

Drawing Tools: Too Primitive for Enterprise Architecture

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INTRODUCTION

Achieving optimal business results: that's what enterprise architecture is all about.

Whether you're transforming your organization due to a change in the marketplace, responding to new regulations, or looking for increased agility, enterprise architecture can give you the business intelligence you need to do it.

Once you create an enterprise architecture, you can look at everything in your business laid out like a blueprint for a house. In a blueprint, you see how everything fits together: plumbing, electricity, walls, floors, which way the doors swing, and so on. It's the same with enterprise architecture, except that you see how your strategies, processes, people, systems, and data fit together.

But enterprise architecture is more than just diagrams. Understanding your organization from an enterprise architecture perspective gives you the ability to see the big picture—and have all the details at your disposal—so that you can make informed business decisions quickly, respond to change, and efficiently drive positive business transformation.

Knowing these potential benefits, many organizations begin enterprise architecture initiatives. The first step is gathering knowledge about who they are, what they're doing, and how they're doing it. During this process, they need a tool to document what they learn, and communicate the "blueprint" to others in the organization.

Drawing tools—including Microsoft Visio, Microsoft PowerPoint, Smart Draw, spreadsheets, sticky notes, or even markers and whiteboard—may seem like the most appropriate choice at the beginning. They help you document workflows, planning diagrams, and organizational charts, but that's all they can do. At the end of the process, you'll have expended much effort, and only created a series of disconnected, moment-in-time pictures that have no intelligence behind them.

This lack of intelligence behind the pictures is the single biggest obstacle to good enterprise architecture today. Without it, you'll be starting over every time your business changes. That approach makes enterprise architecture a stumbling block on the road to business transformation rather than the tremendous aid it has the potential to be.

Instead, you need a tool that lets you add intelligence to your diagrams, as well as link your workflows, planning diagrams, and organization charts together with the systems, databases, and data warehouses that you use to run your business.

PowerDesigner® gives you these abilities. That's what makes it so significantly superior to any other tool on the market.

WHY DRAWING TOOLS FAIL

This paper defines a drawing tool as something that can make shapes and connect them with lines. Many companies use them to document different aspects of the business, but these tools fail to provide what you need for a successful enterprise architecture implementation. Here's why.

- **No Consistency**

Drawing tools, like pencil and paper, just give you a medium. They don't give you standards. If you give pencils and paper to two different people and have them document two different business processes, you'll get two completely different drawings, and no way to connect them together.

With PowerDesigner, the standards are already built-in, ensuring a common understanding between all business and IT stakeholders.

- **No Way to Manage Metadata**

When you use a drawing tool, you can label the things you represent in your diagrams, but you can't add information about those things, because drawing tools have no way to manage metadata.

Simply put, metadata is information about things. For example, if you have a workflow that depends on information from Database A, then Database A is a piece of metadata. If you use a drawing tool, you can draw a cylinder in your diagram and label it “Database A,” but there’s no way to link that picture of a cylinder back to the actual database, or to other drawings that also represent Database A. On your picture, “Database A” is just text.

With PowerDesigner, you capture the details behind what you’re drawing in a single, unified database, called a repository. Within this repository, you actually create a unique piece of metadata called “Database A,” and link it to the cylinder that represents Database A in your workflow diagram, and to every other process diagram that relies on Database A. If anything about Database A ever changes, you’ll know exactly which parts of your business will be affected. You also have only one representation of Database A regardless of how many drawings it appears on, which guarantees consistency throughout the enterprise.

- **No Link to Other Architectures, Systems, or Data Sources**

Drawing tools have no ability to link different pictures together to show dependencies. For example, a shipping process generally depends on the order fulfillment process for accurate information. If the marketing department decides to remove a field from the order fulfillment process on the company’s web site, shipping may be affected. That’s a dependency. It’s critical information for your enterprise architecture, and drawing tools simply cannot collect it.

PowerDesigner’s unique Link & Sync technology captures those kinds of dependencies in your organization in a natural and automatic way. In fact, simply using PowerDesigner in your day-to-day work will allow it to capture these dependencies automatically.

- **No Way to Maintain as Business Changes**

If you’re keeping your enterprise architecture locked up inside a number of disconnected pictures, you’ll always have to update each and every one of them to reflect any change in your organization. That approach makes enterprise architecture an impediment to your business moving forward, instead of the aid it’s meant to be.

PowerDesigner automatically propagates your changes throughout your enterprise architecture, because it works with the metadata behind each picture, rather than just the pictures themselves. Maintaining metadata ensures that everyone working on any aspect of the enterprise is properly informed of all changes, and can be confident that the diagrams they work from are up-to-date.

- **No Central Repository or Version Control**

Drawing tools give you individual pictures stored as individual files on servers or hard drives, which are hard to share among a group of people. When changes are made, drawing tools can capture the details but cannot capture all the dependencies, or communicate the changes and related dependencies to all the appropriate stakeholders.

PowerDesigner facilitates communication and collaboration by storing all metadata and architectures in a central location, complete with documented histories and version control. Using this shared repository, teams can analyze and design the enterprise architecture using a single, common set of source materials. If someone makes a change to Database A, PowerDesigner will not only disseminate the change to every instance of Database A in your architecture, but will also communicate the change to people throughout your enterprise with visual queues in the user interface and email notifications.

- **No Planning, No Automation, No Impact Analysis**

Drawing tools can give you a good idea of what the business wants, and a snapshot of where you are at a moment in time. They cannot help you plan, automate, or see the impact that a future change will have on the organization.

With PowerDesigner, you can make quick, informed decisions to steer your organization through any change the future holds.

HOW POWERDESIGNER SUCCEEDS

PowerDesigner is the leading modeling and metadata management solution for enterprise architecture. It allows you to document the processes, systems and data you have, as well as how these pieces are all connected, and build your enterprise architecture from there.

PowerDesigner does everything for your enterprise architecture that drawing tools can't.

- **Consistent, Standard Modeling**

Standard modeling provides a structure and a foundation for the graphic representation aspects of enterprise architecture, ensuring that everyone uses a common language to describe the business. You won't have to read the legend every time you look at a new diagram.

We've integrated multiple industry-standard models into PowerDesigner—including traditional conceptual, logical and physical—to ensure consistency and reduce ramp-up time. PowerDesigner also provides special support for data warehouse databases and data movement technologies.

- **Infrastructure to Manage, Integrate and Share Metadata**

PowerDesigner operates on the concept of metadata, or information about things, which is the single biggest differentiator between it and drawing tools. Metadata management is what makes PowerDesigner the best tool on the market for enterprise architecture.

Manage Metadata

PowerDesigner gives you the ability to collect, store, and manage all of your organization's metadata in a central location. This is a useful way to protect your metadata, as well as make it available for people in your organization to search it, sort it, retrieve it, update it or version it.

Integrate Metadata

PowerDesigner also provides a way to integrate multiple sets of metadata. Just like there are multiple types of "things" in your business, including business things, technology things, pieces of knowledge, etc., there are correspondingly different types of metadata, the information about those things. Integration means that PowerDesigner lets you connect the business things to the technology things to the pieces of knowledge so that you can see how all of the parts of your business fit together.

Lack of metadata integration is the single biggest obstacle to good EA today. In the typical organization, the business people put their metadata in one place, technology people put theirs in another, software engineers put their metadata in a different place from data architects, and nobody knows how all the metadata is related.

For example, finding out why a business process is using data from a particular server would not be a trivial task at most organizations. Getting an answer would generally involve multiple questions to multiple people throughout the enterprise. PowerDesigner's integrated metadata can provide the answer to the same question in a few seconds.

Share Metadata

Additionally, PowerDesigner makes metadata easy to access and share. You can browse the metadata repository, including reports and analysis output, via a web browser. You can export those reports to documents, spreadsheets or web pages in order to distribute among teams. This is really where metadata management and integration pay off, because your organization can use the information to make business decisions and drive change.

- **Link & Sync Technology**

PowerDesigner's unique Link & Sync technology gives you the ability to connect all the parts of your enterprise together, uniting the tactical and the strategic, capturing dependencies between different models and processes, effectively removing silos, increasing alignment, and improving business agility.

You can also use Link & Sync to automate EA processes such as dependency management and change management.

- **Easy to Maintain**

Because PowerDesigner is a metadata management tool, it automatically propagates any changes you make in your enterprise architecture as your business evolves. For example, if you make a change to a piece of metadata called Customer, the change will immediately show up in every diagram where Customer appears.

- **Central Repository with Version Control**

PowerDesigner stores all of its metadata and architectural artifacts in a central repository, so that all members of the IT infrastructure can access and manage the information as necessary. PowerDesigner also provides version control for sharing, requiring users to “check out” and “check in” documents to view or make changes, and keeps a documented history of changes and the ability to roll back to previous versions.

- **Impact Analysis**

Once you manage your enterprise architecture in PowerDesigner, you can map out “what if” scenarios in response to business needs. For example, how will the integration of Company X’s systems affect the business after the acquisition of Company X is complete?

PowerDesigner provides the knowledge you need to understand exactly what business processes use what information, where that information is managed and automated, and why the business uses and needs these elements.

Impact analysis reports provide a clear picture of the dependencies between pieces of metadata, helping to ensure that business goals, strategy, tactics, and requirements are respected. By highlighting impacted elements, the reports help you estimate the time, cost, and risk associated with any proposed changes. They also provide a roadmap for implementation should you decide to implement the change.

CONCLUSION

In 1969, management guru Peter Drucker wrote, “To make knowledge work productive will be the great management task of this century, just as to make manual work productive was the great management task of the last century.”¹

Simply put, effective tooling is what made manual work more productive. And PowerDesigner is the effective tool for knowledge work. PowerDesigner is far and away the best tool available for creating and managing an ever-changing enterprise architecture that can evolve with your business, and give you the insight, visibility, documentation and collaboration capabilities you need for increased agility.

Instead of just drawing a new picture every time your business changes, start reaping the benefits of a fully realized enterprise architecture. Stop simply *reacting* to change, and instead, start shaping strategy and transforming your business by *creating* change.

¹ Peter Drucker, *The Age of Discontinuity* (Harper & Row, 1969), p. 290

COMPARISON: POWERDESIGNER VS. DRAWING TOOLS

	Drawing Tools	PowerDesigner
Graphical abilities	X	X
Consistent, standard modeling	X (some modeling standards offered)	X
Industry-standard modeling tools		X
Metadata management		X
Metadata integration		X
Metadata sharing		X
Link & Sync		X
Easy to maintain		X
Repository for sharing	X (some file sharing offered)	X
Version control		X
Impact analysis		X



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