SunTec Xelerate™ E-Invoicing Architecture Overview

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Overview

SunTec Xelerate E-Invoicing is architected as a modular, standards-aligned product that delivers secure, compliant, and controlled e-invoicing across regulatory models, jurisdictions, and enterprise environments.

The product separates invoice processing from invoice transmission, ensuring that compliance logic, data governance, and operational control remain consistent, even as regulatory networks, protocols, and country mandates evolve. It is architected as two logically distinct and complementary components: **SunTec Xelerate™ E-invoicing Processor (XeP)**, and **SunTec Xelerate™ Access Point (XAP)** that is used to meet Peppol requirements.

Two-Component Architecture: Clear Separation of Responsibilities

XEP: The Mandatory Core Processing Component

E-invoicing mandates across countries and models require a common set of processing capabilities that are not associated with how invoices are transmitted. XeP is the central and mandatory component of the product that addresses these requirements:

- Ingestion of invoice data from business systems or user interfaces
- Validation against regulatory schemas and business rules
- Enrichment using master and reference data
- Generation of compliant electronic invoice documents
- Invoice lifecycle management, error handling, and auditability

XeP ensures consistent governance, data quality, and compliance outcomes across all e-invoicing scenarios. It supports flexible deployment models, including on-premise, private cloud, and SaaS, and ensures adherence with enterprise data residency, security, and operational requirements.

XAP: The Conditional Transmission Component

XAP is used only when the regulatory model requires network-based exchange via accredited Access Points, such as Peppol. XAP does not perform invoice processing, validation, or business logic. This ensures a clean separation between compliance processing and transmission mechanics.

XAP's role is limited to:

- Secure transmission and receipt of compliant e-documents
- Handling network-level protocols, routing, acknowledgements, and status messages
- Integration with external registries and discovery mechanisms mandated by the network

Architectural Roles of XeP and XAP

- XeP is mandatory because every e-invoice requires invoice data to be validated, standardized, governed, and audited before submission or receipt.
- XAP is conditional because not all regulatory models require network-based exchange via Access Points. Some countries may require direct reporting to tax authorities or alternative transmission mechanisms.

This architectural decision ensures that:

- Core compliance logic remains centralized and reusable
- Transmission mechanisms can vary without impacting processing
- Regulatory or network changes do not force redesign of the core platform

Establishing XeP as a Global E-Invoicing Processing Foundation

Earlier e-invoicing capabilities within SunTec like GST or VAT-specific implementations, were intentionally aligned to region-specific tax frameworks. While effective locally, they were not designed to support region and model agnostic e-invoicing requirements. XeP was introduced as a new, standalone processing component, driven by the following design considerations:

- **Global product design**
  XeP is built from the ground up to support Peppol, non-Peppol, hybrid, and country-specific models without being constrained by regional tax logic.

- **Alignment with the new SunTec Xelerate product architecture**
  XeP is built on a modern, micro services-based architecture, enabling modularity, scalability, and independent evolution that are essential for a global, mandate-driven product.

- **Decoupling e-invoicing from taxation**
  The architecture positions e-invoicing as an independent operational capability, while still allowing seamless integration with SunTec's taxation product where required.

- **Flexible adoption and deployment models**
  Enterprises can adopt e-invoicing and taxation independently, or together, across on-premise, private cloud, or SaaS deployments.

Architectural Outcome

By introducing XeP as a global processing foundation and keeping XAP as a conditional transmission layer, SunTec Xelerate E-Invoicing achieves:

- Centralized and governed compliance processing
- Flexibility to support multiple regulatory models

- Independence from network or authority-specific transmission changes
- A future-ready architecture that can adapt as e-invoicing mandates evolve globally

SunTec Xelerate E-invoicing - Functional Architecture