



Subgroup 1 Meeting

Paperless Transport

**DIGITAL
TRANSPORT
& LOGISTICS
FORUM**

Instructions and netiquette

- If you are not the speaker, **please turn-off your device's mic**. You may also want to turn off your camera in case there is bad connection.
- You can ask for the floor by **typing a message in the meeting chat room**. The moderator will give you the floor as soon as possible.
- **Please avoid taking the floor without prior invitation from the moderator to avoid confusion.**
- **Please keep your intervention short and to the point.** This will allow us to stick to the time allocated for each part of the agenda.
- Please consider that the **call might be recorded**. The record will only be used by the EC and will not be distributed or published in any way or form.

Enjoy the discussions!

Welcome & Introduction

Lia Potec
Subgroup 1 Coordinator
DG MOVE

Agenda

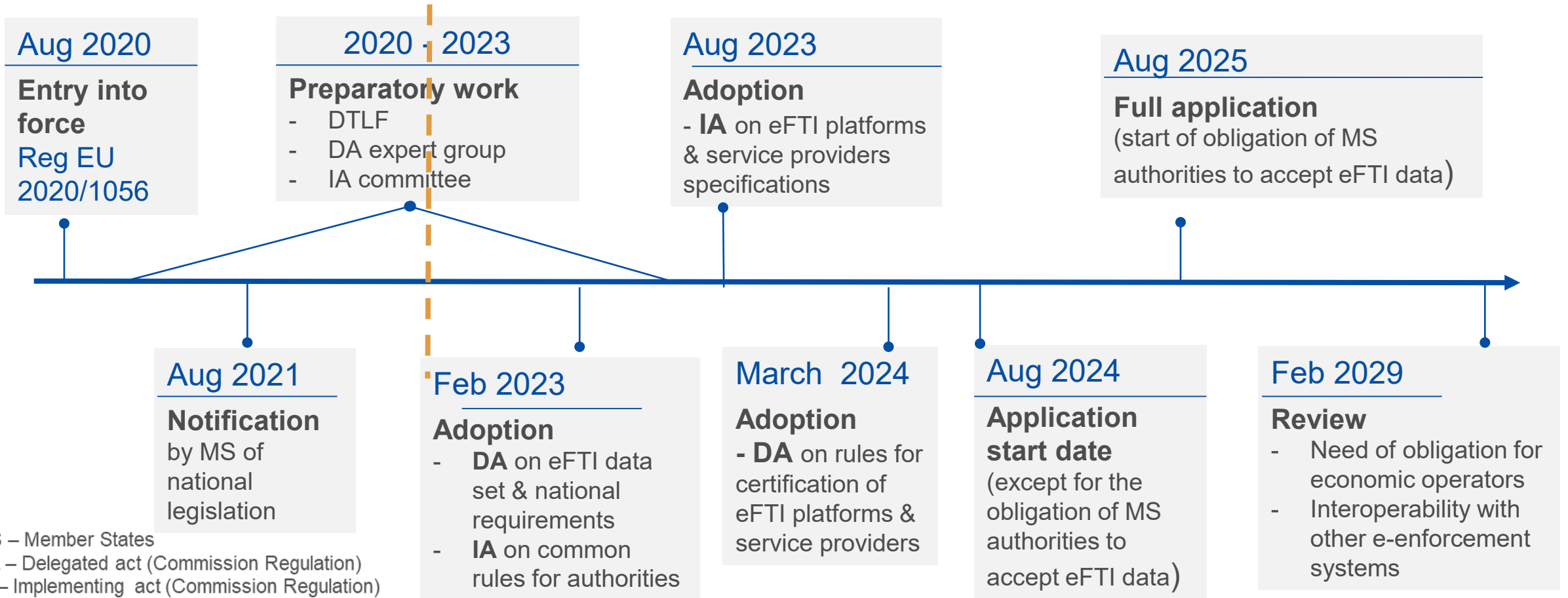
Timing	Topic	Presenter(s)
08.50 - 09.00	<i>Connection to videoconference & Virtual welcome coffee</i>	<i>All</i>
09.00 - 09.15	Introduction <ul style="list-style-type: none"> • Welcome address • Technical instructions • Adoption of the agenda • Adoption of the minutes of the previous SG1 meeting 	<i>European Commission</i>
09.15 - 09.30	eFTI implementation preparation: updates on state-of-play <ul style="list-style-type: none"> • Implementing Acts and the Digital Transport and Trade Facilitation Committee • Delegated Acts and Subgroup 3 of the DTLF • Q&A session 	<i>European Commission All</i>
09.30 - 09.45	General progress in SG1 <ul style="list-style-type: none"> • Brief update on progress since last Sub-group 1 meeting • Discussion 	<i>SG1 Rapporteur All</i>
09.45 - 10.30	SG 1 Updates - Team 1 “Data” <ul style="list-style-type: none"> • Update on progress: 2nd draft eFTI Data Requirements • Next steps 	<i>Technical Support All</i>
10.30 - 11.15	SG 1 Updates - Team 2 “Functional” <ul style="list-style-type: none"> • Update on progress: finalising the generic BPM; integration with Waste Shipment environment • Next steps 	<i>Technical Support All</i>
11.15 - 11.30	<i>Break</i>	
11.30 - 12.30	SG1 Progress updates – Team 3 “Technical”: <ul style="list-style-type: none"> • Update on progress: architecture principles; design decisions; working draft of eFTI architecture options • Next steps 	<i>Team Leaders All</i>
12.30 - 13.00	SG1 Progress updates – Team 4 “Certification & Implementation” <ul style="list-style-type: none"> • Update on progress: launch of the team; work plan and timeline • Next steps 	<i>SG1 Rapporteur All</i>
13.00 - 13.15	AOB <ul style="list-style-type: none"> • Next meetings planning and upcoming events <ul style="list-style-type: none"> • 12 May – Workshop on identification, authentication and authorisation • Other DTLF meetings • Other 	<i>European Commission All</i>
13.15	<i>End of the meeting</i>	

eFTI implementation preparation: Updates on state of play

Lia Potec
Subgroup 1 Coordinator
DG MOVE

eFTI Regulation

Implementation timeline



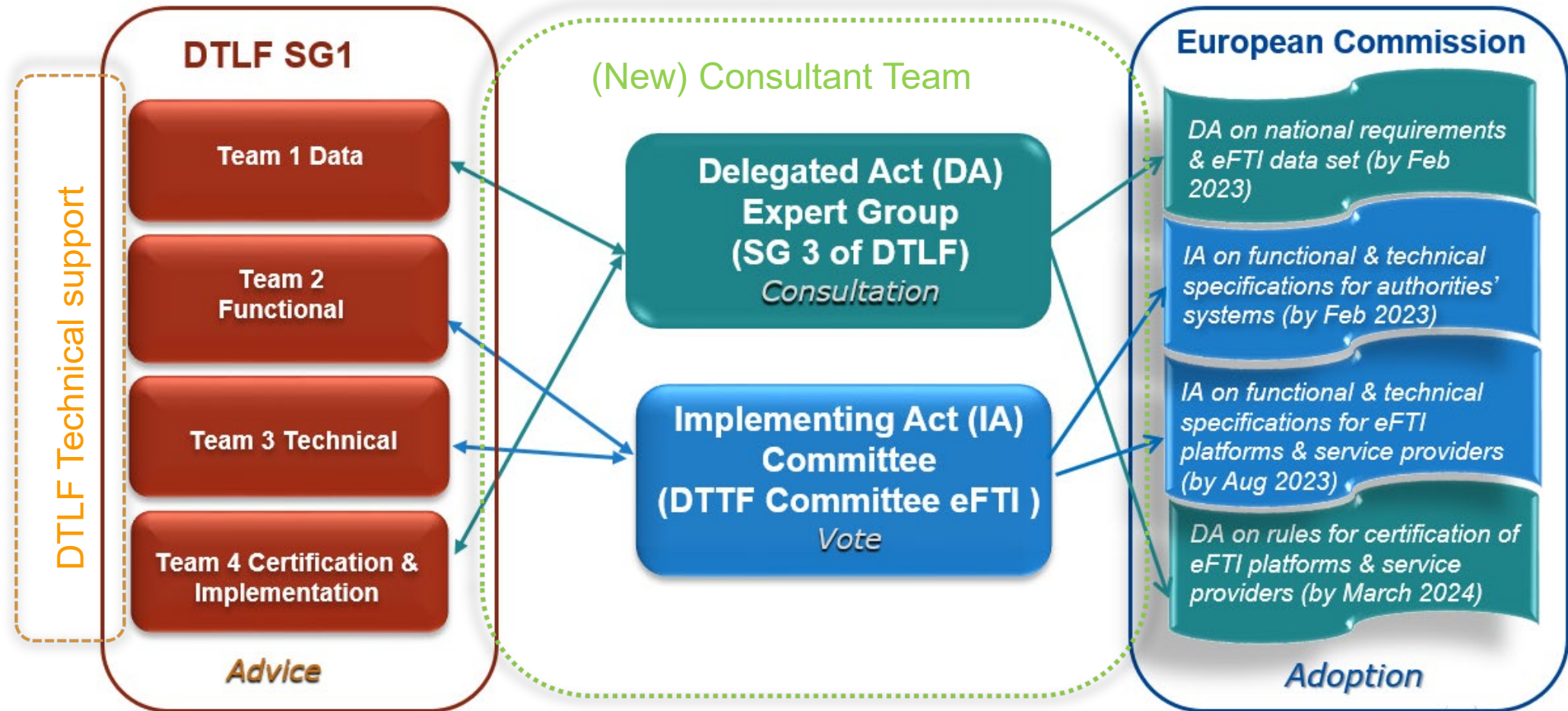
Preparing eFTI Reg. secondary acts

Who does what ? (1)

Entity	Composition	Role	Scope	State of play
Digital Transport and Logistics Forum (DTLF)	<ul style="list-style-type: none"> ✓ Industry representatives (majority) ✓ Member States experts (≈12 MS currently actively represented) 	Advise the European Commission (EC) in considering different implementation options → Recommendations	<ul style="list-style-type: none"> ✓ All aspects covered by eFTI secondary acts (eFTI data (sub)set(s), functional & technical specifications for authorities and private sector systems, certification) + uptake 	<ul style="list-style-type: none"> ✓ On-going preparatory work in four thematic Teams of DTLF Sub-group 1 ✓ Expected to finalise recommendations by autumn 2022
Delegated Act (DA) Expert Group (DTLF Subgroup 3)	<ul style="list-style-type: none"> ✓ Member States experts (all MS should be represented) ✓ European Parliament experts ✓ Industry representatives (selected DTLF representatives) 	Assist the EC in defining the implementation specifications → Consultation → EP & Council 2 months to formulate any objections after EC adoption	<ul style="list-style-type: none"> ✓ National legislation requirements (Art. 2) ✓ eFTI common data set and subsets (Art. 7) ✓ Certification rules for eFTI platforms & service providers (Art. 12 & 13) 	<ul style="list-style-type: none"> ✓ Two meetings held (November 2021 & April 2022) ✓ Next meetings (tbc): <ul style="list-style-type: none"> ✓ 23 June 2022 ✓ 13 Oct 2022 ✓ Nov/Dec 2022
Implementing Act (IA) Committee (Digital Transport and Trade Facilitation Committee)	<ul style="list-style-type: none"> ✓ Member States experts (only!) 	Assist the EC in defining the implementation specifications → Vote before EC can adopt the IA	<ul style="list-style-type: none"> ✓ Functional & technical specifications for authorities' systems (Art. 8) ✓ Functional & technical specifications for eFTI platforms & service providers (Art. 9 & 10) 	<ul style="list-style-type: none"> ✓ First meeting on 19 May 2022 ✓ Next meetings (tbc): <ul style="list-style-type: none"> ✓ July 2022 ✓ Sept/Oct 2022 ✓ Nov/Dec 2022 ✓ Jan 2023

Preparing eFTI Reg. secondary acts

Who does what ? (2)



General progress DTLF Subgroup 1

Dominique Willems
SG1 Rapporteur
DCSA

DTLF SG1 - State of play

Done	Team 1 – Data	Done	Team 2 – Functional
<ul style="list-style-type: none"> ✓ Received & processed input First Draft eFTI Data Requirements ✓ Options paper and mapping for Dangerous Goods ✓ In-depth analysis of Aviation Security ✓ Functional (meta) data identified & processing started ✓ Mode specific meetings held (Rail, Road/cabotage, IWW) ✓ Updated draft eFTI Data Requirements <p>To do</p> <ul style="list-style-type: none"> ○ Send for review version 2 of the eFTI Data Requirements ○ Technical data requirements ○ Rules & conditions and Publication & maintenance of the eFTI-DR ○ Handover to Delegated Act Expert group (SG3) that needs to: <ul style="list-style-type: none"> ○ Address remaining legal questions & issues ○ Include national requirements 		<ul style="list-style-type: none"> ✓ Finalized draft Generic BPM + Reading Guide ✓ Feedback received, processed & published ✓ Coordination with data and technical aspects ✓ Discussion & options paper for Waste Shipments <p>To do</p> <ul style="list-style-type: none"> ○ Bridge functional & technical ○ Define lower-level specific BP's ○ Define potentially diverging BP's, WSR (being finalised) ○ Handover to legislative process (Implementing Act committee (DTTF)) 	
Done	Team 3 – Technical	Done	Team 4 – Certification & Implementation
<ul style="list-style-type: none"> ✓ Legal requirements (Task 1) identified & discussion started ✓ Architecture Principles (Task 2) creating first draft of the principles ✓ Building Blocks (Task 4) aggregated & being consolidated ✓ Architecture design decision recommendation ✓ SG2 cooperation: joint meetings held ✓ First draft of architecture options for eFTI platforms & authorities shared within Team 3 for review <p>To do</p> <ul style="list-style-type: none"> ○ Update reports according to incoming proposals for revisions to tasks 1, 2 and 4 ○ Consolidate architecture options for eFTI platforms & authorities ○ Continue cooperation with SG2 ○ Handover to legislative process (Implementing Act committee (DTTF)) 		<ul style="list-style-type: none"> ✓ Kick off Team 4 ✓ Set scope and objectives ✓ Draft the workplan ✓ Define composition of the team ✓ Start scoping use cases for the Implementation & Communication strategies <p>To do</p> <ul style="list-style-type: none"> ○ Confirm workplan ○ Confirm team/task leads ○ Organise initial meetings & workshops of the tasks (certification & implementation) ○ Consolidating use cases received 	

SG1 - Beyond the eFTI Regulation

Subgroup 1 Paperless Transport

Business-to-Authority information exchanges

- Continued input to and validation of eFTI DA & IA
- eFTI closely related requirements (e.g., EMSWe & customs)
- Data on vehicles & personnel

Business-to-Business information exchanges

- eFTI practical implementation on business side
- Acceptance by Civil Courts, Banks & Insurance
- Cross-modal digitalisation of private sector transport documentation



Team 1 - Data

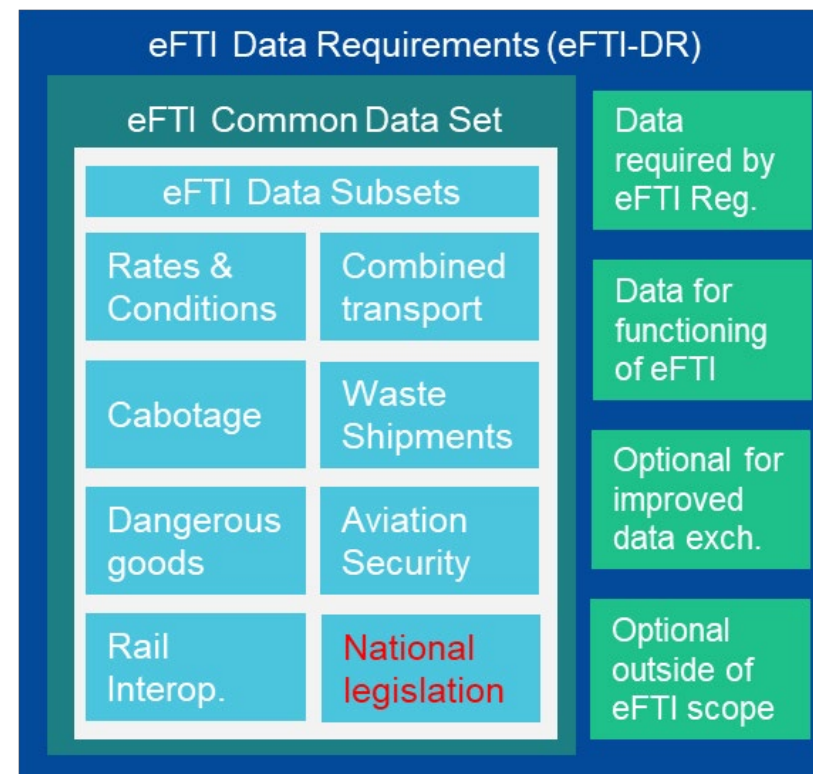
Michael Dill
Technical support
GEFEG

State of play

Done so far

First draft eFTI Data Requirements (eFTI-DR)

- ✓ Based on EU legislation information requirements
- ✓ Data elements (basic structure, UN/CEFACT MMT profile)
- ✓ Publication for initial review end of January 2021
- ✓ 436 comments of feed back received
- ✓ Consolidated feedback published in September 2021
- ✓ Mode or domain dedicated discussions (September – November 2021)
- ✓ Update of the eFTI Data Requirements based on feedback and additional discussions (November 2021 – April 2022)



eFTI working draft v0.2

- The common data set draft v0.1 has **63 semantic elements**
- In the working draft v0.2 there are about **127 semantic elements**
 - Based on work with especially:
 - Aviation security
 - Dangerous goods
 - Road cabotage and combined transport
 - Proposals for functional elements
 - Additionally, v0.2. shall make it clearer what the legal requirements are for one (or a group of) data element

Towards the second draft of the eFTI-DR

(work in progress)

'Core' Data

(Data occurring in multiple eFTI subsets)

- **Locations** (to include place of loading, place of delivery, etc., including coding)
- **Dates & timestamps** (to include date of loading, time of arrival, etc.)
- **Transport equipment** (to correct types & dimensions/volume)
- **Packaging** (to correct quantities & structure)
- **Previous transport** (to finalise e.g., for cabotage)
- **Consignment orientated** Note: so far, no need yet identified for transport movement as a data group separated from consignment
- **Other** (to correct obvious issues e.g., container indicator)

Note: Consignment oriented - so far no need identified yet for transport movement as a data group separated from consignment

'Other' Data

(Data occurring in one eFTI subset)

Dangerous Goods

- Extensive discussions held with experts & UN/ECE
- Mapping of eDGTI vs. eFTI-DR / UNCEFACT MMT RDM
- Finalisation of options paper

Aviation Security

- Meetings held with air cargo community incl. ICAO & Customs (TAXUD)
- Mapping of eFTI-DR & UN/CEFACT MMT to ICAO & Customs

Waste Shipments

- Finalisation of option paper (Team 2 – Functional)
- Define (left-over) data requirements, some already taken into account

eFTI common data set and its subsets

The eFTI common data set has **one common structure** being the basis for

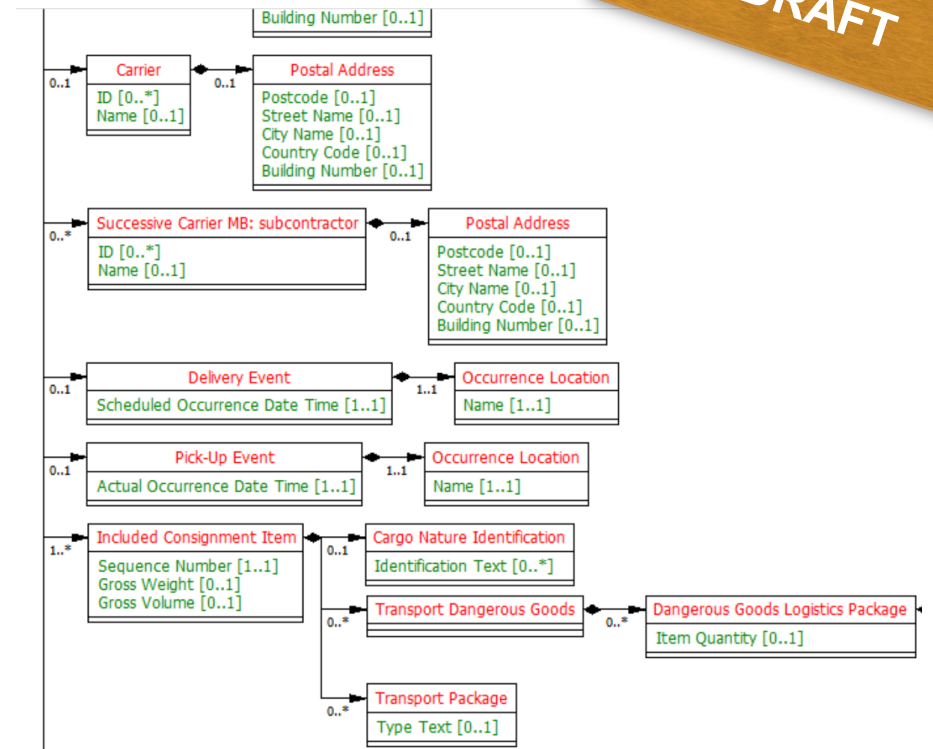
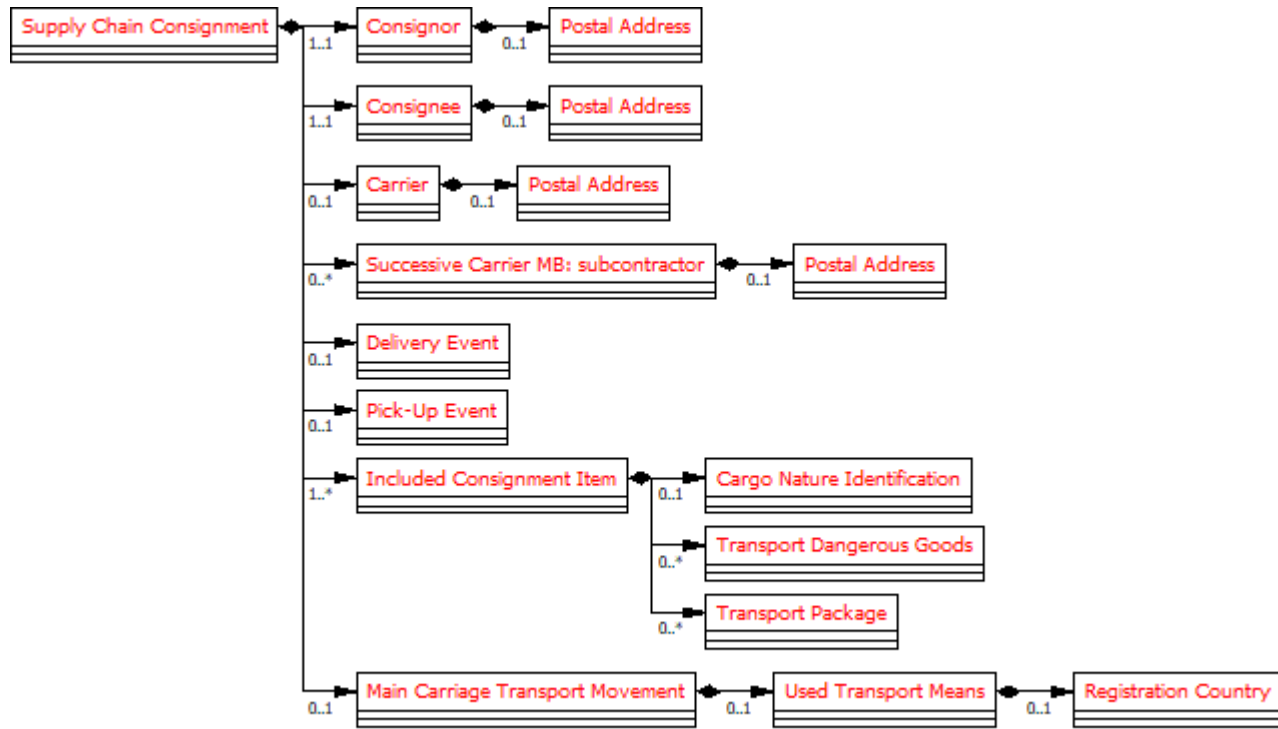
1. Six EU subsets (as of the underpinning regulations)
2. An unknown number of MS subsets

This needs to be managed in a maintainable manner -
if we have to change later, it would become very difficult to manage!

eFTI common data set and its subsets

Example: cabotage

DRAFT



Towards the second draft of the eFTI-DR: Functional Data Requirements

Functional Data Requirements

eFTI legal requirements

- Unique identification of data made available
- Linking to other shipments/consignments
- Logging (date made available, changes, requests)
- Party responsible for data parstimme_ aus_russlandty making data available
- eFTI platform & service provider identification

Subset & national requirements

- Additional references & documents (e.g. consignment notes, invoices, customs)
- Signatures/Stamps/Validations

Required to “make eFTI work”

- Subsets covered (to enable completeness check)
- General references (other than legally required)
- Response data from authorities (request for additional info, results etc.)

Nb. The functional data is not pure Meta Data. In most cases the data also needs to be exchanged in both machine and human-readable formats

Grouping of functional data:

- a) Communication and envelope
- b) Attachments (separate)
- c) Content

Publication within Implementing Act!

Alignment with the Process Team needed

Most discussed functional elements included in version 0.2. proposal

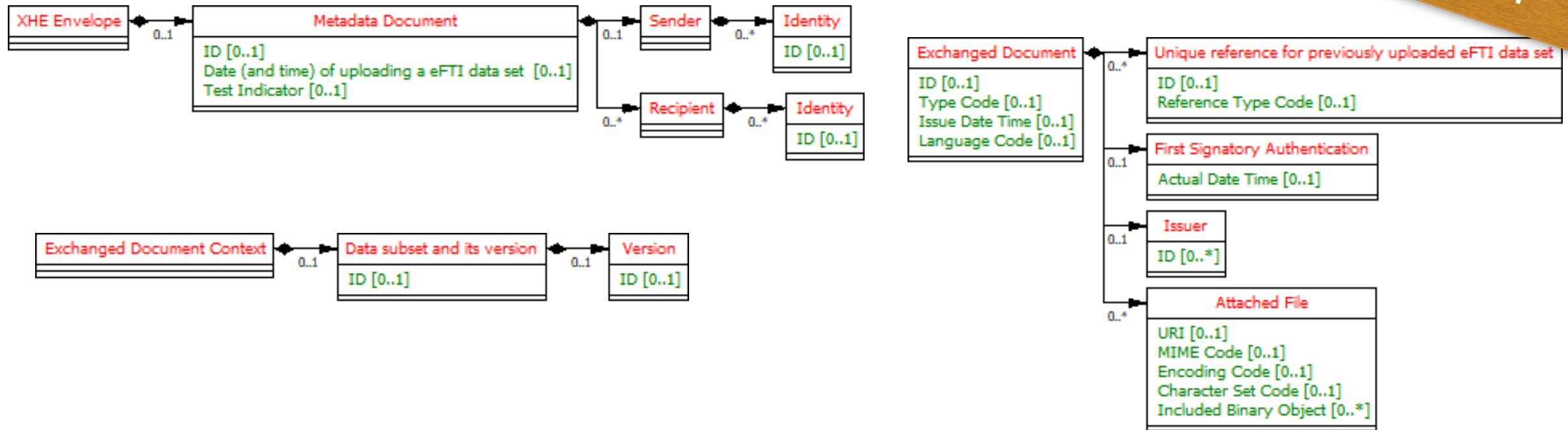
Towards the second draft of the eFTI-DR: Functional Data Requirements

Functional Data Requirements

- Unique reference for uploaded eFTI data set
 - Unique ID of a consignment
 - Unique reference for previously uploaded eFTI data set
 - General reference:
 - Data subset and its version
 - Date (and time) of uploading an eFTI data set
 - Additional References:
 - Party responsible for the eFTI data set ID
 - Party which uploaded the eFTI data set ID
 - (General) Notifying Party
 - eFTI Platform ID
 - eFTI Platform Service Provider ID (?)
- Change/incident: two different topics (?)
 - Signatures – stamps – validation
 - Transaction authentication (?)
 - Content authentication
 - Authentication of references and attached files (?)
 - Responses from Authorities (not included in v0.2)
 - Logging data

Towards the second draft of the eFTI-DR: Functional Data Requirements

DRAFT



Next steps

Version 2 of the Draft eFTI-DR

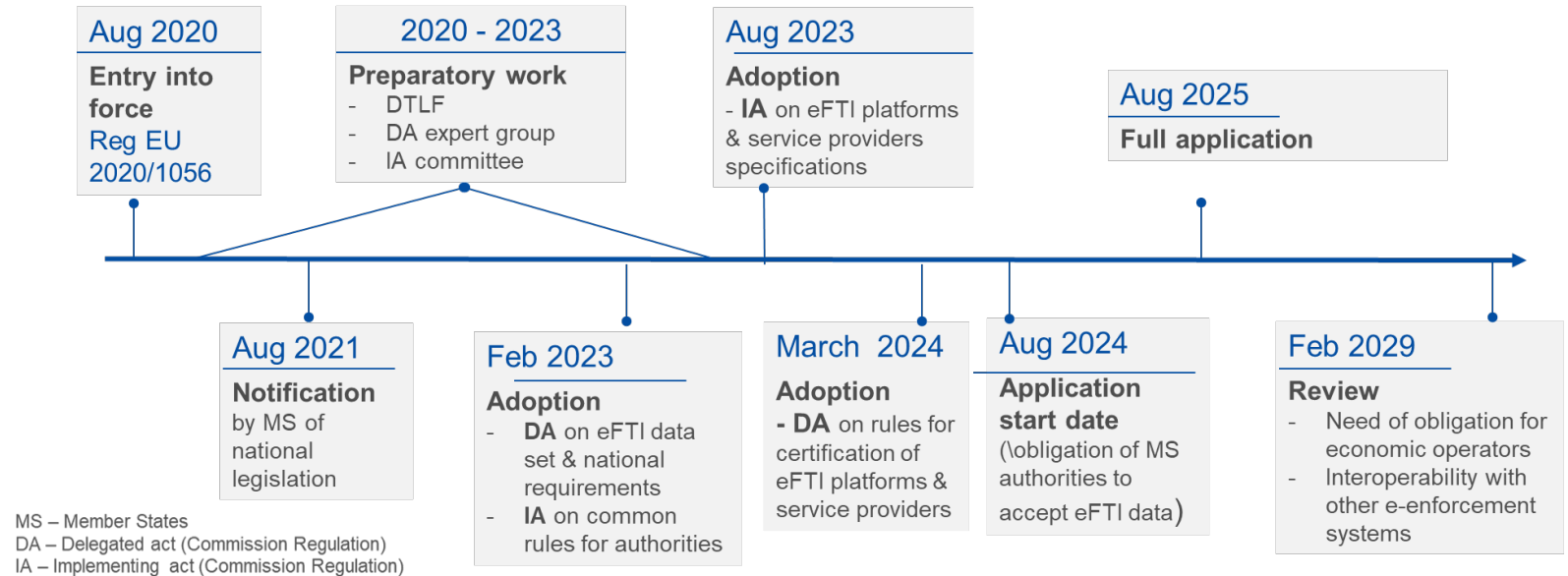
- Finalise version 2 of the draft eFTI Data requirements (May 2022)
- Start review version 2 of the draft eFTI Data requirements (end of May 2022 – end of June 2022)

Continue work on

- Technical data requirements
- Rules & conditions
- Publication & maintenance of the eFTI-DR

Towards eFTI Delegated Act

- Handover to Delegated Act Expert group (SG3) that needs to:
 - Address remaining legal questions & issues
 - Include national requirements



Team 2 - Functional

Nina Neubauer
Technical Support
Deloitte

Key Elements of the Workplan

Deliverables



Team 2 of SG1 provides assistance & advice to the EC on:

- defining the common procedures and detailed rules, including common technical specifications, for competent authorities' access to eFTI platforms
- establishing the specifications for the requirements for the eFTI platforms
- establishing the rules regarding the requirements for eFTI services providers

Approach

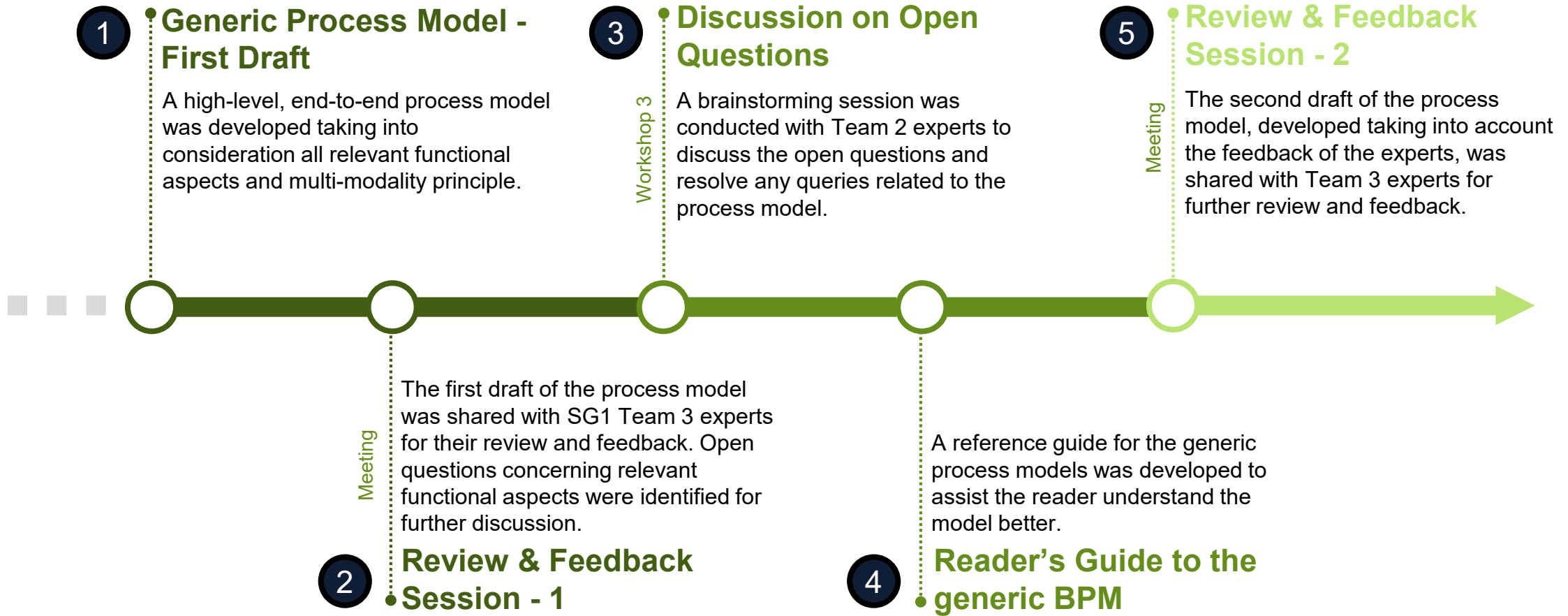


- Multitude of differentiating factors, there is no catch-all business process model
- It should still be possible to create a generic model or master flow based on multimodality with some diversification.
- Therefore, identifying the sources that drive functional diversity is a key task

Methodology

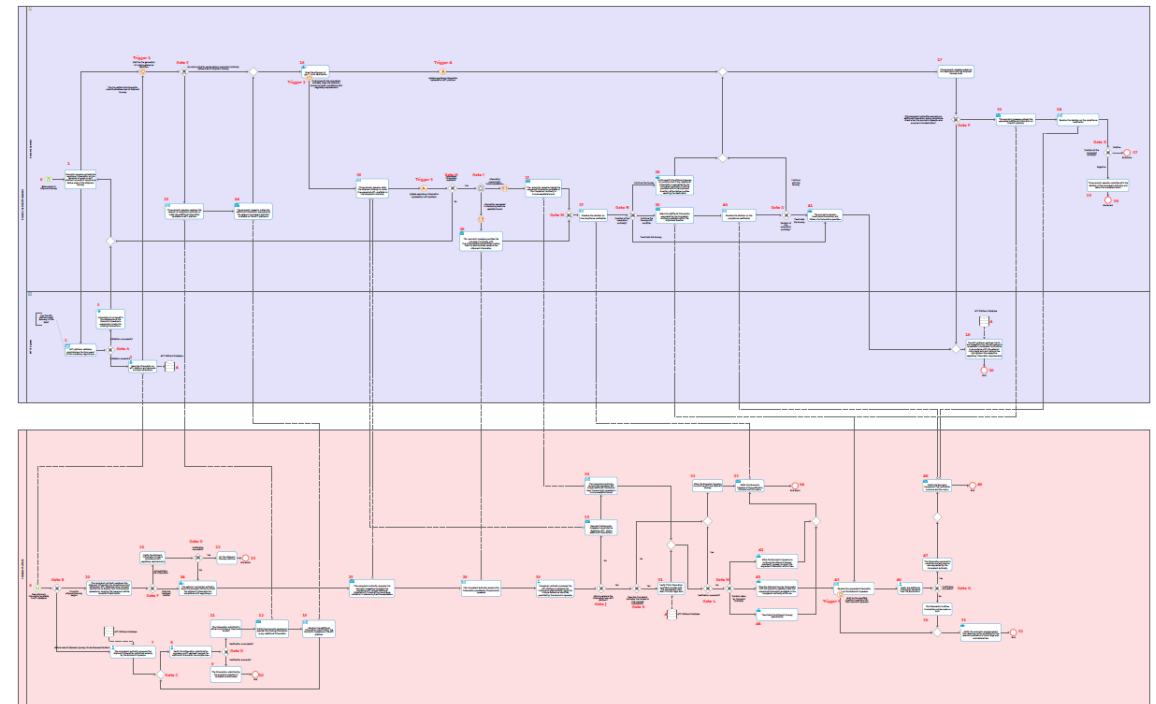
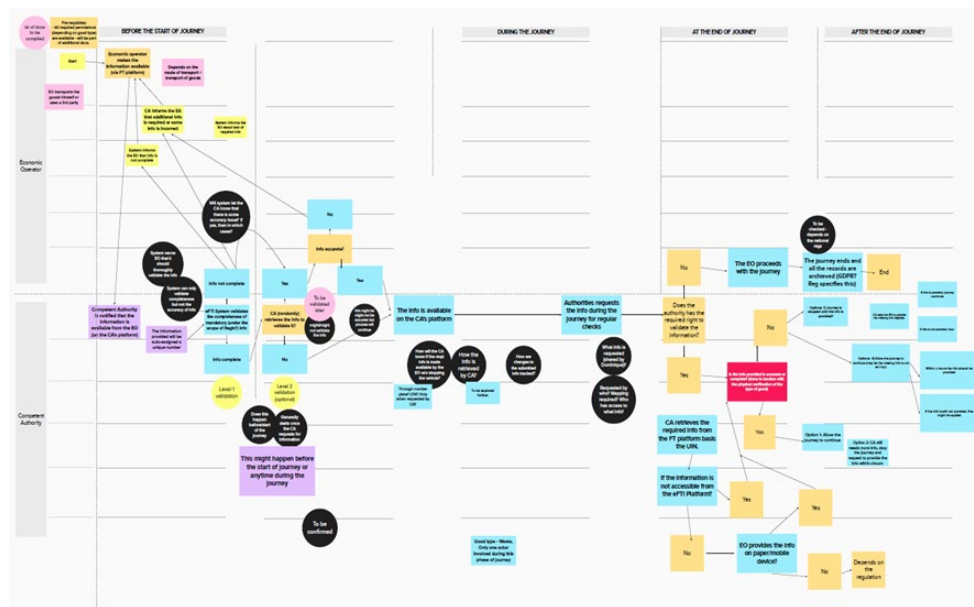
- EU Business Process Modelling (EU BPM)

Key milestones



The Generic Business Process Model (gBPM)

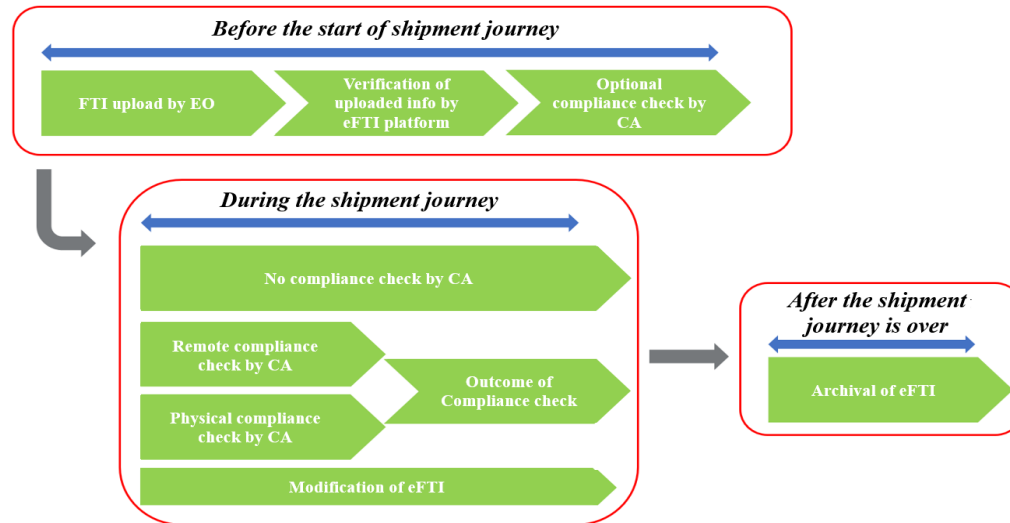
- The BPM provides a visual representation of how economic operators shall make the regulator freight transport information available to the competent authorities and how relevant authorities shall access that information.
- The high-level, generic* [Business Process Model](#) was developed taking into consideration all relevant functional aspects. Based on the inputs received from Team 2 experts,



* Generic means that for certain good-types like dangerous goods and waste shipment, a different variation of the process flow might be required.

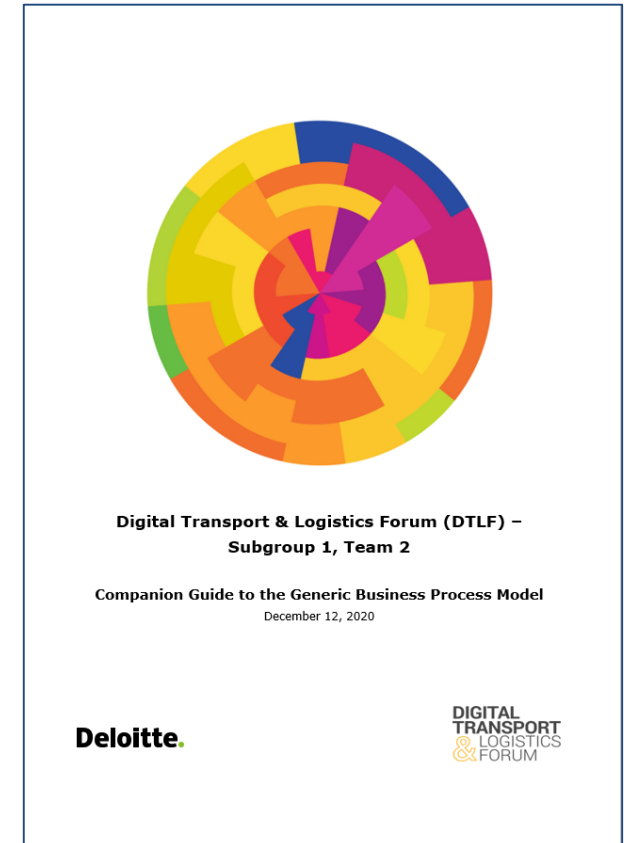
The Reader's Guide to the gBPM

- The '[Reader's Guide](#)' serves as a companion to the generic end-to-end business process model.
- Provides detailed explanation of different process flows, categorised into different phases of shipment journey – before, during and after – to assist the reader to understand the model better.



Note: FTI – Freight Transport Information | EO – Economic Operator | CA – Competent Authority | eFTI – eFTI IT platform

- Neatly maps relevant Articles and Recitals from the eFTI Regulation with different functional specifications, based on which the generic BPM has been derived.

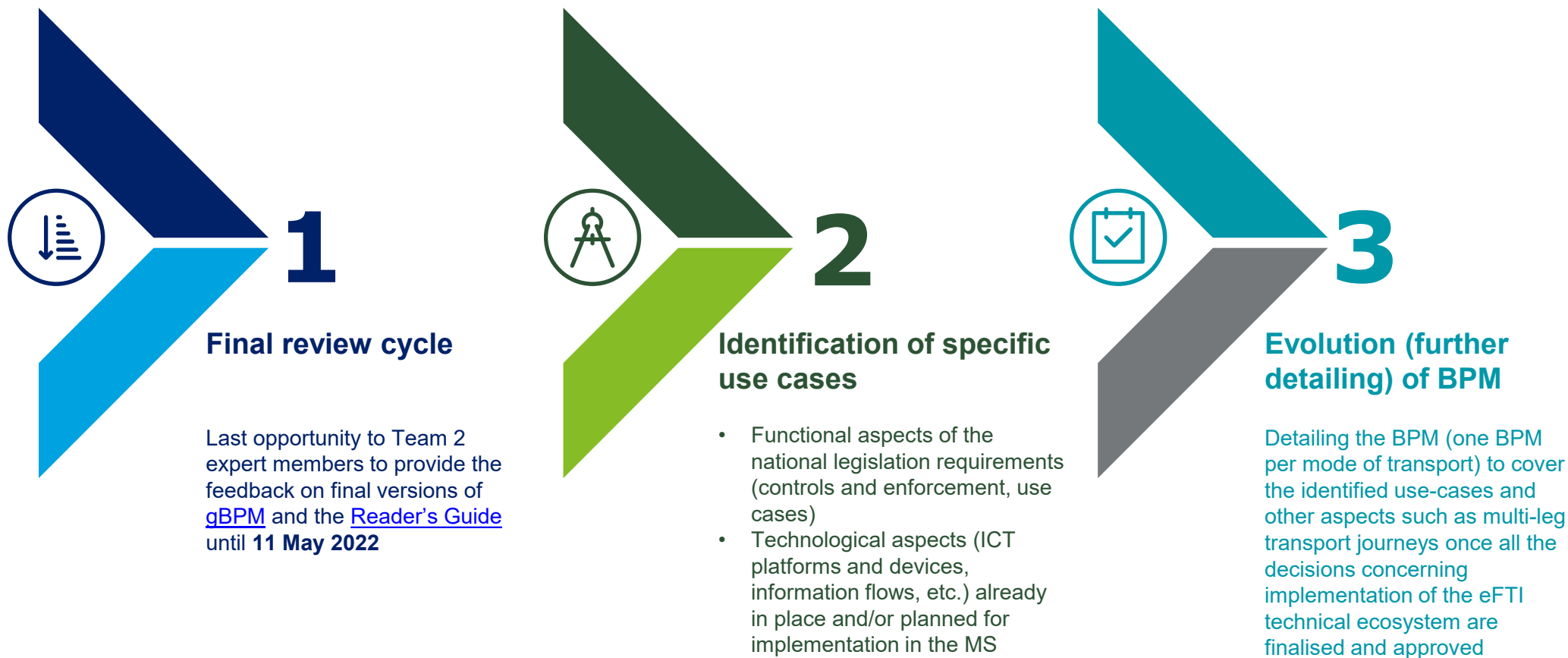


Cover page of the Reader's Guide (for representation purpose only)

Extensive Review of Deliverables

- Both the deliverables of Team 2 – gBPM and the Reader's Guide went through two review cycles
- A total of 193 comments were received on the second version of the BPM, focusing on a number of aspects such as
 - Access management
 - Data security and safety
 - Multiple-leg journeys
 - National access points
 - Access to data across borders
- The final version of the gBPM and the Reader's Guide have been updated based on all the feedback provided and will be shared for final round of feedback with relevant stakeholders (Team 2 experts)

Next Steps

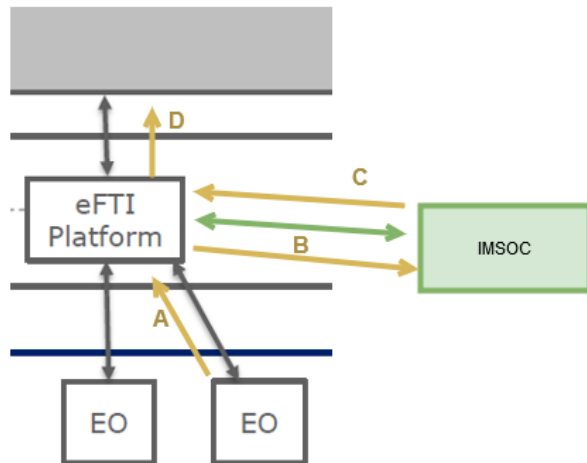


Team 2 - Functional WSR integration

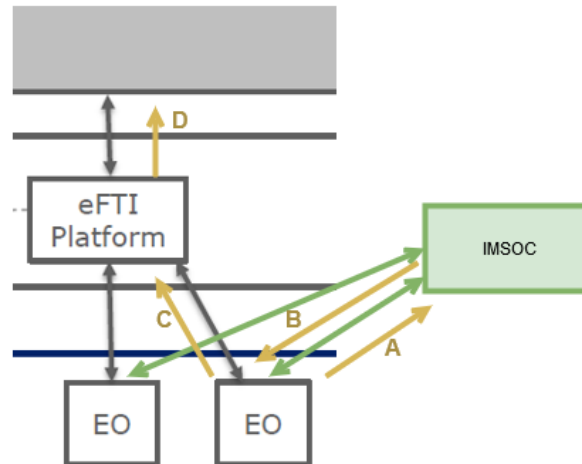
Felipe Fuentes Prior
European Commission
DG ENV

Recap: Option paper

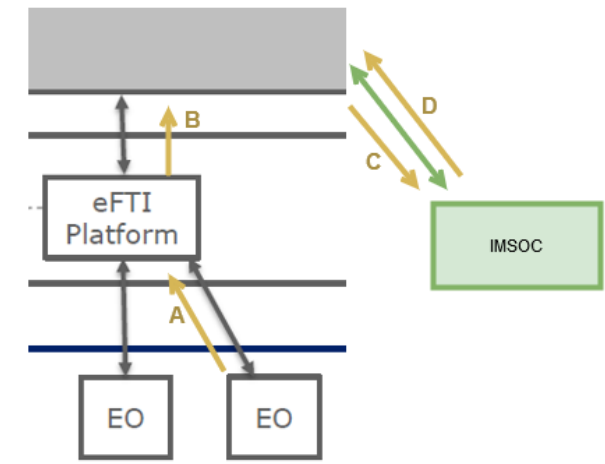
Option D.1



Option D.2



Option D.3



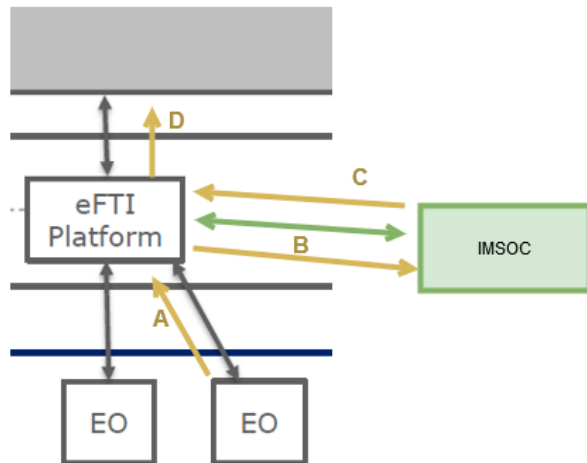
- The eFTI platform retrieves the 'complete' WSR information (dataset) from the IMSOC platform
- On the eFTI platform only a 'compact eFTI data instance', containing the 'WSR reference identifier', is uploaded
- A URI is assigned to this submitted data instance
- Upon a request from a CA Access Point, the eFTI platform then delivers this 'combined' (or expanded) eFTI data instance to it

- The 'complete' WSR information (dataset) specific to a WSR shipment, will be retrieved and processed by the EO software solution and uploaded to the eFTI platform
- The eFTI platform then delivers this 'combined' (or expanded) eFTI data instance to any CA Access Points that requests it

- A 'compact eFTI data instance', containing a 'WSR reference identifier' is uploaded by the EO to the eFTI platform
- The CA Access Point first submits a request to the eFTI platform, fetching the WSR reference identifier, together with other relevant eFTI data
- The Access Point submits the WSR reference identifier, and in return IMSOC delivers the 'complete' WSR information
- To its users, the Access Point then provides access to the combination of the eFTI data and the complete WSR information retrieved from IMSOC

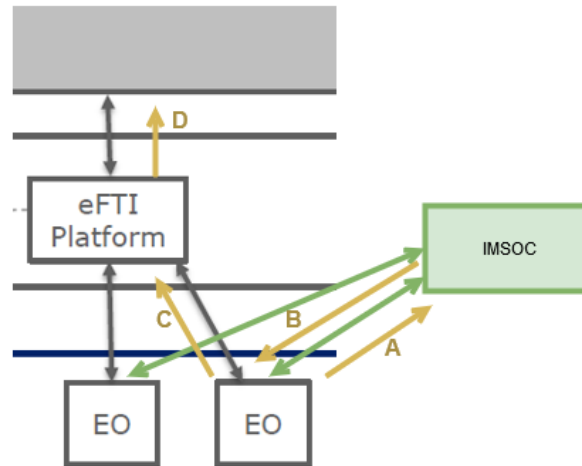
Recap: Option paper

Option D.1



✓ Adopted

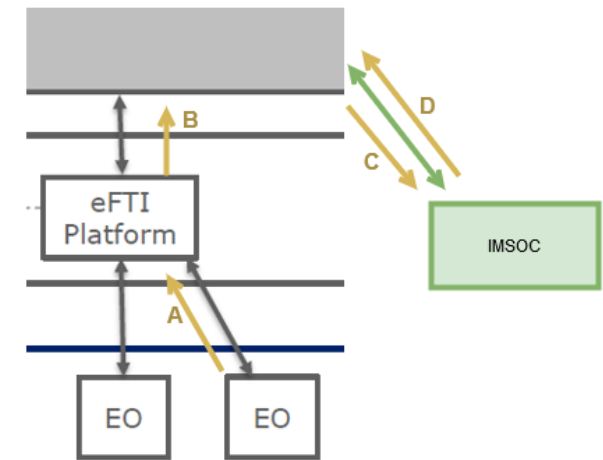
Option D.2



✗ Neglected:

- Does not fulfil the once-only principle
- Could turn out as a burden that deters carriers from switching to electronically handling freight transport information
- Highest overall cost and complexity
- Risk of business processes dilution

Option D.3

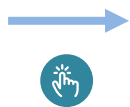
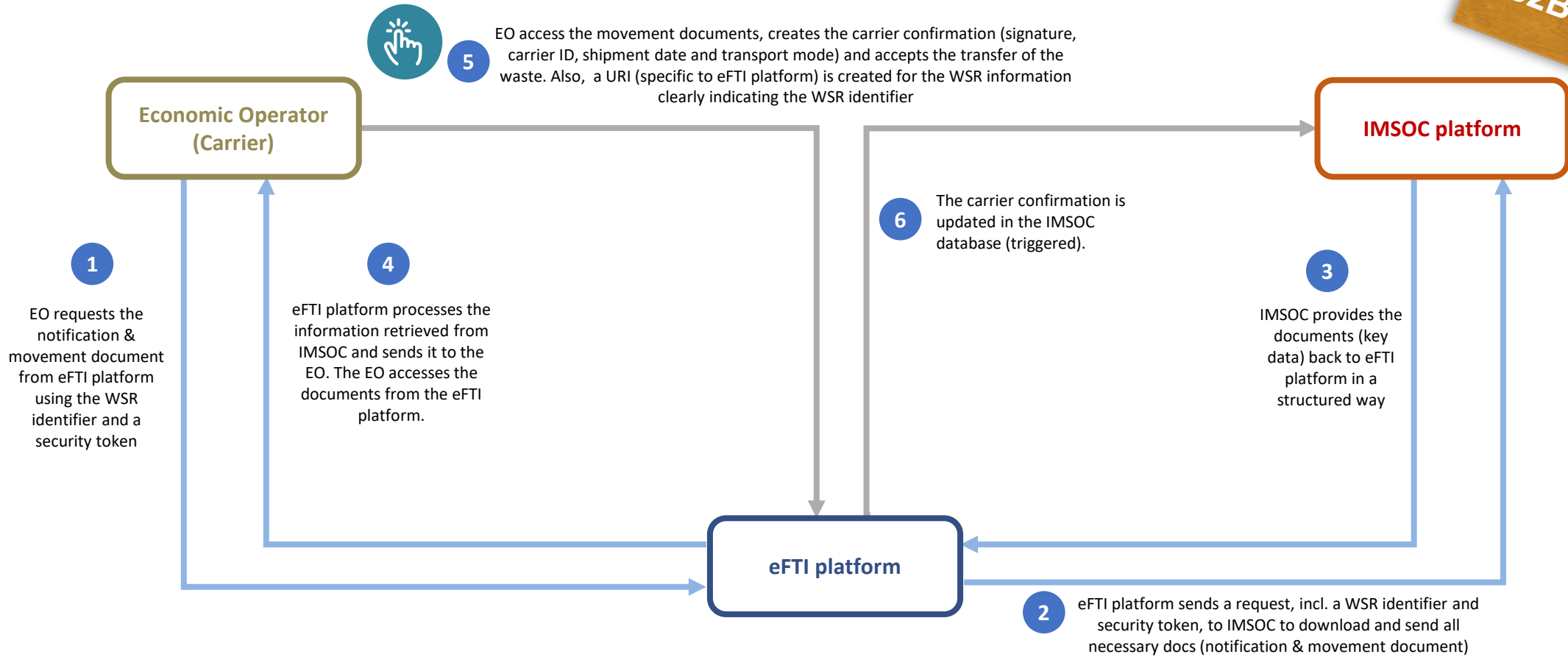


✓ Partially adopted:
✗ As hybrid version with option D.1

Option D1

Carrier confirmation

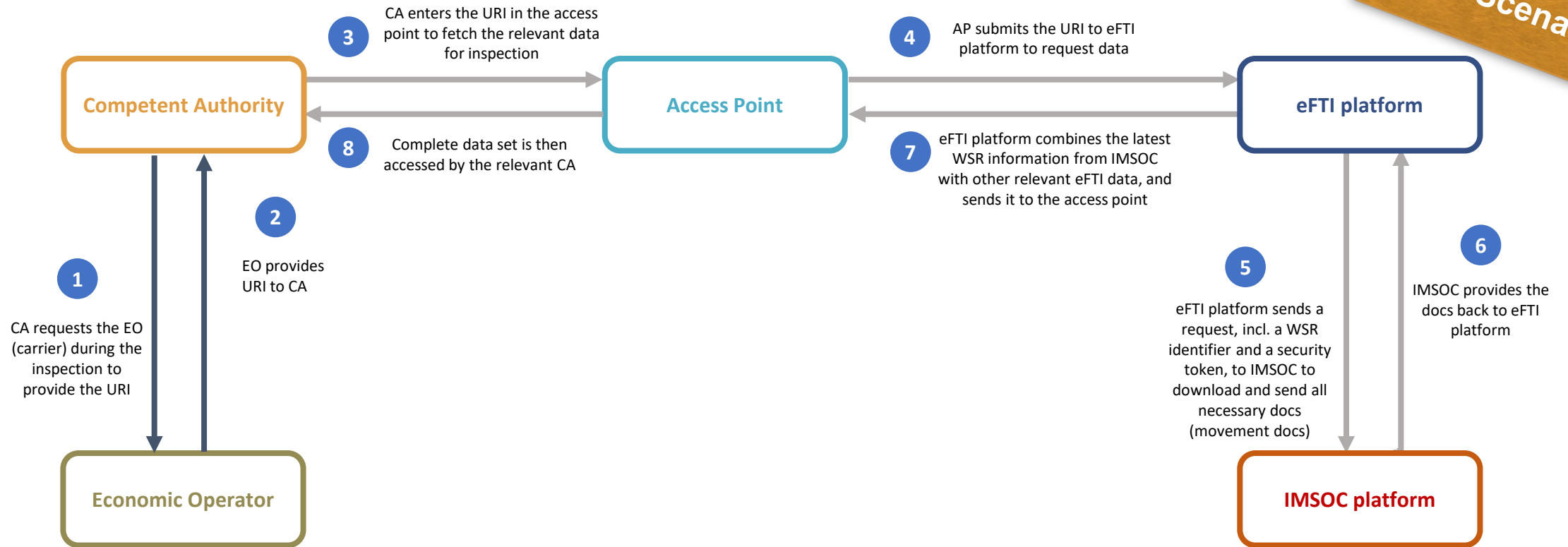
B2B Scenario



Option D.1

Access of Waste Shipment Information from eFTI

B2A Scenario

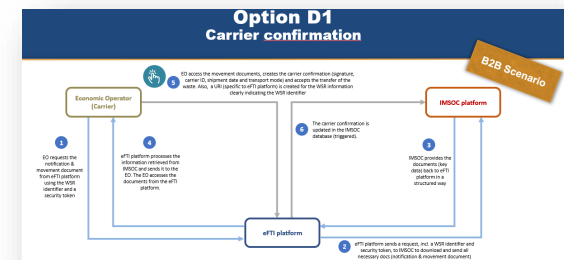
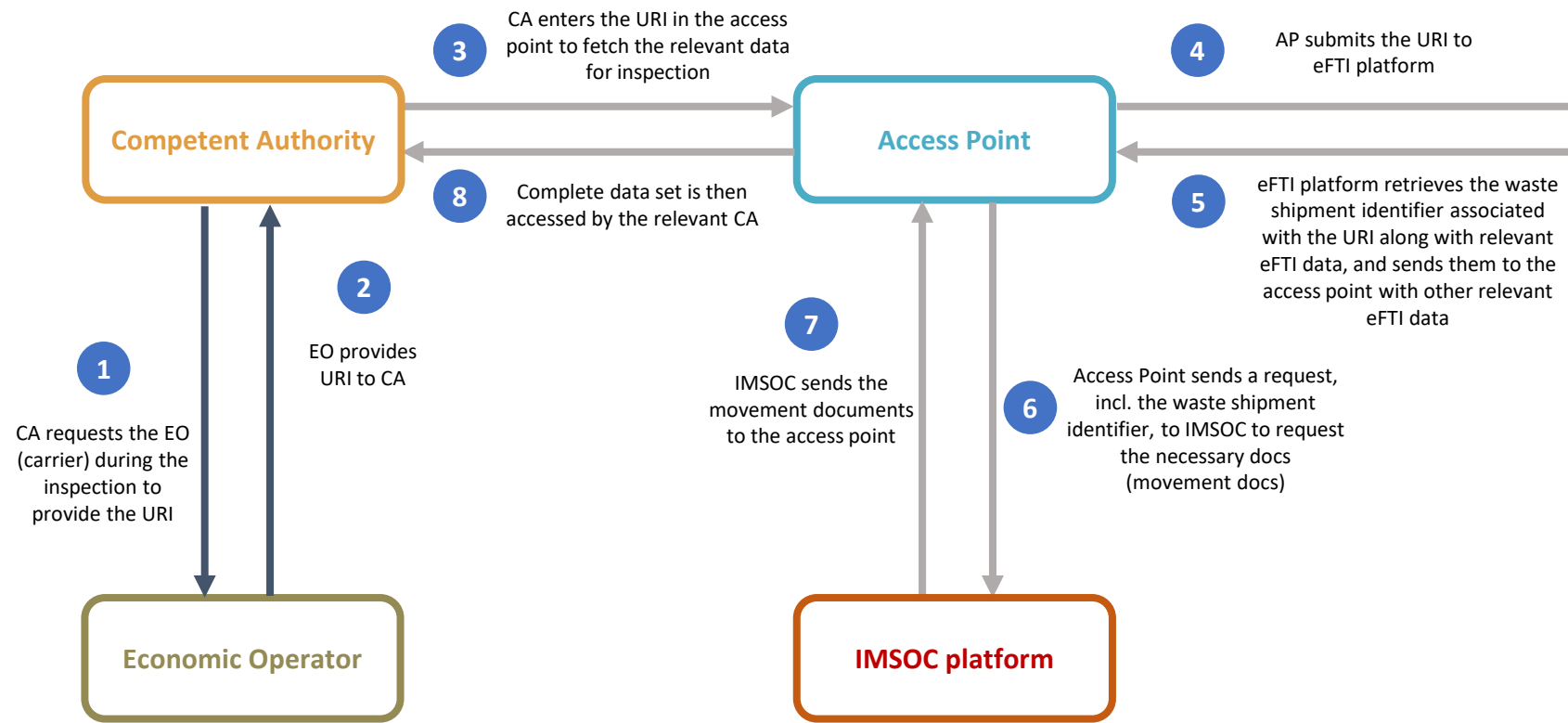


Note: It is necessary for eFTI platforms to support the data flows shown (as intermediate access)

Hybrid Option D.1 + D.3

Access of eFTI and Waste Shipment Information from Access Point

B2A Scenario



Note: Together with the carrier confirmation, this option is a combination of option D.1 & D.3

Hybrid Option D.1 + D.3

SWOT Analysis

STRENGTHS

- From an EO point of view respects the Once-Only principle (EO does not need to submit information to authorities that already has been submitted to authorities)
 - However: It can be argued that with this option the private sector is covering the implementation (costs) of the Once-Only principle by forcing eFTI service providers to implement respective functionality in eFTI platforms - see weaknesses
- Fulfils data consistency goal
- Fulfils uniformity of access goal, both from a user and a software perspective
- High reward, being a single place to get all the information even beyond eFTI
- Real-time, latest information is made available to the Access Point from IMSOC. As such, no considerations in terms of data retrieval upon changes/ modification to the WSR data set
- Distinguishes roles of parties (creation of information, preparation of information for inspections)
- EOs can choose from using individual B2B solutions or eFTI platforms for B2B
- Making information available on the eFTI platform could fulfil:
 - Provision of data for authority/inspection purposes
 - Provision of data to subsequent parties taking charge of a shipment

WEAKNESSES

- Additional functional requirement for eFTI platforms - may make eFTI platforms more costly
- It could be argued that in this option the private sector is covering the costs for implementation of the once-only principle, and that the administration should cover these costs instead
- This poses a high risk as it increases the complexity and criticality of the access point in the day-to-day work of CA
- Adds IMSOC as a single point of failure

OPPORTUNITIES

- Different EOs, such as carriers and notifiers, could "push" each other into working electronically - acceleration of the digitalisation process
- The following two can be combined:
 1. An eFTI platform requesting waste shipment information from IMSOC (data of category "A. Data prepared pre-shipment" as defined in WSR eFTI Introduction)
 2. An eFTI platform transmitting information to IMSOC (data of category "B. Data created during shipment by a carrier" as defined in WSR eFTI Introduction)

THREATS

Key outcomes on discussions with Member States

France

- France uses IMSOC for waste shipment information
- All notifications for exports have to be submitted by GISTRID - for imports, this is not the case
 - GISTRID is the main tool used to manage files and communicate with notifying bodies. It is a stand-alone solution that is not linked to IMSOC
- A third tool 'Trackdéchets' which is used for domestic transport of waste. This tool will be interconnected in the future to eFTI platform
- France has plans to connect GISTRID with IMSOC and Trackdéchets to eFTI platform
- France envisions to have a national access point (NAP) and control authorities will connect to these NAPs to access the regulatory information to perform controls

Austria

- Austria has a domestic fully EDI for domestic waste shipment
 - It will not be integrated with IMSOC and include any domestic WS information
- Austria wants to have NAPs for authorities, which should be a regular part of the eGov infrastructure

Germany

- Germany has 30 Competent Authorities but most important are the Länder ministries
- For provisions in the Waste Shipment act, they need to contact the respective Competent Authority
- Bigger companies use commercial software to handle the Waste Shipment information
 - Further, there are pilot projects in progress
- Implementing the SDG Regulation is part of implementing the Online Access Act

Ongoing work and next steps

- Share the options paper for review
- Coordination with Team 3
 - Alignment with Architecture options
 - Structure of the **Unique Reference Identifier (URI)**
 - ❑ The structure could be: [xxx]-[xxxxx]-[xxx]-[xxxxx]
 - ❑ The security token could also be part of the URI
- Coordination with Team 1
 - What data ?
 - How to integrate the WSR data requirements into the eFTI DR ?

Team 3 - Technical

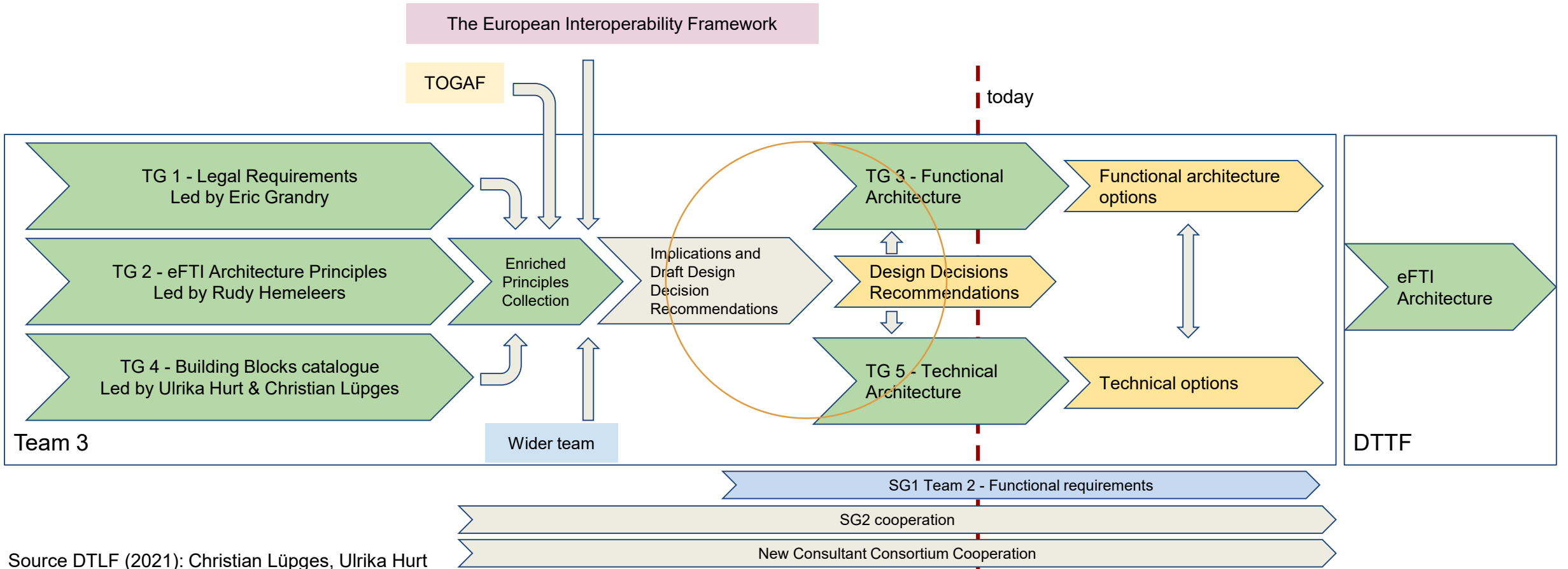
**Rudy Hemeleers, Ulrika Hurt,
Christian Lüpkes**
Team leaders

Roberto Garcia Escallon
Technical support
Deloitte

Agenda

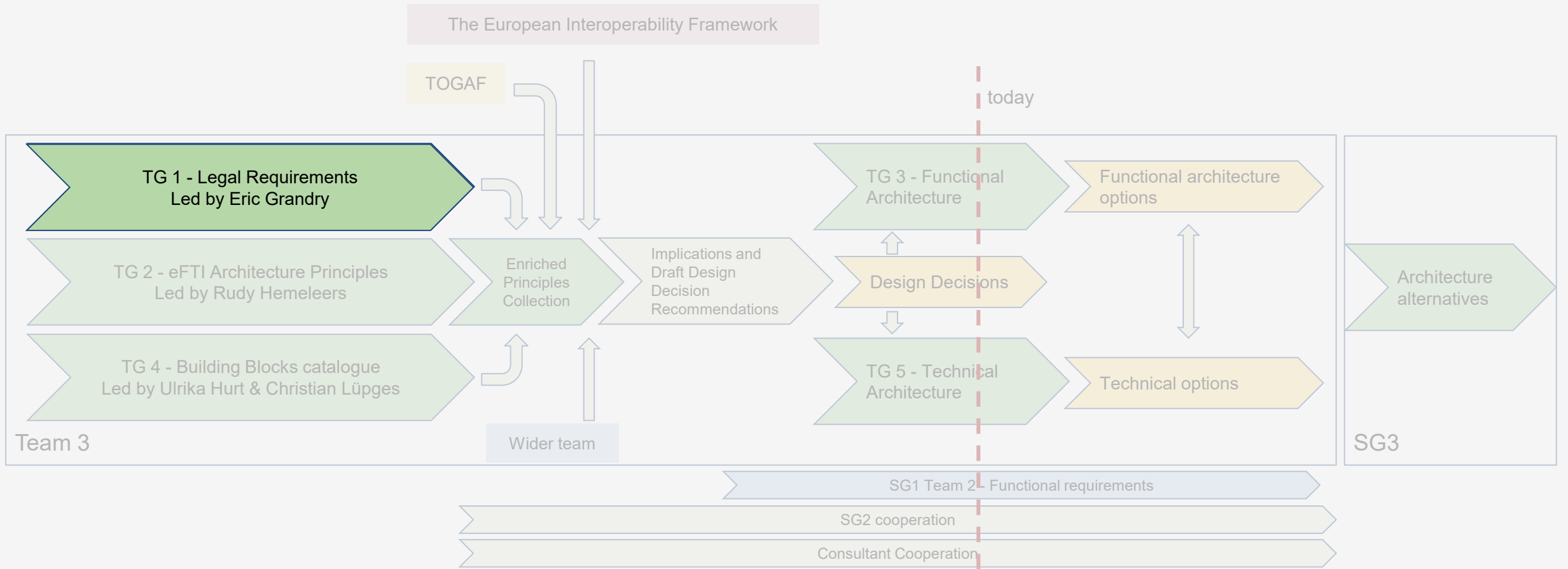
1. State of play update
2. Architecture Principles
3. Design Decision Recommendations
4. Architecture Options
5. Discussion

Recap



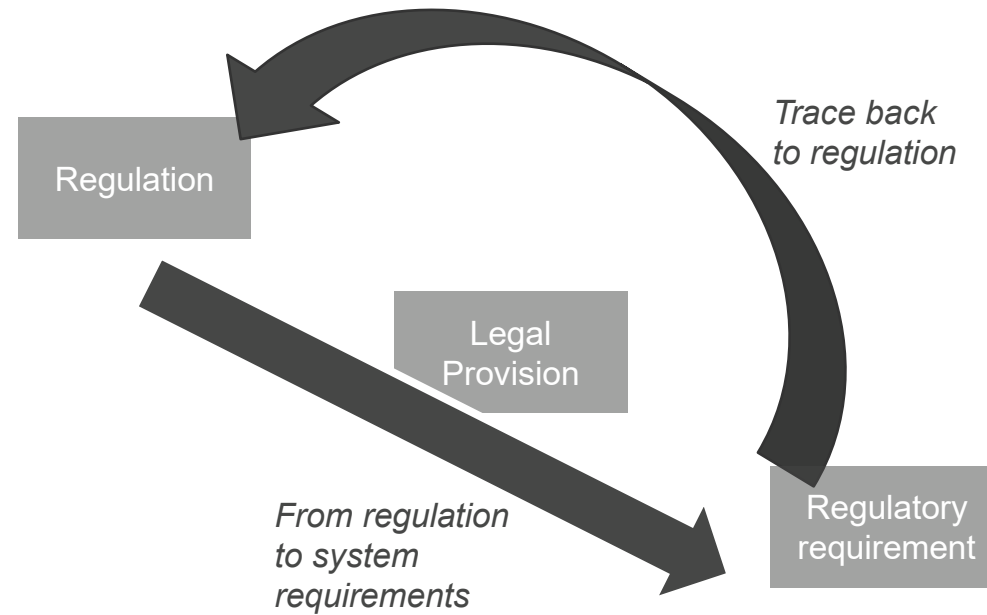
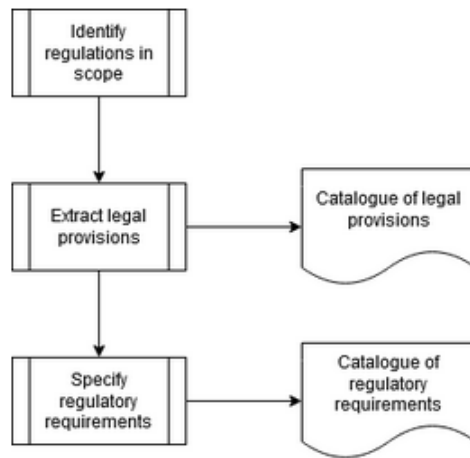
Work so far

Team3 TG1 Results



Requirements analysis

Internal process and deliverables



Requirements elicitation

Regulatory requirements

The requirements are analysed according to the quality attributes they contribute to. The quality attributes are defined in ISO/IEC 25000 system quality model (Functionality, performance efficiency, IOP, security, reliability, usability). As information security is crucial (confidential information shared amongst high number of actors), the usual CIA concerns (Confidentiality, Integrity, Availability) are completed according to the Reference model of Information Assurance and Security (RMIAS, Cherdantseva 2013) with the following concerns: Privacy, Non-Repudiation, Auditability, Accountability, Authenticity & Trustworthiness.

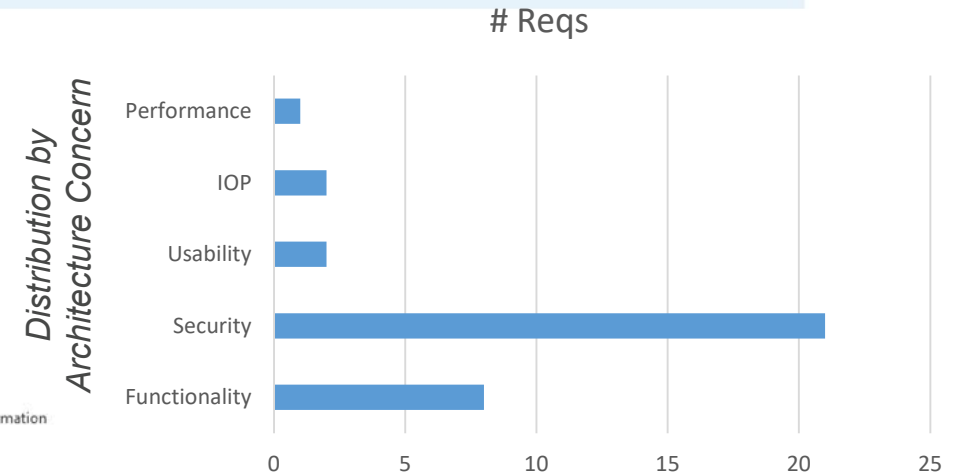
The status of each requirement reflects the work progress:

- identified: the requirement is specified
- rejected: the requirement is either not relevant from an architecture perspective, or included in another requirement
- consolidated: the requirement is consolidated in another requirement
- specified: the requirement is final in its specifications

Regulatory-Requirements-list

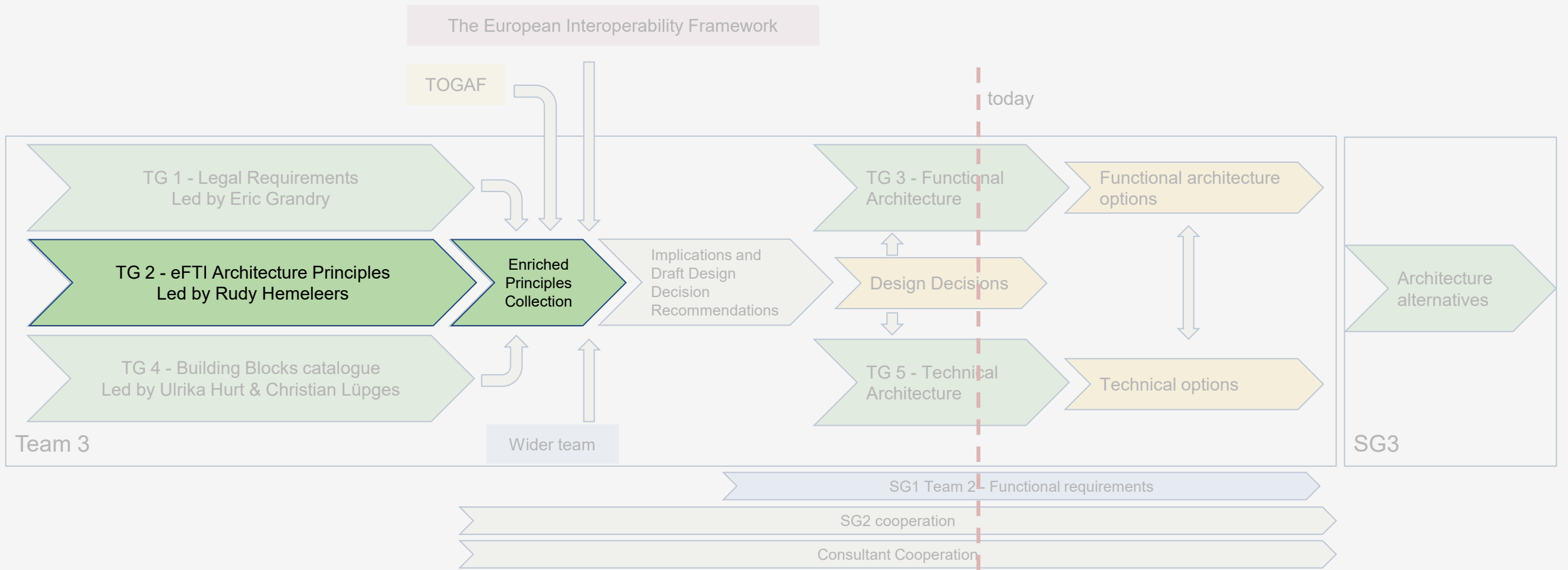
✓ Name	Requirement	Quality attribute	Analysis
✓ Machine readable RI	... The eFTI Service Provider must make electronic regulatory information available to the Competent Authority in machine readable format	IOP	
Human readable RI	... At the request of the competent authority, the economic operator concerned makes regulatory information available in human-readable format	Usability	
Certified eFTI Platform	... The regulatory information made available electronically by the economic operator to the competent authority is based on data processed on a certified eFTI platform	Security	
Communication of unique eID	... The economic operators shall communicate the unique electronic identifying link that uniquely identifies the regulatory information related to the shipment	Functionality	
Electronic device	... Information in human-readable format requested by competent authorities shall be made available on the spot, on the screen of an electronic device owned by the economic operator concerned	Usability	
Official stamp	... Where regulatory information required includes official validation, such as stamps or certificates, the respective authority shall provide that validation electronically	Security	
Confidentiality of information	... Competent authorities, eFTI service providers and the economic operators concerned shall ensure the confidentiality of information that is processed and exchanged	Security	Commercial information and any other information
Authorized access to information	... Competent authorities, eFTI service providers and the economic operators concerned shall ensure that information may be accessed only when authorised	Security	

34 Requirements

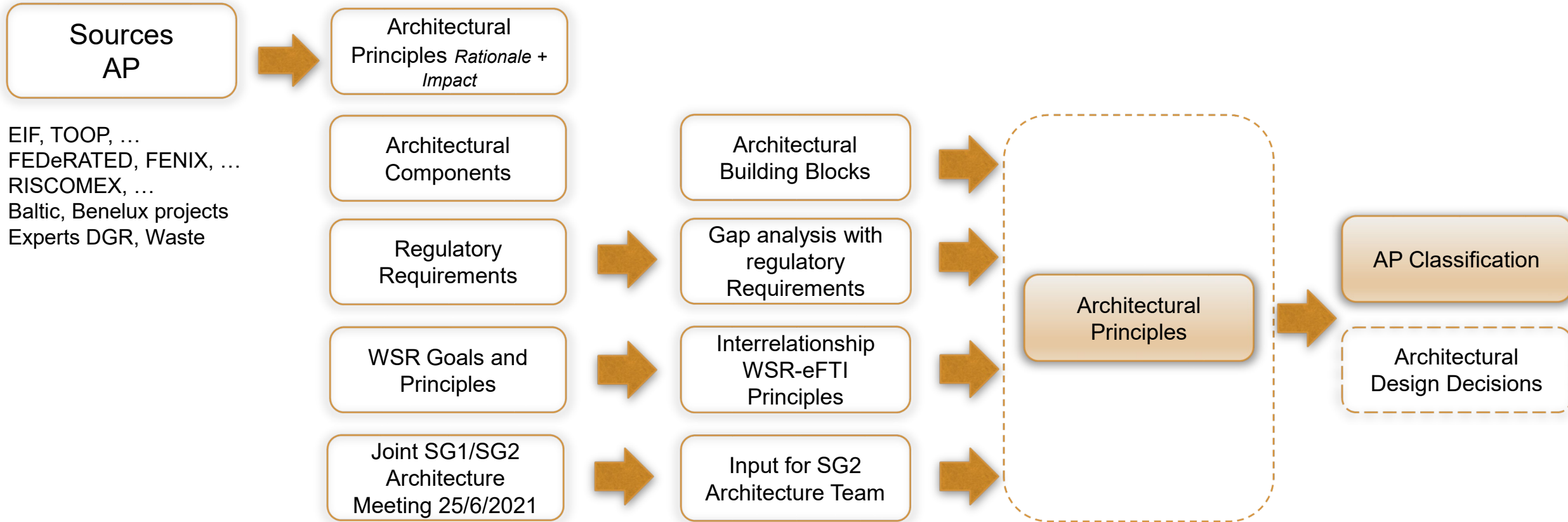


Architecture Principles

Team3 TG2 Results



Architectural Principles



eFTI Architecture Principles

Architectural Principles

P1 - Data is Shared at Source

P2 - Data Sovereignty

P3 - Decentralized Approach, Common Rules of Interaction

P4 - Trust, Non-Repudiation by Default

P5 - Security, Appropriate Authentication

P6 - Access and Rights

P7 - Once-Only

P8 - Open Specifications and Standards, Interoperability

P9 - Technology Independence

P10 - Easy Deployment, Integration and Transition

P11 - Support a Transition Period

General Architectural Principles

GP1 - Holistic Thinking

GP2 - KISS

GP3 - Scalability

GP4 - Modularity

GP5 - Maintenance and Development

GP6 - Sustainability

Example

Statement	<p>The eFTI exchange environment provides the participants with the ability to securely share access to data among each other, without the need to copy the data locally in their own systems or eFTI platforms in order to process it.</p> <p>When an economic operator makes the information available through their preferred (certified) eFTI platform, the competent authority can “pull” the information from that eFTI platform when needed and justified. Other economic operators in the logistics chain may also access and process the data subset(s) on the eFTI platform of their business partners, data subset(s) that they can also uniquely identify using the “pushed” metadata.</p>
Rationale	<p>The eFTI Regulation provides that the competent authorities be given access to data stored on the operators’ eFTI platforms, in accordance with the provisions of the legislation falling under the scope of the Regulation. For that purpose, the economic operators are required to provide the authorities a unique identification link to the eFTI data subset that constitute the regulatory information corresponding to the transport of a determined set of goods (shipment) (cf Article 5(3) and 9(1)(e)).</p> <p>Allowing data to be accessed and processed at source will avoid data duplication and lack of synchronization of updates managed locally in different eFTI platforms.</p>

- P1.1 The data is accessed at source/eFTI platform, “on demand”. Access to the data is created without a need for the operators to “push” the eFTI data.
- P1.2 The eFTI data (sub)sets corresponding to the transport of a specific set of goods (shipment) that are made available for access are uniquely identifiable through a unique identifying link (cf. eFTI Regulation). This in turn is built from metadata.
- P1.3 To enable the authorities to access the data, Logistics operators need to share (“push” or “publish”) the unique identifying link (and other metadata).
- P1.4 Authorities access information as datasets (eFTI subsets) through a “pull mechanism”, using the unique identifying link (and/or other metadata).
- P1.5 Authorities do not store (locally in their systems) the information that they “pull” from the certified eFTI platforms for longer than it is necessary to perform inspection duties, in accordance with the applicable rules.
- P1.6 Economic operators may also give access to the data subset(s) on the eFTI platform to their business partners, based on the same unique identifying link.
- P1.7.1 The eFTI exchange environment is based on a data exchange mechanism that: is optimized from a “pull” mode perspective, but also supports pushing (meta)data;
- P1.7.2 The eFTI exchange environment is based on a data exchange mechanism that: includes a data discovery mechanism based on unique identifying links/metadata that are pushed;
- P1.7.3 The eFTI exchange environment is based on a data exchange mechanism that: supports multiple access to the data by different parties based on single links/metadata.

Architecture Principles Recommendation Collection

Living document



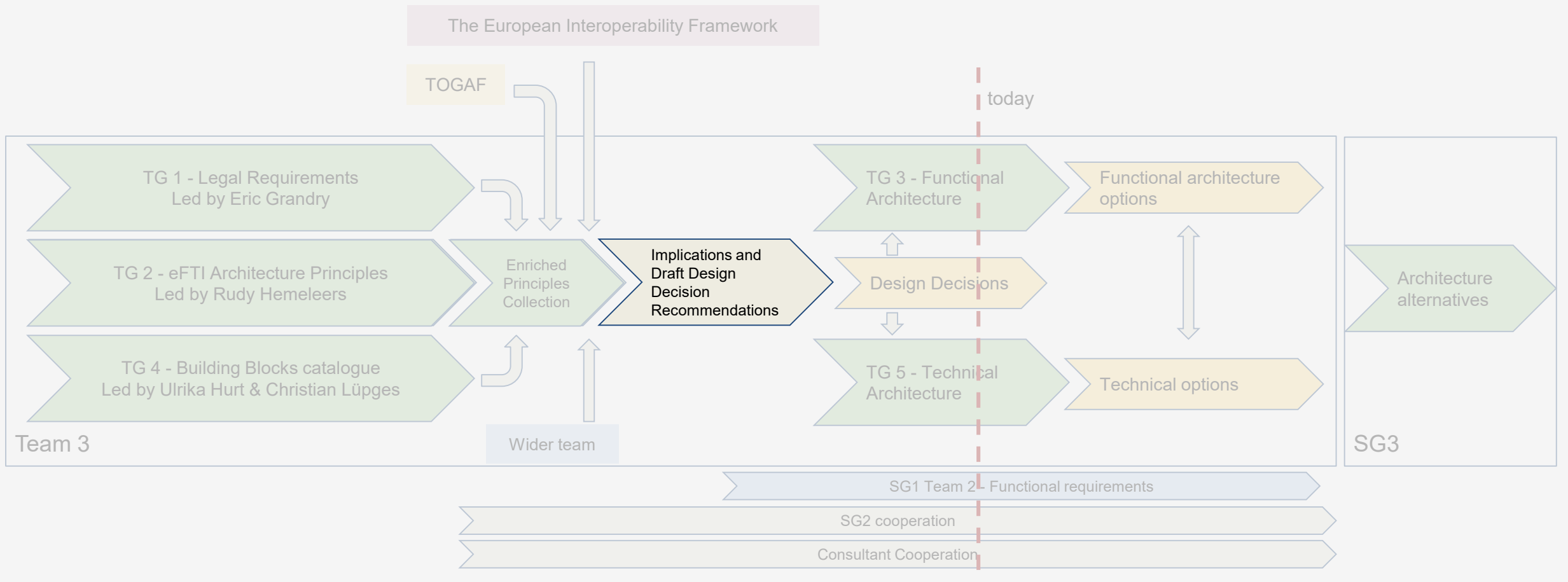
Stable version



https://sharepoint.dtlf.eu/SG1TechnicalAspects/Shared%20Documents/2.%20Task%20Group%20%20Architecture%20Principles%20Repository/Working%20Documents/eFTI_Architectural_Principles_V1.0_DRAFT_20220304.docx

Design Decision Recommendations

Team3 TG4 Results



eFTI Architecture Design Decision Categories

1 - Functional Structure

2 - Data Distribution/sharing and Data Attributes

3 - Data Access/Delivery

4 - Interoperability, Compatibility, Integration

5 - Authentication and Identification of Users

6 - Access Control

7 - Evidences and Logs

8 - Data Security, Cybersecurity

9 - Data Models, Semantics

10 - General IT aspects

11 - General Non-Functional Aspects

Source: DTLF (2021), SG1, Team 3 (U. Hurt, C. Lügges, R. Garcia Escallon)

Example

Match between implications and design decisions

P1.1	The data is accessed at source/eFTI platform, "on demand". Access to the data is created without a need for the operators to "push" the eFTI data.	3 - Data access/delivery	<p>The eFTI architecture requires</p> <ul style="list-style-type: none"> the implementation of the pull pattern for the eFTI data set also the implementation of the push pattern to indicate metadata (publicly available identifiers) on the transport and the unique link to the eFTI data set
P1.2	The eFTI data (sub)sets corresponding to the transport of a specific set of goods (shipment) that are made available for access are uniquely identifiable through a unique identifying link (cf. eFTI Regulation). This in turn is built from metadata.	2 - Data distribution/sharing and data attributes	<p>The eFTI architecture requires</p> <ul style="list-style-type: none"> a mechanism that identifies requested eFTI datasets (e.g. metadata registry) via publicly available identifiers (numberplate, ENI Number, rail wagon ID, container ID, etc.) By using the eFTI architecture economic operators agree by default to make the relevant eFTI data set available at an eFTI platform, which could be queried by authorities if necessary. eFTI architecture will include a service catalogue where data providers are listed
P1.3	To enable the authorities to access the data, Logistics operators need to share ("push" or "publish") the unique identifying link (and other metadata).	3 - Data access/delivery	<p>The eFTI architecture requires</p> <ul style="list-style-type: none"> the implementation of the pull pattern for the eFTI data set also the implementation of the push pattern to indicate metadata (publicly available identifiers) on the transport and the unique link to the eFTI data set
P1.4	Authorities access information as datasets (eFTI subsets) through a "pull mechanism", using the unique identifying link (and/or other metadata).	2 - Data distribution/sharing and data attributes	<p>The eFTI architecture requires</p> <ul style="list-style-type: none"> a mechanism that identifies requested eFTI datasets (e.g. metadata registry) via publicly available identifiers (numberplate, ENI Number, rail wagon ID, container ID, etc.) make these data available via links (unique URL/URI) <p>The eFTI architecture must ensure that</p> <ul style="list-style-type: none"> only authorised authorities can query eFTI data sets (access management).
P1.5	Authorities do not store (locally in their systems) the information that they "pull" from the certified eFTI platforms for longer than it is necessary to perform inspection duties, in accordance with the applicable rules.	3 - Data access/delivery	<p>The eFTI architecture cannot support this implication by design.</p> <p>The eFTI platform:</p> <ul style="list-style-type: none"> shall grant access to the eFTI dataset for at least an active transport Also should be correlated with regulation: do also data on an inactive transport need to be available
P1.6	Economic operators may also give access to the data subset(s) on the eFTI platform to their business partners, based on the same unique identifying link.	2 - Data distribution/sharing and data attributes	See below
P1.7.1	The eFTI exchange environment is based on a data exchange mechanism that: is optimized from a "pull" mode perspective, but also supports pushing (meta)data;	3 - Data access/delivery	<p>The eFTI architecture requires</p> <ul style="list-style-type: none"> the implementation of the pull pattern for the eFTI data set also the implementation of the push pattern to indicate metadata (publicly available identifiers) on the transport and the unique link to the eFTI data set
P1.7.2	The eFTI exchange environment is based on a data exchange mechanism that: includes a data discovery mechanism based on unique identifying links/metadata that are pushed;	3 - Data access/delivery	<p>The eFTI architecture requires</p> <ul style="list-style-type: none"> a discovery model for the eFTI datasets metadata that can hold links to other services (DG, WH, other modes) with a unique URL/URI <p>The eFTI data set requires</p> <ul style="list-style-type: none"> defined data fields which can include links to additional data that are not required by eFTI itself. A type of a dedicated link slot (list of possible external link types) needs to be discussed (dedicated fields to further information)
P1.7.3	The eFTI exchange environment is based on a data exchange mechanism that: supports multiple access to the data by different parties based on single links/metadata.	3 - Data access/delivery	<p>The eFTI platform should allow data access to multiple parties using the same unique identifying link.</p> <p>Access logs will include both access requests and every reading of the data</p>

Example

DDR* validation and Indication on the "target"

Principle nr	Implications nr	Implications	Categories for decisions	Design recommendation	Req. for Ecosystem (all)	Req. for EO	Req. for eFTI platform	Req. For CA	Req. for AP	Req. for governing body
P2	Data Sovereignty	P2.2	A data holder must be able to identify the subsets of eFTI data to which they will share/allow access, as well as to whom this access is allowed (Principle 3: Decentralized Approach, Common Rules of Interaction).	06 - Access Control	"The eFTI platform architecture requires <ul style="list-style-type: none"> • To enable the owners of the data to control who can access it – only those enabled should be allowed to read it (e.g. permission for authorities on a route) • The access of the data should be based on Public-Key-Infrastructure so only the specified targets get access to it 		<ul style="list-style-type: none"> • Art. 9 1. (c) , (d), (f), (h) are relevant at this stage. • Art. 4 2. states that "where the economic operators concerned make regulatory information available electronically to a competent authority, they shall do so on the basis of data processed on a certified eFTI platform" • Art. 4 3. states that "information in machine-readable format shall be made available via an authenticated and secure connection to the data source of an eFTI platform." • In comparison to the implication, it is not stated that EOs are able to restrict the access to eFTI datasets on an eFTI platform for CAs 			
P2	Data Sovereignty	P2.3	The eFTI architecture must allow the carrier (as data holder, and data subject required by the EU legislation falling under the eFTI scope to make the transport information available to authorities) to grant or revoke access to the eFTI datasets related to the goods they are transporting and that can be physically located in	06 - Access Control	The eFTI platform requires <ul style="list-style-type: none"> • to have the latest eFTI data set accessible. The appropriate data should be collected and kept at the eFTI platform • by "at source" the original location of the data in the Enterprise Resource and Planning 		eFTI platform should be able to provide both, the latest eFTI data set valid for a transport (not directly mentioned in the regulation), but also archived eFTI datasets. The latter is acc. to Art. 9			
P3	Decentralized Approach, Common Rules of Interaction	P3.1	Need for functional and/or technical rules that ensure that the participants to the eFTI exchange environment can know and trust each other. (See Principle 4: Trust, Non-Repudiation by Default	01 - Functional structure	The eFTI architecture requires <ul style="list-style-type: none"> • a distributed network of access nodes • defined communication rules between the access nodes among themselves and between access nodes and eFTI platforms • eFTI platforms need to register at an access node 	The design recommendations should be respected at this stage and have their origin or have been proven e.g. in the eDGTI architecture				

Updates and next steps

- Revisiting regulatory provisions
- Validate design decisions recommendations against specific articles
- Indication on the "target" of the possible requirement deriving from the recommendation (e.g. EO, eFTI Platform, CA, ...)

Architecture Options

Antonio Molinari
Technical support
Circle

**Support for the implementation of
EU Regulation 2020/1056 on
Electronic Freight Transport Information (eFTI)**

**DRAFT Functional architecture options for
the EFTI Exchange Environment**

Presentation to DTLF SG1 on 27 / 04 / 2022

TASK 1

To collect relevant information in order to draft a complete list of the regulatory information requirements in the EU and national legislation.

TASK 2

Propose alternative scenarios for the architecture, rules and procedures for the functioning of the EFTI Exchange Environment and subsequently develop in detail the preferred option.

Tasks are executed in close cooperation with DTLF (mainly SG 1 Team 3)



Identification and comparison of Functional Architecture Options

Document Structure

The document is divided into 5 sections:

1. Functional architecture
 - Leading principles
 - General principles
 - Design decisions recommendations
2. Components descriptions
3. Components implementation options
4. Actions by the Competent Authorities and the Economic Operators
5. Scenario proposal

Main EFTI exchange environment components

LEGALLY REQUIRED

- eFTI Platform
- Communication network enabling electronic data exchange

PROPOSALS FOR NEEDED FUNCTIONALITY

1. *Identification, Authentication & Authorization mechanism(s)*
2. *Access Point (AP) and/or National Access Point (NAP)*
3. *Search mechanism (including UUID)*
4. *Update dispatch mechanism*

Access point (AP) &/or National Access Point (NAP)

- ❖ **The AP** provides the Identification, the Authentication and Authorization mechanism for the competent authorities (CA) which **allows access and interaction** with the eFTI exchange environment
- ❖ **The NAP links the different AP at national level** and forwards the access request to the correct eFTI Platform inside the eFTI exchange environment.
- ❖ The NAP authorisation mechanism enables a **privileged access to the eFTI Platforms** to allow retrieving the eFTI Dataset for the CA.
- ❖ Depending on the **national needs**, AP and NAP can be combined or several can exist in parallel.

Search Mechanism (including UUID)

- ❖ The search mechanism allows the **search for a specific eFTI Dataset** inside the eFTI exchange environment and to **retrieve the eFTI Data** from the eFTI Platform where stored.
- ❖ This is not a mechanism to search for meta-data or for specific information inside the eFTI dataset.
- ❖ The search mechanism is based on a **Universally Unique Identifier (UUID)** for each eFTI Dataset. We propose two options:
 - A **URL**, that will enable to uniquely identify the EFTI Dataset inside the entire network (global approach).
 - A **Registry** where all eFTI Platforms must send the UUID generated for the eFTI Dataset with the reference of their own address (EFTI specific approach).

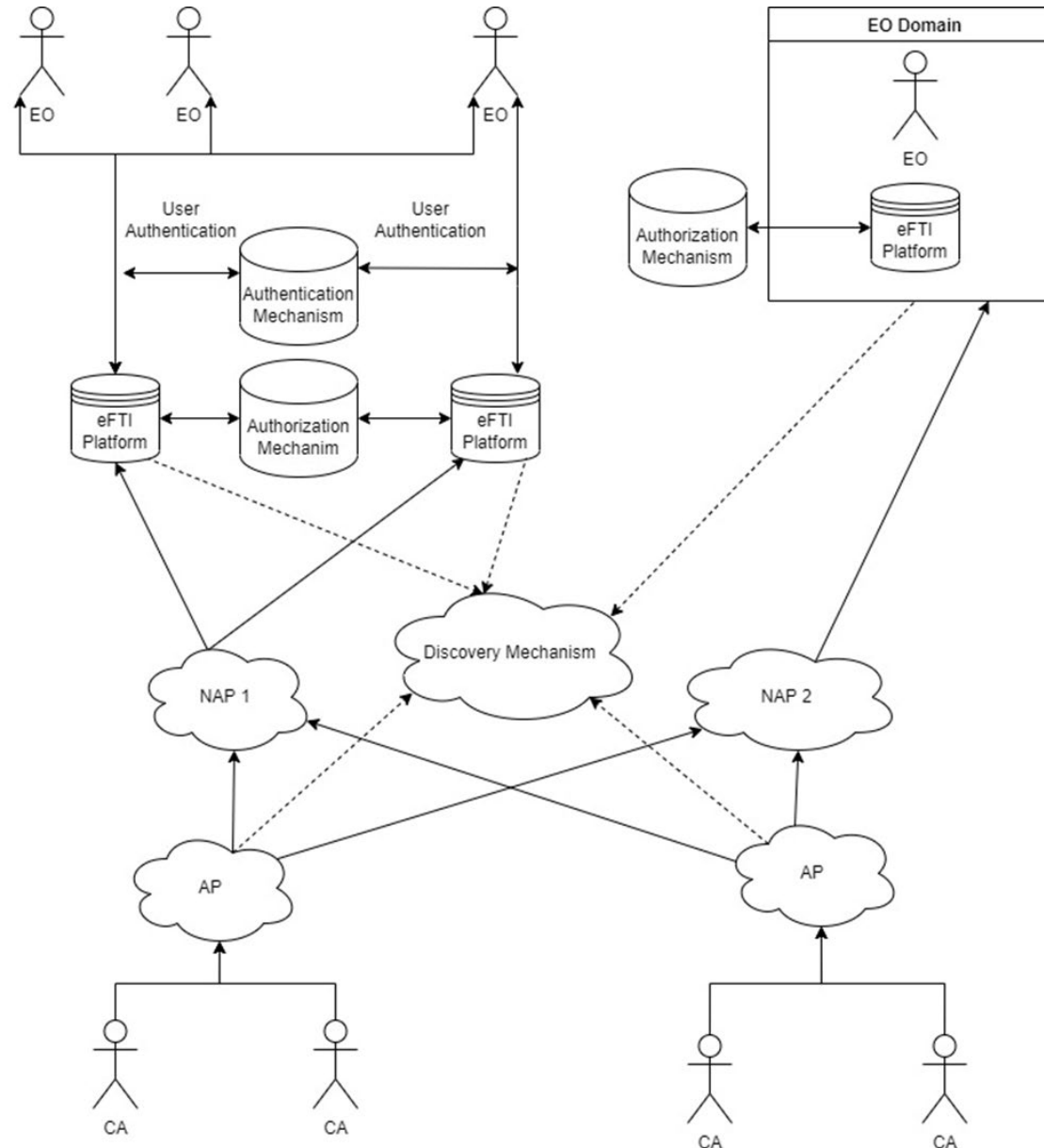
Update Dispatch Mechanism

- ❖ The **update dispatch mechanism** allows the actors to be notified in case a change happens to a specific eFTI Dataset after their subscription.
- ❖ Without this mechanism each interested actor, would need to keep requesting updates of the eFTI Dataset to have the latest information.

Alternative options currently under review and evaluation

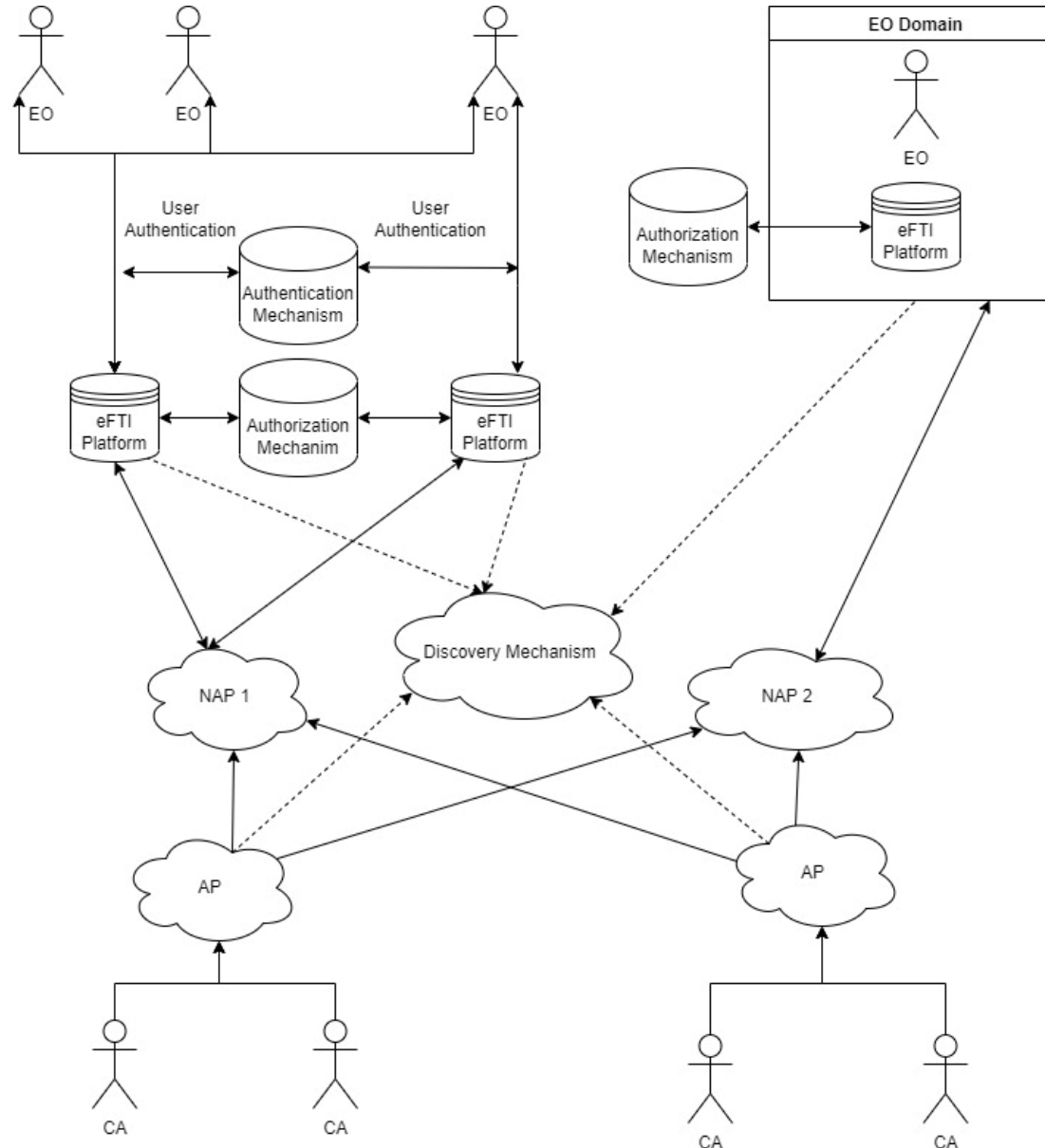
- Scenario 1 – NAP with Pull from CA
- Scenario 2 – NAP with Push Meta-data
- Scenario 3 – No Access Point
- Scenario 4 – Update Dispatch
- Scenario 5 – Share encrypted eFTI Dataset

Scenario 1 – NAP with Pull from CA



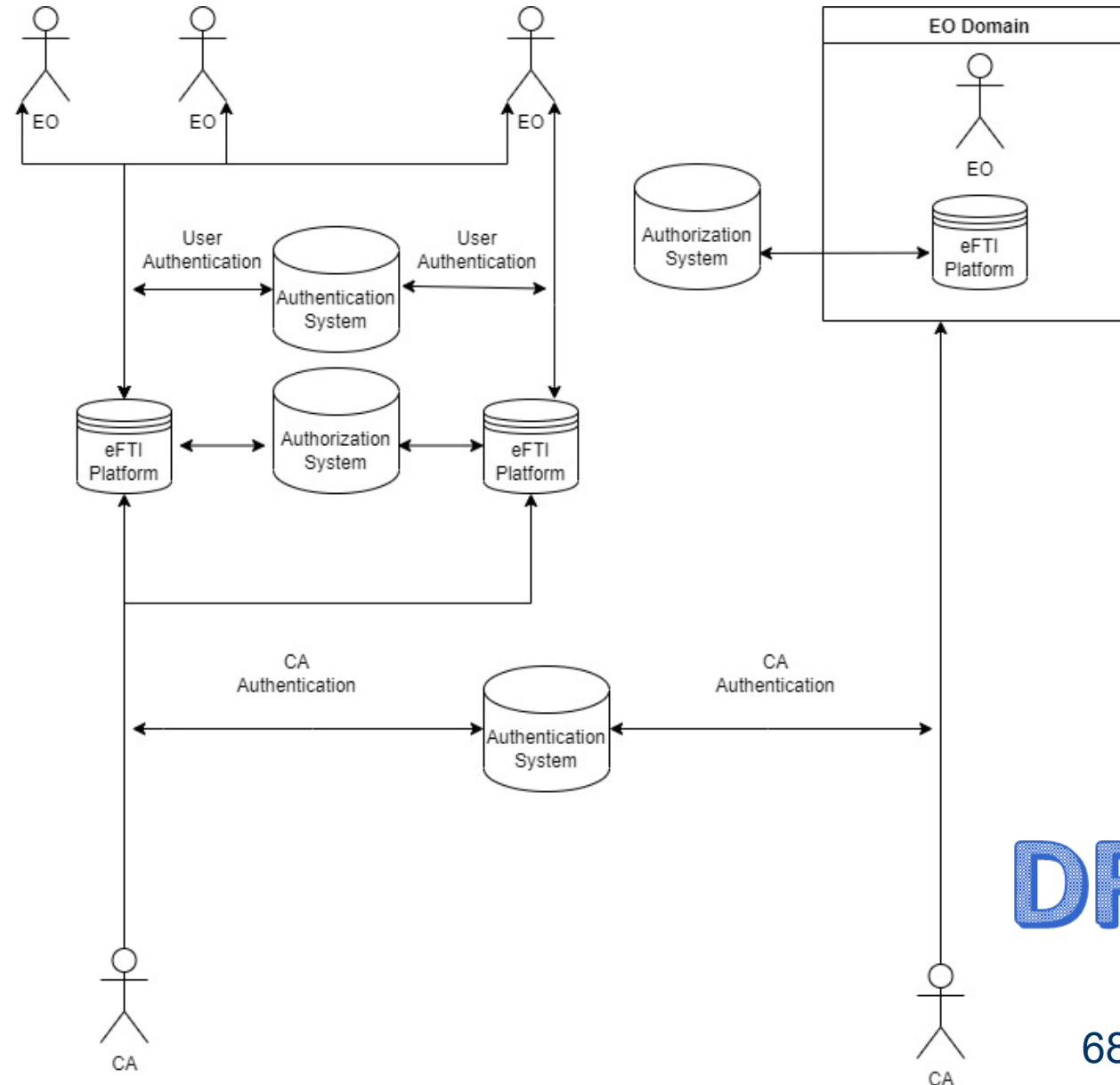
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Scenario 2 – NAP with Push Meta-data



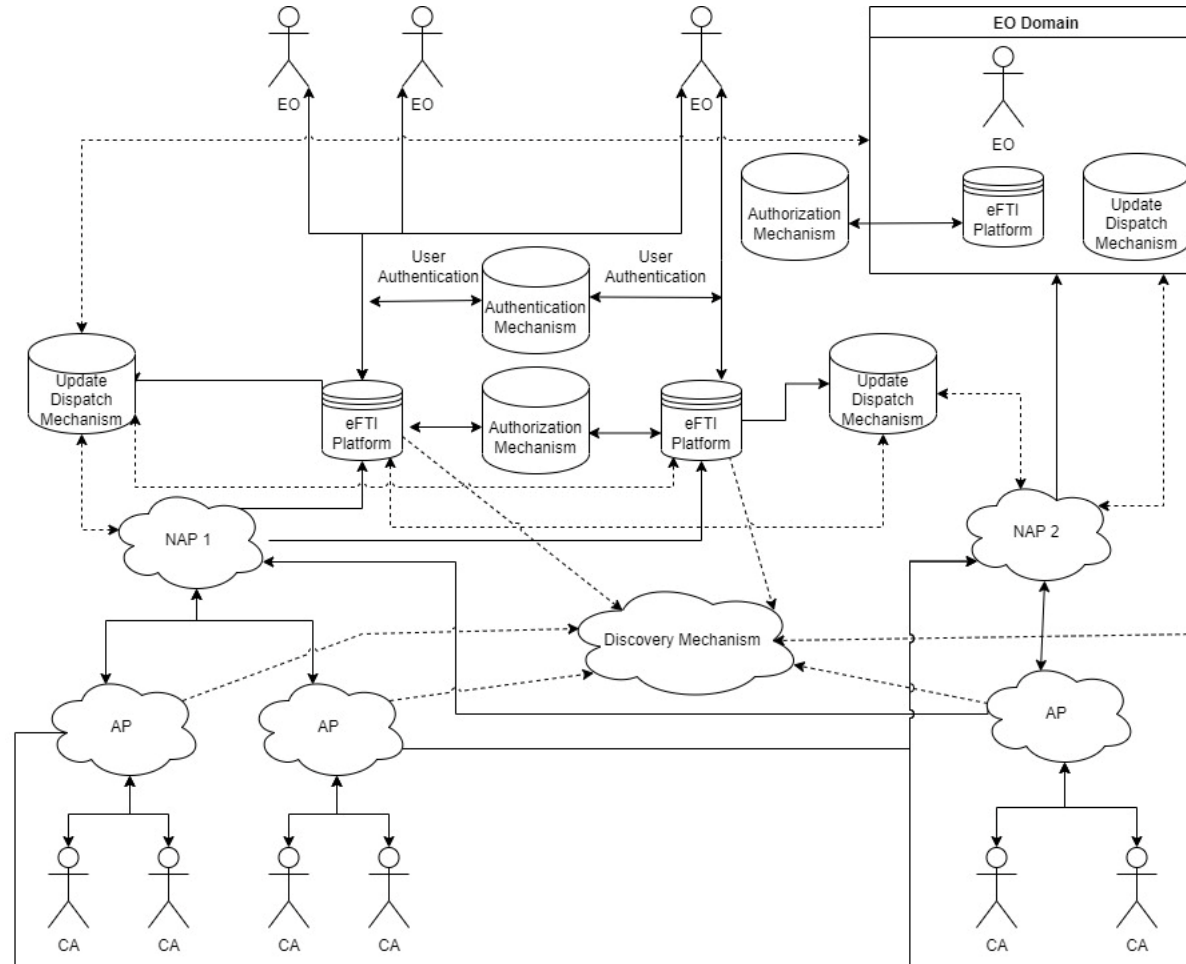
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Scenario 3 – No Access Point



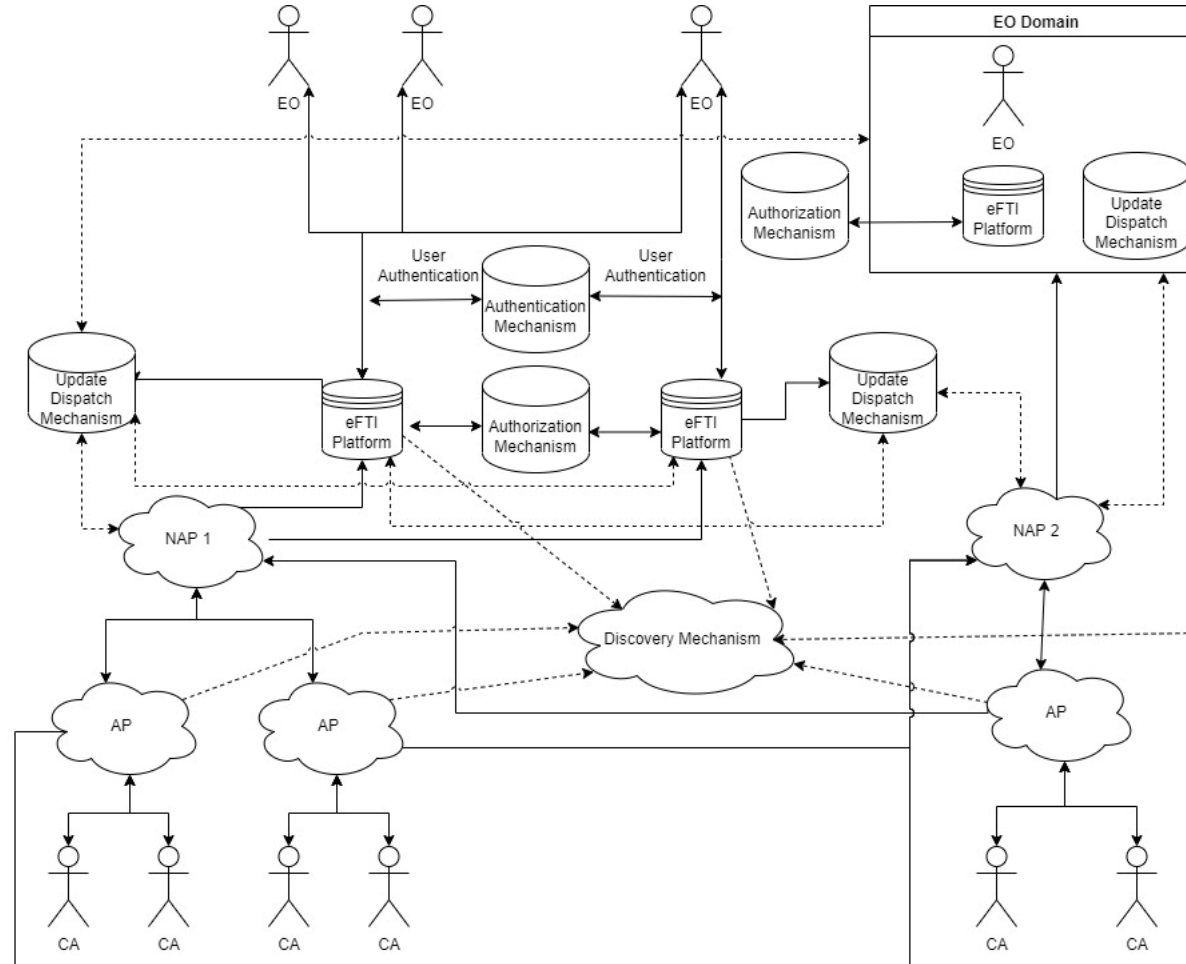
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Scenario 4 – Update Dispatch



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Scenario 5 – Share encrypt eFTI Dataset



DRAFT

1. Present the functional architecture document to the DTLF
2. Collect initial feedback from DTLF SG 1 Team 3 and update the functional architecture document (May 2022)
3. Discuss what is seen as the preferred scenario
4. Present the functional architecture document to the eFTI Committee and launch official review of the updated functional architecture document
5. Agree on preferred scenario to be used for further technical work
6. Develop a more detailed functional architecture document functional and technical specifications of the preferred implementation option in a business process modelling IT tool.

Thank you for your attention !

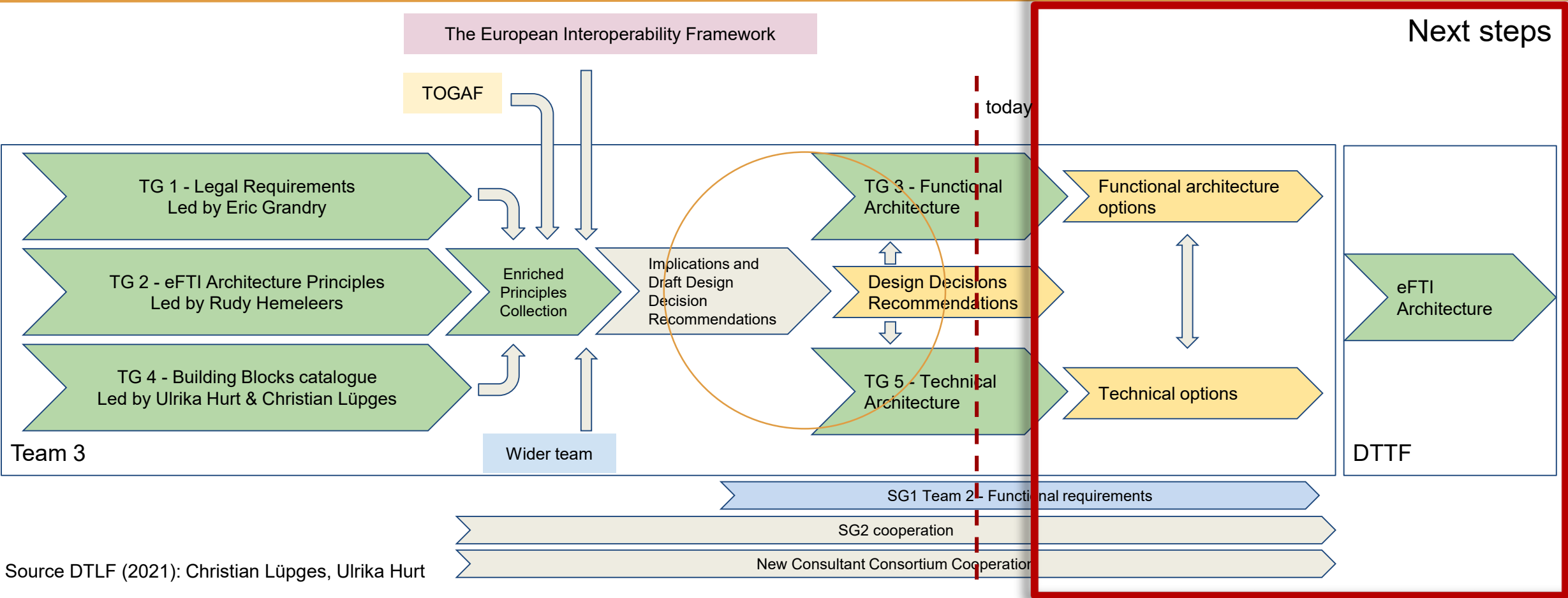


Questions ?



Way forward

Next steps



Source DTLF (2021): Christian Lüpkes, Ulrika Hurt

Next steps

- Functional architecture options document is out for review within Team 3
 - Comments expected until 19th of May
 - Document amendment
- Functional architecture options document to be shared with SG1
- Technical options to be faced (with regard to existing building blocks)

Team 4

Certification & implementation

Dominique Willems

Subgroup 1 Rapporteur

eFTI Provisions - Certification

Article 12 - Certification of eFTI platforms

1. Upon application by an **eFTI platform developer**, a conformity assessment body shall assess the compliance of the eFTI platform with the **requirements laid down in Article 9(1)**. (established through an Implementing Act – input from other teams)

Article 13 - Certification of eFTI service providers

1. Upon application by an **eFTI service provider**, a conformity assessment body shall assess the compliance of the eFTI service provider with the **requirements laid down in Article 10(1)**. (established through an Implementing Act – input from other teams)

Article 11 - Conformity assessment bodies

1. Conformity assessment bodies shall be accredited in accordance with Regulation (EC) No 765/2008 for the purposes of performing the certification of eFTI platforms and eFTI service providers as set out in Articles 12 and 13 of this Regulation.
2. For the purposes of accreditation, **conformity assessment bodies shall meet the requirements laid down in Annex II.**

The Commission is empowered to adopt delegated acts in accordance with Article 14 to supplement this Regulation by laying down rules on the certification of eFTI platforms and on the use of the certification mark, including rules on the renewal, suspension and withdrawal of certification.

eFTI Provisions - Implementation

Article 18 - Entry into force and application

1. This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.
2. It shall apply from 21 August 2024.
3. However, Article 2(2), Article 5(4), Article 7, Article 8, Article 9(2) and Article 10(2) shall apply from the date of entry into force of this Regulation.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

NOTE:

The eFTI Regulation, does not require any detailing or planning of an implementation or communication strategy.

Nonetheless, considering the large scope, number and range of stakeholders involved and complexity of the application of the eFTI Regulation, it is deemed necessary to propose an Implementation & Communication strategy.

Objectives & Subtasks

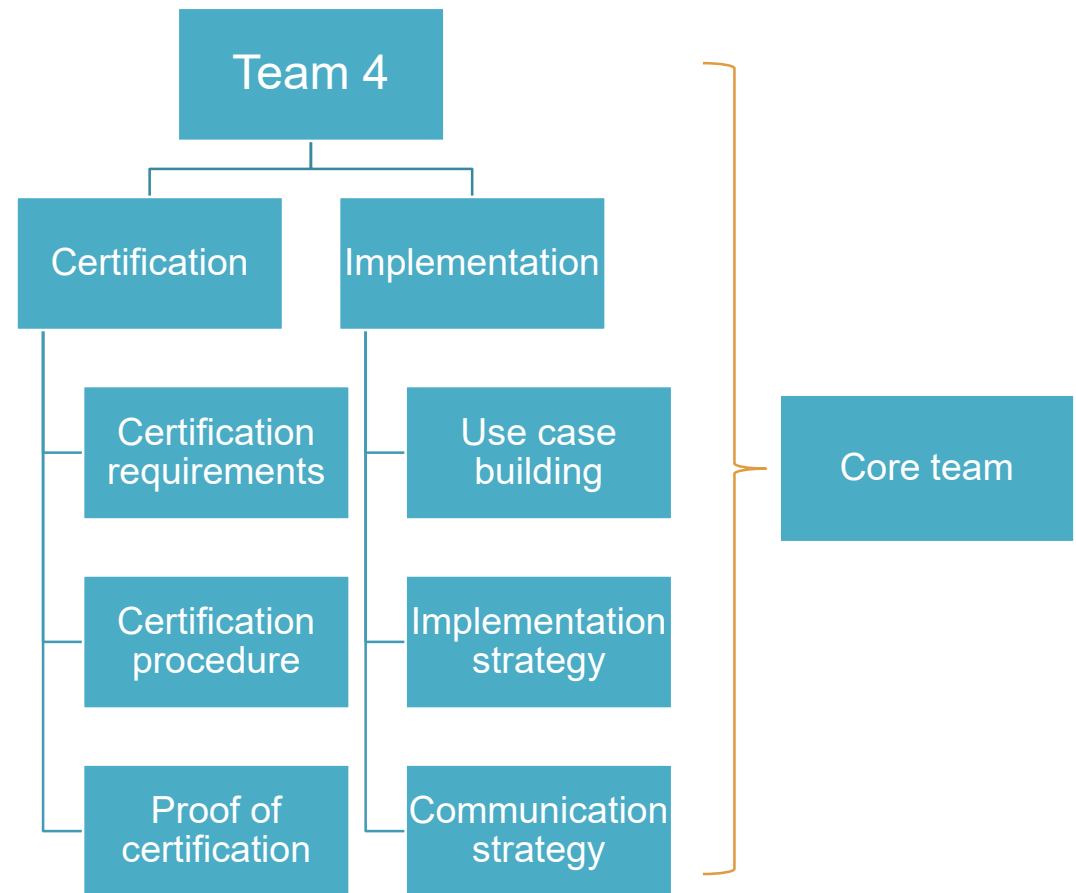
Task 5 - Certification of platforms and service providers	Task 6 – Implementation and communication
<p>General objective: Provide advice and assistance to the EU Commission on laying down rules on the certification of eFTI platforms and on the use of the certification mark, including rules on the renewal, suspension and withdrawal of certification</p>	<p>General objective: Provide advice and assistance to the EU Commission on ensuring a smooth implementation of the eFTI Regulation for all concerned stakeholders, within the legal time limits, and enabling a widespread knowledge and use of eFTI platforms.</p>
<p>Subtask 1 - Certification requirements Data, functional and technical requirements are determined in teams 1, 2 & 3. Team 4 will focus on balancing:</p> <ul style="list-style-type: none"> • Ensuring sufficient clarity and harmonization • Ensure sufficient flexibility and ability to adapt to new business concepts and technology 	<p>Subtask 1 - Public & private sector Use Cases for implementation By creating use cases from different stakeholders' perspectives, the implications of the implementation of the eFTI Regulation can be determined.</p> <p>Use cases should be considered from different angles, e.g.: competent authorities, economic operators, modes of transport, developers & service providers, etc.</p>
<p>Subtask 2 - Certification procedure Already largely defined by the legislation. However, specific aspects need to be addressed. For example:</p> <ul style="list-style-type: none"> • Can a platform be certified if the developer is not in the EU? • When is re-certification required? • Are there any appeal procedures in case a certification is denied? 	<p>Subtask 2 - Implementation strategy & planning The eFTI proposal contains legal provisions concerning the implementation and its planning.</p> <p>However, how this can be achieved in a realistic and acceptable manner for all parties involved requires further analysis.</p>
<p>Subtask 3 - Providing proof of certification</p> <ul style="list-style-type: none"> • What is the 'certification mark' of article 12? • What if a CA or EO have doubts about the authenticity of the 'mark'? • Is there a need for a public database with the certified solutions? • What if a platform is no longer compliant, but is still using the mark? 	<p>Subtask 3 - Communication & training material The eFTI Regulation brings forth drastic innovation in how EO's and CA's exchange data. Communication and training material is needed for different stakeholders with different needs, e.g.: specifications for developers, benefits for higher level decision makers or processes for operational experts.</p>

Organisation & state of play

Team 4 kicked off in March

Since then, 2 meetings held to:

- Set scope and objectives
- Draft the workplan
- Define composition of the team
- Start scoping use cases for the Implementation & Communication strategies



Draft Work Plan

Onboarding phase & Task 5

Task Name	Deliverables	04/22	05/22	06/22	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23
Onboarding													
Finalising the work plan	Work Plan												
Establishment of teams based on the work plan	Mapping of teams for each subtask												
Task 5 - Certification of platforms and service providers													
Subtask 1 - Certification requirements													
5.1.1	Mapping of certification requirements based on the eFTI Regulation and outputs from other teams												
	Preliminary draft - Certification requirements												
5.1.2	Discussion of certification requirements in workshops												
	Revised draft - Certification requirements												
5.1.3	Workshop to present the final report												
	Final report - Certification requirements												
Subtask 2 - Certification procedure													
5.2.1	Desk research on relevant conformity assessment procedures												
	Preliminary draft - Proposed certification procedure												
5.2.2	Workshop to present the key outcomes of the desk research and draft the to-be certification process												
	Revised draft - Proposed certification procedure												
5.2.3	PoC of the certification process to assess the user experience (through different stakeholders that would go through the certification, such as platform developers, service providers, but also the conformity assessment bodies themselves)												
	Key outcomes and lessons learnt from PoC												
5.2.4	Consolidation of key outcomes from desk research, workshop, and PoC												
	Revised draft - Proposed certification procedure												
5.2.5	Workshop to present the final report												
	Final draft - Proposed certification procedure												
Subtask 3 - Providing proof of certification													
5.3.1	Mapping of proof of certification requirements based on the Member States' regulations, eFTI Regulation and outputs from other teams into a discussion paper												
	Draft report - Proof of certification requirements												
5.3.2	Workshop to present and discuss the draft report												
	Map of consolidated comments												
5.3.3	Consolidation of key outcomes from desk research and PoC												
	Draft report including comments addressed												
5.3.4	Workshop to present the final report												
	Report of requirements to provide proof of certification												

Draft Work Plan

Task 6 & Closing Phase

Task Name	Deliverables	04/22	05/22	06/22	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23
Task 6 - Implementation and communication													
Subtask 1 - Public & private sector Business Cases for implementation													
6.1.1	Creation of use cases for public & private sector <i>Preliminary list of use cases</i>												
6.1.2	Validation of the use cases by the team members to identify overlap with the use cases proposed by Circle/RINA and consolidation of outcomes <i>Revised list of use cases</i>												
6.1.3	Workshop to present the final report <i>Final list of use cases</i>												
Subtask 2 - Implementation strategy & planning													
6.2.1	Mapping of proof of certification requirements based on the Member States' regulations, eFTI Regulation, self-assessment of the certification body and outputs from other teams into a discussion paper <i>Discussion paper</i>												
6.2.2	Discussion in workshops <i>Mapping of team members' comments</i>												
6.2.3	Drafting of implementation strategy <i>Draft plan for an implementation strategy</i>												
6.2.4	Workshop for final validation <i>Report on implementation strategy & planning</i>												
Subtask 3 - Communication & training material													
6.3.1	Thorough stakeholder mapping to identify target groups, on all sides <i>Map of stakeholders involved</i>												
6.3.2	3 workshop to discuss the needs of the different stakeholders for each of the following 'outreach' streams: - Communication /dissemination activities - Training programme for eco ops, platform developers and providers - Helpdesk facilities before and during implementation <i>Initial reports, one for each 'outreach' stream, on stakeholder needs</i>												
6.3.3	Development of the 'outreach' programme/strategy, including concepts for different materials <i>Revised reports - one for each 'outreach' stream, on 'outreach' strategy</i>												
6.3.4	Roadmap and timeline for go-live <i>Final report - Communication & training strategy</i>												
Closing phase													
	Consolidating the outputs from workshops, discussions etc. <i>Draft report for the proposal</i>												
	Members' review and ensuring it can be communicated in an appropriate way <i>Initial proposal to DG MOVE</i>												
	Review of revised proposal by DG MOVE <i>Proposal for the delegated act</i>												

Team composition

Total team members: 80

Type of contribution

General team member: 34

Core team member: 28

Team lead: 5 (candidates)

Doesn't know yet: 13

Number of members per type of organisation

Authority: 27

Certification & accreditation: 2

General organization: 4

Individual expert: 9

Information technology: 15

Logistics & transport: 19

Shippers: 4

Observations & conclusions

- Good balance public-private
- Good geographical coverage
- All modes of transport are covered, including maritime, although aviation is barely represented
- Certification & accreditation seems a bit underrepresented, although European Accreditation has not yet appointed (all) individual members
- Would be good to split into 2 groups according to tasks, with core group covering both
- We suggest to have co-task leads
 - Task 5 Certification: European accreditation & EMCI Register
 - Task 6 Implementation: ESC & Public authority representative
- Need to have some bilateral calls with potential lead candidates

Kick-off: Task 6 (Subtask 1)

Identification of use cases

The outcomes of task 6 should be an implementation strategy and a communication strategy. The Use Cases will be used to tailor both strategies to suit the needs of the eFTI Regulations' Stakeholders. However, choices need to be made about from which perspective the use case should be identified

Different actors

- Authorities
- Carriers
- Shippers & forwarders
- IT (solution) providers
- Certification & accreditation bodies

Different expertise

- IT technical
- Legal
- Operational
- Strategic / management

Piece of legislation

- Rates & conditions
- Cabotage
- Combined transport
- Dangerous goods
- Waste Shipments
- Aviation security
- Rail interoperability

Different modes of transport

- Air
- Inland waterways
- Rail
- Road
- Combined (incl. maritime)

Different types of goods

- Bulk
- Dangerous goods
- General cargo
- Small consignments
- Waste shipments

Journey of the goods

- In 1 MS
- 2 or multiple MS
- Outside of EU

AOB

Lia Potec
Subgroup 1 Coordinator
DG MOVE

Next DTLF meetings planning 2022

SG 1 - SG 2 cooperation / joint workshops

- 12 May – Workshop on identification, authentication and authorisation
- June (tbc) – joint meeting on data aspects (how to bridge the two data modelling approaches)

DTLF Plenary

- 9 June (tbc), 10 November

Subgroup meetings

- SG 1 - 5 October
- SG 2 - 6 October
- SG 3 - 23 June ,13 October & November/December



Thank you for your attention

MOVE-DIGITAL-TRANSPORT@ec.europa.eu

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