Peppol

The future is open

Digital Traffic Reporting

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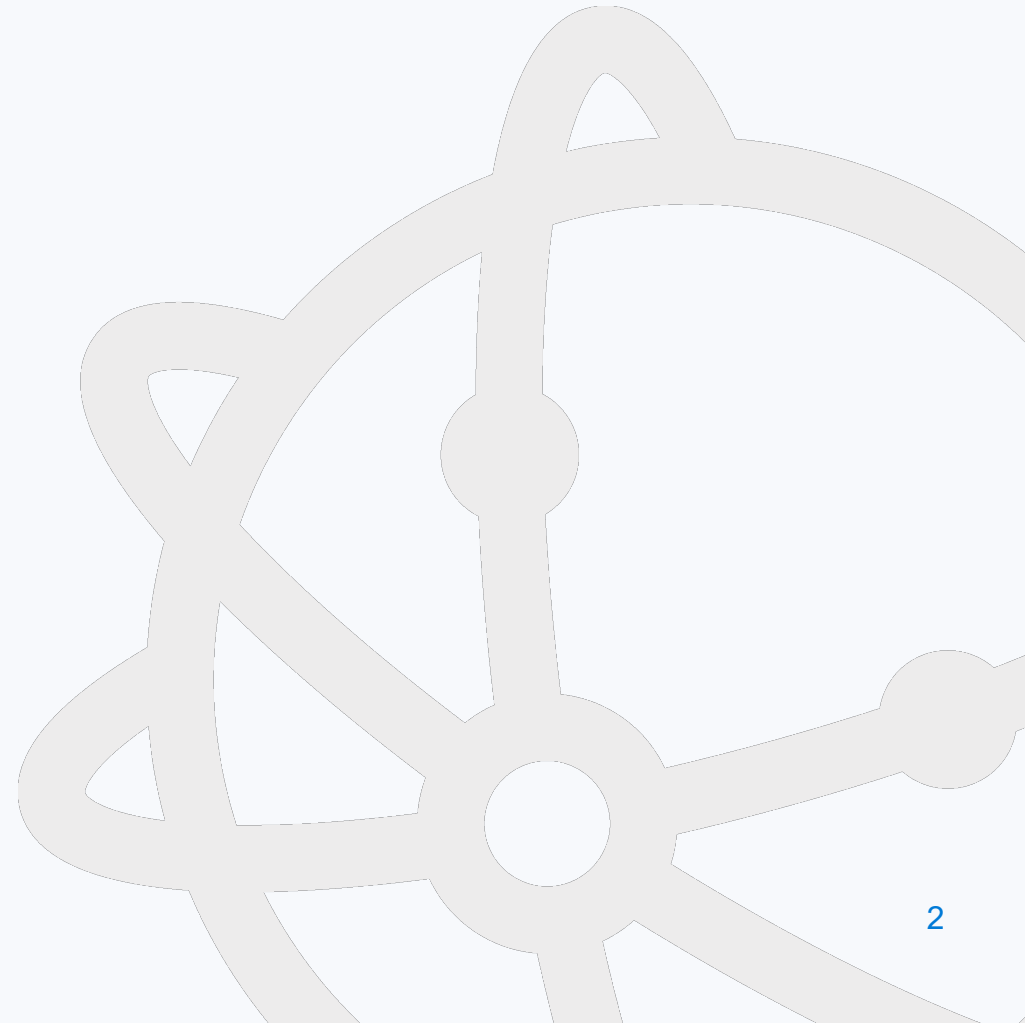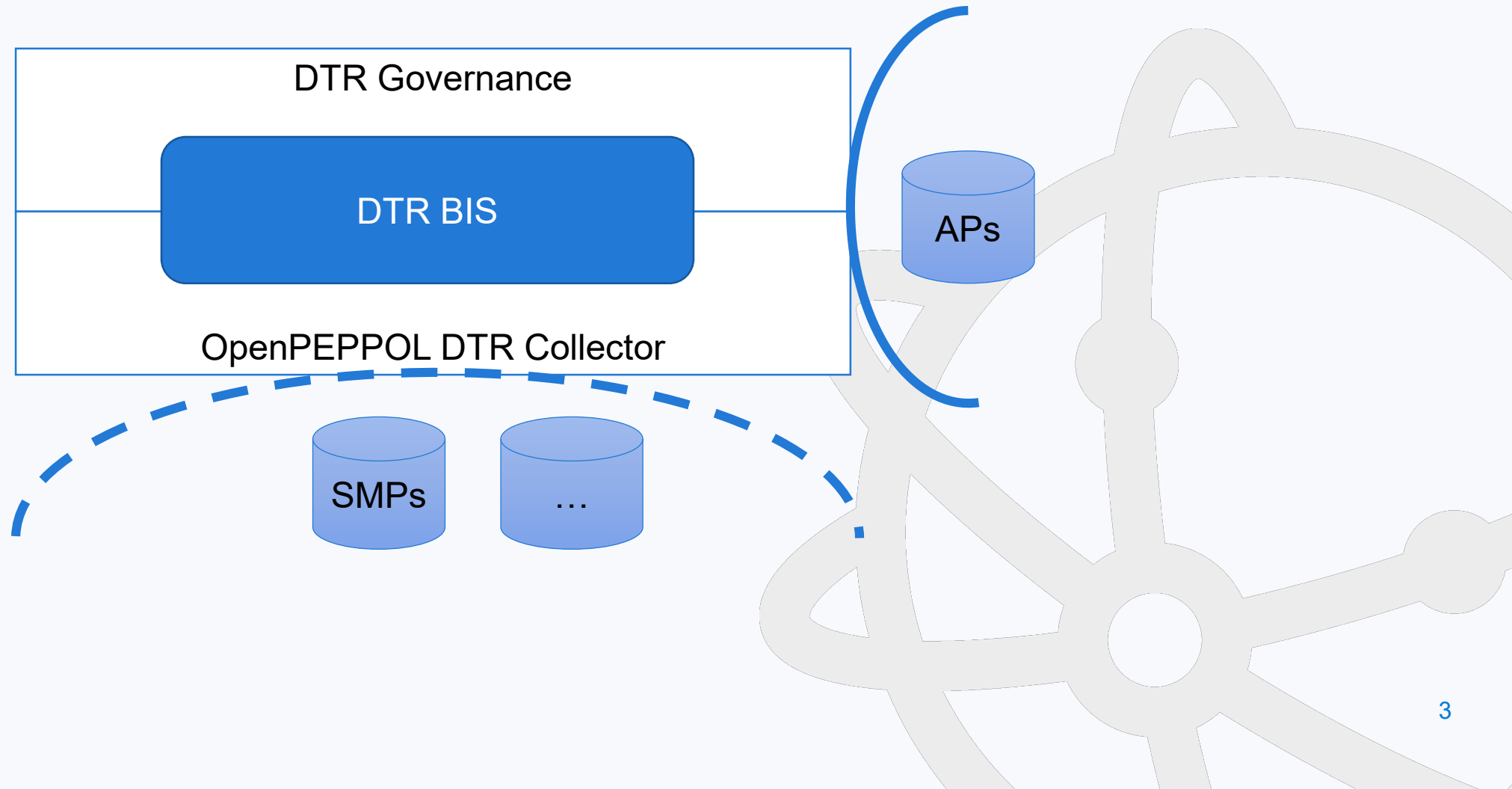
Agenda

- Context – what we're aiming for
- Goals – the reason for this BIS
- Scope – the information elements gathered
- Data – what is collected
- XML – how it could be represented

Context

for Digital Traffic Reporting - DTR

Goals

- Describe Digital Traffic Reporting in the PEPPOL network

- Provide a technical representation of the **Digital Traffic Report** (DTR) message

- The BIS applies to all **AP Providers**, independent of the transport protocols they support.
  - Service Metadata Publisher (SMP) providers and others don't need to issue a DTR.

- Two basic parties are involved
  - Reporter as the sender of a DTR and
  - a PEPPOL Authority as the receiver of the DTR

Process

1. A PEPPOL AP submits a DTR to a PEPPOL Authority containing the digital traffic volumes collected within a defined traffic period.

2. OpenPEPPOL may gather additional information elements e.g. on SMP providers from different sources.

3. OpenPEPPOL will collect and evaluate the received DTRs and may provide parts of the gathered data and insights to other PEPPOL authorities.

In scope of the BIS

Part 1

- **General Rules**
  - All values MUST be collected separately for incoming and outgoing transactions.

- **Identify Senders and Receivers**
  - The reporter MUST provide the total number of effective distinct senders and effective distinct receivers.
  - The reporter MUST provide the list of effective distinct senders and effective distinct receivers.

- **Identify exchanged Quantities**
  - The reporter MUST provide the total number of sent and received documents, independent of the participants and the document types.
  - The reporter MAY provide the total number of exchanged documents per sender and receiver, independent of the document types.

- **Identify exchanged Transport Protocols**
  - The reporter MUST provide the total number of documents per transport protocol, independent of the participants and the document types.

In scope of the BIS

Part 2

- Identify exchanged Document Types
  - The reporter MUST provide the total number of documents per document type, independent of the participants.
  - The reporter MAY provide the total number of documents per sender and per document type.
  - The reporter MAY provide the total number of documents per receiver and per document type.
- Identify Locality of the exchanged documents
  - The reporter MAY provide the total number of cross-border and domestic exchanges, independent of the participants and the document types.
  - The reporter MAY provide the total number 3-corner and 4-corner model exchanges, independent of the participants and the document types.

Out of scope of the BIS

- The definition of the traffic reporting period.
- The declaration of the digital traffic report receiver participant identifier.
- The responsibilities and requirements for the receiver of the DTRs.
- Additional governance aspects for the receiver of the DTRs.
- The rules for identifying the country code from a participant identifier.

Data

Part 1

- Incoming vs. Outgoing transaction
  - For the sending AP of a document exchange, all transactions count as outgoing.
  - For the receiving AP of a document exchange, all transactions count as incoming.
  - If an AP is sending and receiving with a traffic reporting period, the numbers for outgoing and incoming transactions need to be counted separately.

- Transport Protocol
  - Is obtained implicitly from the communication channel in use.

- Sender ID, Receiver ID, Document Type ID
  - *Sending*: Information is available for the SMP lookup.
    Alternatively it can be obtained by inspecting the SBDH envelope.
  - *Receiving*: Can be retrieved from the SBDH envelope.
  - Note: Data extraction rules from SBDH are defined.

Data
Part 2

- Sender and Receiver Country Code
  - The country code can be determined from the respective participant identifier schemes (as in 0184 or 9914).
    This method is not 100% exact, but close to.
  - The exact rules for extracting the country code from the participant identifier schemes is not defined in the BIS.

- Domestic vs. Cross-border transaction
  - A transaction is considered domestic, if Sender and Receiver Country Code are identical, otherwise it is a cross-border transaction.
  - If the sending AP and the receiving AP share the same PEPPOL Access Point certificate it is considered a 3-corner transaction, otherwise it is a 4-corner transaction.

XML representation

Suggestion only

```xml
<DigitalTrafficReport xmlns="urn:peppol:names:specification:ubl-compatible:schema:xsd:DigitalTrafficReport-2">
  <!-- Header information omitted -->
  <Outgoing>
    <TotalCount>1</TotalCount>

    <DistinctSenderCount>1</DistinctSenderCount>
    <Sender>
      <ID scheme="iso6523-actorid-upis">9915:test</ID>
    </Sender>

    <DistinctReceiverCount>1</DistinctReceiverCount>
    <Receiver>
      <ID scheme="iso6523-actorid-upis">9958:example</ID>
    </Receiver>

    <DocumentType>
      <ID scheme="busdox-docid-qns">urn:oasis:names:specification:ubl:schema:xsd:Invoice-2::Invoice##urn:www.cenbii.eu:transaction:b
      <Count>1</Count>
    </DocumentType>

    <TransportProtocol>
      <ID>busdox-transport-as2-ver1p0</ID>
      <Count>1</Count>
    </TransportProtocol>
  </Outgoing>

  <Incoming>
    <TotalCount>1</TotalCount>
```

```xml
<DigitalTrafficReport xmlns="urn:peppol:names:specification:ubl-compatible:schema:xsd:DigitalTrafficReport-2">
  <!-- Header information omitted -->
  <Outgoing>
    <TotalCount>1</TotalCount>
    <CrossBorderCount>1</Cro
    <DomesticCount>0</Domest
    <ThreeCornerCount>0</Thr
    <FourCornerCount>1</Four
    <DistinctSenderCount>1</
    <Sender><ID scheme="iso6

    <DistinctReceiverCount>1
    <Receiver><ID scheme="is
    <DocumentType>
      <ID scheme="busdox-doc
      <Count>1</Count>
      <Sender><ID scheme="is
      <Receiver><ID scheme="
    </DocumentType>
    <TransportProtocol><ID>b
  </Outgoing>
  <Incoming>
    <TotalCount>1</TotalCoun
    <CrossBorderCount>1</Cro
    <DomesticCount>0</Domest
    <ThreeCornerCount>0</Thr
    <FourCornerCount>1</Four
```

Alternative approach

Batch event transmission

- List of the following fields for the reporting period
  - Date and time (in UTC)
  - Direction (incoming or outgoing)
  - Other AP Certificate Subject DN (our AP Certificate is contained)
  - Sender ID country (Sender ID directly would be better - allowed by GDPR?)
  - Receiver ID country (Receiver ID directly would be better - allowed by GDPR?)
  - Transport protocol
  - Document type ID
  - Process ID

Poll

- Aggregate data on AP side
    - Potentially error prone
    - Less privacy concerns
- Alternatively provide an event stream
    - Potentially data privacy issues
    - Easier to collect and send
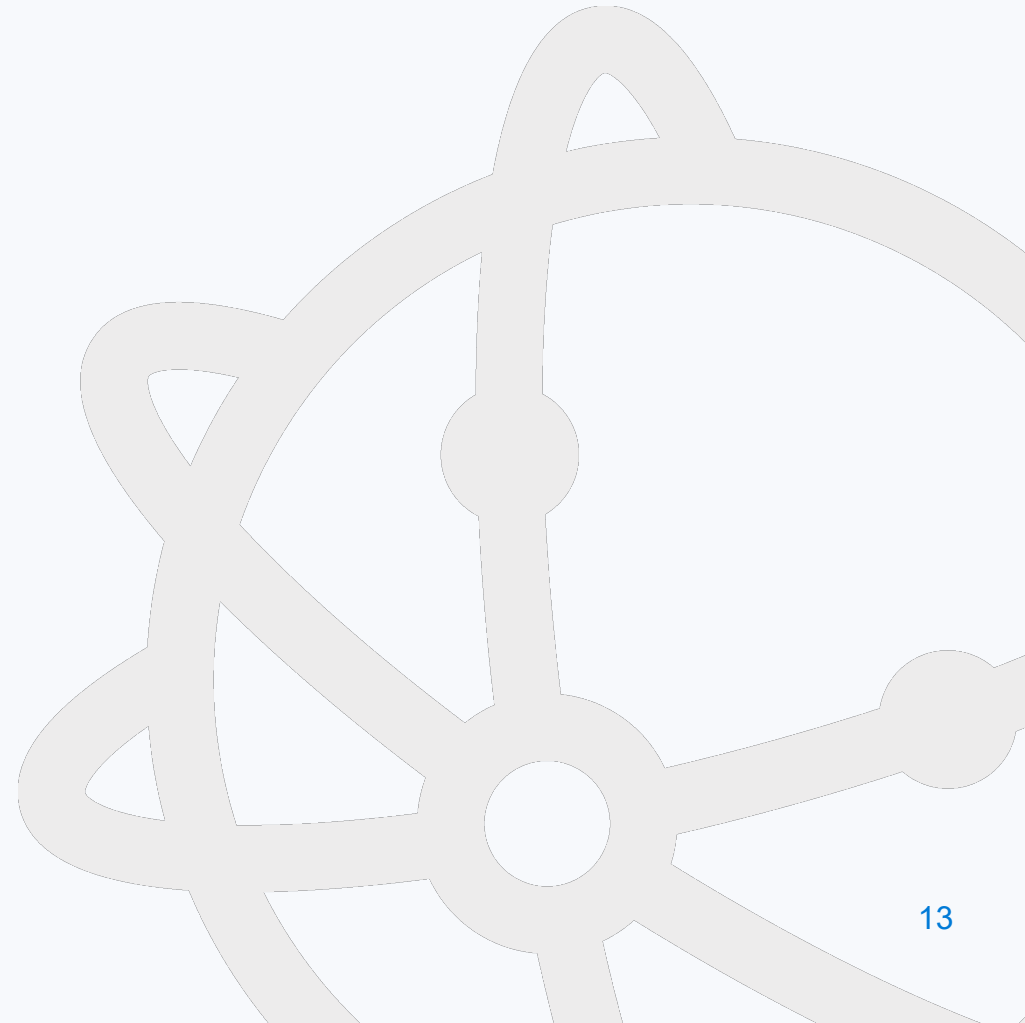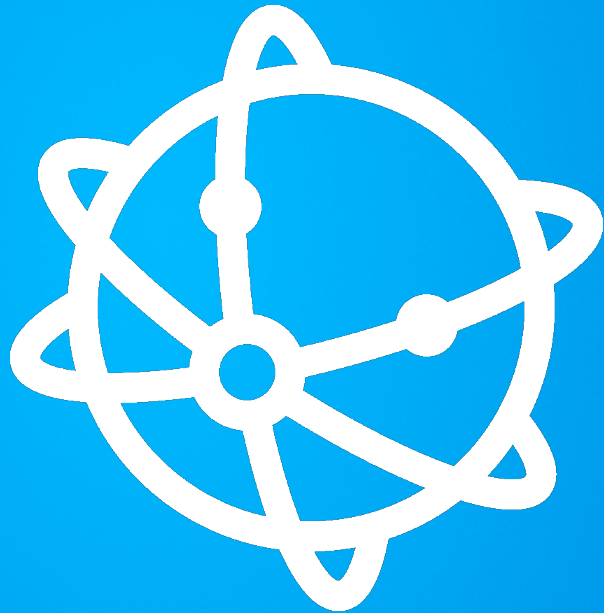
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INFORMATION

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