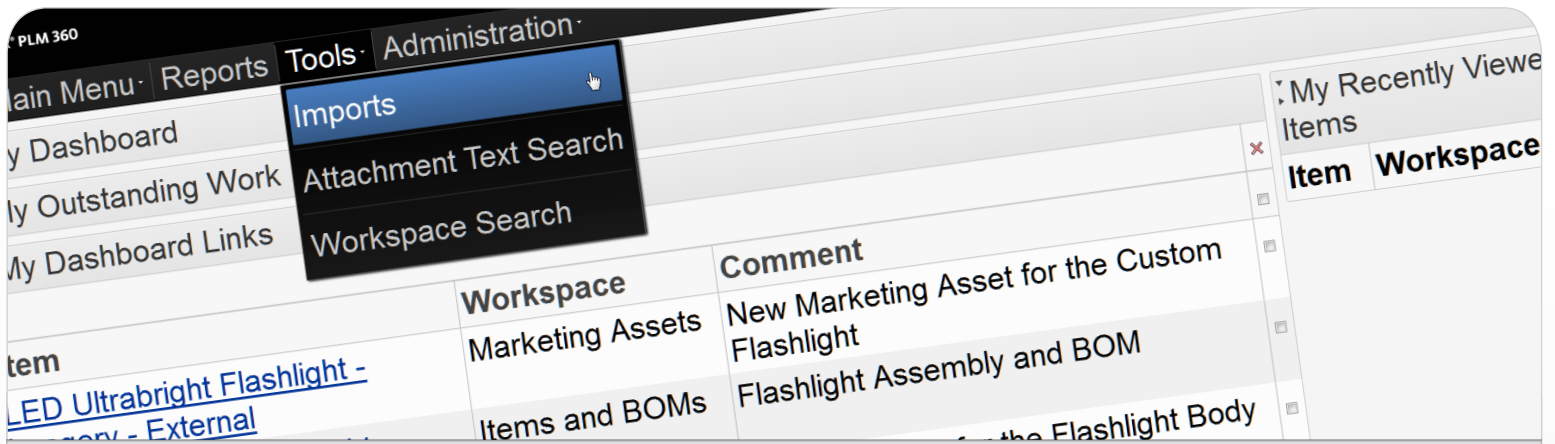
Though difficult to determine upfront, these answers do help determine the technical design of the integration. Thus, an ability to experiment with different approaches using real scenarios with actual data is an advantage. Beyond easy setup and deployment, other technological considerations include the robustness and strength of the solution and its maximum throughput, or capacity. Whatever the need, the Autodesk PLM 360 Connect tools deliver technologies capable of handling even the most complex business situations.

Integration Technology
Autodesk PLM 360 Connect offers three broad levels of integration capability.

Move data right from your browser
Load data fast with simple import and export available to administrators of both Autodesk PLM 360 Professional and Enterprise. Once data exists in PLM and the process owners and users become familiar with the tool, further data manipulations can occur easily with little or no additional training.

Using a simple internet browser, users and administrators can:

- Easily enter sample data to test or experiment with different integration scenarios
- Export report data in text (HTML) or spreadsheet (XLS) formats for use in other systems
- Import item record details with associated structured bills of material data
- Import spreadsheets of migrated data to pre-populate Autodesk PLM 360 workspaces
- Re-import data to update existing records without duplicating Autodesk PLM 360 data

Key benefits:

- Get started fast by importing information already collected
- Quickly import large amounts of data using a simple graphical interface
- Reduce errors and inaccuracies by minimizing human intervention

- Avoid building expensive, one-time connections to discontinued systems
- Work at your own pace and move data only as needed

Integration made easy: Autodesk PLM 360 Connect and Jitterbit Solutions

Jitterbit specializes in simple, fast, and low-cost integrations of cloud to on-premise and cloud to cloud applications and data. Using Jitterbit, you can connect Autodesk PLM 360 to standards-based systems or databases with ease. Map data and attributes simply by building drag-and-drop references within the Jitterbit application.

Autodesk PLM 360 connections powered by Jitterbit help organizations:

- Consolidate process-specific information from multiple business systems
- Rapidly migrate data from any data source into Autodesk PLM 360
- Achieve a holistic view of product data across multiple systems
- Synchronize back-office systems through seamless Autodesk PLM 360 integration
- Replicate Autodesk PLM 360 data to a data warehouse for advanced business analytics

Key benefits:

- Ease to start, use and maintain
- Stay flexible with on-premise or cloud-based solutions
- High performance delivered by parallel processing
- Autonomy from information technology (IT)
- Monitor and track entire projects with powerful administration tools

Jitterbit's graphical "no-coding" approach accelerates and simplifies the configuration and management of on-premise and cloud integration projects.

Custom connections use the API Integration – exclusive to Autodesk PLM 360 Enterprise

Autodesk PLM 360 offers a powerful set of application programming interfaces (APIs) built specifically to execute programmable services via the World Wide Web (i.e. web services). Use this powerful API to write programs that interact directly with Autodesk PLM 360 using the same commands sent by an internet browser. Autodesk PLM 360 uses a modern REpresentational State Transfer (REST) web services design model, a simpler and more powerful alternative to Simple Object Access Protocol (SOAP) and Web Services Description Language (WSDL) used in traditional information technology environments.
The Autodesk PLM 360 set of APIs affords programmers advanced data manipulation between Autodesk PLM 360 and other business systems.

Through API programming with Autodesk PLM 360, organizations can:

- Create custom integrations to read and write data from PLM 360 to a native desktop applications
- Write custom point-to-point integrations with legacy systems
- Leverage the API to use other, popular EAI tools that integrate enterprise systems
- As a developer of a new software, use the API to integrate your application within the larger ecosystem
- Build the integrations you need to move data into and out of Autodesk PLM 360 with confidence

Key benefits:

- Explore the possibilities with virtually any application featuring an API
- Resolve problem connections with unique, adaptive solutions
- Offer additional protection using connections built with compiled code
- Reuse existing connection technology proven within the enterprise
- Validate connection performance using stress-test programs

Valuable integrations – a few examples using Jitterbit

Integrating Autodesk PLM 360 and ERP to transfer released engineering data

In this example, Autodesk PLM 360 parts and bills of material designated 'released' status are automatically transferred to a downstream ERP system as 'engineering released' data. A properly configured integration results in fast and accurate transfer of information into ERP exactly as it appears in PLM.

Simple administrator steps to build the PLM/ERP integration:

1. Start within Jitterbit by creating a project to connect Autodesk PLM 360 to an existing ERP system.

2. Connect the systems by authenticating a user with the appropriate privileges inside each system.

3. Identify the origin workspaces in Autodesk PLM 360 from which the correct revision-controlled engineering data exists. The appropriate items and bills of material will include item attributes, lifecycle states, and revision control rules.

4. Map item properties within Jitterbit using drag and drop of Autodesk PLM 360 attributes to their equivalents in the destination ERP system.

5. Specify item criteria to determine the Autodesk PLM 360 data eligible for transfer to ERP. In this example, business rules dictate the engineering data must have a status equal to 'released'.

6. Run the synchronization by initiating a process on the server and validating the first run's success.

Key benefits:

- Stay focused on business goals with intuitive point-and-click system connect, define, and map operations

- Detailed information transfer occurs immediately with no manual user intervention

- Respond quickly to changing business needs using technology that's easy to modify and update

- Shrink costs and complexity by keeping hard-coded integration programs to a minimum

Integrating Autodesk PLM 360 and ERP to better predict the cost impact of change

A proposed change within Autodesk PLM 360 integrated to ERP automatically reveals the related part inventory available within the ERP system. Earlier inventory awareness may result in more cost effective changes or better coordination among departments to enact changes in less time.

Sample use case of PLM/ERP proposed change integration:

Consider a proposed change within Autodesk PLM 360 that references a set of parts and/or assemblies destined to become obsolete and replaced with new designs. Adding items to the change causes the integration to retrieve the items' cost and quantity from every factory location. Autodesk PLM 360 tallies the values and rules flag components that cause the change to exceed acceptable costs. Alternatively, the integration may compute the number of business days, based on current production levels, required to exhaust all current inventory. Last, the system may notify other departments of the pending changes and thus avoid further inventory buildup. Each of these scenarios would help the organization determine if proceeding with the change is a viable option.

Key benefits:

- Early insight into pertinent information eliminates costly or unduly long change cycles

- Detailed data transfer occurs immediately and reflects proper calculations

- Affect decision-making before others get involved to reduce wasted efforts and confusion

PLM/ERP/BOM Integration

- Achieve more optimum processes that consider the right information and people at the right time

Integrating Autodesk PLM 360 and CRM to better monitor customer activities

Large customers may engage suppliers with multiple business activities that originate from different departments. It can be difficult for the supplier – and even the customer – to properly manage and track these activities. A well-conceived integration between the customer's sales engagements stored in CRM and the development activities stored in PLM may help yield greater advantage from these activities for the supplier and the customer.
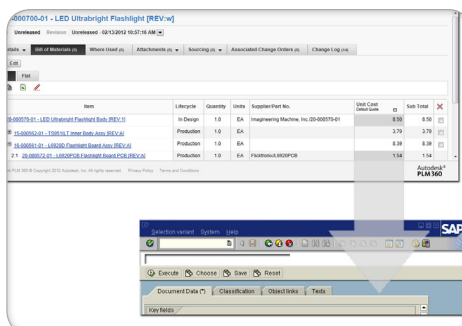
Sample use case of PLM/CRM integration to better communicate activities:

Clearer insight into the latest sales activities helps engineering better understand which customers value which products or services most. Consequently, suppliers can solicit more relevant customer feedback when considering potential product changes or future developments. The integrations may be a simple as tagging the latest customer name, size, and location information to the products stored in PLM. Advanced integrations may connect a running total of sales volume with specific products or replacement parts to provide further insight.

Key benefits:

- Draw new insights from data otherwise difficult to assemble without automated integrations

- Identify new business opportunities by passively monitoring customer buying habits

- Predict the customer impact of business decisions earlier, based on real customer data

- Keep everyone in the organization abreast of the latest, most accurate customer information

To learn more, visit
http://www.autodeskplm360.com/connect.

About Autodesk

Autodesk, Inc., is a leader in 3D design, engineering and entertainment software. Customers across the manufacturing, architecture, building, construction, and media and entertainment industries -- including the last 17 Academy Award winners for Best Visual Effects -- use Autodesk software to design, visualize and simulate their ideas. Since its introduction of AutoCAD software in 1982, Autodesk continues to develop the broadest portfolio of state-of-the-art software for global markets. For additional information about Autodesk, visit www.autodesk.com.
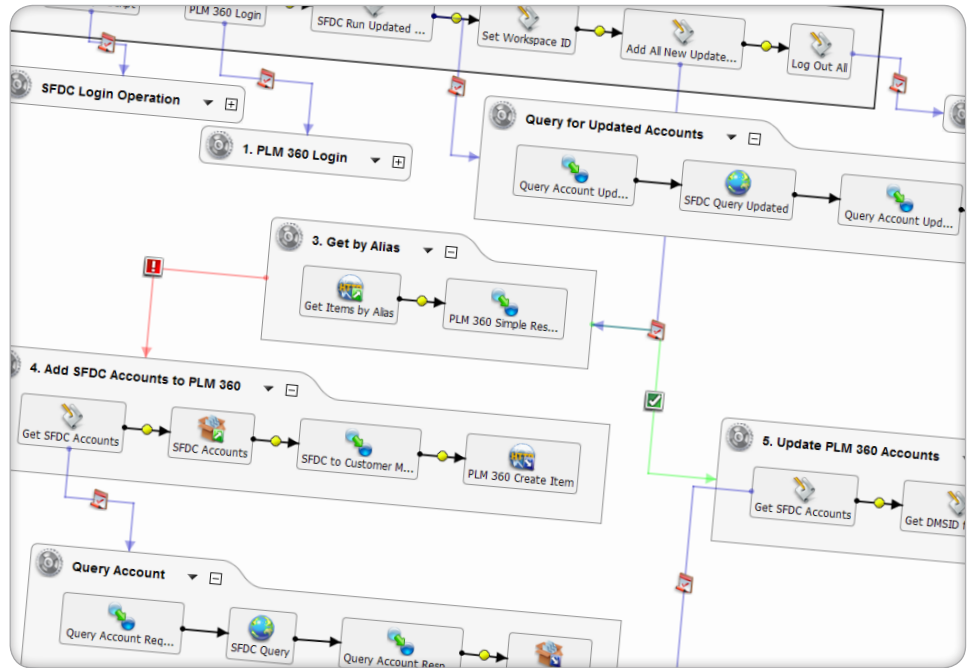
Autodesk PLM360 + CRM Integration

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