



OpenEdge™ Reference Architecture

The OpenEdge™ Reference Architecture is a blueprint for designing applications that can evolve as your business needs change and technical innovations emerge.

The OpenEdge™ Reference Architecture

A good business application reflects a well-planned balance of functionality, usability, and information storage. But a *great* business application builds those features on top of a great architecture. Solid software architectures are the foundation of scalability, reliability, security and flexibility. Poorly-architected software is good for a few years; well-architected software is good for a lifetime.

The OpenEdge™ Reference Architecture (OERA) is a great starting point for anyone wishing to construct the best business applications using the OpenEdge platform. Based on the principles of Service Oriented Architectures (SOA) and Service Oriented Business Applications (SOBA), the OERA provides a blueprint of best practices designed specifically to ensure maximum flexibility and productivity while allowing a greater ability to accommodate the enhancements in technology and changing business requirements that will surely come in the future.

While the standards-based OpenEdge platform is flexible enough to accommodate any design methodology, the OpenEdge Reference Architecture provides a sound roadmap for the most effective and efficient use of these technologies. The aim of the OERA is to describe a generalized design that is independent of any implementation details. It maps out a building block approach (see the diagram below) for describing various high level software architecture elements that vary in scope and by subject matter.

OERA Building Block Approach



Process oriented architectures are all about focusing on your business first. This approach breaks the application up into small segments defined by the business processes that the application provides. This process-based approach is designed to make interoperability easier. Each process exists separate from all others, but each can also call on any other process to help perform a task or present a set of information. This is where the concept of “business services” comes from in the application world – a process that exists as a service for any other process. Think of it in this way:

For years now, people have been talking about separating business logic from the user interface. But the components were separated in only a single dimension – between process and screen. With Service Oriented Architecture (SOA), we need to also split the application into pieces by functionality. There should be a single, standalone component, for example, that checks for customer credit. It may be used in dozens of places, but it is only designed and developed once. And yes, this is like object orientation – but at the business component level. It has nothing to do with technology or programming widgets.

Service Oriented Architecture (SOA) is built on two basic premises:

- 1) The concept that applications should consist of components that are built to and support standards that allow sharing between components and applications.
- 2) That business processes are at the heart of the application and provide the basis for the application. Processes are organized into services that can be used both within and between applications.

There are four parts to a SOA:

- 1) Business process components that contain the intelligence of the application.
- 2) User interface methods that provide human input and output sources for the business processes.
- 3) Integration methods and platforms that provide non-human input and output sources for the business processes.
- 4) An agreed-upon set of standards and contracts that describe all of the interface methods between the components.

To move to collaborative applications, you have to start at the architecture level. Monoliths don’t collaborate. Even when they exchange, they don’t collaborate. While previous architectural transformations were primarily system-driven, this change will be business-driven. By positioning the business processes as the primary architectural force, you can start thinking about applications differently and you can implement an architecture that supports your central role.

Your business gets a return on its investment value when the solution gives both:

- 1) Reuse – the ability to harvest a component for multiple purposes.
- 2) Efficiency – the performance, economy and flexibility of the system.

The OpenEdge Reference Architecture is a core component of the information and educational resources that Progress provides to empower its partners like you. As part of a whole approach to delivering product, you have access to the knowledge and support you need to maximize the technology investment you have made. Education services, consulting offerings, customer support services, conferences, seminars, and the Progress Software Developers Network™ (PSDN) are resources that are available to you when applying the concepts of the OpenEdge Reference Architecture to existing or new applications.

Combined with the Application Transformation Approach, the OERA gives you the benefit of reuse and efficiency while delivering you the blueprint, method, and approach to building competitive, adaptable applications to help you compete more effectively and win new business.