Solution Conformance Certification Report

Information Framework (SID) v21.0

for:

IST – International Software Techniques S.A.

SPMS – MTB v6.0

September 2021

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1 Introduction

1.1 Executive Summary

This document provides details of IST's Self-Assessment on its proprietary SPMS – MTB solution, against the following ODA 21.0 components:

Information Framework (SID) version 21.0

The assessment included a review of the methodology approach to information modeling against the TM Forum Information Framework (SID) according to the specific business entities (ABEs) submitted in scope for the Assessment.

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1.2 About IST – International Software Techniques S.A.

International Software Techniques S.A. (doing business as IST) is a privately held company of Greek interests, established in 1991.

IST currently functions both as an Independent Software Vendor (ISV) and as a Value-Added Reseller (VAR) for third-party software products and services.

The company is headquartered in Marousi, Athens, Greece. The management team owns 100% of the share capital, allowing the company to pursue a coherent growth strategy.

IST dedicates itself to delivering sophisticated services and solutions for specific, high growth and demanding industries, such as telecommunications, banking & finance, and pharma.

IST primarily addresses the needs of large-sized and Enterprise-level organizations (either private, publicly traded, or multinational), while also offering its services to major international software vendors, I.T. solution providers, I.T. integrators and digital agencies (acting as their designated outsourcing partners).

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The company is also actively pursuing grants through Greek and European funded research projects.

For more information on the company and its services, please visit:

www.ist.com.gr

1.3 Solution Branding

The solution has adopted a dual branding strategy: it's branded as either SPMS or MTB, depending on the client and / or the market it's addressed to.

- **SPMS** (Service & Product Management System) is the mainstream solution branding and the one that is communicated in most markets and clients.
- **MTB** (Master Tariff Book) is an alternative branding with which the solution is marketed to some specific CSPs and markets.

Both brandings (SPMS and MTB) are registered trademarks of IST.

For ease of reference, both brandings are used within this document (i.e., SPMS – MTB).

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2 Solution Overview

2.1 SPMS – MTB v6.0 Functionality / Capability

The goal of SPMS – MTB is to centralize all processes related with the introduction, management and alteration of Products, Services, Offers, Bundles, Discounts and Promotions for Communication Service Providers (CSPs).

The SPMS – MTB solution functions as a central hub, through which a CSP organizes, monitors and controls one of the most important aspects of its business operations.

SPMS – MTB is a sophisticated and highly proficient Enterprise Product Catalogue (EPC) / Product Lifecycle Management (PLM) solution, which allows a Communication Service Provider (CSP) to have orderly and complete control over its product portfolio.

SPMS – MTB addresses the needs of CSPs seeking to secure and enhance their market positions - moreover, it allows CSPs to understand and effectively manage the underlying product set, while at the same time it enables more flexibility around managing customer preferences and experiences.

SPMS – MTB is a robust and mature solution, which has been in constant development and commercially available since 2003.

It is deployed in a growing number of CSPs worldwide, and is equally capable of supporting mobile telephony, landline (fixed) telephony, Internet services, subscription TV services, leased lines, etc. as well as combinations of the above (double, triple, quadruple play).

2.2 SPMS – MTB v6.0 Benefits

The Telecom Operator market currently faces fierce competition which is lowering margins. Moreover, converging technologies are making product differentiation problematic.

Facing these difficulties, CSPs are discovering that delivering innovative, profitable products at a lower cost and in less time is an increasingly demanding task.

SPMS – MTB is about taking control over these challenges and providing CSPs (operating in either developed or developing markets) with the tools to succeed in this ever-changing landscape.

The following is a list of tangible benefits:

- Better and more efficient communication / cooperation between cross-functional stakeholders.

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- Rapid response to frequently changing market conditions.
- Introduction / alteration of rate plans and services can be accelerated dramatically.
- Less mistakes, higher productivity, more efficient time management.
- Empowerment of marketing department.
- Centralization of product management.
- Workflow execution optimization.
- Operator compliance with external audits & industry regulations.

2.3 SPMS – MTB v6.0 Integration

SPMS – MTB offers significant advantage to a company, but also gives other enterprise systems great value by enabling the sharing of product information throughout the organization.

From product initialization through delivery to final customers, SPMS – MTB can integrate with business operations, trigger innovation, and support new product strategies.

SPMS – MTB functions as a central hub for all CSP departments seeking up-to-date product information.

Indicative involved departments and organizational units are:

- Product Management
- Product Development
- Information Technology
- Financial
- Cost Control
- Customer Care
- Audit
- Regulatory
- Shops / e-Commerce / other sales channels

Moreover, SPMS – MTB feeds business systems with management-approved charging specifications such as:

- Postpaid & Prepaid Billing
- Revenue Assurance
- IVR

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- DWH
- ERP
- Intranet / Internet / Extranet
- CRM
- e-Commerce
- Web Site

SPMS – MTB acts as a single repository for all Products and Services, in order to avoid effort and data duplication across departments and systems. By using SPMS – MTB, a CSP can establish a holistic view of all organization processes and comply with industry regulations.

2.4 SPMS – MTB v6.0 Key Features

SPMS – MTB is a solution that focuses on the need to do more and faster, as a means to rapidly adapt in an increasingly dynamic business environment.

Furthermore, SPMS – MTB is versatile and flexible, ideally suited to serve the needs of all types of CSPs (mobile telephony, landline telephony, Internet services, subscription TV services, leased lines, etc.).

- **A Flexible Architecture**
  - SPMS – MTB adopts a flexible architecture, where it can be integrated with different customer / third-party platforms, while it consists of the SPMS – MTB Core (the basic offering) as well as several add-on modules that the customer can procure independently, depending on his business needs.
- **Single Point of Entry & Access**
  - SPMS – MTB provides a single point of entry and single point of access to the master product and service data, through which users can perform all the Product Lifecycle Management processes necessary to centrally manage (i.e., create, modify, delete, launch, maintain and retire) the full catalogue of product offerings and underlying services and devices.
- **Interfacing with Third Party Platforms**
  - SPMS – MTB provides the necessary product data integration infrastructure to interface product and service data to the BSS and OSS applications (e.g., CRM, Billing, Order Management, SDP, Provisioning, Online Portals) in a structured, automated, and efficient fashion, through the SPMS – MTB API.
  - The SPMS – MTB API exposes Core repository up-to-date information to the integrated systems. The integration is implemented using web method calls

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(SOAP or RESTful) to the API. Additionally, the SPMS – MTB API module provides a file generation module where information can be retrieved in ASCII format.

- **Solution Deployment**
  - SPMS – MTB is currently available as an On-Premises offering, deployed on physical and / or virtual serves situated in one or more customer data centers (either locally or internationally).
- **Timely Implementation**
  - On a deployment and implementation level, SPMS – MTB adopts a straightforward and timely process.
  - It offers a rapid time-to-implementation, thus reducing overall implementation costs, while making it ideal for environments where time constraints are tight.
- **Straightforward Licensing Model**
  - SPMS – MTB adopts an easy to understand and procure licensing model which does not place unnecessary restrictions on its use.
  - SPMS – MTB is licensed on a CSP level (without any restrictions on the number of users, products, server(s) configuration etc.) while it is competitively priced and offers a significantly lower TCO in relation to comparable solutions.
- **Competent Support Services**
  - SPMS – MTB is backed by a wealth of services, offered by in-house engineers, business analysts, technical support, and training personnel.
  - A full range of support services is available at a commonly defined and agreed SLA.
- **A Bespoke Solution for Communication Service Providers**
  - SPMS – MTB is not a "plain vanilla" solution; it can be easily customized to meet customer preferences.
  - Versatile and flexible, ideally suited to support the CSP need for rapid delivery of targeted product offerings.
  - SPMS – MTB incorporates the Telecom Industry's business trends and best practices and has a proven track record of successful deployments.
  - SPMS – MTB is built from the ground up in accordance with the Communication Service Providers' processes.
- **Business Process Automation**
  - Streamlines the process of communicating, approving, and implementing Products, Services, Offers, Bundles, Discounts, and Promotions.
  - Triggers automatic update of charging information on CSP's Web Site upon new Rate Plans / Services implementation or modification of the existing ones.
  - Workflow support; using the SPMS – MTB workflow module or by integrating SPMS – MTB with a CSP's existing workflow mechanism.

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- **Product Management Tools**
  - Supports complex user defined product structures and charging strategies.
  - End users can modify any aspect of product information through parameterization forms.
  - Large number of pre-defined templates and configuration for the telecom market.
  - Fully customizable - supports user defined structures and characteristics.
  - Tools for massively updating charging information across products.
  - Embedded version control.
  - Embedded Document Management functionality for all Product Lifecycle related documents.
- **Reporting**
  - Advanced reporting mechanisms.
  - Comparative tools for market and competition analysis.
  - Full history of product modifications.
- **Security**
  - Advanced security and auditing features.
  - Domain, User / Role, Category, Department, and Product-level security.
  - System architecture.
  - User-friendly, Ajax enabled web-based, thin-client environment.
- **Integration with Heterogeneous Systems**
  - Workflow support.
- **Detailed Billing Cost Calculation**
  - Ability to calculate / project the billing cost of each subscription precisely, by taking into consideration all relevant tariff costs, surcharges, discounts, and other fees.
- **Advanced Business Rules**
  - Ability to create dynamic rules for each dynamically defined field.
  - Advanced Business Rules helps drive product personalization, advanced bundling and configuration, complex offers, and more.

2.5 SPMS – MTB v6.0 Architecture

SPMS – MTB is a proven and mature solution that has a successful track record of deployments and is in active development since 2003.

SPMS – MTB consists of SPMS – MTB Core (the basic offering), as well as, several add-on modules that the customer can procure independently, depending upon his business needs.

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Core Module

The SPMS – MTB Core module is the base repository where end users can manage their products. The SPMS – MTB Core module also incorporates the following sub modules:

- Web Interface, where the end-users manage SPMS – MTB information.
- Security / Administration Module.
- Reporting Module.
- SPMS – MTB API: Exposes Core Repository up-to-date data to the integrated Systems. The integration is implemented using web method calls (SOAP or RESTful) to the API. Additionally, API module provides a file Generation module where information can be retrieved in ASCII format.

Additional Modules

- **Workflow Module:** Provides the required functionality in order to build and manage approval paths.
- **Revenue Assurance Module:** Module that imports CDRs, utilizes data and re-rates all events using original-approved product charging specifications defined by Product Managers in SPMS – MTB.
- **Web Site Module:** Automates the process of publishing and effortlessly keeping up-to-date charging information of Rate Plans and Services on the Operator's Web Site.
- **Customer Care Module:** The Customer Care module provides advanced search functionality for retrieving detailed information regarding Rate Plans and Services. Information is transformed based on Customer Care Department needs (Commercial Info). Additionally, the module provides Offer Building functionality and Proration Calculation for Rate Plan transfers.
- **Cost Control Module:** The Cost Control module provides advanced search functionality for retrieving detailed information regarding Rate Plans and Services for Cost Control Department.
- **GSMA Module:** Provides management of numbering Plans of Global Operators. Information is used for Zoning and Revenue Assurance Module.
- **IFRS Module:** The IFRS module generates financial reports based on International financial reporting standards (IFRS). The module imports new/renewal customer contract info by ordering System on a daily basis and generates monthly revenue projections per contract based on contract duration, offers, discounts, subsidy and Devices.

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- **e-Commerce Module:** The module provides product and service charging information to e-Commerce platform. Information is generated based on ordering journeys along with the required data transformation for end customers.
- **RCN module:** Provides the required functionality in order to generate custom messages for Roaming Customers. When customers travel abroad and connect to a foreign CSP network, they receive an SMS with prices related to outgoing, incoming, and local traffic.

Integration Modules

Several SPMS – MTB modules have been implemented (using the SPMS – MTB API) in order to integrate with heterogeneous systems. These modules currently are:

- OpenAPI integration module
- Revenue Assurance integration module
- IVR integration module
- Workflow integration module
- FileAPI integration module
- Landing Page module
- DWH integration module
- Postpaid billing integration module
- SOA / ESB integration module
- Prepaid billing integration module
- ERP integration module

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2.6 Information Framework Assessment – ABE Scope

The following diagram illustrates the Information Framework ABEs that were presented in scope for Certification.

Information Framework (SID) - v21.0 – SPMS – MTB v6.0 – Conformance Footprint

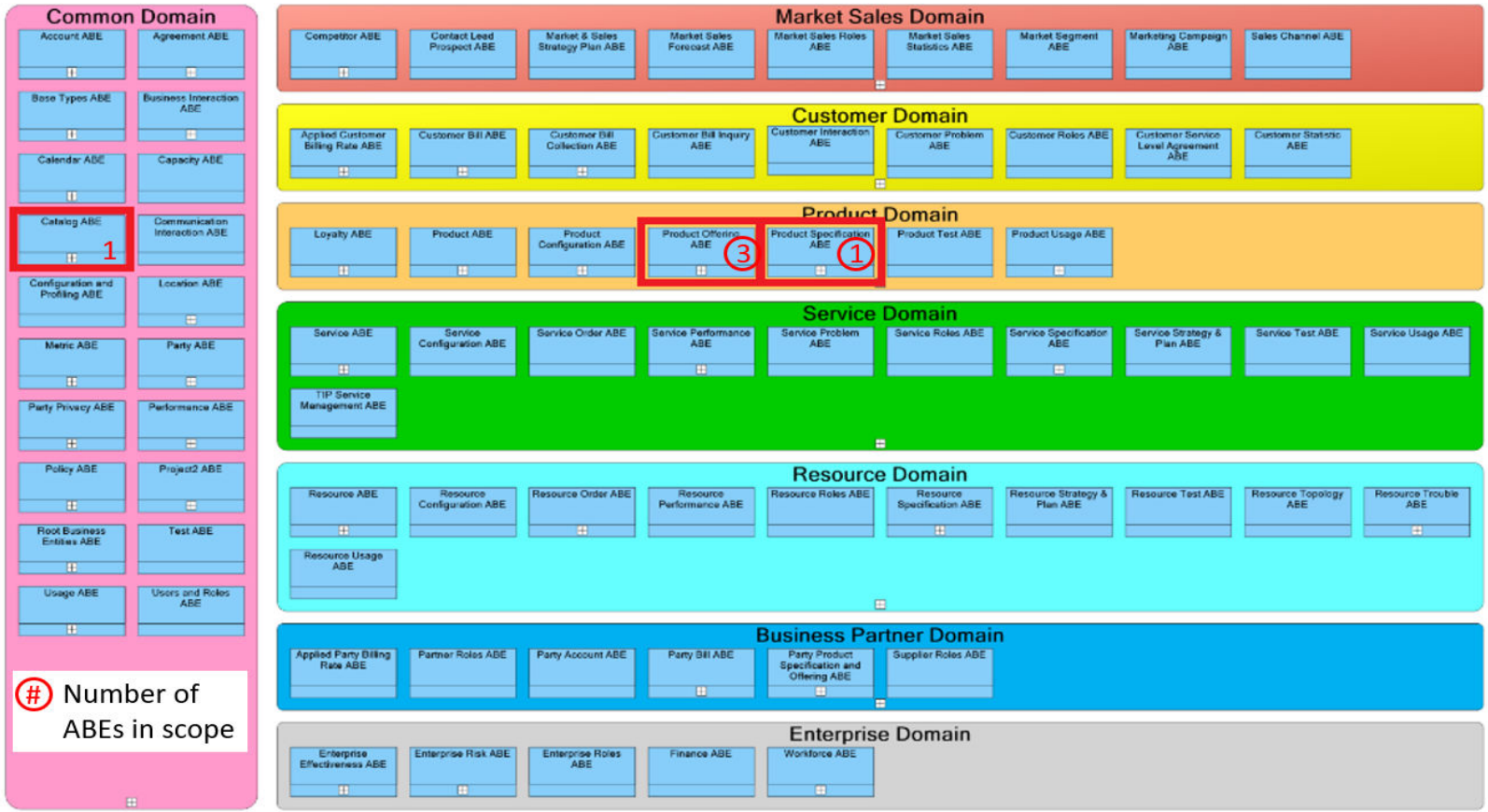

Figure 1 – Level 1 ABEs – SID coverage for SPMS – MTB v6.0 Conformance Assessment

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3 Information Framework Assessment Overview

3.1 Mapping Technique Employed

The certification scope defines the list of Information Framework (SID) ABEs (Aggregate Business Entities) for which mapping support is reviewed during the assessment. For each of the ABEs defined in scope for the assessment, the organization undergoing the assessment must map their information model to the core entities and dependent entities and the required and optional attributes for each entity, as defined in the SID model, according to what is supported for the product/solution under assessment.

For a view of the ABEs that were submitted in scope for conformance certification, please refer to Figure 1 – Level 1 ABEs – SID coverage for SPMS – MTB v6.0 Conformance Assessment on page 11.

3.2 Information Framework Conformance Result

This Section details the Scores awarded to reflect Conformance of SPMS – MTB v6.0 to the Information Framework components release 21.0.

3.2.1 Information Framework – Scoring Rules

Between 2013 (Frameworx 14.0) and the end of 2017, TM Forum applied a combined scoring method based on two different categories of conformance scoring:

1. Information Framework Maturity
2. Information Framework Adoption

Starting on the 1st of January 2018, only one method has been retained instead of these two scoring methods (Maturity + Adoption). The use of two different methods made interpretation and understanding difficult and ambiguous for many of our members, on the ground of such experience, the TM Forum decided to keep only the “Adoption” scoring method and discard the “Maturity” scoring method.

Adoption scoring ensures a good balance between qualitative and quantitative criteria on SID conformance criteria. The adoption scoring method consists of a range of scores from 1

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to 10 which makes it intuitive and fair, it is also based on weighted criteria e.g., core element, dependent, required, optional, etc.

This section provides further details about the **Adoption** scoring method.

3.2.2 Information Framework Adoption Conformance Scoring Methodology

As of Frameworx 14.0 based Conformance Assessments, to recognize the overall adoption of the Information Framework SID Information model, the Information Framework Adoption Scoring system was introduced to complement the Maturity Levels that have been used since the launch of the Frameworx Conformance Program.

Information Framework Adoption scores are granted based on the detailed scoring guidelines outlined in Table 1 below.

Adoption conformance is based on an accumulative scoring system - i.e., scores are awarded for each element of an ABE to give an overall total Adoption score for the ABE – with elements in this context defined by core & dependent entities and required and optional attributes for both category of entity.

The scores for each element are calibrated according to relative weightings, according to the significance of each element e.g., core entity having higher weighting than dependent entities and required attributes having higher weighting than optional attributes. The relative weightings for each ABE 'element' are indicated in Table 1 – TM Forum Information Framework Adoption Conformance – Scoring Rules Table 1 below.

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Table 1 – TM Forum Information Framework Adoption Conformance – Scoring Rules

Information Framework Adoption Conformance Scoring Guidelines						
SID Component	Weighted Scoring Calculation					
Lowest Level ABE	Equivalent – 1 score point					
Core Entity	Equivalent – 2 score points					
Core Entity Required Attribute	% equivalent * 2 [Must support min 50% of Required Attributes]					
Dependent Entity	% equivalent * 1.5					
Dependent Entities – Required Attributes	% equivalent * 1.5					
Core Entity – Optional Attributes	% equivalent * 1.2					
Dependent Entity – Optional Attributes	% equivalent * 0.8					
Adoption Conformance Score Graduation						
Non Conformance [Score = 1 to 3]	Very Low Conformance [3.0 < Score <= 4.0]	Low Conformance [4.0 < Score <= 5.0]	Medium Conformance [5.0 < Score <= 6.0]	High Conformance [6.0 < Score <= 8.0]	Very High Conformance [8.0 < Score < 10.0]	Full Conformance [Score = 10.0]
NOTES: *1. The score values for each SID component are added together to get the overall Adoption Conformance score.* *2. If 50% of of the required attributes of Core entities are not supported, scores for following components are not applied as Adoption Conformance requires conformance to 50% of the required attributes of Core entities.* *3. Adoption Score versus Maturity Level: Using the scoring category to recognise SID adoption, an assessed ABE for which there is equivalence to 2/3 required core attributes and 8/10 dependent entities would be awarded Maturity Level Score = 2.5 (Very Low Conformance) & Adoption Conformance score = 5.2 (Medium Conformance).*						

3.2.3 Additional Notes on Information Framework Conformance Adoption scoring:

1. 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).
2. Adoption Scoring is based on the progressive scoring schema from the former "Maturity" scoring; however, it provides additional flexibility in-so-far as it allows to score all attributes and entities in an assessed ABE. In the former "Maturity" scoring, when not all required attributes of the Core Entity were supported, the Maturity Level score would not progress to the next level, regardless of conformance to other "subordinate" components of the ABE (e.g., dependent entities, optional attributes). "Adoption" scoring fixes this constraint as it provides a weighting mechanism to score all elements supported, regardless of the absence of the core entity or/and required attributes.
3. 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.

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4. 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.
5. The score values for each SID component are added together to get the overall Adoption Conformance score.
6. If 50% of the required attributes of Core entities are not supported, scores for following categories are not applied as Adoption Conformance requires conformance to 50% of the required attributes of Core entities.

3.3 Information Framework – Conformance Result Summary

The following sections provide the summary results of the Information Framework Adoption scores granted to the ABEs presented in scope for the assessment.

Each ABE was measured using the Information Framework (SID) conformance scoring guidelines as described in section 3.2.2 above.

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3.4 Information Framework – Detailed Conformance Results

The data in these columns is based on what was extracted from the SID Release 21.0 Information Model	TM Forum comments	Conformance
ABE name		ABE Conformance Score Adoption
Product Offering ABE	<TMF-AA>Verified as per "SPMS TM Forum SQL API Specification" provided by IST as supporting evidence.	10 - Full Conformance
Product Offering ABE :: Product Catalog ABE	<TMF-AA>Verified as per "SPMS TM Forum SQL API Specification" provided by IST as supporting evidence.	10 - Full Conformance
Product Offering ABE :: Product Offering Price ABE	<TMF-AA>Verified as per "SPMS TM Forum SQL API Specification" provided by IST as supporting evidence.	10 - Full Conformance
Product Specification ABE	<TMF-AA>Verified as per "SPMS TM Forum SQL API Specification" provided by IST as supporting evidence.	10 - Full Conformance
Catalog ABE	<TMF-AA>Verified as per "SPMS TM Forum SQL API Specification" provided by IST as supporting evidence.	10 - Full Conformance

Table 2 – Information Framework: Conformance Scores

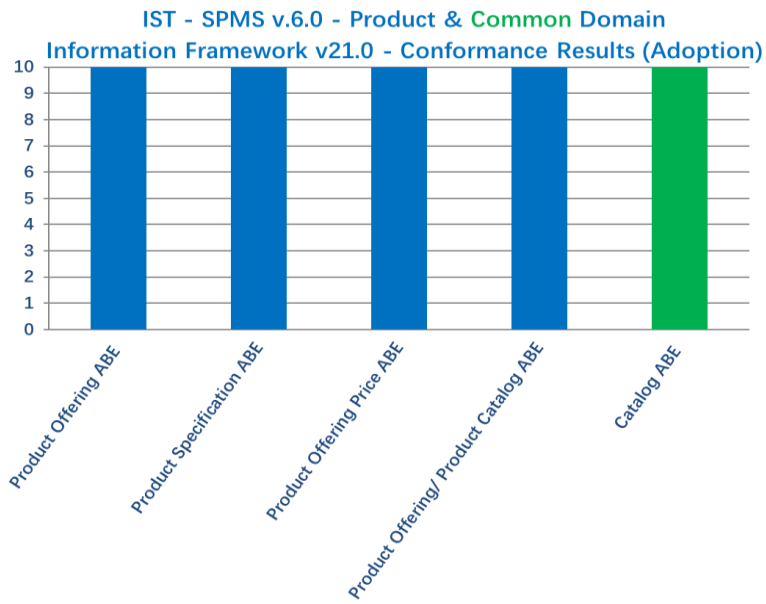

Table 3 – Information Framework: Conformance Graph

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