

# Sybase® PowerDesigner® 15 for Data Architecture

PRODUCT BROCHURE



## POWERDESIGNER DATA ARCHITECT BENEFITS:

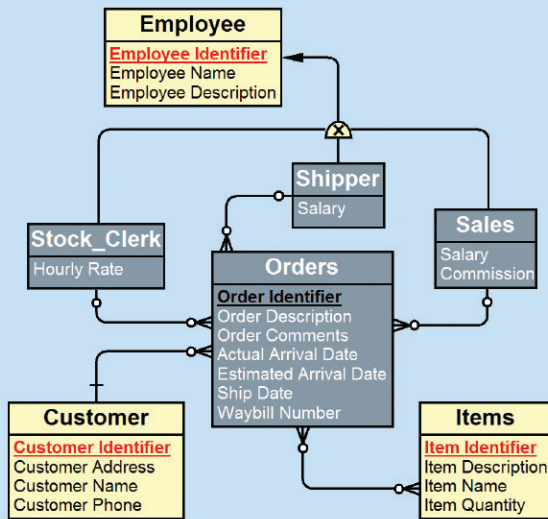
- **The safe choice** – PowerDesigner DataArchitect's market proven commitment to innovations in Data Modeling and Enterprise Information Architecture make it the safe choice for all information modeling requirements. PowerDesigner DataArchitect is a standard in many organizations worldwide.
- **Graphical ease of use** – PowerDesigner DataArchitect's highly customizable user interface makes common tasks easy while empowering advanced users rapid access to all features.
- **Align business and IT** – PowerDesigner DataArchitect facilitates Business and IT alignment through team collaboration. PowerDesigner's unique Link and Synch technology integrates models together and automates the dependency capture between all horizontal layers and all vertical architecture domains, creating an alignment between your IT requirements and your business goals.
- **Improve individual productivity** – PowerDesigner DataArchitect's model-driven approach features a series of customizable DDL generators, reverse engineering and database synchronization capabilities that significantly reduce manual DDL creation, maintenance and reengineering efforts.
- **Improve team productivity** – PowerDesigner DataArchitect provides all modelers the ideal team sharing environment with the only complete and secure metadata repository for all modeling types.
- **Share information** – PowerDesigner DataArchitect fosters greater enterprise collaboration through flexible, document-based, and multi-model reporting presented in RTF and/or fully hyperlinked HTML.
- **Open support** – PowerDesigner DataArchitect benefits heterogeneous systems understanding by supporting all leading database, data movement and XML standards within a single tool and framework.
- **Highly customizable** – PowerDesigner DataArchitect can be easily "programmed" to enforce corporate or regulatory standards and practices through embedded VB Scripting, a fully scriptable COM interface, customizable metamodel and fully documented API.
- **Reduce the impact of change** – PowerDesigner DataArchitect significantly reduces the cost and time when implementing any change through a fast and accurate bi-directional multi-model impact analysis view, integrating all requirements, analysis, detailed database and application models.

Sybase® PowerDesigner® DataArchitect® 15 is the industry-leading data modeling tool. PowerDesigner's innovative Link & Sync Technology enables enterprises to visualize, analyze and manipulate metadata to streamline communication and collaboration. PowerDesigner uniquely combines several data modeling techniques (traditional conceptual, logical and physical modeling) to bring impact analysis and design-time change management together with formal database design solutions. PowerDesigner provides industry leading support to more than 70 RDBMs.

## POWERDESIGNER DATA ARCHITECT KEY FEATURES:

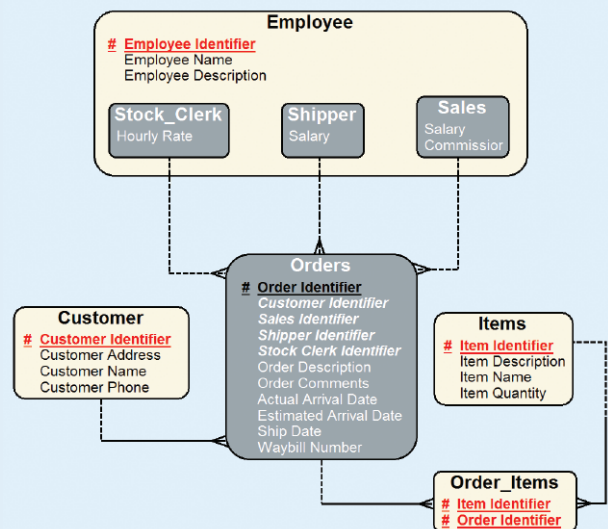
- **Requirements Models** – Detailed requirements analysis is accomplished through linking all models for traceability, ensuring a clear understanding of the business goals, strategies and tactics that drive the data warehouse initial design and ongoing change. Centralizing this knowledge in the requirements model removes the need for a large number of documents and spreadsheets that are manually maintained, it also allows for standardized templates across the organization. The import and synchronization with Microsoft Word allows the business user to be placed directly into the analysis and design lifecycle.
- **Document Generation** – Wizard driven list, multi-model RTF and fully hyperlinked HTML document reporting provides any non-modeling user direct, controlled access to metadata. This fosters greater communication among all members of the project team.
- **Impact Analysis** – Models are fully integrated to give a global view of all the components of an activity and their interdependencies. PowerDesigner's unique Link and Synch technology automatically and intuitively captures the intersections between all architectural layers and perspectives of the Enterprise — removing the Information silos and giving users from all groups the ability to clearly visualize and effectively implement fast, reliable & predictable change.
- **Information Mapping** – Drag-and-drop mapping editor allows for easy, fast and accurate dependency documentation. Simply drag to or from any supported source to target model pair and create comprehensive mapping definitions used in data dictionary definitions, impact analysis and warehouse ETL documentation.
- **Open Support** – All major RDBMS platforms are supported together in one tool. With over 70+ RDBMS definitions supported, PowerDesigner leads with the most comprehensive and complete support available today.
- **Customizable** – Optimize productivity by controlling everything from the user interface to the way PowerDesigner manages modeling tasks and generates code.
- **Integrated** – Plug into Eclipse, Microsoft Visual Studio and PowerBuilder® for seamless integration to leading development environments and synchronize models and code automatically. Plug-in supports all modeling techniques and requirements management. Requirements integrate with Microsoft Team System.
- **PowerDesigner Portal** – Ensures all users have full thin client access to all authorized (by role-based security) metadata including graphics and full element definitions and descriptions.
- **Enterprise Repository** – A fully integrated design-time repository, hosted by your choice of relational database. As a highly scalable centralized metadata management facility, the Enterprise Repository offers capabilities like: Role-based security on models and sub-models, version control, configuration management, version compare and comprehensive search capabilities. The repository may also store and manage any documents important to your projects. New repository notifications ensure all users have the latest metadata available and take appropriate actions based on changes committed to the server.

## MODELING TECHNIQUES:



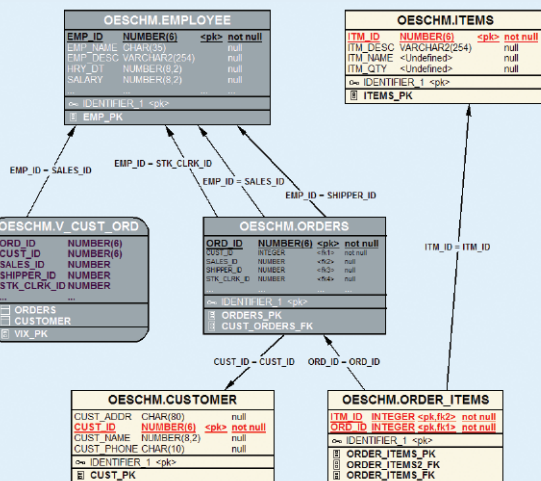
### Conceptual Data Modeling

The Conceptual data model (CDM) support multiple industry standard notations and provide a database and technology independent business representation of the objects of importance to an organization. Conceptual data models iteratively generate into one or more logical and physical data models based on desired levels of abstraction and approaches to information architecture from a common business view.



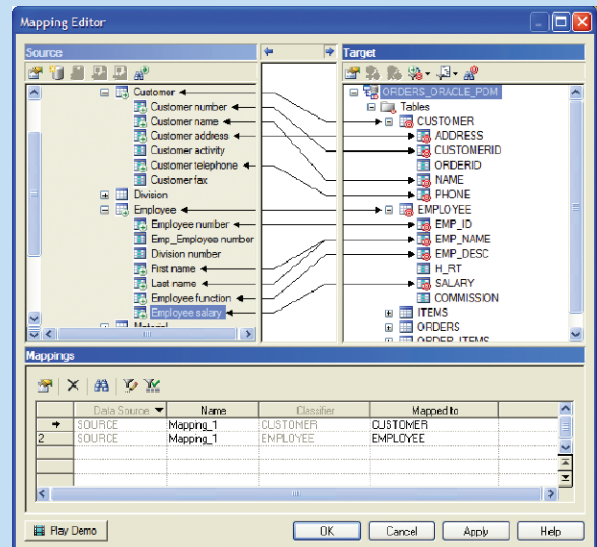
### Logical Data Modeling

The Logical Data Model (LDM) support multiple industry standard notations and provide database independent relational structures. The content of the LDM is adjusted to achieve certain efficiencies. Once validated and approved, the logical data model can become the basis of physical data models and inform the design of a database.



### Physical Data Modeling

The Physical data model (PDM) are typically generated from a logical data model, however, it may be reverse-engineered from a given database implementation. Physical data models support multiple industry standard notations and document, generate and reverse-engineer structures for over 70 RDBMS (including the latest Oracle, IBM, Microsoft, Sybase, Teradata, MySQL, HP NeoView, and many more). Support includes all database artifacts required to create relationships between tables or achieve performance goals, such as indexes, constraint definitions, linking tables, partitioned tables or clusters and new techniques such as Java, XML and Web Services in the database, security modeling, and advanced techniques for views and more. The physical data model can usually be used to calculate storage estimates and may include specific storage allocation details for a given database system.



### DataWarehouse Modeling

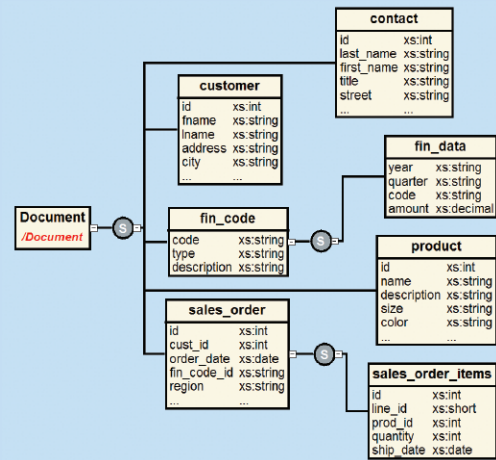
Multidimensional diagrams document the online analytical processing (OLAP) environment by representing cubes, facts, dimensions, dimensional hierarchies and queries independent of the physical table structures used to store the warehouse or data mart information. Together with the data mapping editor or more sophisticated data movement modeling (described below) the complete business intelligence architecture from source definition, transformation, warehouse, datamarts and reporting environment can be completely documented. This provides for clear impact analysis and design time change management of any aspect of the BI environment.

**POWERDESIGNER  
DATAARCHITECT PROVIDES:**

- **360° vision** – The enterprise is represented at all levels of abstraction and in all its dimensions through clear, accurate and integrated management of metadata.
- **Federation** – All models communicate with each other, de-compartmentalizing the enterprise and removing the silos inherited from the use of heterogeneous modeling tools.
- **Control over change** – The relationships between the technical layers and the business logic can be identified, forming a basis for analysing the impact of change.
- **Adaptability** – This simple tool provides open support for a variety of methodological frameworks and is adaptable to the maturity level of the enterprise.

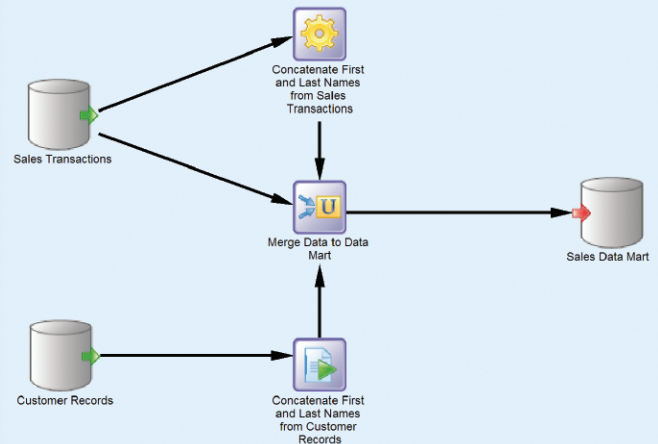
### XML Modeling

XML specific modeling techniques to document generate and reverse engineer XML Schema and XML DTD structures. The XML models are mapped to data models to document XML/Relational mappings as well as for definitions of XML in the database or RDBMS engines that support this concept.



### Data Movement Modeling

A PowerDesigner exclusive, the Data Movement Model (DMM), documents all aspects of information movement. Source data stores, target data stores, multiple transformations, publication and subscription serve to document any ETL, EII or replication process.



### Enterprise Information Architecture

PowerDesigner's unique Link and Synchronize technology allows users to document all dependencies from Requirements to Conceptual, Logical and Physical data models. All dependencies are tracked automatically through inter-model generation and synchronization techniques. All external deliverables are 100% synchronized to their respective models. By upgrading to PowerDesigner Studio, you add UML, Business Process and Enterprise Architecture models; giving business owners the capability to measure the complete impact of a change made anywhere in the development lifecycle and streamline the management of that change across their enterprise.

