

DATEX II

Deployment of DATEX II in your data provision

Day 1 – 25 November 2020

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6TH FORUM
WEBINAR SERIES

Background

- Traffic Stakeholders want/need to share data to enable/enhance services for the mobility users – people and goods
 - Better choice of time, route, mode of transport
 - Better traffic management and safer roads
 - Enable innovation: co-operative systems & increased levels of automation
- Important driving factors leveraging this development
 - The Green Deal – Decarbonisation at high speed
 - Automated Driving – European Competitiveness
 - Data driven, digital economy – Deployment of Mobility Data Spaces and 5G

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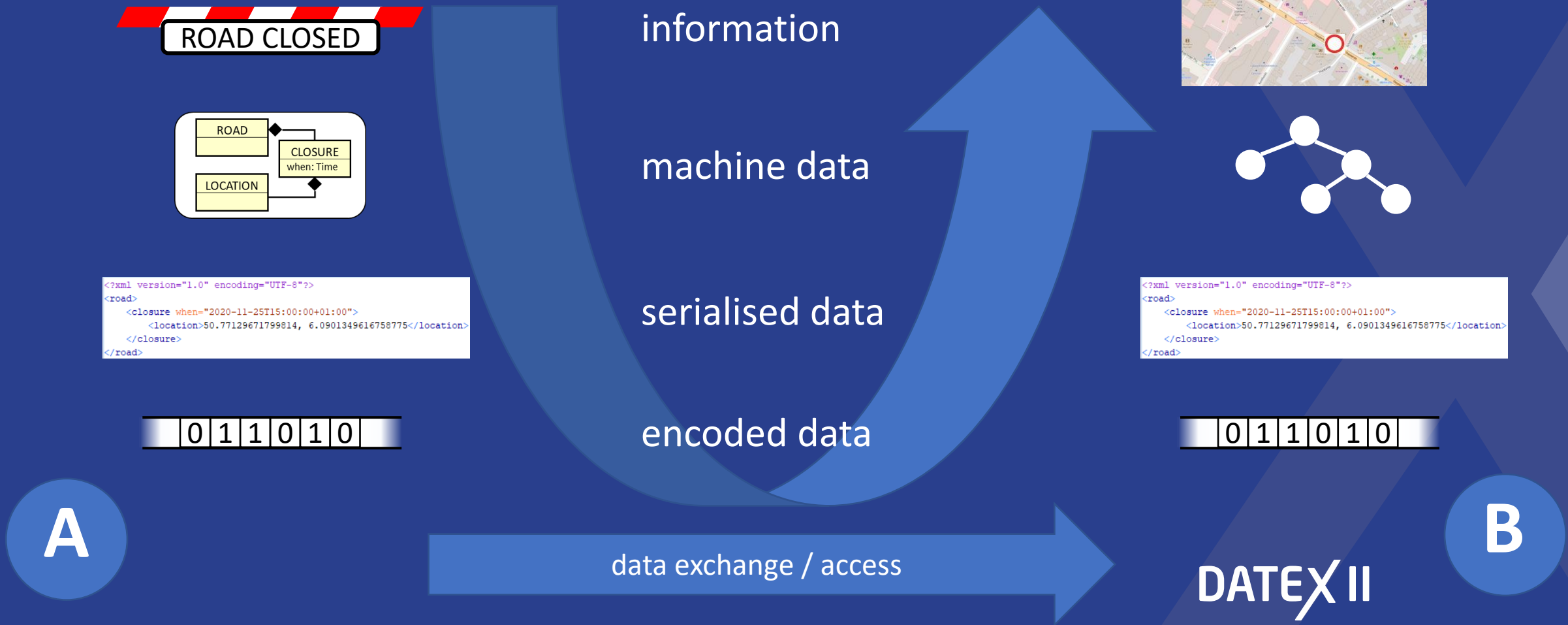
The basic scenario

- I am stakeholder **A** and have Information **I** available digitally – i.e. as data – in my system
- Stakeholder **B** would benefit from also having this information digitally in his system to allow algorithms work with the information
- **A** and **B** agree that there is a benefit in **A** providing the information to **B** (e.g. because it would improve a service provided by **B**)
- The agreement may be due to an obligation (e.g. a Delegated Regulation)
- **A** and **B** therefore decide to enable a digital exchange of machine-processable data (alternatively: to allow **B** to access this digital, machine-processable data)

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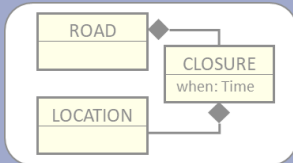
Realisation of data sharing



DR, DATEX & NAP

Delegated Regulations
DATEX II Content (CEN 16157)

ROAD CLOSED



```
<?xml version="1.0" encoding="UTF-8"?>
<road>
  <closure when="2020-11-25T15:00:00+01:00">
    <location>50.77129671799814, 6.0901349616758775</location>
  </closure>
</road>
```

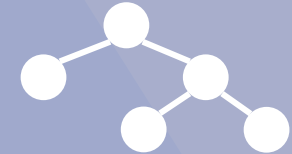
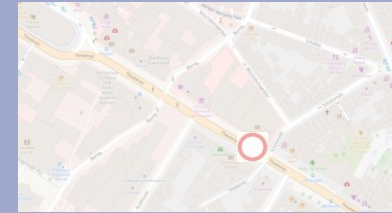
0 1 1 0 1 0

information

machine data

serialised data

encoded data



```
<?xml version="1.0" encoding="UTF-8"?>
<road>
  <closure when="2020-11-25T15:00:00+01:00">
    <location>50.77129671799814, 6.0901349616758775</location>
  </closure>
</road>
```

0 1 1 0 1 0

A

National Access Point (only Metadata mandatory)

data exchange / access

DATEX II Exchange
(ISO) optional

B

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So, the DRs provide me a data model?

- Not really – they provide more or less detailed descriptions of types of data that fall into the scope of a Delegated Regulation
- They strongly recommend to use the CEN 16157 series (i.e. DATEX II) for encoding – but they do not select a publication model, nor do they provide a concrete data profile
- This mean a lot of freedom for data suppliers, but:
 - The data suppliers still need to do a lot of decisions and work
 - The data receivers potentially still have to deal with a lot of diversity

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Does the DATEX II PSA help me?

- Yes!
- The PSA cannot (and should not) mandate detailed models, but:
- The PSA can and has provided support to ensure choices compliant with the Delegated Regulations
- These are not complete, pre-defined data profiles, but mechanisms that help users providing compliant profiles:

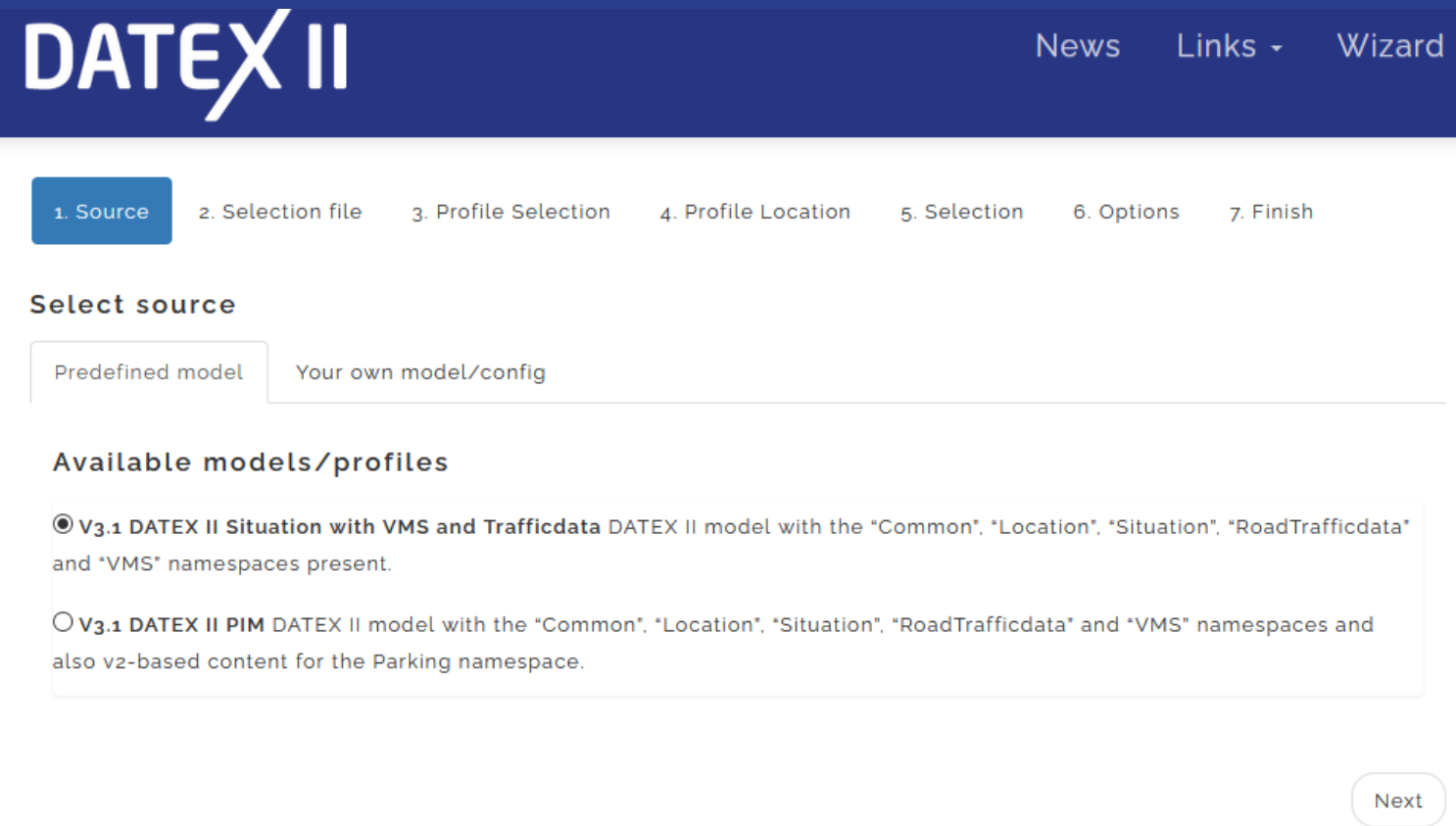
Recommended Reference Profiles

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The DATEX II data profiling tool

- Online available at webtool.datex2.eu/wizard
- 7 steps to create a DATEX II data profile:



The screenshot shows the DATEX II wizard interface. At the top, the logo 'DATEX II' is on the left, and navigation links 'News', 'Links', and 'Wizard' are on the right. Below the logo, a progress bar shows seven steps: '1. Source', '2. Selection file', '3. Profile Selection', '4. Profile Location', '5. Selection', '6. Options', and '7. Finish'. The '1. Source' step is highlighted in blue. Underneath, the 'Select source' section has two tabs: 'Predefined model' (selected) and 'Your own model/config'. Below the tabs, the 'Available models/profiles' section lists two options:

- V3.1 DATEX II Situation with VMS and Trafficdata** DATEX II model with the "Common", "Location", "Situation", "RoadTrafficdata" and "VMS" namespaces present.
- V3.1 DATEX II PIM** DATEX II model with the "Common", "Location", "Situation", "RoadTrafficdata" and "VMS" namespaces and also v2-based content for the Parking namespace.

At the bottom right of the wizard, there is a 'Next' button.

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How to use the tool

- 1. Select the base model (CEN standard or your own)
- 2. Load a selection file (to allow working iteratively)
- 3. Select a Recommend Reference/Service Profile
- 4. Select a Location Referencing Profile
- 5. Perform a Selection (= do the profiling)
- 6. Options (e.g. whether to use XML, JSON or ASN.1)
- 7. Finish (= download your data specification)

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What does the RRP do?

- It warns you, when your profiling seems not in synch with a Delegated Regulation of your choice
- You can still continue with your profile if you want, but you must acknowledge the warning
- Example: unprotected accident area (DR 886)

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Example: unprotected accident area according to Delegated Regulation 886/2013

DATEX II News Links Wizard

1. Source 2. Selection file **3. Profile Selection** 4. Profile Location 5. Selection 6. Options 7. Finish

Choose optional Recommended Reference Profiles

Select RRP profiles Select RSP profiles

Choose optional Recommended Reference Profiles

- A: MMTIS: Delegated Regulation (EU) 1926/2017
- B: RTTI: Delegated Regulation (EU) 962/2015
- C: SRTI: Delegated Regulation (EU) 886/2013
 - Situation
 - Animal, people, obstacles, debris on the road
 - Unprotected accident area
 - Short-term road works
 - Reduced visibility
 - Wrong-way driver
 - Unmanaged blockage of a road
 - Exceptional weather conditions
 - Temporary slippery road
- E: Safe and secure truck parking places: Delegated Regulation (EU) 885/2013

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Example: unprotected accident area according to Delegated Regulation 886/2013

The screenshot shows a software wizard interface with a dark blue header containing the text "DATEX II" and "Wizard". A white dialog box is centered on the screen with the title "Uncheck Reference Profile node?". The dialog contains the text: "Do you want to uncheck node: Accident?", "The node is checked from Reference Profile:", and a bulleted list item "♦ Unprotected accident area". At the bottom right of the dialog are "No" and "Yes" buttons. In the background, a tree view of profile nodes is visible, with the "Accident" node circled in red. The tree view includes nodes like "ImpactOnOppositeDirection", "TrafficElement", "Obstruction", "Activity", "AbnormalTraffic", "EquipmentOrSystemFault", and "Accident". At the bottom of the wizard are "Previous", "Restart", and "Next" buttons.

Uncheck Reference Profile node?

Do you want to uncheck node: Accident?

The node is checked from Reference Profile:

- ♦ Unprotected accident area

No Yes

ImpactOnOppositeDirection

TrafficElement

trafficConstrictionType

Obstruction

Activity

AbnormalTraffic

EquipmentOrSystemFault

Accident

accidentCa

Previous Restart Next

But do I have no support in profiling a specific data service?

- The EU EIP has developed a Reference Handbook for ITS Service Deployment
- These Service descriptions come together with
Recommended Service Profiles
- See next presentation from T. Reiff (BASt)

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