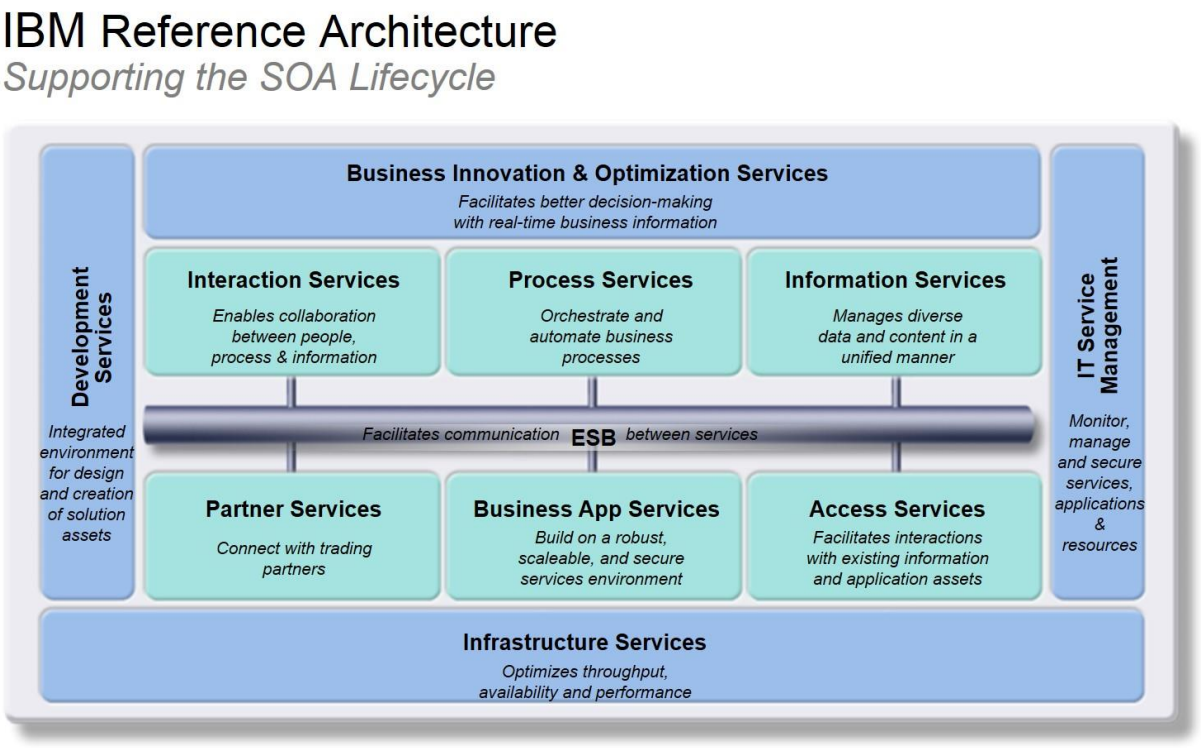
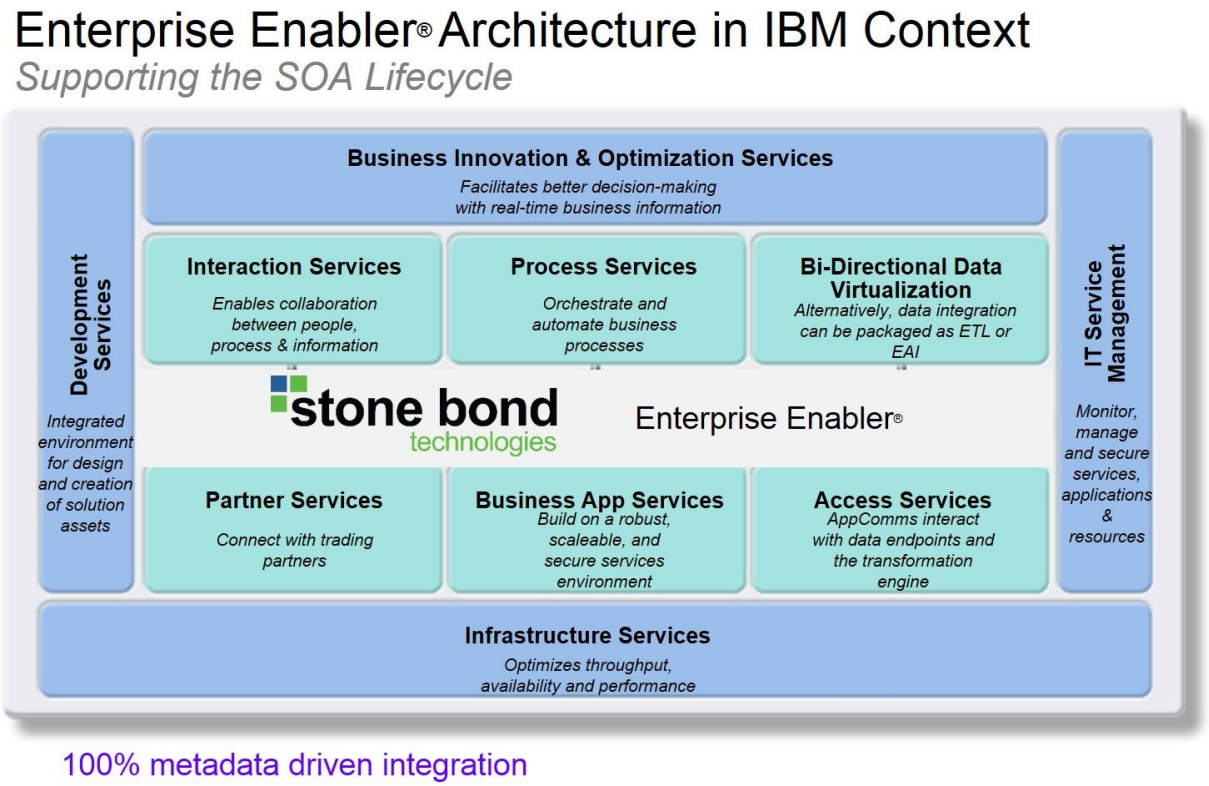
Enterprise Enabler in an IBM Environment

Stone Bond's Enterprise Enabler® (EE) agile integration platform offers all modes of integration in a single platform. One hundred percent metadata driven, integration definitions and rules can be activated in ETL (Extract, Transform, Load), EAI (transactions), SOA (Service-Oriented Architecture), and Data Virtualization. With the ease of configuring EE's core data federation, data virtualization is part of any of these modes. The platform is designed to be completely non-invasive; that is, it absorbs the responsibility to adapt to the environment at hand, all endpoints and consumption mechanisms, and to leverage many existing integrations. The result is fast time-to-value, no specialty skill requirements, and 80% to 90% savings for ongoing maintenance.

Below is a diagram of IBM's reference architecture for SOA. Enterprise Enabler is used in conjunction with this environment to speed construction of some integration components and to augment the overall solution with rapidly constructed ETL, EAI, and Data Virtualization.



Using the same framework for discussion, the diagram below and the text that follows describes Enterprise Enabler's relevant functionalities.



Notes on above stack diagram:

Takeaway:

The Enterprise Enabler Integrated Development Environment (IDE) combined with its run-time environment, deliver essentially parallel capabilities as offered in the IBM SOA Foundation. These capabilities can be implemented on a build-as-you-go basis, and yet, because of the architecture is completely extensible to meet the special needs of your business. Enterprise Enabler powerfully enhances and extends an IBM SOA environment by co-existing in parallel, leveraging existing services built in the IBM SOA framework and providing a faster, more flexible and less expensive SOA world to modify, maintain, and expand.

Background:

The SOA Reference Architecture shows the key capabilities that are required for comprehensive, enterprise wide SOA solutions.

***Development Services** are an essential component of any comprehensive integration architecture. The Enterprise Enabler Architecture includes a single Integrated Development Environment in which you can build, test, deploy and monitor integrations including not only SOA but ETL and EAI integrations. Even when developing highly specialized data transformations, it is not necessary to leave the environment, since embedded code editors, compilers and testers are available within the interface to greatly simplify situations where only custom code can handle the situation. Business Analysts. Using the IDE reduces the overall development cycles by 30 to 60% and the maintenance by 80 to 90%. Service developed in the IDE are automatically generated and hosted by the Enterprise Enabler system, saving the effort to handle that outside the dev environment.*

*- **Interaction Services** provide the capabilities required to deliver IT functions and data to end users, meeting the end-user's specific usage preferences. Enterprise Enabler automatically packages Enterprise Master Services (EMS) data virtualizations as web services (SOAP, REST), SharePoint 2007, 2010, 2013 BCS external entities, ADO.Net connections, ODBC, JDBC, Odata, and others.*

*- **Process Services** provide the control services required to manage the flow and interactions of multiple services in ways that support business processes. Enterprise Enabler's Process Designer is a composite application builder that is the data workflow logic around data integrations.*

***-Bi-Directional Data Virtualization** is a core capability of Enterprise Enabler. Any time data needs to be accessed from any source, it can be transformed, combined, and aligned with data from any number of separate, disparate sources. EE's Data virtualization can be used to combine data from existing services such as may exist already in an IBM environment. This same full CRUD-capable data federation/virtualization can be used/reused in bulk loads or transactions. Federation, replication, and transformation are out-of the box capabilities*

***Access Services** are provided through Enterprise Enabler's proprietary AppComm™ technology which provides CRUD (Create, Read, Update and Delete) functions for any application, data standard, data store, electronic instrument, web services, data warehouse, etc. The AppComm not only knows how to interact with the endpoint, but also how to respond to the commands of the transformation engine as it orchestrates activities across multiple different sources to federate the data "on the fly.", etc. and the ESB. Using a consistent approach,*

these access services expose the data and functions of the existing enterprise applications, allowing them to be fully re-used and incorporated into functional flows.

***Business Application Services** that provide runtime services required for new application components to be included in the integrated system. These application components provide new business logic required to adapt existing business processes to meet changing competitive and customer demands of the enterprise. Design and implementation of new business logic components for integration enables them to be fully re-useable, allowing them to participate in new and updated business processes over time. The Business Application Services include functions important to the traditional programmer for building maintainable, flexible, and re-useable business logic components.*

*In many enterprise scenarios, business processes involve inter-actions with outside partners and suppliers. Integrating the systems of the partners and suppliers with those of the enterprise improves efficiency of the overall value chain. **Partner Services** provide the document, protocol, and partner management services required for efficient implementation of business-to-business processes and inter-actions.*

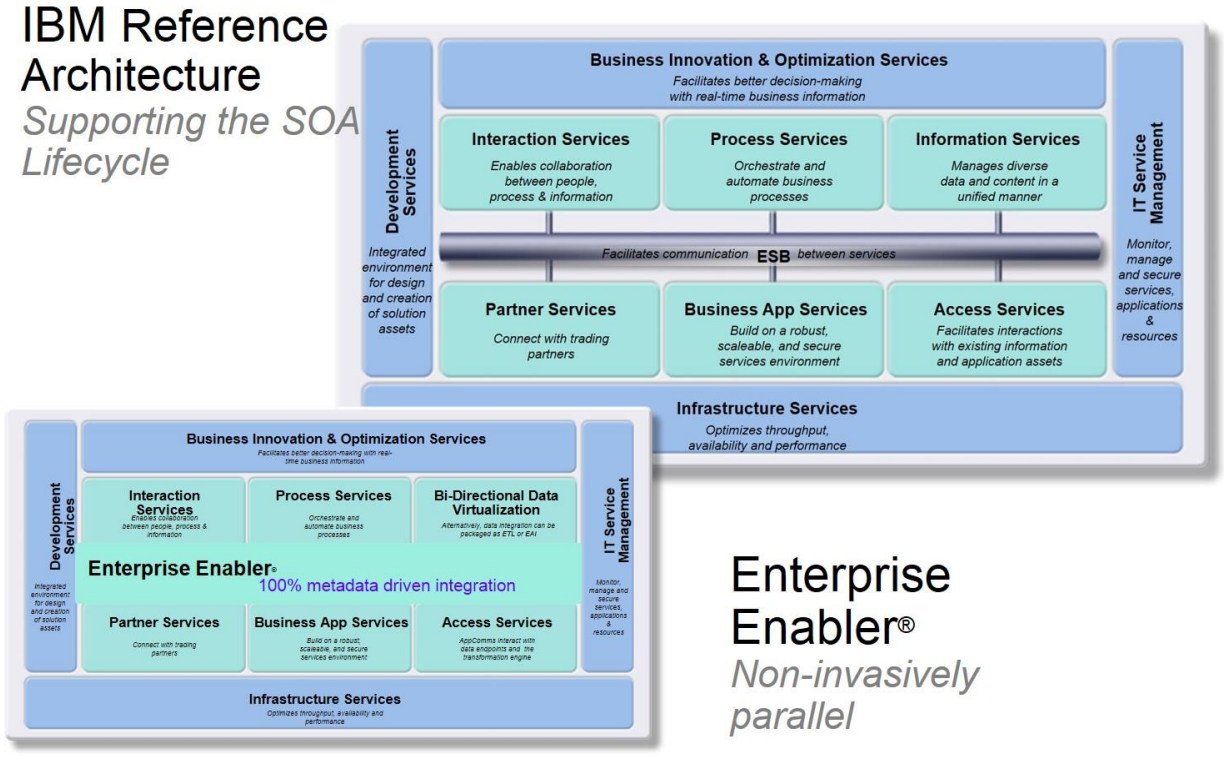
*Underlying all these capabilities of the SOA Reference Architecture is a set of **Infrastructure Services** which provide security, directory, IT system management, and virtualization functions. The security and directory services include functions involving authentication and authorizations required for implementing, for example, single sign-on capabilities across a distributed and heterogeneous system.*

***IT Services Management Services** include functions that relate to scale and performance, for example edge services and clustering services, and the virtualization capabilities allow efficient use of computing resources based on load patterns, etc.*

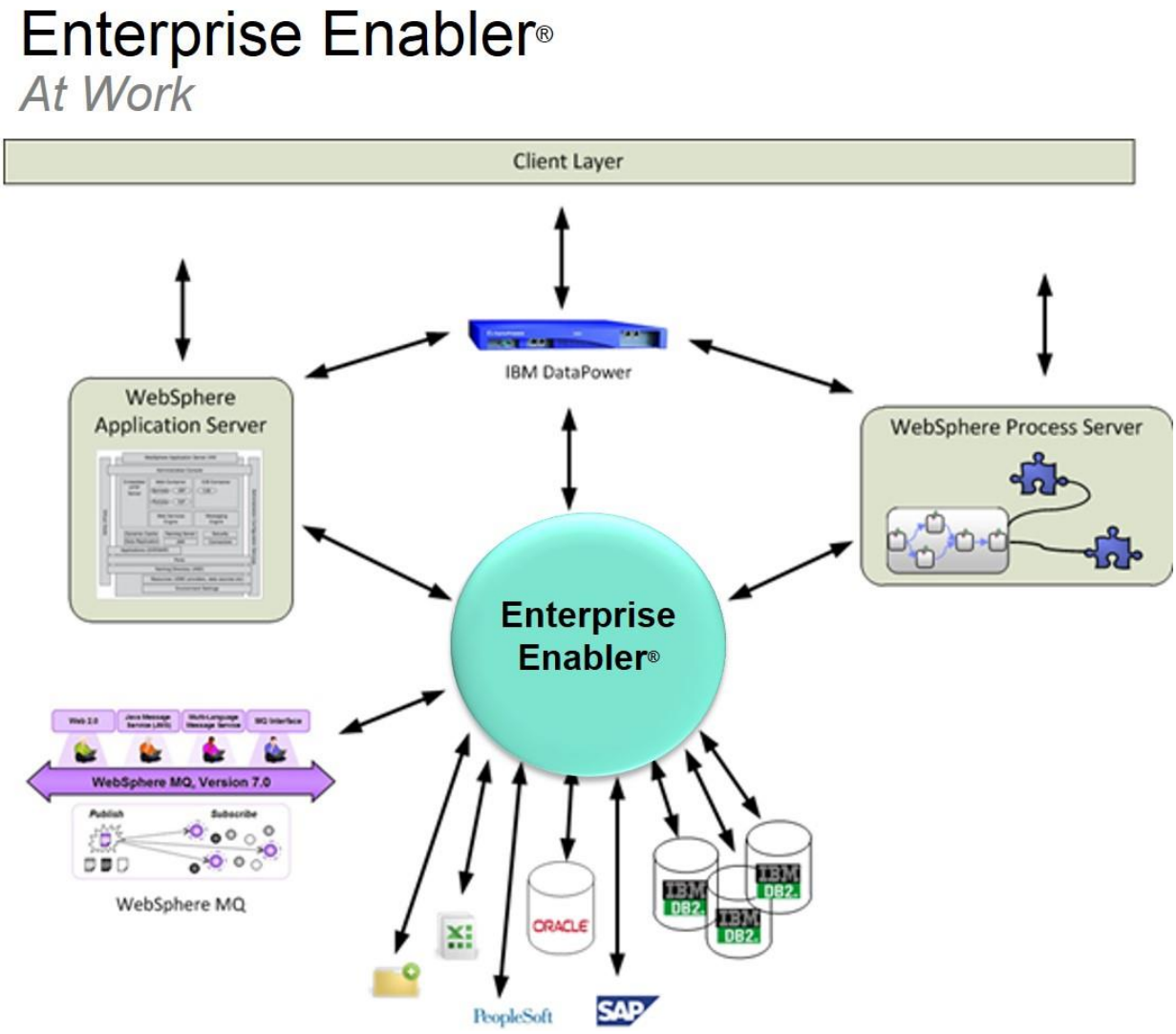
Wrap up:

While Enterprise Enabler usually acts as a stand-alone full scope integration platform, it can also reside and totally noninvasively in an IBM WebSphere adding highly efficient and rapidly deployed data federations and virtualizations. It also offers rapidly developed and deployed ETL and EAI solutions. Enterprise Enabler can leverage services generated by Data Power, for example, and can fully utilize WebSphere MQ and interact with WebSphere Application Server and Process Server.

The diagram below simply depicts an environment that leverages both IBM infrastructure and Stone Bond's Enterprise Enabler stack. There are overlapping functionalities, but typically, EE is put in place to streamline where IBM's capabilities become cumbersome or virtually impossible.



Below is a diagram of a common way to think about using Enterprise Enabler in an IBM environment. This particular schematic shows all client layer interaction through either Data Power, Application Server, or the process server. Actually, the most efficient design for data virtualization is to allow EE to be queried directly from the client application or portal using web services, ODBC, JDBC, Odata, ADO.Net, or for SharePoint 2007, 2010 , or 2013, through Business Connectivity Services(BCS). EE reaches directly to the backend systems, aligns, transforms, filters and merges the data serving it securely live to the consumer and end user. Write backs from the client to the backend sources are also handled live, with end user authentication and transaction rollback. These services are automatically generated and hosted within Enterprise Enabler.



For more information about Enterprise Enabler, please visit Stone Bond Technologies' website at www.stonebond.com.

