

# SAP® PowerDesigner® for Enterprise Architecture

## Streamlining the Connection Between the State of Business Today and Tomorrow

Today's enterprise architecture (EA) teams are being asked to prove their value and to be a positive resource for running, growing, and transforming the business. At the same time, EA teams are also tasked with dealing with current and pending legislation, continuous changes in economic environments, and rapidly changing technology. Successful EA implementations must provide a streamlined connection between the state of the business today and **where the business needs to be tomorrow.**

### THE CHALLENGE

Enterprise architecture is commonly defined as the translation of business vision and strategy into effective enterprise change. This is accomplished by identifying and refining the requirements and models that define the future state of an enterprise, enabling the evolution of that state.

Today the need for enterprise architecture is clear; the biggest challenge organizations face is how to implement it. No longer is enterprise architecture solely the domain of the IT team. Instead, it must involve a free-flowing dialogue between business and IT. EA teams must drive and support business strategy while articulating the current state of the business and demonstrating the future state.

### THE SOLUTION

There are many moving parts that make up the enterprise: systems, applications, business processes and requirements, to name a few. Using an EA tool to make the necessary links and connections between all these moving parts is critical to a successful EA implementation. And since pictures are worth

a thousand words, using a modeling tool for this effort just makes sense. EA tools are required to support the creation, collection, and visualization of enterprise knowledge. This provides the basis for analyzing information to make strategic decisions and meet the stakeholders' vision.

A better-architected enterprise is a better-run enterprise. Investment in enterprise architecture is becoming more essential as business demands on "data as a service" increase.

### THE SAP® PowerDesigner® DIFFERENCE

The approach that SAP® PowerDesigner® software takes to enterprise architecture addresses the decision-making needs of each distinct business area of an organization, providing the specific information each area needs in the "language" it needs.

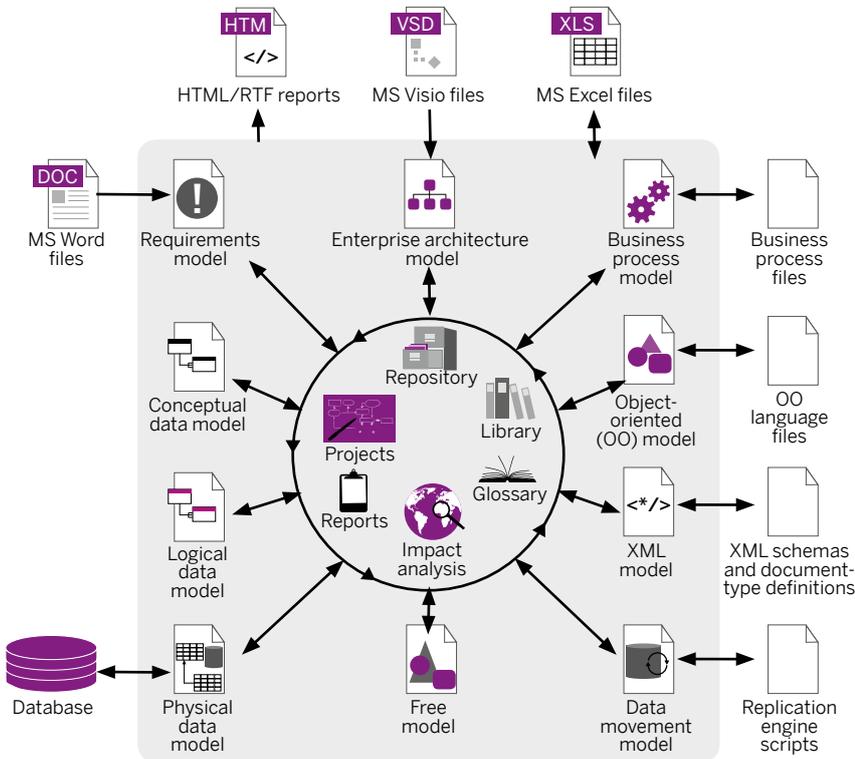
For the business perspective, we provide tools like organization charts, process maps, city planning diagrams, and business communication diagrams. From the IT perspective, derived

from our strength in information architecture, we provide complete conceptual, logical, and physical modeling for all information sources in the enterprise.

From the application perspective, we provide application architecture diagrams and service-oriented diagrams (cloud and virtualization); and from the technology perspective, we provide technology infrastructure diagrams. SAP PowerDesigner ties all of the data, metadata, and diagrams together with unique Link & Sync technology. It is the only EA tool on the market that provides the functionality to automatically and intuitively capture the intersections between all architectural layers and perspectives. It gives users from all groups a clear visualization of the state of the business today and the impact of change on the future.

The modeling solution that SAP PowerDesigner offers for enterprise architecture supports standard methodologies and notations and provides automated reverse engineering and generation of code through customized templates.

**Figure: SAP® PowerDesigner® Software for Enterprise Architecture**





The approach that SAP PowerDesigner software takes to enterprise architecture addresses the **decision-making needs of each distinct business area** of an organization, providing the specific information each area needs.

It provides a scalable enterprise repository solution with strong security and versioning functionality to aid multiuser development. It also enables powerful management reporting and is highly extensible. The Link & Sync technology provides full linkages and traceability throughout all components of the enterprise. (See the figure.)

In addition to providing an EA modeling tool, SAP PowerDesigner has a strong history of providing information and data architecture solutions to Global 1000 customers. Our exceptionally rich support for data and information architecture gives us experience dealing with EA implementations, since the source of the most challenging aspects of enterprise change is information problems.

Using the integrated models that SAP PowerDesigner offers, organizations can define all aspects of the enterprise architecture with comprehensive impact analysis and traceability tools. And they can be sure of the cost and reduce the risk associated with changes within the enterprise when moving toward the desired future state.

To increase communication efficiencies, we created the enterprise glossary, which allows the creation and connection of business terms with all models and artifacts throughout the enterprise. Definitions are established and synchronized in the repository, enabling everyone to use the same terms when naming objects. Business terms are more consistent and align with all the models across the enterprise.

To meet the complex requirements driven by the current economic environment and the wave of mergers and acquisitions, SAP PowerDesigner has been designed with the following features:

- Dependency traceability matrixes
- Configurable model transformations
- Easy configuration of imports from Microsoft Excel
- Virtualization and cloud architecture modeling support

These features provide visualization for organizations to better understand change and communicate it appropriately to all stakeholders. This in turn supports better decision making, which leads to greater efficiency, improved business agility, and the ability to connect the overall business strategy to the transformation that organizations need to survive uncertain economic times.

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#### MODELING TECHNIQUES SUPPORTED IN SAP® PowerDesigner®

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##### Business modeling

Business process modeling with links to simulation with Business Process Modeling Notation (BPMN) support

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##### Data modeling

Multilevel conceptual, logical, physical, and warehouse data modeling with support for modern techniques like Java, XML, and Web services in the database, with Information Engineering (IE) and Integration Definition for Information Modeling (IDEF1X) notation

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##### XML modeling

Unique physical paradigm that supports XML document-type definitions and schema artifacts

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##### Object modeling

Highly extendable Unified Modeling Language (UML) 1.x and 2.0 modeling

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##### Extract, transform, and load (ETL); enterprise information integration (EII); and replication modeling

Ability to document all stages of data movement for any implementation strategy

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##### Enterprise modeling

Comprehensive Link & Sync technology for ultimate metadata management and complete project- and enterprise-wide impact analysis

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#### ADVANTAGES OF THE ENTERPRISE REPOSITORY IN SAP® PowerDesigner®

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##### Team solution

Enable multiple modelers to work on the same model at the same time

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##### Metadata management

Store, manage, and version SAP® PowerDesigner® software models and all other documents in a single location

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##### Cross-model impact analysis

Store and maintain cross-model dependencies for complete impact analysis across the enterprise

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##### Software asset management

Find and reuse objects across all models and projects

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##### Security

Take advantage of role-based security with logging functionality and comprehensive permissions that limit access and visibility to models and submodels

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##### Openness

Use relational database management system (RDBMS)-hosted tables that are fully documented for Structured Query Language (SQL)-based reporting

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## KEY FEATURES AND BENEFITS

The unique Link & Sync technology in SAP PowerDesigner automatically and intuitively captures the intersections between all architectural layers and perspectives of the enterprise, allowing users from all groups (business, IT, and applications) to clearly visualize and effectively implement fast, reliable, and predictable change. Change can come in the form of increased demand for business agility, shifts in technology, and new or revised government regulations.

SAP PowerDesigner also enables organizations to:

- Achieve greater business agility through IT systems with impact analysis and change management
- Readily and accurately visualize, document, and report on impact before changes are made to production
- Visually represent an enterprise architecture using the EA model

- Leverage highly customizable support for homegrown or industry-standard EA frameworks such as Department of Defense Architecture Framework (DoDAF), Zachman, and The Open Group Architecture Framework (TOGAF)
- Share EA metadata with all stakeholders independent of technical abilities via the portal for SAP PowerDesigner
- Use requirements management to provide detailed analysis linking all models for traceability, import, and synchronization with Microsoft Word, placing the business users directly into the analysis and design lifecycle

## TO LEARN MORE

For more information about how SAP PowerDesigner can help your organization run better with enterprise architecture, please contact your SAP representative or visit us online at [www.sap.com/solutions/technology/database/model-driven-architecture/index.epx](http://www.sap.com/solutions/technology/database/model-driven-architecture/index.epx).



The Best-Run Businesses Run SAP™