Frameworx 14.5 Implementation Conformance Certification Report

Verizon

Verizon Enterprise Solutions (VES)

Service Assurance & Billing

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Version 1.0

Table of Contents

List of Figures

List of Tables

1 Introduction

1.1 Executive Summary

This document provides details of Verizon self-assessment and TM Forum's Conformance Assessment of the **Verizon Enterprise Solutions (VES) Service Assurance & Billing** implementation, against the following Frameworx 14.5 components:

- Business Process Framework Version 14.5

The assessment included a review of:

- The methodology approach to process modeling against the TM Forum's Business Process Framework Release 14.5 according to the specific processes submitted in scope for the Assessment.

TM Forum Note 1: This Certification Report is for the assessment of the Verizon Enterprise Solutions (VES) Implementation covering Service Assurance and Billing.

The Certification Report & detailed results for a previous assessment/certification of Verizon Rapid Delivery (VRD) Selling & Order Handling can be accessed from the following link: https://www.tmforum.org/certifications-awarded/verizon-rapid-delivery-vrd/

TM Forum Note 2: This version of the Frameworx Conformance Certification Report is provided by TM Forum, with links to the detailed process mapping documents, access to which must be approved by Verizon (contactVerizonVRD@one.verizon.com).

For more information on Verizon Enterprise Solutions (VES) please contact: contactVerizonVRD@one.verizon.com

For any additional information on this Frameworx Conformance Certification Report, please contact TM Forum at conformance@tmforum.org .

2 Implementation Functionality/Capability Overview

2.1 Verizon Enterprise Solutions – Implementation Overview

Verizon Enterprise Solutions is the division of Verizon Communications that manages Verizon's business and government clients. Verizon Enterprise Solutions (VES) provides products and services related to networks, cloud, machine to machine and mobile technologies; data, hosting and storage; and managed security, as well as other wired and wireless offerings. In addition, it offers solutions that it tailors to specific vertical markets and the markets include healthcare, financial, retail, government, energy and utilities. VES – Service Assurance and Billing portfolio is responsible in delivering applications that facilitate customer service management and Billing operations.

Verizon Rapid Delivery (VRD) is a large-scale transformation program that standardizes Verizon Enterprise Solutions' global business processes and systems. Built using a customer-centric approach, VRD provides a global standard operating environment and removes low value processes that do not provide a superior customer experience.

The VRD platform provides:

- Standardized customer contracts
- A rationalized product suite
- Simplified, repeatable end-to-end processes
- Visibility into the entire value chain for continuous improvement.

The VRD platform has the following key components:

Service catalogue that provides a highly variable product set and standard product entities with a set of well-defined parameters and specifications that can be reused to create interoperable and customizable solutions.

Global Pricing & Costing Engine that provides customer Price Books with a consistent global pricing model. In addition, the pricing engine provides a streamlined process for special pricing and margin calculations driven from authoritative data sources.

Electronic Contract Creation that eliminates the need for a paper contract by enabling fully-electronic contract creation, including amendments and signature.

Unified Ordering Systems that consolidate the ordering flow through a common order processing and close out workflow.

Global Billing Engine that computes pricing of the billable components using the customer's price book while providing a simplified, easy-to-understand invoice to our customers.

L2 Scope for this assessment –

Charging (1.1.1.13) – Prime Biller is VRD's strategic billing and charging solution based on the three-tier platform provided by the CSG Singleview product. It interfaces with Quoting, Pricing, Contracting, Order Management, product catalog, Taxation, Finance and printing subsystems. Prime Biller is used in VRD to - perform rating, Apply discounts, aggregate items for charging, manage customer hierarchy and provide advice of charge.

Bill Invoice Management (1.1.1.10) – VRD uses Prime Biller to ensure the bill invoice is created, physically and/or electronically produced and distributed to customers, and that the appropriate taxes, discounts, adjustments, rebates and credits for the products and services delivered to customers have been applied. These processes assure that enterprise revenue is billed and invoices delivered appropriately to customers.

Problem Handling (1.1.1.6) – VRD uses ETMS to provide a single system encompassing the functionality of all existing trouble management systems for the Verizon Enterprise Services network and facilities. ETMS provides the functionality to isolate, report, track and correct customer problems, as well as to create and close customer problem reports.

This report details how the VRD Charging framework, Invoice Management framework and the ETMS subsystem deliver Verizon's Business functionality that conforms to the eTOM Business Process Framework.

3 Business Process Framework Assessment Overview

3.1 Mapping Technique Employed

Business Process Framework Level 3 descriptions are analyzed by looking for implied tasks. (This is similar to how process decomposition can use Semantic Analysis). Each Business Process Framework process is supported by descriptive text. In many cases, each process is aligned and mapped to appropriate company documentation references solution, methodology or modeling material.

The Business Process Framework Level 3 descriptions are analyzed by looking for implied tasks. Color coded text as highlighted below is used as part of the process mapping whereby highlighted text indicates the level of support for a Level 3 process implied task:

- GREEN is used to highlight key words or key statements that are fully supported
- YELLOW is used to highlight key words/key statements that are partially supported
- GREY is used to highlight key words/key statements that are not supported
- No highlighting is used for words/statements that are irrelevant, just for reference or needed to complete the sentence.

Manual and Automated Support
It is important to determine whether the implied task is supported by manual steps, automated steps, or a combination of both. In this document, "A", "M", or "AM" is used for each task to indicate that the step or steps is/are automated (A), manual (M), or both (AM).

TM Forum Note 1: When process mappings are presented against Level 4 processes, the mappings are provided against the text in the "Mandatory" field for the process. In the event of the Mandatory field not being used, the process mappings are in that case provided against the Level 4 Brief/Extended descriptions.

TM Forum Note 2: Note that if a Level 3 process has not been decomposed to Level 4 processes in the Business Process Framework, in such cases the process mapping support is provided against the Level 4 process descriptions (Brief & Extended).

3.2   Business Process Framework Process Scope

The following figures represent the Business Process Framework Level 2 processes (high-lighted in blue) that were presented in scope for the assessment and that were assessed and support the corresponding Business Process Framework processes according to the results in Chapter 6 Frameworx Conformance. The text callouts capture the high-level mapping to the Verizon VES implementation for the Level 2 processes.
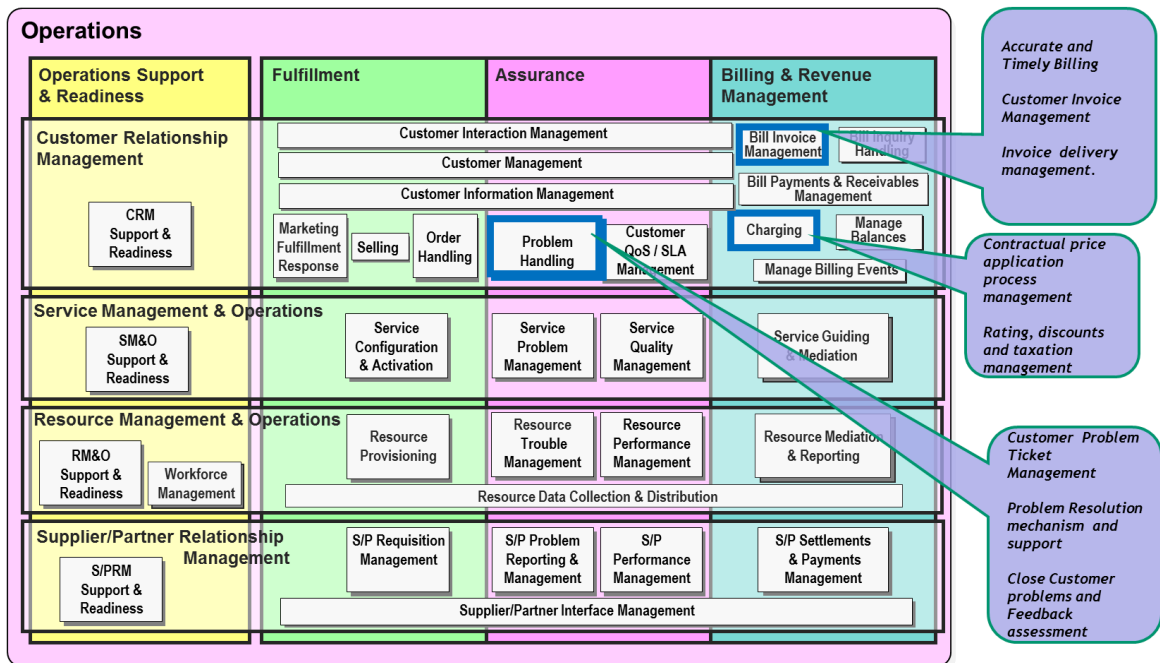
Figure 3-1 Operations Level 2 process coverage for Verizon VES Assessment

The following diagram identifies the number of Level 3 processes that were submitted for assessment, for each Level 2 process that was submitted in scope for the Assessment.
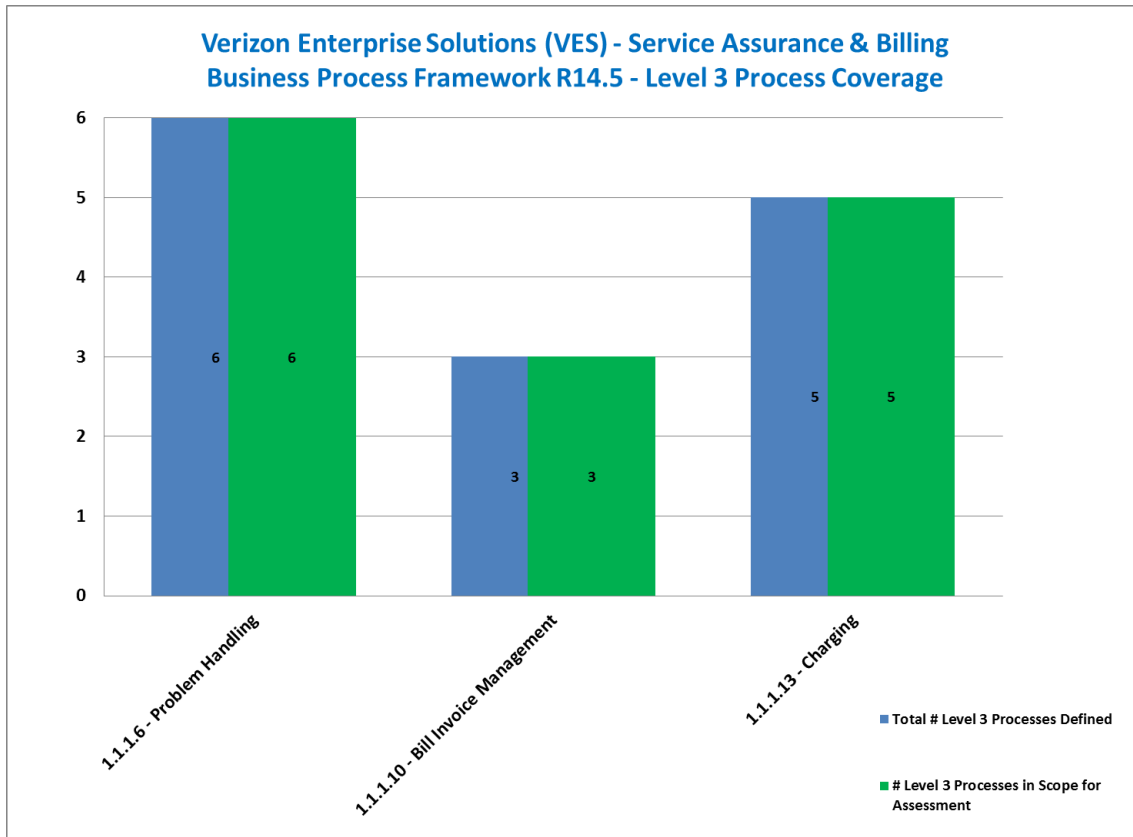
Figure 3-2 Level 3 process coverage for Verizon Enterprise Solutions Assessment

3.3 Implementation Scope

The following diagram represents the Verizon VRD architecture.
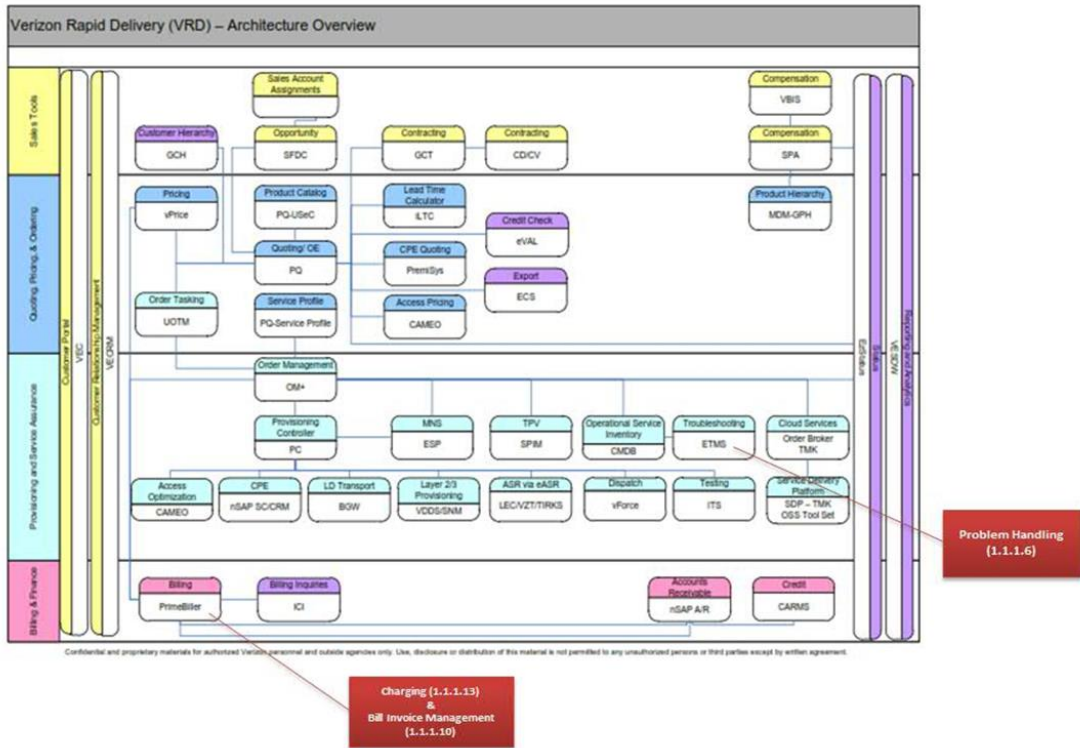
Figure 3-3 Verizon VRD Architecture Overview

4   Business Process Framework – Process Mapping Descriptions

This section provides links to the Process Mapping output from Verizon's Self-Assessment which was reviewed by TM Forum Subject Matter Experts alongside supporting documentation for Verizon Rapid Delivery.

Detailed Process Mapping documents were provided by Verizon for each of the Level 2 Business Process Framework processes in scope for the assessment:

- 1.1.1.6 Problem Handling
- 1.1.1.10 Bill Invoice Management
- 1.1.1.13 Charging

TM Forum Note:

The detailed mapping information provided by Verizon for the Frameworx Conformance Assessment is considered confidential information. For access to the detailed mapping information, please contact TM Forum Frameworx Conformance Certification authority: conformance@tmforum.org.

Alternatively, please contact Verizon VRD contacts directly: contactVerizonVRD@one.verizon.com

4.1   L2: 1.1.1.6 Problem Handling

4.1.1   L2: 1.1.1.6 Problem Handling - Mapping Details

Link to 1.1.1.6 Problem Handling Mapping Document:
http://www2.tmforum.org/cws/helper_controls/download.aspx?ID=28432&team_ID=337

4.1.2   L2: 1.1.1.6 Problem Handling – Detailed Conformance Scores

Operations: Level 1: 1.1.1 - Customer Relationship Management	
Level 2: 1.1.1.6 - Problem Handling	**Conformance Scores**
1.1.1.6.1 - Isolate Customer Problem	**5**
1.1.1.6.1.1 - Verify Product Configuration	100%
1.1.1.6.1.2 - Perform Specific Customer Problem Diagnostics	100%
1.1.1.6.1.3 - Perform Specific Customer Problem Tests	100%
1.1.1.6.1.4 - Notify T&M Root Cause Customer Problem	100%
1.1.1.6.1.5 - Categorize Customer Problem	100%
1.1.1.6.1.6 - Identify Root Cause / Check for Woarkarounds	100%
1.1.1.6.1.7 - Obtain permanent fix or workarounds	100%
1.1.1.6.1.8 - Create customer problem restoration plan	100%
1.1.1.6.1.9 - Create Known record	100%
1.1.1.6.2 - Report Customer Problem	**5**
1.1.1.6.2.1 - Monitor Customer Problem	100%
1.1.1.6.2.2 - Distribute Customer Problem Notifications	100%
1.1.1.6.2.3 - Distribute Customer Problem Management Reports & Summaries	100%
1.1.1.6.2.4 - Notify Customer Problem	100%
1.1.1.6.2.5 - Issue Customer Problem Management Summaries	100%
1.1.1.6.2.6 - Generate Customer Problem Management Reports	100%
1.1.1.6.3 - Track & Manage Customer Problem	**5**
1.1.1.6.3.1 - Coordinate Customer Problem	100%
1.1.1.6.3.2 - Cancel Customer Problem	100%
1.1.1.6.3.3 - Escalate/End Customer Problem	100%
1.1.1.6.3.4 - Monitor Customer Problem Jeopardy Status	100%
1.1.1.6.3.5 - Prioritize Customer Problem	100%
1.1.1.6.3.6 - Escalate Customer Problem to support team	100%
1.1.1.6.4 - Close Customer Problem Report	**5**
1.1.1.6.4.1 - Contact Customer for Feedback	100%
1.1.1.6.4.2 - Complete and Validate Customer Problem Report	100%
1.1.1.6.4.3 - Update Time to Restore Service	100%
1.1.1.6.4.4 - Finalize Customer Problem Report	100%
1.1.1.6.4.5 - Communicate Service improvement Opportunity	100%
1.1.1.6.5 - Create Customer Problem Report	**5**
1.1.1.6.5.1 - Generate Customer Problem Report	100%
1.1.1.6.5.2 - Obtain Configuration Information	100%
1.1.1.6.5.3 - Check for major outage	100%
1.1.1.6.6 - Correct & Recover Customer Problem	**5**

1.1.1.6.6.1 - Manage Product Restoration	100%
1.1.1.6.6.2 - Report Product Restoration Results	100%
1.1.1.6.6.4 - Determine Resolution Feasibility and Justification	100%
1.1.1.6.6.5 - Implement Customer Problem Workaround	100%
1.1.1.6.6.6 - Test & Validate Implemented Solution	100%
1.1.1.6.6.7 - Initiate Change Request	100%
1.1.1.6.6.8 - Review Major Customer Problem	100%

4.3 L2: 1.1.1.10 Bill Invoice Management

4.3.1 L2: 1.1.1.10 Bill Invoice Management – Mapping Details

Link to 1.1.1.10 Bill Invoice Management Mapping Document:
http://www2.tmforum.org/cws/helper_controls/download.aspx?ID=28433&team_ID=337

4.3.2 L2: 1.1.1.10 Bill Invoice Management – Detailed Conformance Scores

Operations: Level 1: 1.1.1 - Customer Relationship Management	
Level 2: 1.1.1.10 - Bill Invoice Management	Conformance Scores
1.1.1.10.1 - Apply Pricing, Discounting, Adjustments & Rebates	**5**
1.1.1.10.1.1 - Obtain Billing Events	100%
1.1.1.10.1.2 - Apply Pricing, Discounting, Adjustments & Rebates to Customer Account	100%
1.1.1.10.1.3 - Apply Agreed Customer Bill Adjustment	100%
1.1.1.10.2 - Create Customer Bill Invoice	**5**
1.1.1.10.2.1 - Render & Format Invoice	100%
1.1.1.10.2.2 - Deliver Electronic Invoice	100%
1.1.1.10.2.3 - Verify Invoice Quality	100%
1.1.1.10.2.4 - Manage Customer Invoice Archive	100%
1.1.1.10.3 - Produce & Distribute Bill	**4.9**
1.1.1.10.3.1 - Co-ordinate Billing Insertion	100%
1.1.1.10.3.2 - Establish & Manage Bill Production Cycle	100%
1.1.1.10.3.3 - Deliver Invoice Information	100%
1.1.1.10.3.4 - Administer Commercial Arrangement for Production and Distribution Capability	75%
1.1.1.10.3.5 - Manage Paper and Envelope Availability	100%
1.1.1.10.3.6 - Manage Production Run to Create Bill	100%
1.1.1.10.3.7 - Manage Physical Production & Distribution Quality	100%

4.4   L2: 1.1.1.13 Charging

4.4.1   L2: 1.1.1.13 Charging – Mapping Details

Link to 1.1.1.13 Charging Mapping Document:
http://www2.tmforum.org/cws/helper_controls/download.aspx?ID=28434&team_ID=337

4.4.2   L2: 1.1.1.13 Charging – Detailed Conformance Scores

Operations: Level 1: 1.1.1 - Customer Relationship Management	
Level 2: 1.1.1.13- Charging	Conformance Scores
1.1.1.13.1 - Perform Rating	5
1.1.1.13.2 - Apply Rate Level Discounts	5
1.1.1.13.3 - Aggregate Items For Charging	5
1.1.1.13.4 - Manage Customer Charging Hierarchy	4
1.1.1.13.5 - Provide Advice of Charge/Rate	5

5 Information Framework Assessment Overview

5.1 Mapping Technique Employed

Not applicable for this phase of the assessment.

5.2 Information Framework Assessment - ABE Scope

Not applicable for this phase of the assessment.

5.3 Implementation Scope

Not applicable for this phase of the assessment.

6 Frameworx Conformance Result

This section details the Scores awarded to reflect Conformance of Verizon Enterprise Solutions to the Business Process Framework & Information Framework components of Frameworx 14.5.

6.1 Business Process Framework – Scoring Rules

The conformance scores granted were based on the following TM Forum scoring rules:

Frameworx 14.5 Conformance Certification (Product/Solution/Implementation)		
Business Process Framework (eTOM) - Conformance Level Descriptions (Level 3 processes)		
Process level	Conformance Score	Qualifier
Level 1	Not applicable	Conformance Assessment shall not be carried out at this process level - hence Conformance Level shall not be awarded at this level.
Level 2	Not applicable	A conformance level is not awarded to Level 2 processes in Frameworx 12.0 Assessments. The Certification Report shall highlight the coverage of a Level 2 process submitted in scope for an Assessment in terms of number of Level 3 processes submitted for assessment out of the total number defined for the Level 2 process.
Level 3	Score is awarded between 3.1 & 5.	The Conformance Score is awarded for each Level 3 processes submitted in scope for the Assessment. The Conformance Score awarded can be a value between 3.1 & 5 depending on the level of coverage & conformance to the Level 3 process based on the alignment to the level 3 Implied Tasks as decomposed in the Level 4 process definitions. *Any manual implementation of the process support shall be noted in the Conformance Report and Detailed Results Report.*

Figure 6-1 TM Forum Business Process Framework: Conformance Scoring Rules

6.2   Business Process Framework – Conformance Result Summary

The graphs in this section provide an overview of the conformance levels granted to the Level 3 Processes presented in scope for the Verizon Enterprise Solutions Assessment. Each Level 3 process was measured using a Business Process Framework (eTOM) conformance score according to level of Conformance – Full Conformance or Partial Conformance as described in section 6.1 Business Process Framework – Scoring Rules.
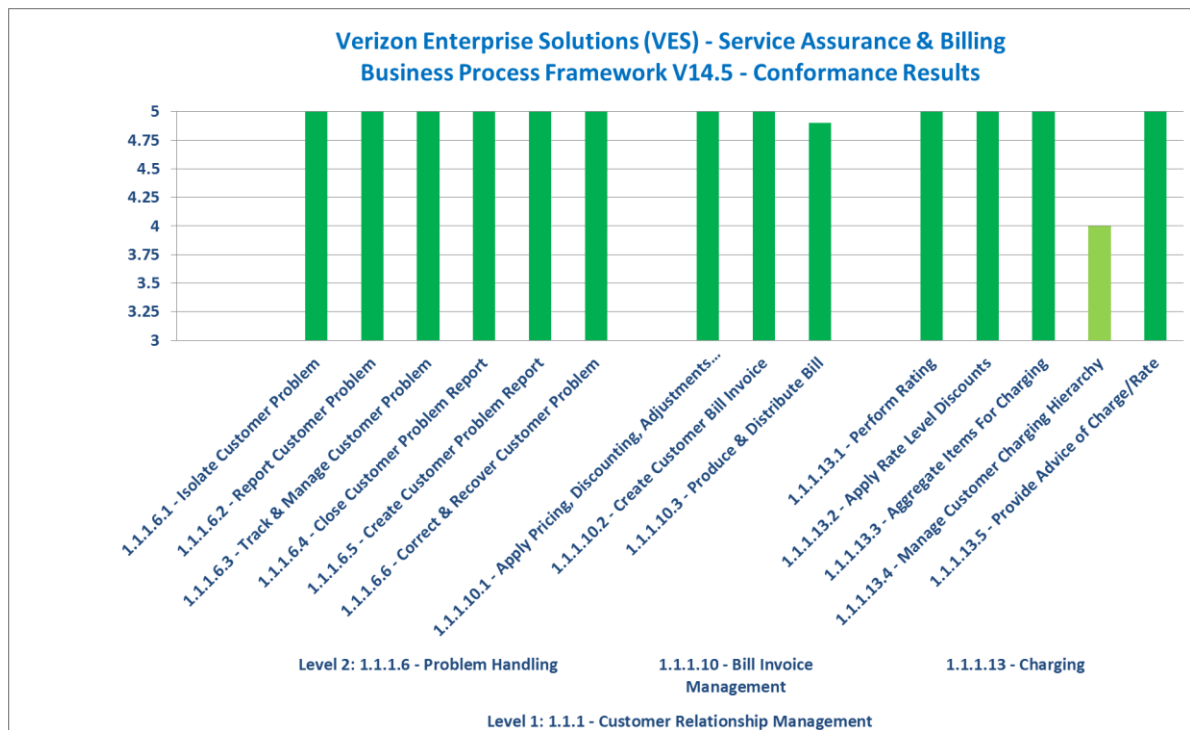

Figure 6-2 Business Process Framework: Conformance Result Summary

6.3   Business Process Framework – Detailed Conformance Results

The following table provides a more detailed breakdown of the scores awarded with some additional commentary.

Table 6-1 Business Process Framework: Detailed Conformance Results

Verizon Enterprise Solutions (VES) Implementation - Billing & OSS Assurance Business Process Framework (eTOM) Release 14.5 Conformance		
L1 / L2 / L3 Process	L3 Process Score [L2 Coverage]	Comments
Level 1: 1.1.1 - Customer Relationship Management		
Level 2: 1.1.1.6 - Problem Handling	[6/6]	Details
1.1.1.6.1 - Isolate Customer Problem	5.0	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.6.2 - Report Customer Problem	5.0	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.6.3 - Track & Manage Customer Problem	5.0	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.6.4 - Close Customer Problem Report	5.0	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.6.5 - Create Customer Problem Report	5.0	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).

1.1.1.6.6 - Correct & Recover Customer Problem	**5.0**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
Level 2: 1.1.1.10 - Bill Invoice Management	**[3/3]**	**Details**
1.1.1.10.1 - Apply Pricing, Discounting, Adjustments & Rebates	**5.0**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.10.2 - Create Customer Bill Invoice	**5.0**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.10.3 - Produce & Distribute Bill	**4.9**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process supported alignment criteria with the standard Business Process Framework (eTOM) but with minor deviation for the following Level 4 process: *1.1.1.10.3.4 - Administer Commercial Arrangement for Production and Distribution Capability*
Level 2: 1.1.1.13 - Charging	**[5/5]**	**Details**
1.1.1.13.1 - Perform Rating	**5.0**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.13.2 - Apply Rate Level Discounts	**5.0**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).

1.1.1.13.3 - Aggregate Items For Charging	**5.0**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).
1.1.1.13.4 - Manage Customer Charging Hierarchy	**4.0**	**Partially Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process supported alignment criteria with the standard Business Process Framework (eTOM) but with some deviations.
1.1.1.13.5 - Provide Advice of Charge/Rate	**5.0**	**Fully Conformant** Supporting evidence and documentation submitted for the assessment of this level 3 process fulfilled alignment criteria with the standard Business Process Framework (eTOM).

6.4   Information Framework – Scoring Rules

The conformance scores granted were based on the following TM Forum scoring rules:

Frameworx 13.0 Conformance Certification (Product/Solution/Implementation)	
Information Framework (SID) - Conformance Score Descriptions	
Conformance Score	**Qualifier**
Non Conformance [Score = 1]	The content of the model is compatible with a subset of the Information Framework (SID) ABEs that define its domain coverage. This provides two interacting components/solutions with a common vocabulary and model structure. The subset represents the scope of the model, expressed in Information Framework (SID) domains and ABEs.
Non Conformance [Score = 2]	The model has passed level 1 conformance and the content of the ABE, part of the domain coverage and defined in the model, contains the ABE's core business entity or entities. A core business entity is an entity upon which other entities within the ABE are dependent. e.g. Service in the Service ABE. A core entity is also an entity whose absence in the ABE would make the ABE incomplete.
Very Low Conformance [2.0 < Score <= 3.0]	The model has passed level 2 conformance and *a percentage of the required attributes of the ABE's core entity or entities are defined in the model.
Low Conformance [3.0 < Score <= 4.0]	The model has passed level 3 conformance and *a percentage of the dependent entities within the ABE are defined in the model. A dependent entity is one whose instances are dependent on an instance of a core entity. For example, a ServiceCharacteristic instance within the Service ABE is dependent upon an instance of the Service entity.
Medium Conformance [4.0 < Score <= 5.0]	The model has passed level 4 conformance and *a percentage of the required attributes of the ABE's dependent entities are defined in the model.
High Conformance [5.0 < Score <= 6.0]	The model has passed level 5 conformance and *a percentage of all attributes of the ABE's core entities are defined in the model.
Very High Conformance [6.0 < Score < 7.0]	The model has passed level 6 conformance and *a percentage of all attributes of the ABE's dependent entities are defined in the model.
Full Conformance [Score = 7.0]	The model has achieved Level 7 conformance (Full Conformance) and all attributes of the ABE's core & dependent entities are defined in the model.
*For each level, according to what is required, a value is calculated based on the percentage of entities/attributes supported - as appropriate. This will result in a decimal figure (rounded to one decimal place).	

Figure 6-3 TM Forum Information Framework: Conformance Scoring Rules

Notes:

A **core business entity** is an entity upon which other entities within the ABE are dependent. For example, Service in the Service ABE. A model should strive to attain as high a level of Information Framework (SID) conformance as possible. A core entity is also an entity whose absence in the ABE would make the ABE incomplete.

A **dependent entity** is one whose instances are dependent on an instance of a core entity. For example, a ServiceCharacteristic instance within the Service ABE is dependent upon an instance of the Service entity.

6.5   Information Framework – Conformance Result Summary

Not applicable for this phase of the assessment.

6.6   Information Framework – Detailed Conformance Result

Not applicable for this phase of the assessment.