



# Carefx and Service Oriented Architecture: The Strategy for Rapid, Flexible Access to Critical Healthcare Information

Innovation in Healthcare comes from the ability to recognize and respond to the changing needs of patients, clinicians, and the business – quickly, easily, and economically. To do so, however, requires flexibility across the IT environment that supports the entire organization.

Carefx has developed a method for rapid, flexible access to patient information across disparate applications via clientless Web delivery. This Service Oriented Architecture (SOA) model provides clinician-ready anytime/anywhere access to data for critical decisions on any patient in their care.

SOA is an architectural style that links together reusable services that are integrated end-to-end across the healthcare community to connect clinicians, patients, and key partners to systems, services, and each other. This architecture enables your IT environment to respond easily to the changing needs in Healthcare, as well as provide for system flexibility, re-usability, interoperability, and scalability.

Key terms of SOA provide insight on how these benefits are achieved:

- **Service Orientation:** A way of integrating your business and applications as linked services
- **A Service:** A repeatable business task (e.g. register patient, generate invoice) that developers make accessible over a network to be combined and reused to create business applications
- **Service Oriented Architecture:** An IT architectural style that support service orientation

## THE POWER OF SOA

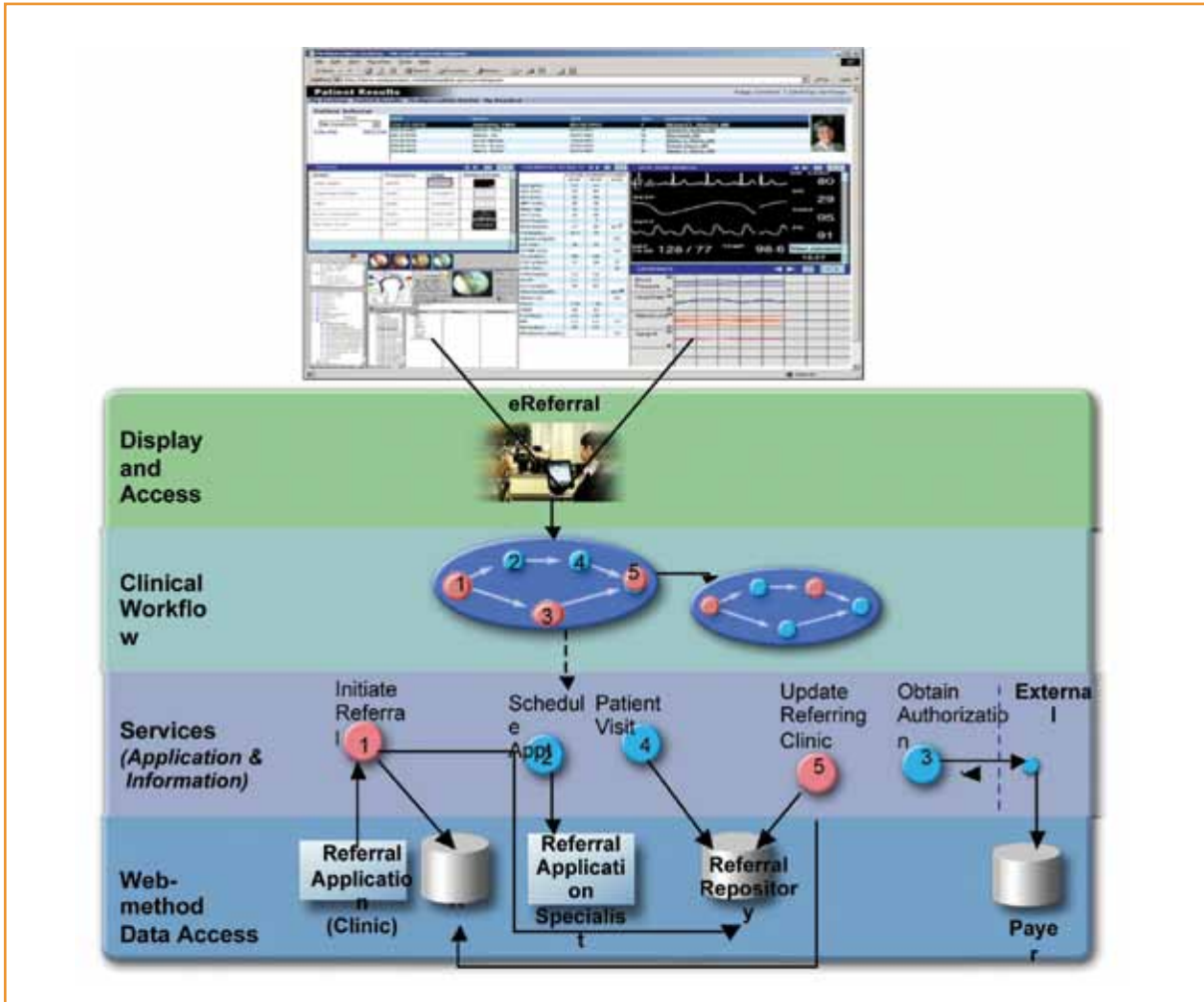
SOA is particularly important to healthcare systems because of the value it brings in exchanging information in a standard way. A SOA architecture will more effectively address collaboration among people and systems.

In the Carefx model, service-oriented architecture is a collection of many pluggable services orchestrated into workflows and presented in a manner that allows clinicians to quickly accomplish tasks with complete information about the patient and condition. SOA provides a means to incorporate different technologies and allow them to interoperate by creating a common method for accessing disparate data sources. This technology tends to perform faster than traditional centralized data models because it is highly distributed, does not require data synchronization, and relies on the integrity of the data source at the point of care. Data can still be aggregated into centralized schema or data marts for purposes of retrospective analysis.

All of this translates to faster software development, speed to solution, and consistent methods for dealing with highly disparate data sources in a common human interface.

## SOA ENABLES SEAMLESS ENTERPRISE INFORMATION INTEGRATION

SOA systems are inherently platform independent. With this architectural style, your organization is free to use the software and hardware of your choice, eliminating the threat of vendor lock-in. Your investments are protected through the reuse of existing software to build SOA services for modernization or new applications. SOA's modularity allows for incremental development, deployment, and maintenance. Organizations then have the freedom to innovate by flexibly assembling "best of breed" services into workflows that solve a new business problem such as electronic referrals.



Service Oriented Architecture: eReferral Process example.



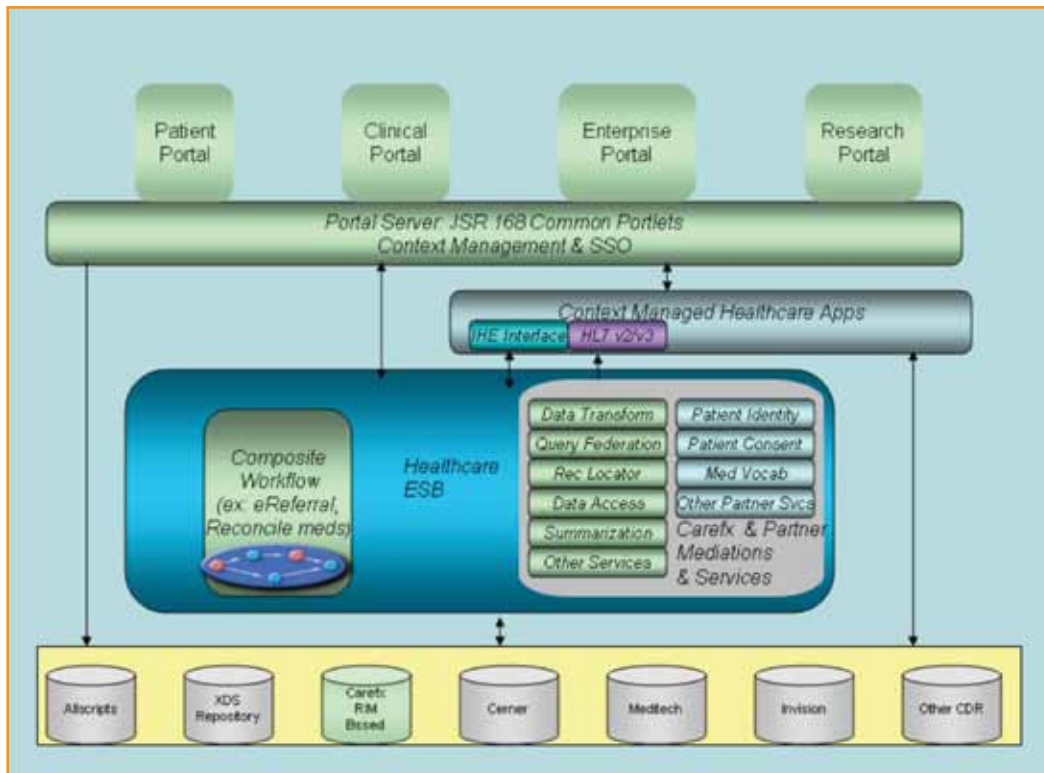
## THE CONTEXT ENABLED SOA PORTAL FRAMEWORK

The Carefx Context Enabled SOA Portal Framework uses the latest standards-based technologies and industry best practices to deliver information in a contextual manner to different constituencies based on role location and/or workflow. These constituencies require a variety of services along with data presented to them according to access rights and location-based workflow. The combined portal framework is built on a foundation that securely delivers this context-managed information across the healthcare continuum. It allows, for example, clinicians to sign-on only once to access multiple applications that all automatically tune to new data as a new patient is selected.

The Fusionfx Component-based SOA Delivers a Collaborative Framework that Allows:

- A highly granular identity management infrastructure
- SOA-based data access layer
- An HL-7 CMA context management framework
- Single sign-on
- Context-enabled JSR 168/WSRP based portlet container
- More than 300 extensible portlet libraries
- Rich widget libraries for graphic/trending/ math functions, etc.
- HL-7 V3 rules-based distribution of data (e.g. physician-to-physician or patient-to-provider)
- HL-7 Broker
- MQ Series queuing and messaging
- Message transformation and mediation
- Enterprise-level security





**GET MORE INFORMATION ON SOA AND FUSIONFX**

Fusionfx services along with partner services supply a rich and highly efficient delivery of disparate data to clinicians for easy access to the information they need to support clinical decisions. These technologies are key to innovating new practices and transforming your IT environment to support patient-centered care.

**Learn more about Fusionfx at [www.carefx.com](http://www.carefx.com) or by contacting us at [info@carefx.com](mailto:info@carefx.com).**

