Australian Government
Australian Taxation Office

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

Peppol International (PINT) Billing A-NZ Migration

Service Provider Engagement

24 October 2023

Acknowledgment of Country

We acknowledge the Traditional Owners and Custodians of Country throughout Australia and their continuing connection to land, waters and community. We pay our respects to them, their cultures, and Elders past and present.

Purpose

To provide a basic understanding of PINT and upcoming changes to inform a future discussion on the migration timeline

- **PINT Overview**

- **PINT A-NZ Changes**

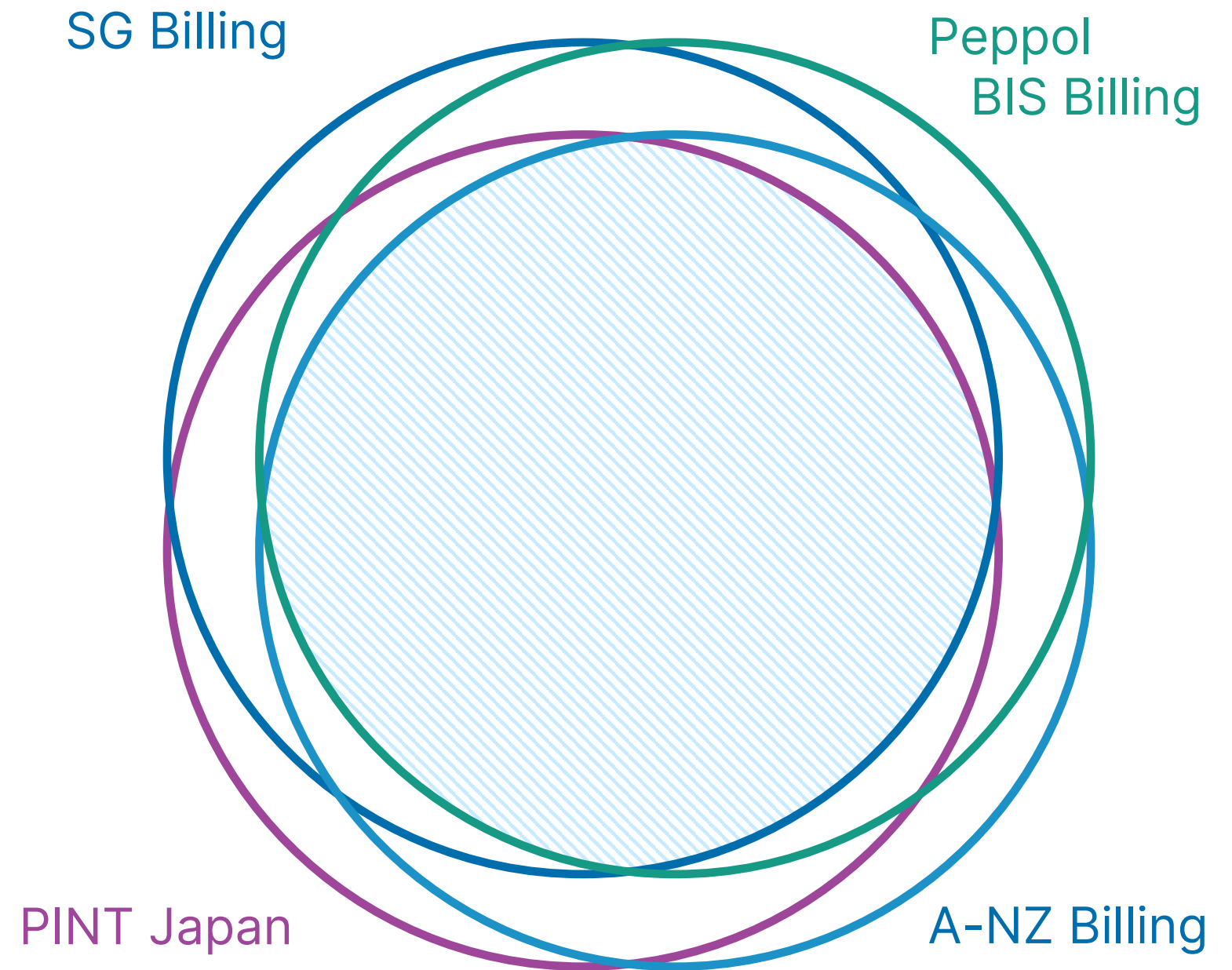- **Wildcard Scheme**

- **Impacts**

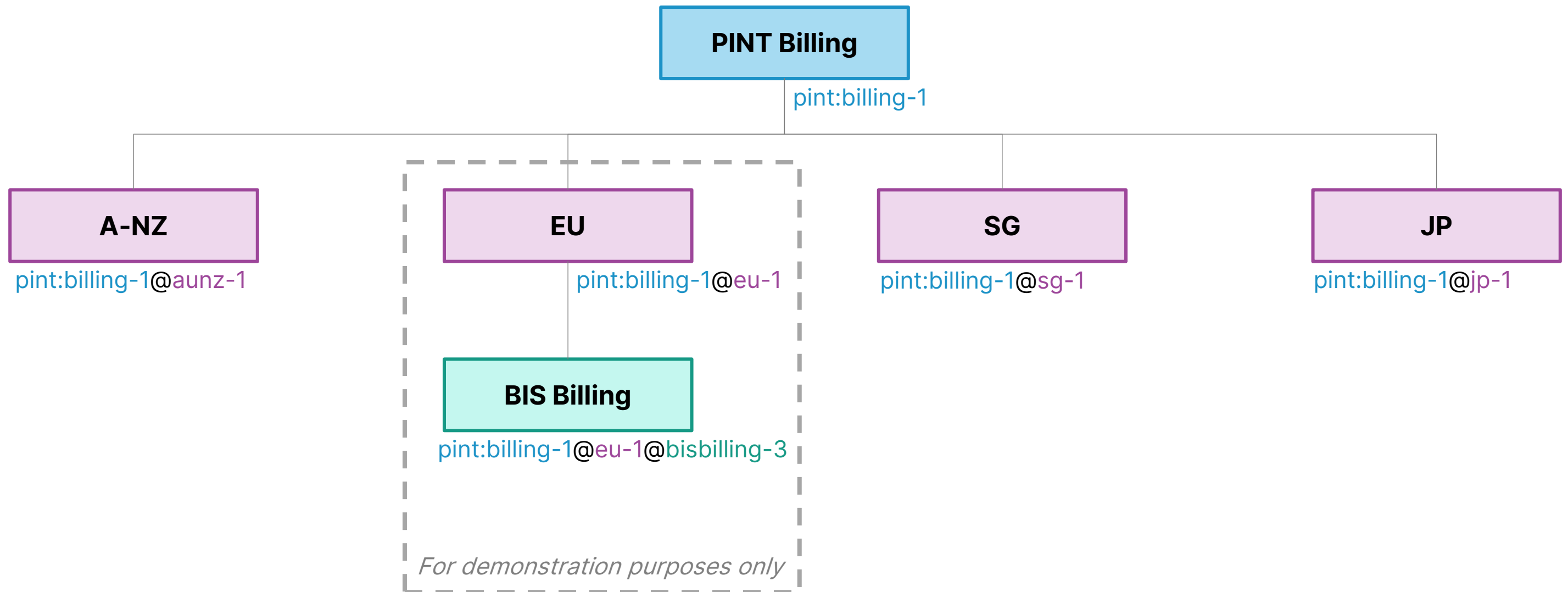- **Migration Process**

[PINT A-NZ SP Engagement Paper](#)

01

PINT Overview

PINT Design

- **Interoperability**

- **Reuse**

- **Flexibility**

SG Billing

Peppol
BIS Billing

PINT Japan

A-NZ Billing

PINT Billing Specialisations

EXTERNAL

PINT Model

The PINT model covers the Business Interoperability Specifications (BIS), data model (semantic & syntax), code lists and rules. There are three layers in the model:

Shared
    - Defined and used in the same way across all jurisdictions

Aligned - e.g. tax information or payment instructions specific to a jurisdiction
    - Defined in general terms and can be understood by all domains
    - Can be specialised (restricted) to support specific requirements

Distinct - e.g. domain-specific legislation/requirements
    - Allows inclusion of elements that may not have general application
    - Receivers might not understand this layer, unless they specifically advertise support for the specialisation

Distinct
Aligned

Shared
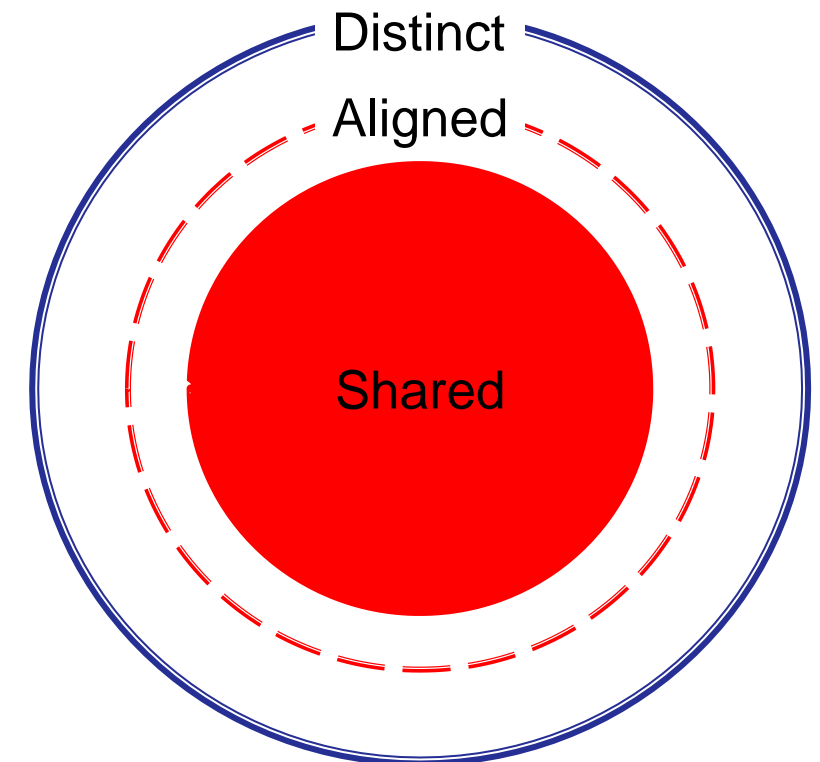
PINT invoice data model in practice – A-NZ

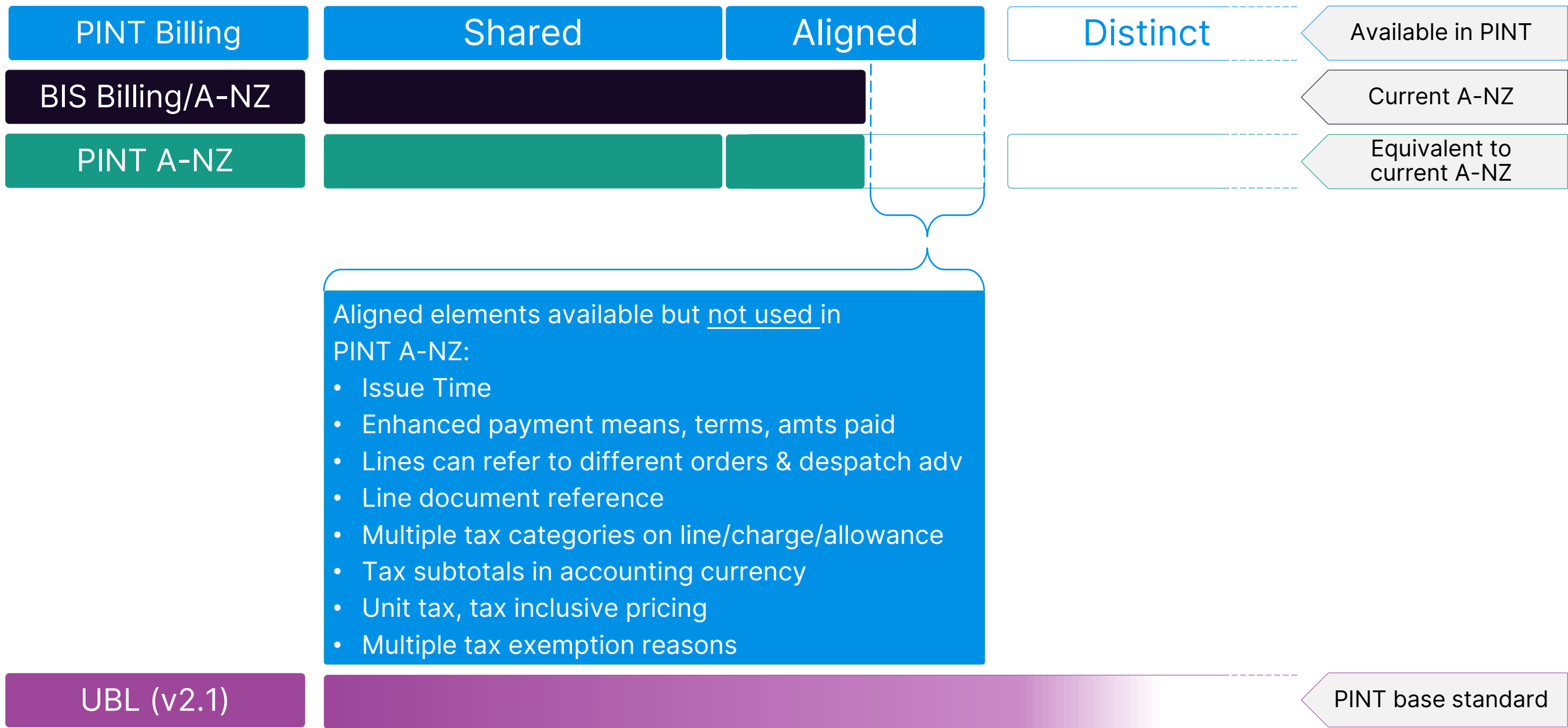| PINT Billing	Shared	Aligned	Distinct	Available in PINT
BIS Billing/A-NZ				Current A-NZ
PINT A-NZ				Equivalent to current A-NZ

Aligned elements available but <u>not used</u> in PINT A-NZ:
- Issue Time
- Enhanced payment means, terms, amts paid
- Lines can refer to different orders & despatch adv
- Line document reference
- Multiple tax categories on line/charge/allowance
- Tax subtotals in accounting currency
- Unit tax, tax inclusive pricing
- Multiple tax exemption reasons

UBL (v2.1)		PINT base standard

02

PINT A-NZ Changes

What is different between current A-NZ specifications and PINT A-NZ?

Changes to A–NZ specification

To minimise impacts and complexity of migration, the PINT A-NZ specifications have been drafted to closely align with the current specifications.
However, Service Providers should be aware of the following changes:

- New business process type (**cac:ProfileID**) and specification identifier (**cac:CustomizationID**) values

Specification	Business process type	Specification identifier
PINT A-NZ Billing	urn:peppol:bis:billing	urn:peppol:pint:billing-1@aunz-1
PINT A-NZ Self-billing	urn:peppol:bis:selfbilling	urn:peppol:pint:selfbilling-1@aunz-1

- Changes to Business Rules – new rule identifiers, some rationalisation and removal of redundant rules and rules that have a 'warning' severity.
A rule cross reference spreadsheet showing the relationship between current and draft PINT A-NZ rules is available to assist Service Providers implementing these changes.

- Addition of minor syntax cardinality, code list, format rules

- Support for a new document type identifier scheme, **the wildcard scheme**, introduced through the **Peppol Policy for use of Identifiers**

Documentation and Artefacts

In addition, PINT A-NZ will also include changes to the following documents & artefacts:

- The PINT A-NZ specifications will be published on an [OpenPeppol website](#), and will include links for the BIS documentation (Billing & Self-billing), compliance and transactions information similar to the current BIS Billing 3.0 specification.

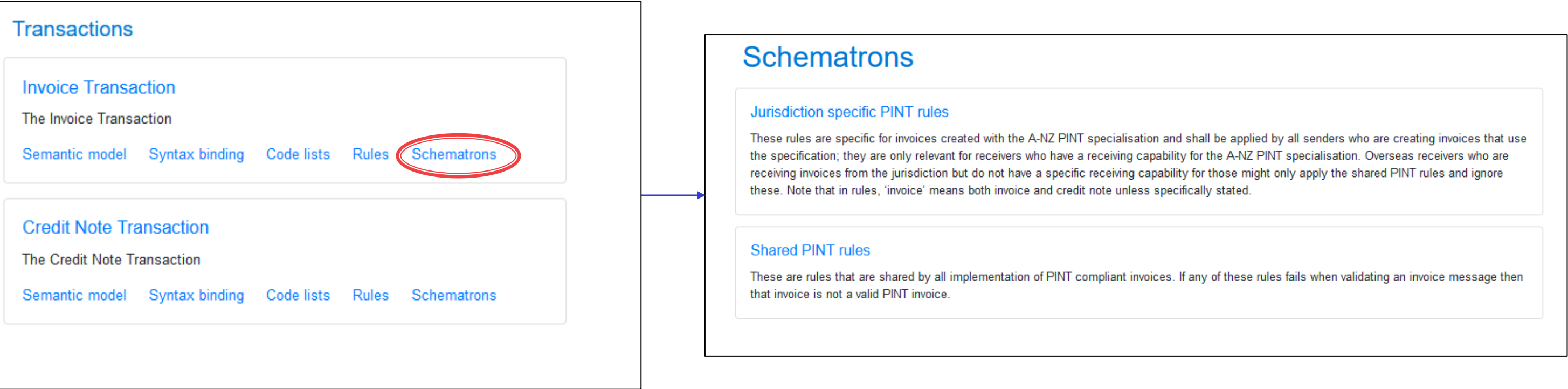- Semantic model (new in Peppol documentation) and syntax model

- Rule (shared and specialisation-specific) and validation artefacts

- Code lists

- XML Examples

Semantic model example

Transactions

Invoice Transaction

The Invoice Transaction

Semantic model   Syntax binding   Code lists   Rules   Schematrons

Credit Note Transaction

The Credit Note Transaction

Semantic model   Syntax binding   Code lists   Rules   Schematrons

Semantic model

Expand All / Collapse All

Id	Business Term	Section	Card.	Definition
IBT-001	Invoice number	Shared	1..1	A unique identification of the Invoice.
IBT-002	Invoice issue date	Shared	1..1	The date when the Invoice was issued.
IBT-003	Invoice type code	Shared	1..1	A code specifying the functional type of the Invoice.

Invoice number

A unique identification of the Invoice.

About

ID	IBT-001
Cardinality	1..1
Section	Shared
Name	Invoice number
Syntax binding	ubl:Invoice / cbc:ID
Rules	• IBR-002: An Invoice MUST have an Invoice number (ibt-001).

ubl:Invoice

Child elements

Card.	Term	Name
1..1	cbc:CustomizationID	**Specification identifier** An identification of the specification containing the total set of rules regarding semantic content, cardinalities and business rules to which the data contained in the instance document conforms.
1..1	cbc:ProfileID	**Business process type** Identifies the business process context in which the transaction appears, to enable the Buyer to process the Invoice in an appropriate way.

IBR-002

[ibr-002]-An Invoice MUST have an Invoice number (ibt-001).

Targeted Semantic Element

1. IBT-001-Invoice number : A unique identification of the Invoice.

Schematron Rules

1. IBR-002

Flag	fatal
Context	/ubl:Invoice	/cn:CreditNote
Message	[ibr-002]-An Invoice MUST have an Invoice number (ibt-001).

https://test-docs.peppol.eu/pint/pint-aunz/dev/pint-aunz/

Shared & Aligned (jurisdiction) rules

Transactions

Invoice Transaction

The Invoice Transaction

Semantic model   Syntax binding   Code lists   Rules   **Schematrons**

Credit Note Transaction

The Credit Note Transaction

Semantic model   Syntax binding   Code lists   Rules   Schematrons

Schematrons

Jurisdiction specific PINT rules

These rules are specific for invoices created with the A-NZ PINT specialisation and shall be applied by all senders who are creating invoices that use the specification; they are only relevant for receivers who have a receiving capability for the A-NZ PINT specialisation. Overseas receivers who are receiving invoices from the jurisdiction but do not have a specific receiving capability for those might only apply the shared PINT rules and ignore these. Note that in rules, 'invoice' means both invoice and credit note unless specifically stated.

Shared PINT rules

These are rules that are shared by all implementation of PINT compliant invoices. If any of these rules fails when validating an invoice message then that invoice is not a valid PINT invoice.

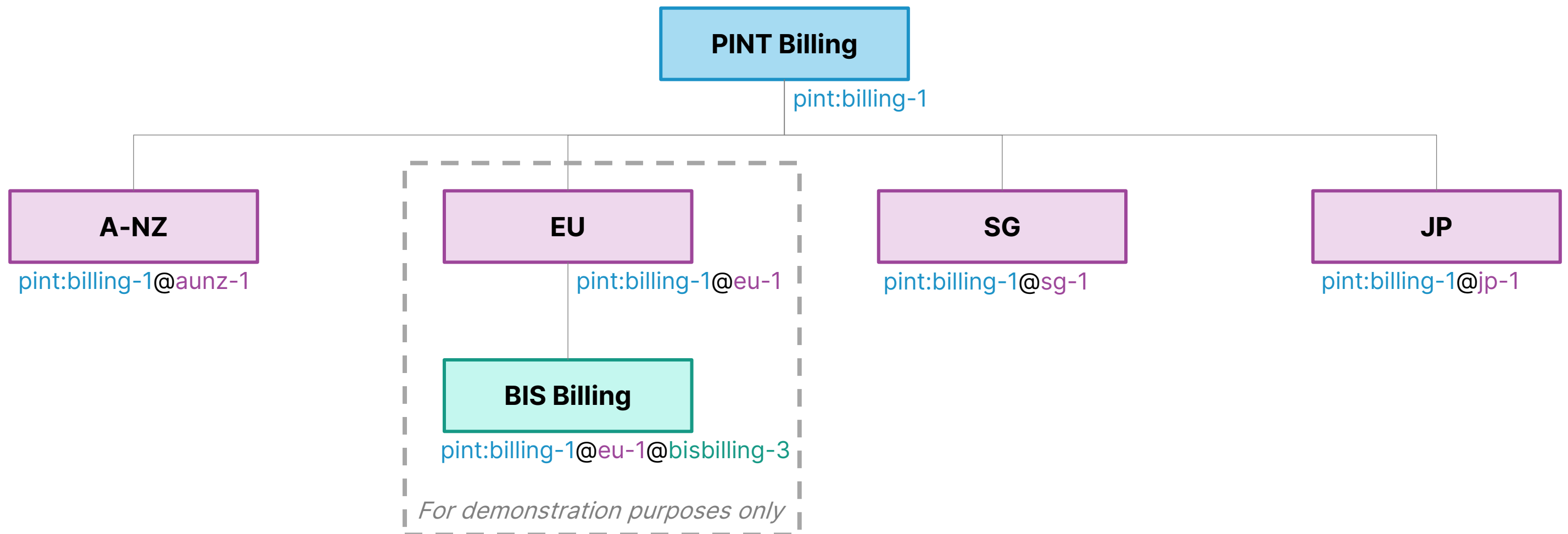https://test-docs.peppol.eu/pint/pint-aunz/dev/pint-aunz/trn-invoice/rule/

03

Wildcard Scheme

Overview and purpose of the scheme

PINT Specification Identifiers

PINT Style Specification Identifier (CustomizationID) Pattern:
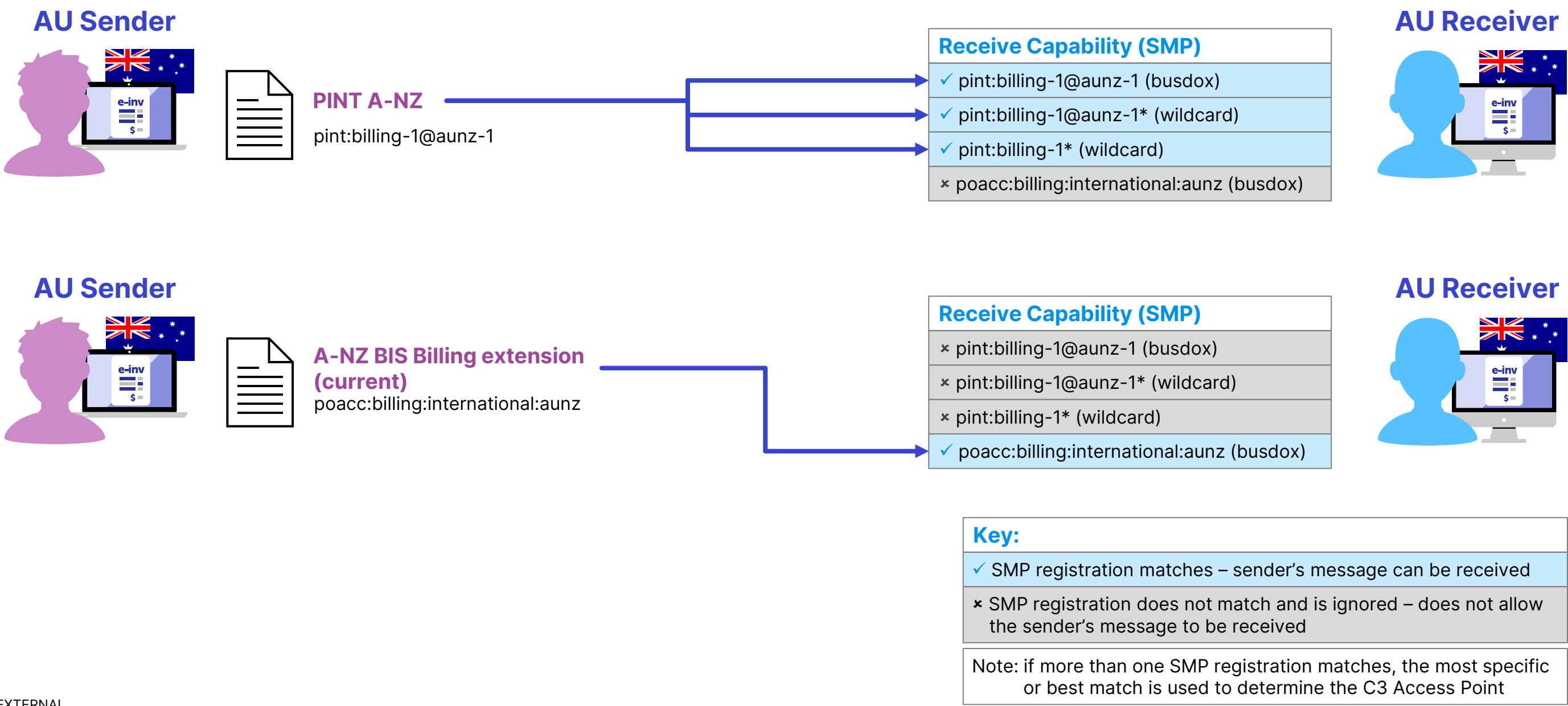　　{base specification identifier}@{optional specialisation}@{optional further specialisation}@...

PINT Billing
pint:billing-1

A-NZ
pint:billing-1@aunz-1

EU
pint:billing-1@eu-1

SG
pint:billing-1@sg-1

JP
pint:billing-1@jp-1

BIS Billing
pint:billing-1@eu-1@bisbilling-3

For demonstration purposes only

How does the Wildcard Scheme compare?

	Busdox Scheme	Wildcard Scheme
SMP registration	Full Document Type Identifier	Document Type Identifier including '*'
Sender document type identifier match	Exact match	Best match
Document / Message	Customization ID no '*'	Customization ID no '*'
SBDH / Envelope	Full document Type Identifier, no '*'	Full document Type Identifier, no '*'

EXTERNAL

PINT Billing Compatibility - Domestic

AU Sender

PINT A-NZ

pint:billing-1@aunz-1

AU Receiver

Receive Capability (SMP)

✓ pint:billing-1@aunz-1 (busdox)
✓ pint:billing-1@aunz-1* (wildcard)
✓ pint:billing-1* (wildcard)
✗ poacc:billing:international:aunz (busdox)

AU Sender

A-NZ BIS Billing extension (current)

poacc:billing:international:aunz

AU Receiver

Receive Capability (SMP)

✗ pint:billing-1@aunz-1 (busdox)
✗ pint:billing-1@aunz-1* (wildcard)
✗ pint:billing-1* (wildcard)
✓ poacc:billing:international:aunz (busdox)

Key:

✓ SMP registration matches – sender's message can be received
✗ SMP registration does not match and is ignored – does not allow the sender's message to be received

Note: if more than one SMP registration matches, the most specific or best match is used to determine the C3 Access Point

PINT Billing Compatibility – Cross-border
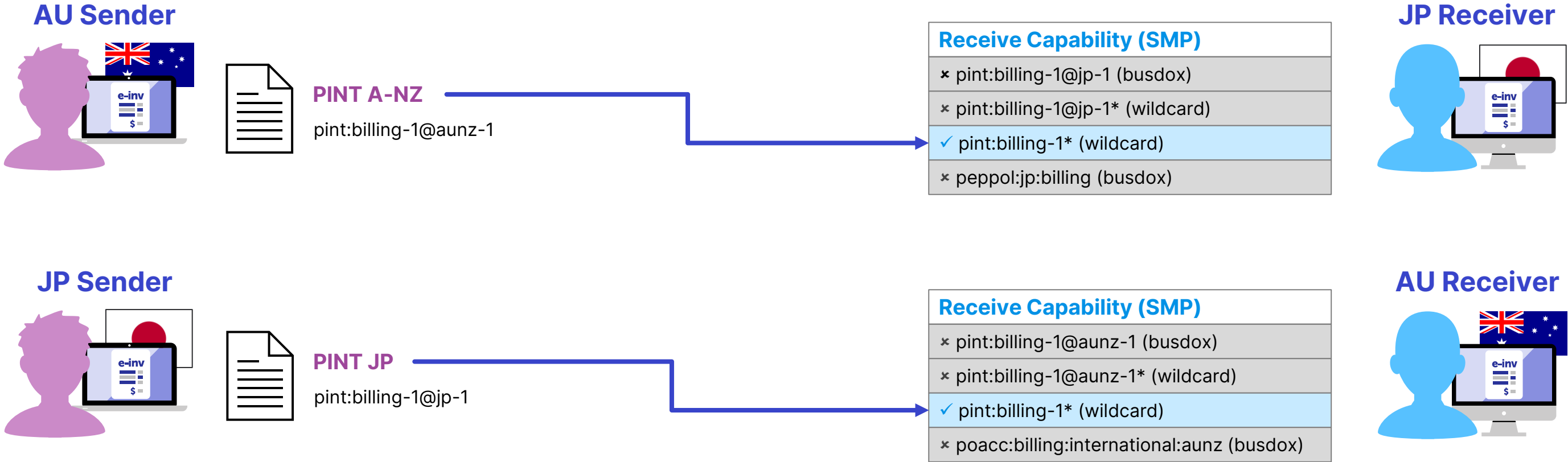
AU Sender

PINT A-NZ

pint:billing-1@aunz-1

Receive Capability (SMP)

✖	pint:billing-1@jp-1 (busdox)
✖	pint:billing-1@jp-1* (wildcard)
✓	pint:billing-1* (wildcard)
✖	peppol:jp:billing (busdox)

JP Receiver

JP Sender

PINT JP

pint:billing-1@jp-1

Receive Capability (SMP)

✖	pint:billing-1@aunz-1 (busdox)
✖	pint:billing-1@aunz-1* (wildcard)
✓	pint:billing-1* (wildcard)
✖	poacc:billing:international:aunz (busdox)

AU Receiver

Key:

✓	SMP registration matches – sender's message can be received
✖	SMP registration does not match and is ignored – does not allow the sender's message to be received

Note: if more than one SMP registration matches, the most specific or best match is used to determine the C3 Access Point

PINT A-NZ Receive Capabilities

C4 Receivers can choose to advertise capabilities using the wildcard or busdox schemes:

pint:billing-1@aunz-1 (busdox)	Matches PINT A-NZ messages only Explicitly states the ability to understand and process according to PINT A-NZ
pint:billing-1@aunz-1* (wildcard)	Matches PINT A-NZ messages and any further specialisations Explicitly states the ability to understand & process according to PINT A-NZ Further specialisations may be understood & processed according to PINT A-NZ
pint:billing-1* (wildcard)	Matches all PINT Billing specialisations All specialisations may be understood & processed according to PINT Billing

PINT A-NZ Sender lookup process (domestic examples)

AU Sender

Prepare and send document

📄 **PINT A-NZ**

pint:billing-1@aunz-1

Sending to AU Receiver 1

Receive Capabilities (SMP)

peppol.eu:poacc:trns:mlr (busdox)
pint:billing-1* (wildcard)
pint:billing-1@aunz-1 (busdox)
peppol.eu:poacc:trns:invoice_response (busdox)

Sending to AU Receiver 2

Receive Capabilities (SMP)

peppol.eu:poacc:trns:mlr (busdox)
pint:billing-1* (wildcard)
peppol.eu:poacc:trns:invoice_response (busdox)

---

1. Sending Access Point (C2) retrieves the receiver's SMP Service Group records

peppol.eu:poacc:trns:mlr (busdox)
pint:billing-1* (wildcard)
pint:billing-1@aunz-1 (busdox)
peppol.eu:poacc:trns:invoice_response (busdox)

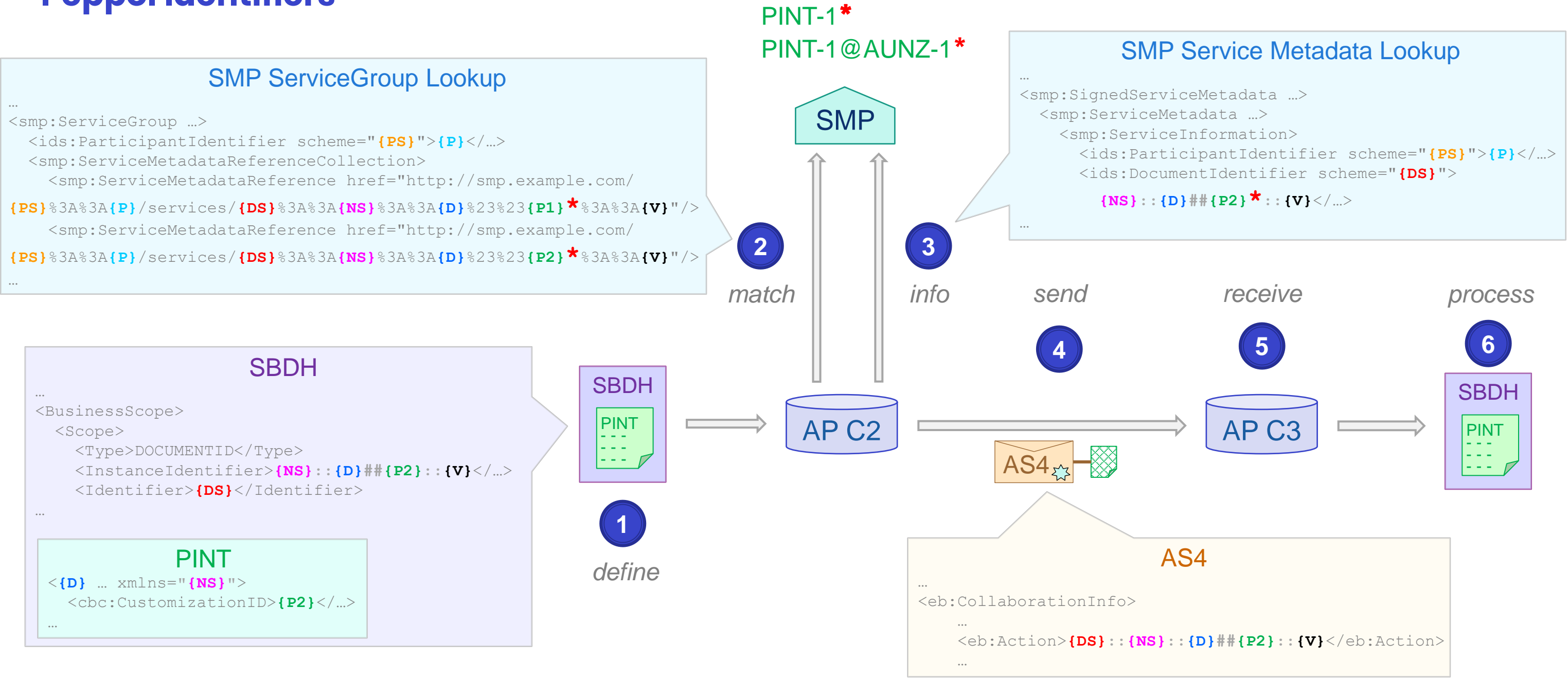| peppol.eu:poacc:trns:mlr (busdox) |
| --- |
| pint:billing-1* (wildcard) |
| peppol.eu:poacc:trns:invoice_response (busdox) |

---

2. Sender checks for a busdox ('exact match') receiving capability.

✓ Match on pint:billing-1@aunz-1 (busdox)

✗ No match on pint:billing-1@aunz-1 (busdox)

---

3. If there is no busdox match, the sender then looks for a wildcard ('best match'). The most specific match must be attempted first, followed by less specialised matches.
   – For PINT A-NZ Billing there are two possible tests:
      ▪ pint:billing@aunz-1*
      ▪ pint:billing*

N/A - not executed as match found at step 2

✗ No match on pint:billing-1@aunz-1* (wildcard)
✓ Match on pint:billing-1* (wildcard)

---

4. When a match is found, the invoice should be sent to the Access Point defined in the matched SMP record.

Relevant C3 AP for *pint:billing-1@aunz-1 (busdox)*

Relevant C3 AP for *pint:billing-1* (wildcard)*

Peppol Identifiers

PINT-1*****
PINT-1@AUNZ-1*****

SMP ServiceGroup Lookup

```
…
<smp:ServiceGroup …>
  <ids:ParticipantIdentifier scheme="{PS}">{P}</…>
  <smp:ServiceMetadataReferenceCollection>
    <smp:ServiceMetadataReference href="http://smp.example.com/
{PS}%3A%3A{P}/services/{DS}%3A%3A{NS}%3A%3A{D}%23%23{P1}*%3A%3A{V}"/>
    <smp:ServiceMetadataReference href="http://smp.example.com/
{PS}%3A%3A{P}/services/{DS}%3A%3A{NS}%3A%3A{D}%23%23{P2}*%3A%3A{V}"/>
…
```
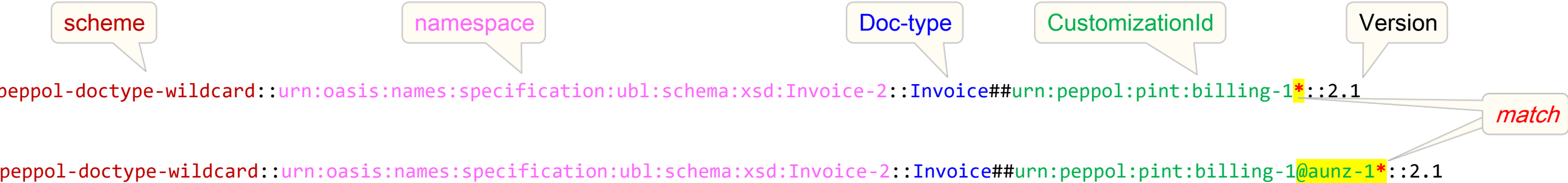
SMP Service Metadata Lookup

```
…
<smp:SignedServiceMetadata …>
  <smp:ServiceMetadata …>
    <smp:ServiceInformation>
      <ids:ParticipantIdentifier scheme="{PS}">{P}</…>
      <ids:DocumentIdentifier scheme="{DS}">
        {NS}::{D}##{P2}*::{V}</…>
…
```

SMP

(2) *match*   (3) *info*   (4) *send*   (5) *receive*   (6) *process*

SBDH

```
…
<BusinessScope>
  <Scope>
    <Type>DOCUMENTID</Type>
    <InstanceIdentifier>{NS}::{D}##{P2}::{V}</…>
    <Identifier>{DS}</Identifier>
…
```

SBDH

PINT
- - -
- - -
- - -

(1) *define*

PINT

```
<{D} … xmlns="{NS}">
  <cbc:CustomizationID>{P2}</…>
…
```

AP C2

AS4

AP C3

SBDH

PINT
- - -
- - -
- - -

AS4

```
…
<eb:CollaborationInfo>
    …
    <eb:Action>{DS}::{NS}::{D}##{P2}::{V}</eb:Action>
    …
```

Participant scheme	**{PS}**	busdox-actorid-upis
Participant identifier	**{P}**	0151:72100100100
Document scheme	**{DS}**	peppol-doctype-wildcard
Document element	**{D}**	Invoice

Namespace	**{NS}**	urn:oasis:names:specification:ubl:schema:xsd:Invoice-2
PINT	**{P1}**	urn:peppol:pint:billing-1
PINT A-NZ	**{P2}**	urn:peppol:pint:billing-1@aunz-1
(UBL) Version	**{V}**	2.1

AP SMP wildcard matching

SMP ServiceGroup Lookup

SMP

```
…
<smp:ServiceGroup …>
  <ids:ParticipantIdentifier scheme="{PS}">{P}</…>
  <smp:ServiceMetadataReferenceCollection>
    <smp:ServiceMetadataReference href="http://smp.example.com/{PS}%3A%3A{P}/services/{DS}%3A%3A{NS}%3A%3A{D}%23%23{P1}*%3A%3A{V}"/>
    <smp:ServiceMetadataReference href="http://smp.example.com/{PS}%3A%3A{P}/services/{DS}%3A%3A{NS}%3A%3A{D}%23%23{P2}*%3A%3A{V}"/>
…
```

scheme   **namespace**   **Doc-type**   **CustomizationId**   **Version**

```
peppol-doctype-wildcard::urn:oasis:names:specification:ubl:schema:xsd:Invoice-2::Invoice##urn:peppol:pint:billing-1*::2.1
```

match

```
peppol-doctype-wildcard::urn:oasis:names:specification:ubl:schema:xsd:Invoice-2::Invoice##urn:peppol:pint:billing-1@aunz-1*::2.1
```

SBDH

AP C2

```
…
<BusinessScope>
  <Scope>
    <Type>DOCUMENTID</Type>
    <InstanceIdentifier>{NS}::{D}##{P2}::{V}</…>
    <Identifier>{DS}</Identifier>
…
```

PINT

```
<{D} … xmlns="{NS}">
  <cbc:CustomizationID>{P2}</…>
…
```

AS4

```
…
<eb:CollaborationInfo>
    …
    <eb:Action>{DS}::{NS}::{D}##{P2}::{V}</…>
    …
```

Participant scheme	{PS}	busdox-actorid-upis
Participant identifier	{P}	0151:72100100100
Document scheme	{DS}	peppol-doctype-wildcard
Document element	{D}	Invoice

Namespace	{NS}	urn:oasis:names:specification:ubl:schema:xsd:Invoice-2
PINT	{P1}	urn:peppol:pint:billing-1
PINT A-NZ	{P2}	urn:peppol:pint:billing-1@aunz-1
(UBL) Version	{V}	2.1

PINT A-NZ Invoice Lookup Priority

Document Customization Identifier:

`urn:peppol:pint:billing-1@aunz-1`

SBDH Instance Identifier:

`urn:oasis:names:specification:ubl:schema:xsd:Invoice-2::Invoice##urn:peppol:pint:billing-1@aunz-1::2.1`

SMP Lookup Priority:

1. `busdox-docid-qns::urn:oasis:names:specification:ubl:schema:xsd:Invoice-2::Invoice##urn:peppol:pint:billing-1@aunz-1::2.1`

2. `peppol-doctype-wildcard::urn:oasis:names:specification:ubl:schema:xsd:Invoice-2::Invoice##urn:peppol:pint:billing-1@aunz-1*::2.1`

3. `peppol-doctype-wildcard::urn:oasis:names:specification:ubl:schema:xsd:Invoice-2::Invoice##urn:peppol:pint:billing-1*::2.1`

PINT A-NZ Credit Note Lookup Priority

Document Customization Identifier:

`urn:peppol:pint:billing-1@aunz-1`

SBDH Instance Identifier:

`urn:oasis:names:specification:ubl:schema:xsd:CreditNote-2::CreditNote##urn:peppol:pint:billing-1@aunz-1::2.1`

SMP Lookup Priority:

1. `busdox-docid-qns::urn:oasis:names:specification:ubl:schema:xsd:CreditNote-2::CreditNote##urn:peppol:pint:billing-1@aunz-1::2.1`

2. `peppol-doctype-wildcard::urn:oasis:names:specification:ubl:schema:xsd:CreditNote-2::CreditNote ##urn:peppol:pint:billing-1@aunz-1*::2.1`

3. `peppol-doctype-wildcard::urn:oasis:names:specification:ubl:schema:xsd:CreditNote-2::CreditNote##urn:peppol:pint:billing-1*::2.1`

04

Impacts

C3/C4 Software and Service Providers

Consider PINT A-NZ receiving capability choices for each/all end users:

- At a minimum, a receiving capability will need to be published for end-users that will allow them to receive a PINT A-NZ Invoice. (busdox and/or wildcard scheme)
- Software and service providers will need to determine whether end-users will be able to publish a receiving capability that will enable invoices from other jurisdictions to be received
- end-user decisions regarding their receiving capabilities will depend on their requirements and the capabilities of their software and processes

Update SMP records:
- Add PINT receiving capability as appropriate
- Remove the current A-NZ extension capability (Post PINT A-NZ migration)

For domestic invoicing there should be no differences for end users receiving documents prepared with PINT A-NZ specifications.

C1/C2 Software & Service Providers

C1/C2 Software & Service Providers will need to:

- Update payload content (PINT business process type and specification identifier) and the Standard Business Document Header (SBDH)

- Implement an updated service discovery (receiving capability lookup) function including both the busdox and wildcard schemes:
  - Check for 'exact' match receiving capability, using the busdox scheme first
  - If no match, then check for a wildcard match as per the [Peppol Policy for Use of Identifiers.](#)
  - A similar lookup process needs to be implemented for both Billing invoice and credit note, and Self-billing invoice and credit note, when sending those documents.

Other considerations for Peppol Service Providers

- Engaging with other service and software providers in the ecosystem such as C1/C4 DSP partners.

- Consider any contractual and integration implications of the changes.

- Consider supporting cross border capabilities (sending & receiving of international invoices) in the future (noting there is no requirement in PINT to provide such services and is purely an optional additional service that can choose to support).

05

Migration plan

Proposed timeframe and activities to support PINT A-NZ migration

Migration Plan

Phase	Get Ready	Phase In/ Implementation	Phase Out[4]
PINT A-NZ published→	A-NZ PASRs published→	A-NZ PASRs effective→	Current specs removed→
Current specifications	Mandatory	Mandatory	Deprecated
PINT A-NZ specifications	Optional	Optional	Mandatory
Overview	All parties review changes and prepare for implementation activities.	Senders build PINT A-NZ lookup and send capability. Receivers implement and publish PINT A-NZ receive capability.	Senders should support PINT A-NZ Receivers must support PINT A-NZ

Software & Service Provider Activities	Senders and Receivers:
	• Understand requirements
	  ○ PINT A-NZ specs
	  ○ Wildcard scheme
	  ○ Capability lookup
	• Prepare for implementation
		Senders:
		• Add Wildcard lookup support
		• Add ability to send PINT A-NZ
		Receivers:
		• Add ability to receive & process PINT A-NZ
		• Add PINT A-NZ to SMP
			At end of phase:
			Senders:
			• Remove capabilities to send current A-NZ
			Receivers:
			• Remove current A-NZ from SMP

Send	Current specifications	Current specifications	PINT A-NZ
SMP Registration[1]	Current specifications	Current specifications PINT A-NZ[2]	PINT A-NZ Current specifications[3]

PASR - Peppol Authority Specific Requirements

Feedback

Any questions that hasn't been answered in today's webinar or feedback you may have on today's session can be provided to your relevant Peppol Authority below using the [feedback template](#).

The New Zealand Peppol Authority - support@nzpeppol.govt.nz

The Australian Peppol Authority - eInvoicing@ato.gov.au

Useful Links

Specifications

- **Base PINT v1.0 Specifications (Published)**
- **PINT A-NZ Specifications v0.9 (Draft)**
- **ANZ Peppol BIS 3.0 extensions** **(Current specifications)**

Member Review & Webinars

- **OpenPeppol PINT & Wildcard May webinar**
- **Member Review of PINT A-NZ Specs**
- **PINT A-NZ Engagement paper**
- **Rule cross reference spreadsheet**

eDelivery documents

- **OpenPeppol eDelivery Specifications**
- **Peppol Policy for Use of Identifiers**
- **SMP Specifications**

Glossary

Term	Description
BIS	Business Interoperability Specification (content describing process, usage, central elements, calculation, identifiers etc.)
Busdox Scheme	The original and default Document Type Identifier Scheme which uses 'exact match' for advertising receive capabilities.
Compliant specification	Supports all necessary data elements and does not break any rules of 'parent' specification, but may not contain all the 'parent' data elements
Data model (semantic and syntax)	Consists of semantic definitions (business terms and groups, business meaning) and syntax definitions (how those semantic terms are implemented using UBL XML syntax)
DSP	Digital Service Provider (C1/C4 FMIS, ERP etc.); noting that some C2/C3 SPs offer value-add services on behalf of C1/C4
PASR	Peppol Authority Specific Requirements
SP	Service Provider (C2/C3 Access Point, SMP)

Glossary

Term	Description
Specialisation	PINT specifications that derive from a 'parent' specification. Specialisations restrict or narrow the 'parent' specification to suit a more specific set of requirements. It will support all shared data elements and comply with all rules of the 'parent' specification but may restrict the use of aligned elements and may introduce new distinct elements.
UBL	Universal Business Language is a standard defining an XML schema for a range of business documents for procurement and transportation. UBL v2.1 is the standard that underpins the PINT Billing and PINT A-NZ specifications.
Validation artefacts: schematron and XSLT	Languages to codify and implement business rules that can be built into software or can be used in a stand-alone application/platform to test specific XML messages e.g. while developing/testing software
Wildcard scheme	The new Document Type Identifier Scheme which uses 'best match' for advertising receive capabilities