EUROPEAN COMMISSION
Directorate-General for Communications Networks, Content and Technology

Coordination
Programme Coordination

Non-paper on the IT Governance of the
CEF Building Block Digital Service Infrastructures (DSIs)

(Document elaborated by DG CNECT and DIGIT)

PREFACE

This non-paper paper is the result of a fruitful collaboration among the European Commission, the Telecom Expert Group and the Telecom Committee[1] of the Connecting Europe Facility (CEF). The text of the non-paper reflects the discussions held at the following meetings:

- the CEF Telecom Expert Group Meeting of 24 October 2014 on the draft IT Governance Model elaborated by DG CNECT and DIGIT with the support of the various Commission services involved in the CEF;
- the CEF Telecom Expert Group Meeting of 3 February 2015 where the IT Governance Model was adopted for implementation;
- the CEF Telecom Committee Meeting of 24 September 2015 where the Commission proposed to update the IT Governance Model based on the results of its pilot implementation;
- the CEF Telecom Expert Group Meeting of 3 December 2015 where the updated IT Governance Model was adopted for implementation.

ORGANISATION OF THE NON-PAPER:

This non-paper is organised into three chapters:

- The first chapter: '*Introduction*', clarifies the purpose (Section 1.1), application (Section 1.2) and scope (Section 1.3) of the proposed IT Governance Model;
- The second chapter: '*Proposed IT Governance Model*', describes what an IT Governance Model is (Section 2.1) and its objectives (Section 2.2). Two sections constitute the core of the non-paper, the principles of governance that underpin the IT Governance Model (Section 2.3) and the model itself (Section 2.4). Finally, this chapter looks at the governance bodies that are proposed to embody the model (Section 2.5) and the processes that they are responsible for (Section 2.6);
- The third chapter: '*Interactions Between the Governance Bodies*' explains how the different governance bodies interact with each other.

---

[1] Regulation (EU) No 1316/2013 establishes the CEF Coordination Committee covering the transport, telecommunications and energy sectors. It is important to clarify in this regard that Member States, when discussing issues related to the telecommunications sector, in particular draft annual and multiannual work programmes, are represented by experts in the telecommunications infrastructure sector, hereafter referred to under the term 'CEF Telecom Committee'.

CONTENT

1. INTRODUCTION

1.1. Purpose

In the first months of CEF's implementation, EU Member States and associated countries[2] (both hereafter referred to under the term 'Member States') raised concerns[3] about the IT governance of CEF's Digital Service Infrastructures (DSIs) and, in particular, about the governance of the CEF building block DSIs[4] as these are going to be reused in several policy domains and by projects not directly funded by CEF. The Commission shares the concerns of Member States and agrees that the roll-out and take-up of the CEF building block DSIs in different policy domains cannot be based on 'self-organisation' where every DSI works independently of one another. This is why the Commission is putting forward, by means of this non-paper, a proposal for an 'integrated' IT Governance Model. The proposed model has been designed according to guiding principles stemming from Regulation 1316/2013 establishing the Connecting Europe Facility (hereafter referred to as 'the CEF Regulation') and Regulation 283/2014 guidelines for trans-European networks in the area of telecommunications infrastructure (hereafter referred to as 'the Guidelines'). The proposed model was also influenced by the work currently being developed in the Electronic Simple European Networked Services (e-SENS) Large Scale Pilot. Once agreed and implemented, the IT Governance Model will promote coherence across CEF building block DSIs and trust between them and the sector-specific DSIs while promoting efficiency and avoiding the duplication of structures. The DSIs are expected to contribute to a fully functioning Digital Single Market for online and communications services in Europe, a priority of the new Commission[5] and of the new legislative period for the European Union.

1.2. Scope

The table below shows the scope of the proposed IT Governance Model.

The following items are in scope:

- IT Governance;

- IT Governance as an enabler of sustainability;

- The main focus of the IT Governance Model is on the Core Service Platforms of the CEF building block DSIs;

- The links to the sector-specific DSIs that reuse the CEF building block DSIs;

- The links to the projects not directly funded by CEF that reuse the CEF building block DSIs;

- The links to the Generic Services 'connected' to the Core Service Platforms of the CEF building block DSIs.

The following items are out of scope:

- Existing policy governance structures and policy governance in general;

- The sector-specific DSIs themselves;

- The Generic Services themselves.

---

[2] European Free Trade Association (EFTA) countries which are members of the European Economic Area (EEA), in accordance with the conditions laid down in the EEA Agreement and which have signed the association agreement.

[3] https://circabc.europa.eu/w/browse/194321fb-54e4-410f-b1a0-2400c6b08389

[4] CEF building blocks are a set of highly reusable tools and services that have been mainly developed and piloted by the Member States in different large scale pilots. Currently there are 5 building blocks: eIdentification and eSignature, eDelivery, eInvoicing and Automated Translation. For more information about them: https://joinup.ec.europa.eu/community/cef/og_page/catalogue-building-blocks

[5] Commission Work Programme 2015: http://ec.europa.eu/atwork/pdf/cwp_2015_en.pdf

When a reference is made to the 'CEF building block DSIs', it is made with the above scope in mind. The scope of the proposed IT Governance Model was defined taking into account that:

- The IT Governance Model of Core Service Platforms of sector-specific DSIs may already be defined in a sector-specific regulation; and that
- Member States should promote the deployment of Generic Services and the reuse of the CEF building block DSIs according to IT Governance Models applicable at national or sub-national level.

1.3. Application

The proposed model has been designed for the mid-term (from 2015 to 2020) but without compromising the options for the long-term. Consequently, the proposed IT Governance Model will apply for the duration of CEF, i.e. until 2020, unless a long-term solution has been implemented before then. The model will be reviewed on a yearly basis to ensure its continuous improvement before the adoption of a long-term solution.

2. PROPOSED IT GOVERNANCE MODEL

2.1. What is an IT Governance Model?

An IT Governance Model is of decisive importance to the effective functioning of large Programmes such as CEF as it defines the principles, structure and processes to direct and control the CEF building block DSIs towards the goals defined in the CEF Regulation and the Guidelines. In this non-paper, an IT Governance Model is composed of three key elements:

I. 'Principles of Governance' that express how the 'organisational structure' and 'governance processes' should be set up. The principles state what should happen without prescribing how; The Principles are then translated into:

II.   an 'Organisational Structure' defining:
   a. who participates in the decision-making processes and who influences them;
   b. the layers of responsibility and the roles of the governance bodies within them.

III. 'Governance Processes' formalising the set of activities (including their inputs and outputs) performed by each layer of the structure (i.e. what they do) as well as across layers (i.e. how they interact).

PRINCIPLES OF GOVERNANCE

ORGANISATIONAL STRUCTURE

PROCESSES

INFLUENCERS
- Standardisation Bodies
- Private Sector
- Open Source Communities
- Other Stakeholders

PARTICIPANTS
- CEF Coordination Committee
- CEF Telecom Expert Group
- Architecture Management Board
- DSI Operational Management Boar
- DSI Expert group

Figure 1 The three key elements of the IT Governance Model of CEF Telecom

These three elements are applicable to all building block DSIs of CEF. For each building block, a responsibility assignment matrix, also known as RACI matrix[6], can be devised by intersecting the Organisational Structure with the Governance Processes. According to the RACI matrix, governance bodies may be Responsible, Accountable, Consulted or Informed of the events of the Governance Processes. The Principles of Governance are shared among the building block DSIs.

2.2. Objectives of the IT Governance Model

The main objective of the proposed IT Governance Model is to align both policy and implementation; and the operational practices of DSIs with CEF's long-term strategic goals. Both alignment efforts are crucial in order to make the CEF building block DSIs successful at policy, strategy and operational level. In other words, the objective of the IT Governance Model is the alignment to CEF's overarching policy and between operational and strategic objectives. The alignment process should be carried-out alongside CEF's implementation roadmap. The establishment of an IT Governance Model is vital for the creation of the European interoperability ecosystem[7] mentioned in the Guidelines, as its governance bodies are responsible for managing conflicting or divergent requests, to guide CEF building block DSIs towards standardisation (without forgetting the 'user') and to ensure the overall coherence of the ecosystem that is being built (also important for sustainability).

2.3. Principles of the IT Governance Model

The Principles of Governance are the foundation of the IT Governance Model as they shape the design of the Organisational Structure and of the Governance Processes. These principles reflect a high level of consensus, they are enduring guidelines embraced by both the Member States and the Commission. It should be noted that the proposed IT Governance Model is located within the EU legislative framework and, as a consequence, it is subject to the EU rules such as, for instance, the treaty-based rules on the role of the Commission. The IT Governance Model of the CEF building block DSIs takes into account the generic principles underpinning good European Governance and the European regulatory environment. Three generic principles are highlighted below given their importance to the functioning of the IT Governance Model:

- Transparency: all relevant documents of the governance bodies shall be made available to the Member States on a dedicated website, or a collection of websites accessible through a common portal, where information can be consulted and retrieved[8];
- Effectiveness and timeliness: To the extent possible, issues shall be handled by the lowest level that can take care of them with efficacy;
- Participation: The quality, relevance and effectiveness of the CEF building block DSIs will depend on the participation of Users and End-Users. This requires DSIs to follow an inclusive approach throughout the roll-out period.

The above generic principles also apply to the Commission itself. When pertinent, departments and services of the Commission not directly involved in CEF may also contribute to the governance of the CEF building block DSIs. This will be done in a transparent way, respecting effectiveness and timeliness.

The development of the principles listed in the next sections has been based on the CEF Regulation and the Guidelines, and influenced by e-SENS[9]. This model has also taken into account the principles

---

6   http://en.wikipedia.org/wiki/Responsibility_assignment_matrix
7   Ecosystem is the term used to describe a stage of maturity where the CEF building block DSIs are used in most Member States and in different sectors/ policy domains. As this happens, symbiotic relationships start to emerge between the building blocks and the systems that use their services to serve administrations, businesses and citizens. These positive synergies take the form of network economies, economies of scale and economies of scope. As interoperability across borders and sectors increases, the building blocks become enablers of new EU-wide business models. Architecture and coherency management is deemed crucial to reach this stage of maturity.
8   Exceptions to systematic publication are foreseen where disclosure of a document would undermine the protection of a public or private interest as defined in Article 4 of Regulation (EC) N° 1049/2001 regarding public access to European Parliament, Council and Commission documents.

developed by the Information Systems Audit and Control Association (ISACA) in version 5 of its framework: Control Objectives for Information and Related Technology (COBIT 5®).

2.3.1. Principles of CEF DSIs Governance Structure

Principle 1. Take on board the governance bodies and general governance directions of the CEF Regulation and the Guidelines

Description: The CEF DSIs Governance Structure must respect and take into account the governance bodies and directions in the CEF Regulation and in the Guidelines.

Rationale: The CEF building block DSIs are regulated by the CEF Regulation and the Guidelines.

Implication: According to the CEF Regulation, the CEF Coordination Committee is a committee within the meaning of Regulation 182/2011[10]. Subject to the rules defined by this regulation, the opinions delivered by the committee, as part of the comitology procedure, may in this context for simplification purposes, be considered binding on the Commission. As such, the committee may be considered to be at the policy layer of the proposed IT Governance Model, being responsible for delivering an opinion on the CEF Work Programme(s) outlining the DSIs to receive financial support from CEF. In addition to the CEF Coordination Committee, the Guidelines established the CEF Telecom Expert Group, inter alia, to assist the Commission in addressing implementation problems and contribute to the monitoring of the implementation of the Guidelines. Because of its horizontal role, that crosses all DSIs, the CEF Telecom Expert Group is at the Strategy/Coordination layer of the proposed IT Governance Model. All issues[11] and cross-CEF building block DSIs matters could, for the purpose of overall IT governance, be channelled through this group. Funnelling all cross-cutting matters through a single group should make it possible to better manage issues, prioritise actions and strategically guide the CEF building block DSIs.

Principle 2. Balanced, effective and proportionate stakeholder representation

Description: The CEF DSIs Governance Structure must have balanced stakeholder representation to ensure that the needs and requirements of the Union, of the individual Member States and of the individual policy domains are taken into account without bias. This goal should be achieved within a governance structure that is effective and proportionate to the tasks and responsibilities at hand and simple to implement.

Rationale: The CEF building block DSIs should be deployed in the Member States to serve one or more policy domains and, consequently, their stakeholders.

Implication: In order to maximise stakeholder participation, the governance structure of the CEF building block DSIs should have multiple governance bodies with well-defined responsibilities (policy related, coordination/strategic alignment and operational) and stakeholder involvement (through information and consultation channels). The structure should also be designed for effectiveness and proportionality. To achieve this goal, Member States and, when applicable, other stakeholders should be represented by experts with knowledge and experience relevant to the issue at stake. This is further developed in Principle 6 and Principle 7.

---

[9]   eSENS is currently working on the consolidation, improvement, and extension of solutions that foster interoperability between Public Administrations across the EU. Most of these solutions are based on the results of the previous Large Scale Pilots: PEPPOL, SPOCS, e-CODEX, STORK and epSOS. Within e-SENS, 'Work Package 3' is currently analysing the "Sustainability and Long-term Governance" of the building blocks of the Large Scale Pilots.

[10] Regulation laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers, see http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32011R0182.

[11] In this document 'issue' is defined in the sense of PMI® i.e. a point or matter in question or in dispute, or a point or matter that is not settled and is under discussion or over which there are opposing views or disagreements.

Principle 3. Consensus decision-making process facilitated by the Commission

Description: The CEF DSIs Governance Structure must ensure that the Commission leads (in accordance with the regulations and general principles) and organises the decision-making processes, with a view to ensuring decision-making by consensus.

Rationale: The CEF building block DSIs should evolve based on decision-making by consensus taking into account the interests of the Union, of the individual Member States and of the individual policy domains.

Implication: The Commission should lead (in accordance with the regulations and general principles) and organise the processes of governance of the CEF building block DSIs. The Commission will, among other activities, take care of the secretariat of the various governance bodies (prepare documents, draft agendas, organise meetings, draft minutes, etc.) and chair the meetings. The Commission will promote decision-making by consensus. If consensus cannot be reached, the Commission will endeavour to elaborate solutions which command the widest possible support within the governance bodies.

Principle 4. Active involvement of Member States and User Communities

Description: The CEF DSIs Governance Structure must ensure that Member States and User Communities provide tactical advice to the CEF building block DSIs, to support their operational success.

Rationale: According to the Guidelines, the Union and the Member States should play a key role in the roll-out and promotion of the CEF building block DSIs. In this regard, both Member States and User Communities should contribute to addressing implementation problems and provide tactical advice to the CEF building block DSIs.

Implication: In addition to the CEF Telecom Expert Group, that should handle cross-cutting matters, each CEF building block DSI should have an individual, or a joint, DSI Expert Group to provide advice and expertise to the owner and solution provider of its Core Services Platform. The Expert Group of a DSI should consist, unless otherwise specified, of Member State representatives. This means that DSI Expert Groups may be composed of Member State representatives only or they may be mixed. This possibility adds additional inclusiveness, flexibility and openness to the IT Governance Model. The Expert Groups will be selected per building block DSI according to the regulations relevant to the specific building block DSI. As further explained in Principle 9, to the extent possible, these expert groups should be embodied by already existing consultative entities or committees. The DSI Expert Group may be extended to include representatives of User Communities relevant to the particular DSI. Wherever appropriate the Extended DSI Expert Group will:

- Be composed of a DSI Expert Group extended, when relevant, by User Communities
- Play a prominent role in the decision-making process at tactical level. To this end, they may formulate opinions, recommendations and submit reports;
- Ensure 'proximity' to the Users of the CEF building block DSIs and the end-Users of their services in the Member States; and
- Make available to the teams of the Commission, working on the implementation and roll out of the CEF building block DSIs, information about the specificities of the Member States, and the views from different stakeholders within each Member State.

The points above should be considered indicative rather than exhaustive and definite.

Principle 5. Clarity of responsibility and accountability within the Commission for the operational management of the Core Service Platforms

Description: The CEF DSIs Governance Structure must ensure that every DSI is to have a 'DSI Owner' and a 'Solution Provider' from within the Commission. Both of them will be responsible and accountable

for the operational management of the Core Service Platforms of the CEF building block DSIs. These roles are already defined in detail in the project management methodology of the Commission (PM²)[12].

Rationale: According to the Guidelines, among other responsibilities, the Commission is responsible for the implementation of the Core Service Platforms of the CEF building block DSIs and the provision of their specifications, software and central services.

Implication: Typically, the 'DSI Owner' is responsible for the business/ policy side of the CEF building block DSI and the understanding of what the DSI needs to do to be successful. On the other hand, the 'Solution Provider' is responsible for the technical/ solution side of the CEF building block DSIs including the design and implementation of solutions in the form of specifications, software and central services.

Principle 6. Involvement of standardisation bodies and of the Multi-Stakeholder Platform on ICT Standardisation

Description: The CEF DSIs Governance Structure must ensure that standardisation bodies and the Multi-Stakeholder Platform on ICT Standardisation play an advisory role to the DSIs, offering opinions and possible solutions.

Rationale: According to the Guidelines, CEF DSIs, and in particular the CEF building block DSIs, should comply with agreed international and/or European standards or with open specifications for interoperability, particularly those identified by the Commission in accordance with Regulation (EU) No 1025/2012 (on European standardisation)[13], and other relevant specifications and orientations, such as the European Interoperability Framework for European public services (EIF).

Implication: Whenever necessary, the governance bodies of CEF should consult, and work together, with standardisation bodies and the Multi-Stakeholder Platform on ICT Standardisation to ensure that they comply with agreed international and/or European standards, or with open specifications for interoperability. In practice, each building block DSI will cooperate with several standardisation bodies in an inclusive approach to standards development organisations.

Principle 7. Involvement of private sector organisations and relevant user organisations

Description: The CEF DSIs Governance Structure must ensure that, when required, the private sector and relevant user organisations play an advisory role to the IT Governance Model, offering opinions and possible solutions.

Rationale: According to the Guidelines, the private sector and relevant user organisations should be involved in the implementation of the CEF building block DSIs.

Implication: When pertinent, the CEF building block DSIs should consult, and collaborate with, organisations of the private sector, and relevant user organisations, to ensure their involvement in the roll-out, improvement and evolution of its specifications, software, and central services.

Principle 8. Keeping in mind the construction of a European interoperability ecosystem

Description: The CEF DSIs Governance Structure must be supported by an architecture management board with a view to ensuring alignment between short-term and long-term objectives.

Rationale: According to the Guidelines, the CEF building block DSIs should gradually build up a European interoperability ecosystem.

Implication: An architecture management board will provide advice and guidance to the CEF building block DSIs and Member State representatives responsible for strategic decision-making so as to ensure

---

[12]   http://www.cc.cec/wikis/display/PM2/Project+Organisation+and+Roles
[13]   http://ec.europa.eu/enterprise/policies/european-standards/standardisation-policy/general-framework/index_en.htm

the architectural coherence of the ecosystem. This board will play a role in ensuring that the Guidelines are followed and, in particular, that "solutions comply with agreed international and/or European standards or with open specifications for interoperability, particularly those identified by the Commission in accordance with Regulation (EU) No 1025/2012 of the European Parliament and of the Council, and other relevant specifications and orientations, such as the European Interoperability Framework for European public services (EIF)[14]. This means that the architecture management function will play a role in managing issues and risks, identifying opportunities for synergies among the DSIs and monitoring the progress made by them.

Principle 9. Reuse of existing committees and consultative entities in accordance with EU legislation and the Framework for Commission Expert Groups[15]

Description: The CEF DSIs Governance Structure must privilege the consultation of existing committees[16] and consultative groups[17]. The 'Comitology Register' gives an overview of existing committees[18] and the 'Register of Commission Expert Groups' gives a good, although not complete, overview of existing consultative groups[19].

Rationale: In almost every policy domain, the Commission is already assisted by consultative entities or committees in the implementation of EU legislation. In order to ensure that the IT Governance Model is effective, efficient and manageable, it is important to avoid duplication of consultative entities.

Implication: To the extent possible, CEF building block DSIs should consult existing committees or consultative groups as opposed to create new ones, increasing both the effectiveness and efficiency of the governance processes.

2.3.2. Principles of CEF DSIs Governance Processes

Principle 10. Implements selection processes

Description: Governance processes must ensure that CEF building block DSIs are added to CEF in accordance with the CEF Regulation and the Guidelines.

Rationale: The CEF Regulation and the Guidelines lay out the eligibility criteria and priorities for funding that should be used in the selection of CEF building block DSIs.

Implication: The CEF building block DSIs are to be selected according to the process and rules defined in the CEF Regulation and the Guidelines. According to the Guidelines: "The selection of actions contributing to projects of common interest in the field of digital service infrastructures to be funded under the CEF, as well as their level of funding, shall be carried out as part of an annual work programme." The selection process also ensures that the CEF building block DSIs take priority over sector-specific DSIs as the former are a prerequisite for the latter.

Principle 11. Implements strategic steering and coordination processes

Description: Governance processes must ensure that the architecture of the future ecosystem is managed, that issues are resolved and that the implementation of the CEF building block DSIs is steered and well-coordinated.

---

[14] http://ec.europa.eu/isa/documents/isa_annex_ii_eif_en.pdf

[15] C(2010) 7649 final, SEC(2010) 1360 final: http://ec.europa.eu/transparency/regexpert/PDF/C_2010_EN.pdf

[16] A committee of representatives from every EU country (chaired by the Commission) within the meaning of Regulation (EU) No 182/2011

[17] Usually a body set up by the Commission or its departments to provide it with advice and expertise, comprising at least 6 public and/or private-sector members and meeting more than once. There are 2 types: formal expert group set up by a Commission decision and informal expert group set up by an individual Commission department. Rules on creation/operation of Commission expert groups (C(2010) 7649 final, SEC(2010) 1360 final).

[18] http://ec.europa.eu/transparency/regcomitology/index.cfm?do=List.list

[19] http://ec.europa.eu/transparency/regexpert/index.cfm

Rationale: The roll-out and take-up of the CEF building block DSIs in different policy domains cannot be based on 'self-organisation' where every DSI works independently of one another.

Implication: Coordination procedures should be used when CEF building block DSIs are confronted with issues that have cross-DSI implications. Such coordination procedures should apply as from the start to ensure that cross-DSI synergies are exploited and that risks are managed. Furthermore, architecture management processes should be introduced to ensure the coherent evolution of the DSIs' ecosystem. Coordination and architecture management processes should steer the implementation of the CEF building block DSIs forward according to the governance principles defined in this non-paper.

Principle 12. Implements processes that enable the roll-out of the CEF building block DSIs

Description: Governance processes must ensure that CEF building block DSIs properly manage the lifecycle of their Core Service Platform, be it specifications, software or central services. The lifecycle of these elements should be managed based on IT service management practices such as the ones defined in ITIL® or ISO/IEC 20000. The lifecycle should therefore encompass: Change Management (including mechanisms to on-board new developments and phase-in or phase-out of technology), Release Management and Incident Management. Furthermore, every DSI should also manage risks and issues, the configuration of all elements under their control and their stakeholders.

Rationale: CEF building block DSIs should continue to evolve as their deployment base grows both geographically (more Member States) and in the number of users (sometimes 'machine' users, other times people, depending on the DSI).

Implication: CEF building block DSIs should put in place sound operational procedures to manage the lifecycle of specifications, software and central services. Risks and stakeholders should be managed with the same level of attention. Instead of detached and disconnected from the strategy behind CEF, the CEF building block DSIs should be developed in consistence with the high-level objectives of the CEF Regulation and of the Guidelines, and the more specific objectives in the annual and multiannual Work Programmes. This basically means that workarounds and custom solutions to problems should not be implemented. Instead, the CEF building block DSIs should continuously drive their solutions towards standardisation and ease of use. In cases where the consultation process with stakeholders and experts does not result in a way forward that is aligned to CEF's strategic objectives, the problem should be transferred to the coordination level. Finally, configuration management should be adopted as from the start to ensure the orderly evolution of every element under the control of the CEF building block DSIs.

2.4. Deriving the IT Governance Model from the Principles

This chapter describes the proposed IT Governance Model of CEF building block DSIs. The model is derived from the Principles of Governance outlined in the previous chapter. The conceptual anchor of the model is the division of governance processes in an organisational structure composed of three separate layers linked to one another through reporting flows and processes that, when needed, enable the transfer of decision-making to a higher level. The bottom layer is concerned with the governance of the individual DSIs, while the top layers with the governance of the portfolio of DSIs. This split of governance responsibilities is made in accordance with Principle 1 (Take on board the governance bodies and general governance directions of the CEF Regulation and the Guidelines) and Principle 2 (Balanced, effective and proportionate stakeholder representation). At every layer, the decision-making process is facilitated and led by the Commission as defined in the Principle 3 (Consensus decision-making process facilitated by the Commission).

Figure 2 Proposed IT Governance Model

It is therefore proposed that:

- The upper layer of the organisational structure should, under the leadership of the Commission, handle the selection processes (in line with Principle 1 and Principle 10) of CEF building block DSIs and of the sector-specific DSIs that reuse them. According to the CEF Regulation, the Commission is responsible for the adoption of annual work programmes, following the examination procedure described in article 5 of Regulation (EU) No 182/2011. This means that decisions on the level of funding happen at the IT Policy layer. Thus, this layer should ensure, through the selection process, that market ready DSIs receive a lower level of financial support or become self-sustaining;
- The middle layer of the organisational structure should, under the leadership of the Commission, handle the coordination and strategic alignment processes, covering all CEF building block DSIs (in line with Principle 1 and Principle 11). This layer should be supported by an Architecture Management Board (AMB) which may also assist other layers (in line with Principle 8);
- The bottom layer of the organisational structure should, under the leadership of the Commission, handle the implementation processes (Principle 12). At this level, every CEF building block DSI should have two separate governance bodies or, alternatively, one governance body with two distinct functions:
  - One handling all operational matters regarding the 'operational-side' of the CEF building block DSIs (in line with Principle 5 - Clarity of responsibility and accountability within the Commission for the operational management of the Core Service Platforms), this involves: Reporting; Lifecycle management; Risk and issue management; Configuration management and Stakeholder management (this is not an exhaustive list);
  - One providing advice to the operations on tactical matters taking into account the 'user side' of the CEF building block DSIs (in line with Principle 4).

Both of these governance bodies/functions should be in direct contact with private sector organisations and relevant user organisations (in line with Principle 7) and with standardisation bodies and the Multi-Stakeholder Platform on ICT Standardisation (in line with Principle 6). It should be highlighted that the different layers of the IT Governance Model should interact with one another through reporting processes that allow information to move from the DSIs up to the coordination layer. Exceptionally decision-making may also be transferred to the coordination or policy level. The coordination layer should continuously provide best practices, guidance and other recommendations to the DSIs.

2.5. Selecting the Governance Bodies of the IT Governance Model

This section provides information about which governance bodies should embody the structure of the proposed model. The governance bodies are chosen to fit the proposed IT Governance Model in accordance with Principle 1 (Take on board the governance bodies and general governance directions of the CEF Regulation and the Guidelines) and Principle 9 (Reuse of existing committees and groups of Member States in accordance to EU legislation and the Framework for Commission Expert Groups).

Figure 3 IT Governance Model showing the governance bodies according to Principle 1

It is therefore proposed that:

- The CEF Coordination Committee will, as defined in the CEF Regulation and the Guidelines, under the responsibility of the Commission, and within the comitology procedure, handle the adoption of the work programme(s) with entailed selection of DSIs;
- The CEF Telecom Expert Group will, under the responsibility of the Commission, coordinate the implementation of the DSIs and their overall strategic alignment – this group will be supported by an AMB operated by the Commission. The AMB may, in the future, interact with similar architecture governance bodies of the Member States;
- The implementation layer will be DSI specific and composed of two governance bodies:
  - o The DSI Operational Management Board (OMB) composed of three elements:
    - I. A DSI Owner (there may be more than one), accountable for the policy and functional side of the DSI;
    - II. A DSI Solution Provider (there may be more than one), accountable for IT delivery;
    - III. Representatives of sector-specific DSIs are invited to participate when they reuse (or have committed to reuse) the building block. Their participation in the decision-making process will enable the exchange of experience and 'domain-specific' knowledge to the CEF building block DSIs.

      Typically, the roles above will be performed by departments and services of the Commission. As already explained, the OMBs will address the 'day-to-day' operational matters of the CEF building block DSIs. The OMBs will work in close collaboration, and consult, their DSI Expert Groups when required.

  - o The Extended DSI Expert Group provides advice and expertise to the OMB. As defined in Principle 4, the Extended DSI Expert Group should consist, unless otherwise specified, of existing Expert Groups and, when relevant, User Communities. The Owner and Solution Provider of the DSI should meet the Extended DSI Expert Group at least twice a year (in the form of a workshop or another type of event) to discuss important tactical matters e.g. whether new services should be offered or new standards should be considered for adoption, etc.

Consultation processes will ensure that, in addition to the Extended DSI Expert Group, standardisation bodies, the private sector, Open Source Communities (in particular those moderated by the Commission) and other relevant stakeholders are involved as required. As illustrated in Figure 3, by the white triangle, consultations are not exclusive to the 'implementation layer', they may also happen at other levels of the governance model. All issues and matters that cannot be resolved by the OMBs will be brought to the attention of the CEF Telecom Expert Group (for example when the risk or impact of carrying out a change is high, because of an issue between two or more DSIs, etc.).The tables below detail the governance bodies of the CEF building block DSIs, included in the CEF Digital Work Programme 2014[20], which are not directly prescribed by the CEF Regulation or the Guidelines.

Architecture Management Board

Representatives of the DSI Operational Management Board		
The Owners of the CEF building block DSIs	The Solution Providers of the CEF building block DSIs	*When relevant, representatives of DGs of the Commission that reuse the CEF building block DSIs*

---

[20] Once defined, the governance bodies of the Cybersecurity DSI will be added to these tables.

eDelivery Individual Governance Bodies

DSI Operational Management Board			Extended DSI Expert Group
Owner	**Solution Provider**	**Sector Specific-DSIs**	
CNECT (eIDAS[22] Task Force and Public Services Unit)	DIGIT	*Representatives of DGs of the Commission that reuse the building block*	eIDAS Expert Group[21] + relevant User Communities

eID Individual Governance Bodies

DSI Operational Management Board			Extended DSI Expert Group
Owner	**Solution Provider**	**Sector Specific-DSIs**	
CNECT (eIDAS Task Force)	DIGIT	*Representatives of DGs of the Commission that reuse the building block*	eIDAS Expert Group + relevant User Communities

eSignature Individual Governance Bodies

DSI Operational Management Board			Extended DSI Expert Group
Owner	**Solution Provider**	**Sector Specific-DSIs**	
CNECT (eIDAS Task Force) and DG GROW (until mid-2016)	DIGIT	*Representatives of DGs of the Commission that reuse the building block*	eIDAS Expert Group + relevant User Communities

eInvoicing Individual Governance Bodies

DSI Operational Management Board			Extended DSI Expert Group
Owner	**Solution Provider**	**Sector Specific-DSIs**	
DG GROW	DIGIT	*Representatives of DGs of the Commission that reuse the building block*	European Multi-Stakeholder Forum on Electronic Invoicing[23] + relevant User Communities

Automated Translation Individual Governance Bodies

DSI Operational Management Board			Extended DSI Expert Group
Owner	**Solution Provider**	**Sector Specific-DSIs**	
CNECT	DGT	*Representatives of DGs of the Commission that reuse the building block*	Language Resources Network (informal group) + relevant User Communities

---

[21] http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3032
[22] http://ec.europa.eu/dgs/connect/en/content/electronic-identification-and-trust-services-eidas-regulatory-environment-and-beyond
[23] http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=2650&NewSearch=1&NewSearch=1

2.6. Governance Processes

This section provides information about the governance processes that are part of the IT Governance Model. An overview of the processes and the associated governance bodies is shown in the figure below.
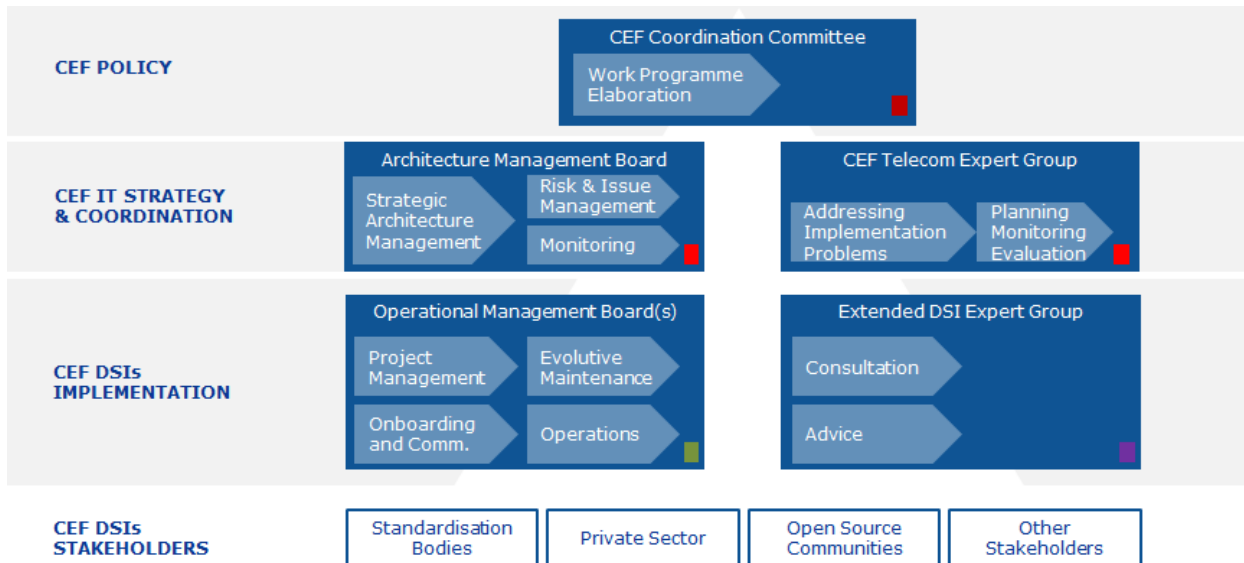

Figure 4 Governance Processes per layer of the IT Governance Model

The processes under the responsibility of the CEF Coordination Committee and the CEF Telecom Expert Group are defined in the CEF Regulation and Guidelines. It is important to highlight that, whenever required, implementation issues may escalated to the CEF Telecom Expert Group.

The processes under the responsibility of the AMB will ensure that each building block DSI is aligned to the overarching policy objectives stated in the CEF Regulation and Guidelines throughout their implementation. This includes setting a common direction for all building block DSIs, monitoring their reuse by different policy domains and their performance in relation to the objectives set out in the CEF Work Programmes. The processes under the responsibility of the AMB can be broken down into:

- Strategic Architecture Management: The AMB may give recommendations on changes with significant impacts before these are implemented. The AMB is also responsible for the evolution of the Catalogue of CEF building block DSIs and all matters related to the definition of a common target architecture leading to the establishment of an European interoperability ecosystem;

- Risk & Issue Management: The AMB may give recommendations on issues and risks that are cross-cutting or recurrent across CEF building block DSIs;

- Control and Monitoring: The AMB will monitor the reuse and performance of the CEF building block DSIs and propose corrective actions as needed.

The processes under the responsibility of the OMBs are shown below:

- Project Management: Tracking of budget spending, planning follow-up, review and approval of project management artefacts such as: Project Charters, Risk Logs and Issue Logs;

- Onboarding and Communication activities: Tracking of e.g. onboarding of new Users, review and approval of communication initiatives;

- Evolutive Maintenance: Tracking of e.g. release plans and change requests;

- Operations: Tracking of e.g. operational services and service level agreements.

The two first processes are mostly relevant to the Owner and Solution Provider of the DSI. The other two may require the active participation of the Extended DSI Expert Group through consultation and advice processes.

3. INTERACTIONS BETWEEN THE GOVERNANCE BODIES

The figure below clarifies, via connecting arrows, that the IT Governance Model is not static but rather dynamic. As illustrated in the figure, the sector-specific DSIs should channel their reuse requests, change requests or other directly to the CEF building block DSIs. The OMB of the concerned CEF building block DSI will evaluate the request with the support of a DSI Expert Group. In case an issue arises, for example between the CEF building block DSI and the sector-specific DSI, the request may be transferred to the AMB or, in case deemed necessary, to the CEF Telecom Expert Group for final agreement on the way to proceed. In case the agreed approach involves a change to a CEF Work Programme, the issue may be brought to the attention of the CEF Coordination Committee (the top level). At defined moments in time, the DSIs report progress to the AMB and the CEF Telecom Expert Group that keep the oversight of the implementation efforts, opportunities and risks. The AMB supports the reporting function and also the architectural management function overarching the CEF building block DSIs ('key parts' of the CEF Digital endeavour) and of the ecosystem to be ('the goal' of the CEF Digital endeavour). The figure below also shows that sector-specific DSIs are continuously interacting with the governance bodies of their own policy domain(s). In the case of CEF building block DSIs, they are mostly in contact with EU ICT Policy governance bodies such as eIDAS. Finally, the building block DSIs may also be reused by User Communities which are not funded by CEF. Once the reuse agreement is formalised, these requests will be handled in the same way as the ones of the sector-specific DSIs.
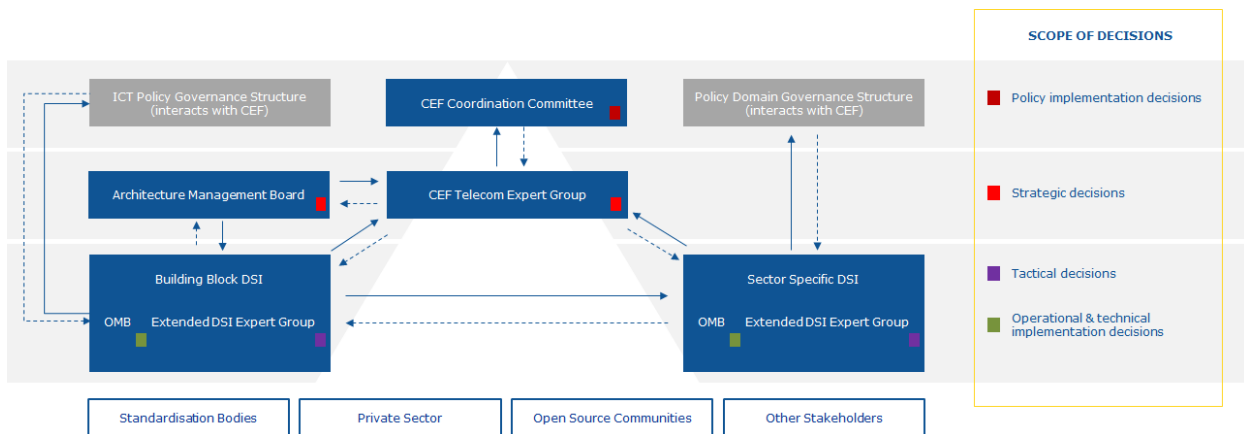

Figure 5 Interaction between CEF building block DSIs and sector-specific DSIs