



**SOA Development in the Real World**  
**Customer Case Study**

**Site Service Selection (S<sup>3</sup>)**

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## Agenda

- **Company Overview**
- **Business Problem and Requirements**
- **Business Solution**
- **S<sup>3</sup> Implementation**
- **Challenges**
- **Lessons Learned**
- **Future Plans**



## What is TNS?

***One of the world's leading providers of fast, reliable data communications services for transaction-oriented applications.***



## MIS group supports 4 Divisions

POS – Point of Service

FSD – Financial Services

TSD – Telecommunications Services

ISD – International Services



## Business Problem

New Product offering requires Service Pre-Qualification for hundreds or thousands of locations at a time.

- Provisioning and Sales Support groups currently do pre-quals manually. Time intensive and prone to error.
- Product SLAs cannot be met with manual processing.
- Pre-qual accuracy is required for CRM
- Sales forecasts necessitate scalability.

Too many point-to-point custom integrations



## Solution Requirements

### Standards Based

- Portable - Not locked into one product

### Scalable and Reusable

Ability to interface with Internal systems and processes.

- OSS Systems – Oracle Apps, Remedy, Visionael, Databases
- Web Service, JAVA API

Ability to interface with External systems and processes

- Carrier pre-qualification systems, Address Validation service



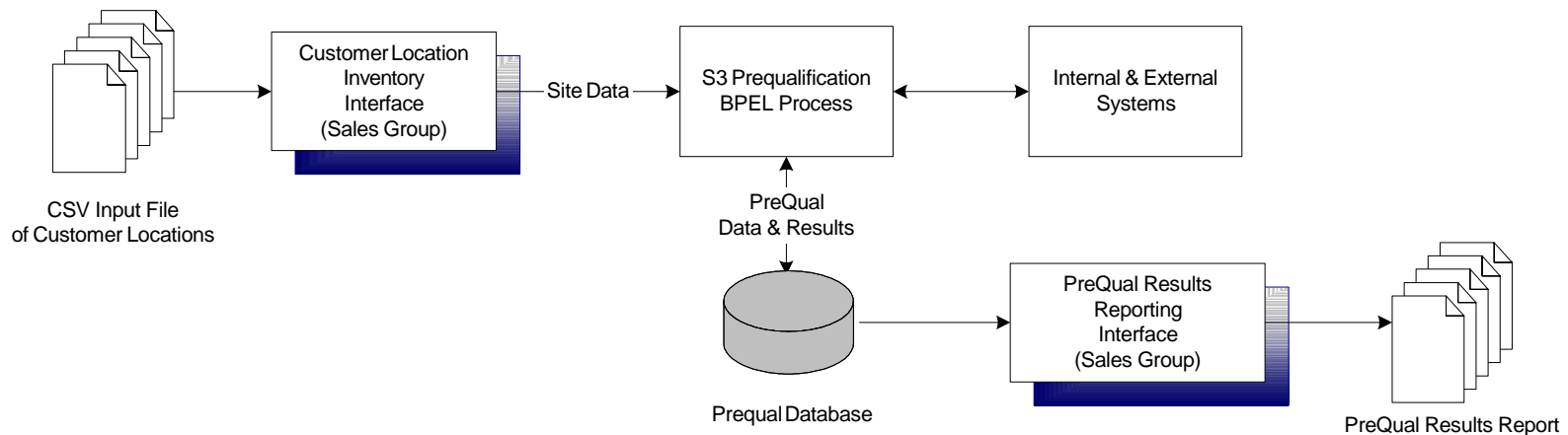
## Business Solution

### Oracle BPEL Process Manager

- Enables modular implementation of functional processes
- Fits well with existing web service architecture
- Scalable and Reusable
- Reduces or Eliminates manual and time intensive tasks
- Interfaces and integrates with OSS Applications

## Site Service Selection (S<sup>3</sup>)

A tool that enables Sales staff to input a list of customer site locations to get Connectivity Pre-Qualification and Pricing results for Broadband and Wireless service for each location.





## S<sup>3</sup> Implementation

**Front-end** – PHP SOAP call web pages

**Input** – CSV file using synchronous file adapter

### **Partner Links**

**Address Validation** – External Web Service

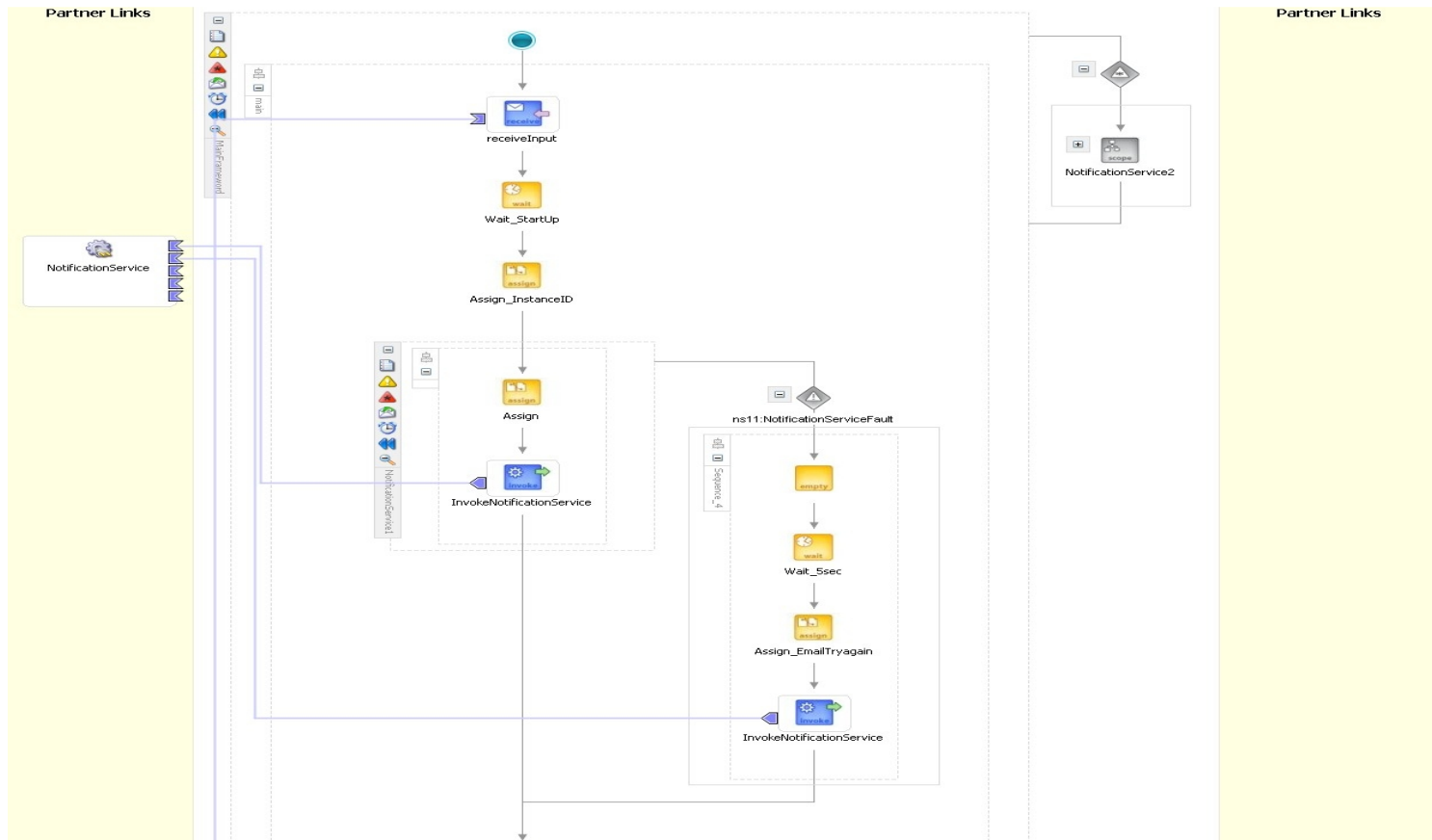
**Carrier1 Pre-Qual** – FTP and Database Adapters

**TNSConnect** – Database Adapter

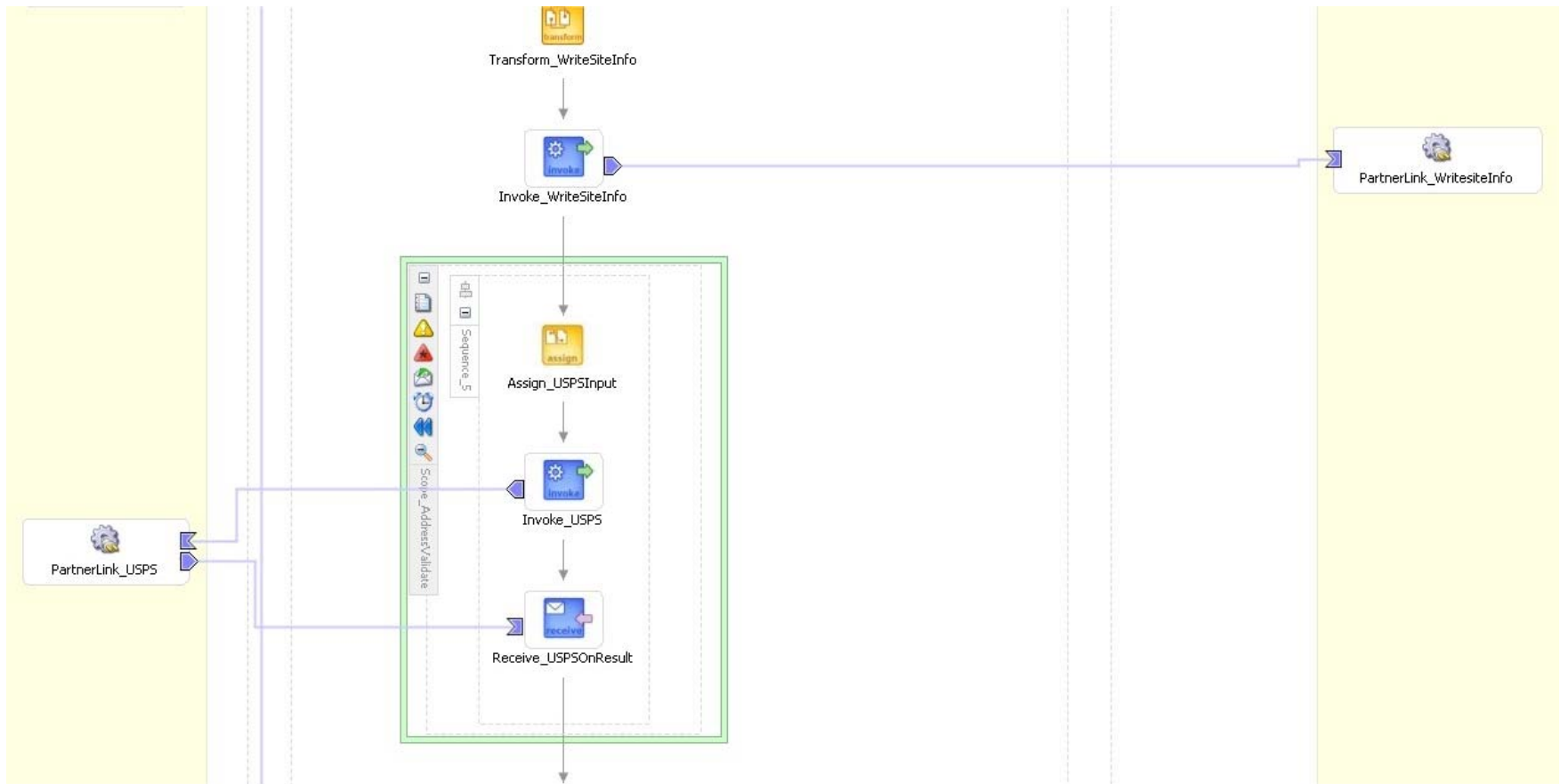
**Wireless** – Database Adapter

**Frame Relay** – Database Adapter

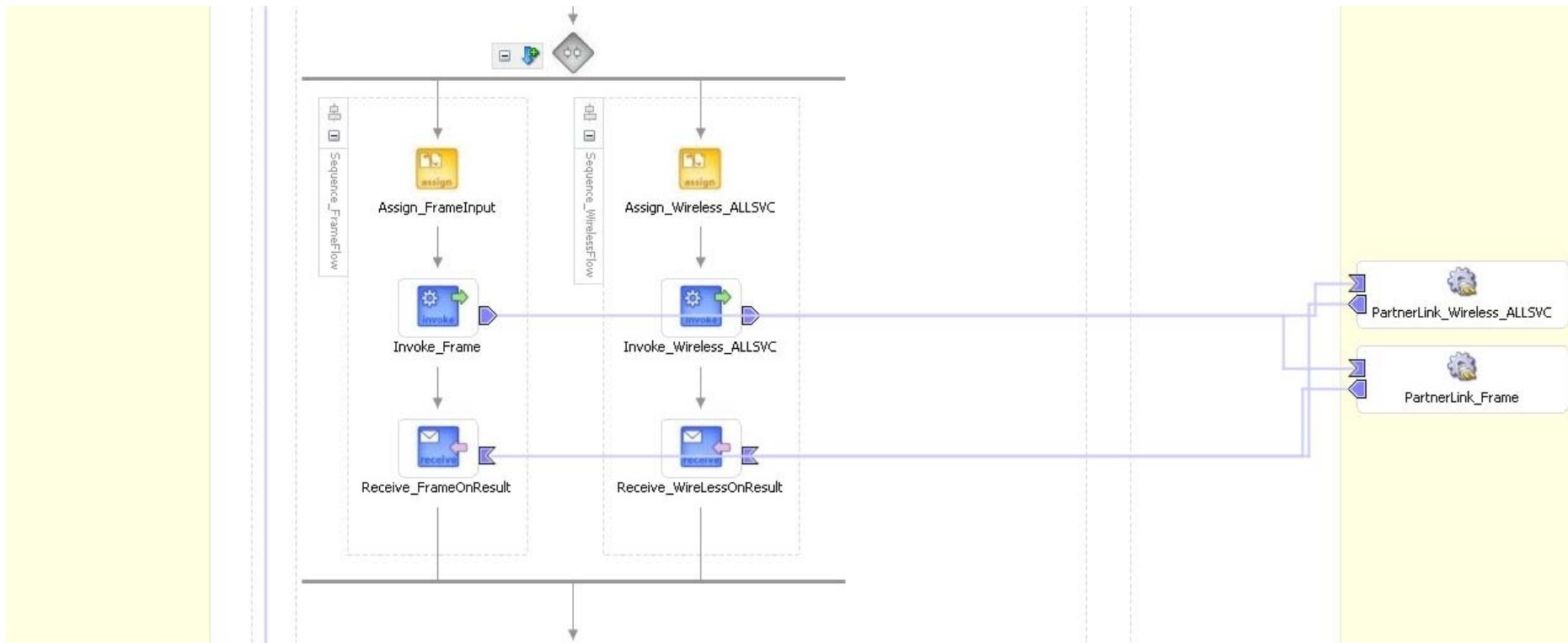
## Input and Notification



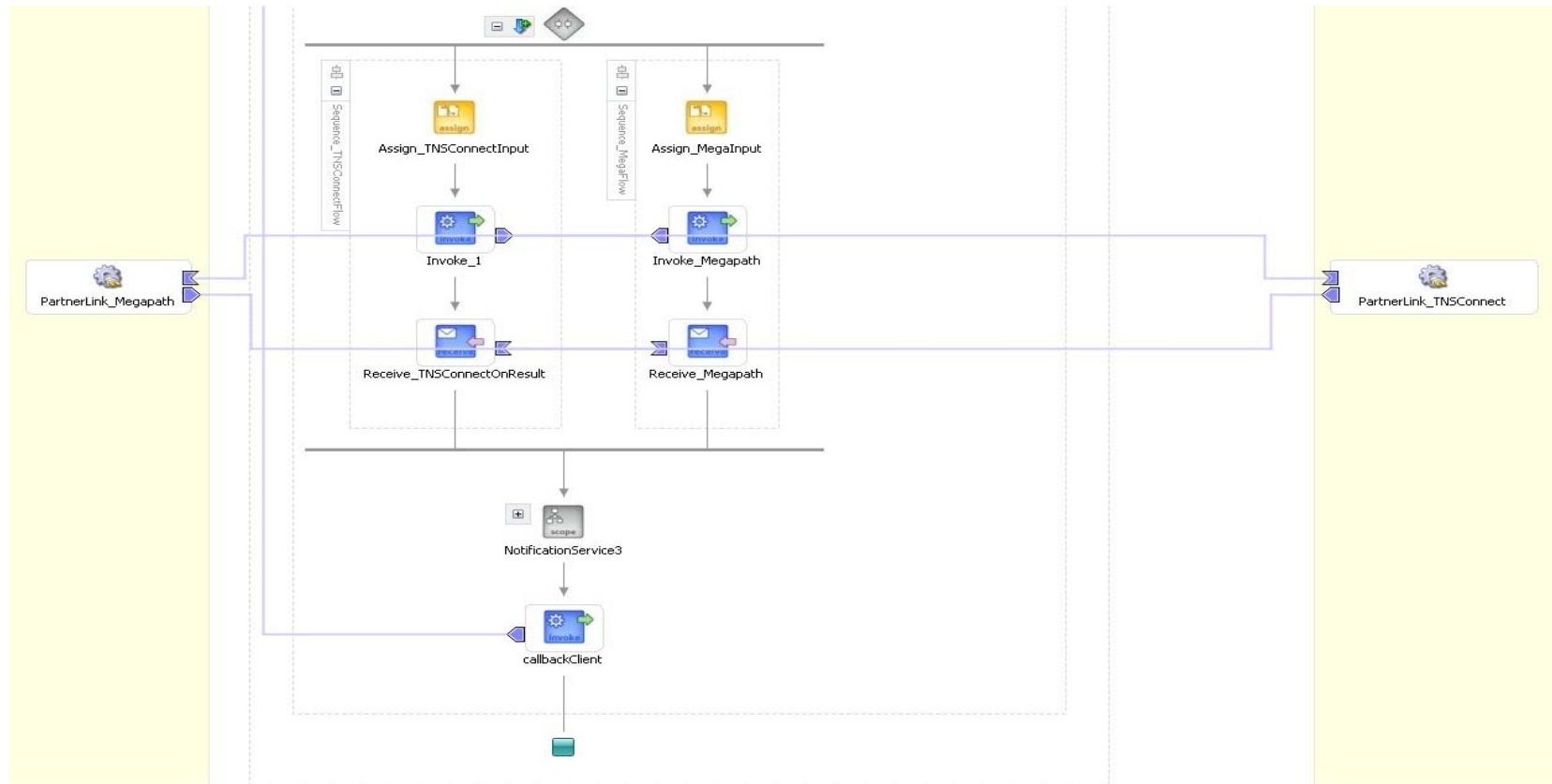
## Address Validation



## Frame Relay & Wireless



## TNSConnect & Carrier





## S<sup>3</sup> Implementation (continued)

**Sensors** – Monitor process progress, fault handling (future BAM use)

**Notifications** – Start and End of process, Fault Handling

**Output** – Database tables with pre-qualification data

**Reporting** – Perl scripts that generate Excel spreadsheets



## S<sup>3</sup> Challenges

**Input Processing** – Ability to synchronously read a file.

10.1.2 UI limitation required direct WSDL updating

### **Partner Links**

**Address Validation** – Use of Fault Handlers to catch remote web service issues

**Carrier1 Pre-Qual** – DIME vs FTP. Column Header creation, dynamic file names, pickup is separate asynch service.

**TNSConnect, Wireless, Frame Relay** – handling data, writing output



## S<sup>3</sup> Lessons Learned

Don't mess with Namespaces!

Make components modular (functional decomposition)

Set the JTA timeout on the application server high enough to handle the length of your processes.

Use Domains to separate Production/Test/Development

Use Multi-threading thru parallel flows

Manually updating of the XSLT for Column Headers

Looping through payload record sets to modify elements



## Future Plans

Better use of ANT – Create deployment descriptor files for deployment to different servers. Changing XML configs on the fly.

Use of BAM for monitoring

Use of DIME to replace FTP Adapter with web service

Reuse of processes for new product offerings

Expanding our use of BPEL PM to include the Sales Product Activation System



## Contact Info

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