



EUROPEAN NETWORK OF CYBERSECURITY  
CENTRES AND COMPETENCE HUB FOR  
INNOVATION AND OPERATIONS

## D3.4 GOVERNANCE MODEL IMPLEMENTATION PLAN

Lead author: Georgi Penchev, IICT

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## D3.4 GOVERNANCE MODEL IMPLEMENTATION PLAN

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<b>Lead author</b>	Georgi Penchev (IICT)
<b>Contributors</b>	Velizar Shalamanov (IICT), Todor Tagarev (IICT), Irena Mladenova (IICT), Yantsislav Yanakiev (BDI), Pavel Varbanov (ESI CEE), Consuelo Colabuono (RHEA), Ewa Konieczna (VisionSpace), Lina Smovziuk (NAU KHAI), Bodi Antal (SU), Maria Vittoria Marabello (EXP), Kornel Toth (SU)
<b>Peer reviewers</b>	Tiia Sömer (TUT), Andrea Guarino (ACEA), Michael Cooke (NUIM)
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## List of contributors

The list of contributors to this deliverable are presented in the following table:

Section	Author(s)
<b>Executive Summary</b>	Todor Tagarev (IICT), Velizar Shalamanov (IICT)
<b>Introduction and Conclusions</b>	Georgi Penchev (IICT)
<b>Chapter 2 (all sections)</b>	Velizar Shalamanov (IICT), Irena Mladenova (IICT), Georgi Penchev (IICT)
<b>Section 3.1</b>	Georgi Penchev (IICT)
<b>Section 3.2</b>	Yantsislav Yanakiev (BDI), Maria Vittoria Marabello (EXP)
<b>Section 4.1</b>	Georgi Penchev (IICT), Ewa Konieczna (VisionSpace), Lina Smovziuk (NAU KHAI)
<b>Sections 4.2 and 4.3</b>	Ewa Konieczna (VisionSpace), Lina Smovziuk (NAU KHAI), Bodi Antal (SU), Kornel Toth (SU)
<b>Section 4.4</b>	Georgi Penchev (IICT), Consuelo Colabundo (RHEA)
<b>Section 4.5</b>	Pavel Varbanov (ESI CEE)
<b>Chapter 5 (all sections)</b>	Velizar Shalamanov (IICT), Irena Mladenova (IICT), Georgi Penchev (IICT)
<b>Annex 1</b>	Velizar Shalamanov (IICT), Irena Mladenova (IICT)
<b>Annexes from 2 to 4</b>	Yantsislav Yanakiev (BDI), Maria Vittoria Marabello (EXP)
<b>Annex 5</b>	Georgi Penchev (IICT), Consuelo Colabundo (RHEA)
<b>Annex 6</b>	Pavel Varbanov (ESI CEE)

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## Executive summary

The objective of the deliverable *D3.4: Governance model implementation plan* is to define and structure logical steps towards transforming the ECHO Consortium into a sustainable and adaptive Collaborative Networked Organisation (CNO). In this regard, D3.4 can be considered as the design of a change management initiative to be implemented in a gradual manner in order to introduce change, train the involved people, test and improve new processes and structures, thus providing a smooth transition to the envisaged organisation and overcoming possible organisational resistance to change.

The development of the D3.4 is preceded by other activities within the WP3.

*D3.1 Governance needs and objectives* [D5] explored governance needs and objectives, analysed existing networks, the landscape of the EU cybersecurity, motivation and constraints of the network participants. D3.1 analysis was used in *D3.2 Governance alternatives* [D6] to identify feasible options for the future organisation of the ECHO Network after the project's end. In D3.2 we selected, developed and assessed four alternatives, while a fifth one – A0, combining best features of the other four – was identified as “best solution” for the future establishment of the Collaborative Networked Organisation (CNO).

The D3.2 results were used as inputs for the development of *D3.3 Governance model description* [D7], which provides general design of core processes and structures for the future ECHO CNO. While the grant and consortium agreements define the current operating model (COM), the D3.3 design sets the target operating model (TOM) serving to guide the transition.

The implementation of the envisaged model is a complex task. If we take into account the complexity of the network organisations, as well as the size and the scope of the proposed ECHO CNO (more than 45 autonomous organisations, from more than 17 European countries), we can see the need for a specific project dedicated to change management.

The D3.4 develops and presents a structured change management project, based on the application of Awareness, Desire, Knowledge, Ability and Reinforcement (ADKAR) model.

The first chapter of the document considers the application of the ADKAR method in the development of change management project in regard to the results derived from D3.1-D3.3. The second chapter defines inputs from ECHO deliverables and documents to inform the development of the Implementation Plan. The third chapter presents the Implementation Plan in four sections dedicated to the Plan's phases, activities, roles and responsibilities, as well as to the monitoring and training. The last chapter briefly presents the way ahead after D3.4 development.

In order to identify the status of ADKAR building blocks, three main research activities were conducted during D3.4 development – establishment of a Focus Group on governance and management from ECHO Partners' managers and experts; interviews with the management of the ECHO partners; organising a Strategic Planning Simulation Game for introducing and testing the Strategic Planning Process designed in D3.3.

The proposed Implementation Plan consists of two main phases – Preparation and Implementation Phases.

The Preparation Phase – until M36 (January 2022)– is aimed at enhancing the evaluation of the ADKAR blocks to the level of 5 at least<sup>1</sup>, especially on Awareness and Desire elements, but it is also dedicated to further, detailed development of documents and training materials through a training course for managers, thus improving the Knowledge and Abilities blocks (building on T2.6 findings). One of the most important tasks of the Preparation Phase is to reach agreements on crucial questions related to the cost-benefit structures and the business model of the future ECHO CNO (in coordination with T9.3 Market Analysis, Business Model and Exploitation).

The Implementation Phase follows a plan for the period M36-M48 (January 2022 – January 2023). Activities are given in general and will be detailed within updates of D3.3, D3.4 and D3.5 in months M36 and M48.

Specific milestones for the decision-making process are also identified. The activities are described as roles and responsibilities in RASCI matrices for both phases of the Plan, and the respective timetable is presented here.

The organisational transformation is not a standalone activity – it is a complex endeavour of changing intention, strengthening desire and motivation and a clear explanation of the way ahead. The Implementation Plan depends on other deliverables and external inputs, especially from WP8 Demo Cases for the validation of proposed governance solutions, expanding the network of partners, and on WP9 for the elaboration of the catalogue of services, innovation and exploitation strategies. Finally, the proposed Implementation Plan will remain on paper and will not bring the desired changes if it is not agreed upon and supported by all managers and participants of the ECHO Project. In this regard, the planned activities in WP1 ‘Project coordination and management’ and WP9 ‘Dissemination, Exploitation and Innovation Management’ are expected to make the Plan better known and to reach an agreement on its objectives and tasks.

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<sup>1</sup> The scale used for accessing the ADKAR is from 0 to 6. The score 5 means very high level of assessment for the ADKAR building blocks (see also Section 4.1.2, Assessing the ADKAR building blocks).

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## 1. Introduction

### 1.1 Purpose and scope of the document

**The purpose of this document** is to provide the initial design of the Implementation Plan, as a transformation and change management project for establishing the ECHO Network as a Collaborative Networked Organisation (CNO).

The D3.4 uses inputs from other ECHO deliverables and documents such as D3.2: *Governance alternatives* [D6] and D3.3: *Governance Model Description* [D7]. Deliverables and documents from other Working packages are also used. The analysis of the organisation's external aspects provided in previous deliverables is also used and is updated.

The work on D3.4 included a number of dedicated activities and events were conducted as follows:

- Kick-off Meeting, where the plan of work was agreed and approved;
- Structured discussion within Focus Group comprised from ECHO Partners' management experts;
- Interviews with ECHO Partners' managers;
- Conducting the Strategic Planning Simulation Game in order to test and to present results derived in D3.3 for the Strategic Planning Process [D7].

The D3.4 development followed the Methodology Framework agreed within WP3 'ECHO Governance Model' and presented in D3.2 and complies to other planned deliverables, updates, documents and updates until M48.

The ADKAR model and lifecycle served in the development of D3.4. The main building blocks of ADKAR – Awareness, Desire, Knowledge, Ability and Reinforcement were assessed during the events mentioned above. The results are analysed in Chapter 3 and Chapter 4 and are used in planning for future activities and events which will raise the level of ADKAR blocks, thus helping to overcome the possible organisational resistance to change.

The focus of the document falls mainly on the first, Preparation Phase (M30-M36) of the Implementation Plan. This Phase is presented in more details than the second Implementation Phase (M37-M48). Nevertheless, main points of this Phase are identified where the Implementation Plan will be updated and decision about the direction of the change should be taken.

The roles and responsibilities for execution and maintenance of planned activities and events are assigned, as well as the timetable is presented.

The identification of all solutions is tentative. They will be detailed and agreed during the implementation period by the ECHO Management and General Assembly.

### 1.2 Structure of the document

The document is structured in introduction (as a first section), four chapters (in sections numbered from 2 to 5) and conclusions (as a sixth section).

*The first chapter* presents methodology framework for the D3.4 in relation to development of the Implementation Plan. The main method – ADKAR model and project lifecycle – are described.

*The second chapter* provides the inputs used for development of D3.4. First, Section 3.1 considers inputs from previous deliverables and documents developed in WP3; external aspects; and the place and role of E-Governance Consulting Service (E-GCS). The place and scope of other inputs and outputs of the D3.4 document are briefly described. The second Section 3.2 presents briefly the inputs derived during the process of development of the D3.4 – work of Focus Groups; analysis of interviews with managers; and analyses of the Strategic Planning Simulation Game.

*The third chapter* is dedicated to description of the developed Implementation Plan as goals, activities, schedule, roles and responsibilities. Section 4.4 discusses the appraisal of implementation, monitoring and reporting activities. The final Section 4.5 presents the aspects of training and setting-up a training course.

*Chapter four* summarises the Implementation plan and puts main points in the way ahead.

*Six Annexes* are added to respective chapters in order to explain some aspects of the chapters' text in more details.

### 1.3 Relation to other work in the project

Figure 1 presents graphically the relationships of D3.4 to other work, deliverables, tasks and Packages.

The inputs for the Deliverable are the *D3.2 Governance Alternatives [D6]* and especially the *D3.3 Governance model description [D7]*. During the D3.4 development important groups and activities were established. The Focus Group on change management, Development Team (DevTeam), interviews and cooperation with WP8 'Demonstration Cases' and WP9 'Dissemination, Exploitation and Innovation Management' will be used in the forthcoming D3.4 updates to derive guidance and as focal discussion fora.

The Leadership in transition to ECHO CNO is crucial both in directing the process and for reaching agreement and approval of main change management decisions.

The relations with other project activities are discussed in detail in all parts of the document, especially in section The Implementation Plan . The relations are also summarized in section Summary of the way ahead.

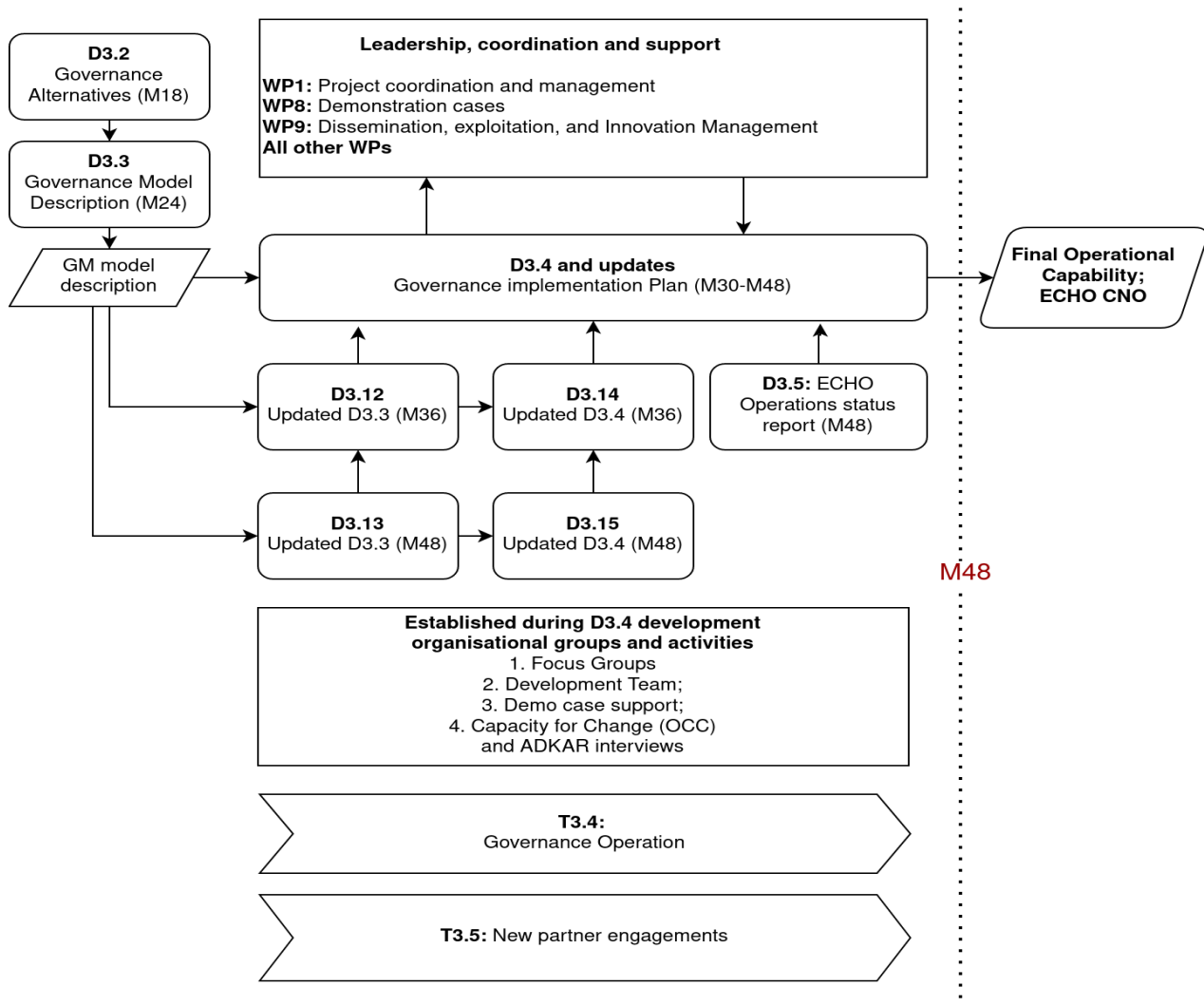


Figure 1: Relation to other work in the project

## 1.4 Applicable and reference documents

The following documents contain requirements applicable to the generation of this document:

Reference	Document Title	Document Reference	Version	Date
[GA]	Grant Agreement 830943 – ECHO	-	1.0	02/04/2019
[PH]	D1.1 Project Handbook	ECHO_D1.1_v1.42	1.42	20/10/2019
[PQP]	D1.3 Project Quality Plan	ECHO_D1.3_v1.3	1.3	15/06/2020

Table 1: Applicable documents

The following documents have been consulted for the generation of this document:

Reference	Document Title	Document Reference	Version	Date
<b>D1</b>	D1.1 Project Handbook	ECHO_D1.1_v1.42	1.42	20/10/2019
<b>D2</b>	D1.2 Data Management Plan	ECHO_D1.2_v2.0	2.0	04/04/2020
<b>D3</b>	D1.3 Project Quality Plan	ECHO_D1.3_v1.3	1.3	31/05/2019
<b>D4</b>	D1.4 First Project Activity Report	ECHO_D1.4_v1.0	1.0	29/02/2020
<b>D5</b>	D3.1 Governance needs and objectives	ECHO_D3.1_v1.1	1.1	03/02/2020
<b>D6</b>	D3.2 Governance alternatives	ECHO_D3.2_v1.0	1.0	31/07/2020
<b>D7</b>	D3.3 Governance model description	ECHO_D3.3_v1.0	1.0	31/01/2021
<b>D8</b>	D3.6 Information Sharing Models	ECHO_D3.6_v1.0	1.0	31/10/2019
<b>D9</b>	D5.1 E-EWS High-level design	ECHO_D5.1_v1.2	1.2	31/10/2019
<b>D10</b>	D6.1 E-FCR High-level design	ECHO_D6.1_v1.1	1.1	31/10/2019
<b>D11</b>	D9.1 Project Leaflets	ECHO_D9.1_v1.0	1.0	13/09/2019
<b>D12</b>	D9.10 Yearly review of project objectives and market needs/opportunities	ECHO_D9.10_v1.1	1.1	31/01/2020
<b>D13</b>	D9.11 Procedure for internal IP reviews	ECHO_D9.11_v1.1	1.1	31/01/2020
<b>D14</b>	D9.12 IP awareness trainings	ECHO_D9.12_v1.1	1.1	31/01/2020
<b>D15</b>	D9.16 Communication and Stakeholders Engagement Plan	ECHO_D9.16_v0.9	0.9	31/07/2019
<b>D16</b>	D9.2 Dissemination Strategy	ECHO_D9.2_v1.0	1.0	31/07/2019
<b>D17</b>	D9.3 Stakeholder Mapping	ECHO_D9.3_v1.0	1.0	31/07/2019
<b>D18</b>	D9.4 Interim dissemination reports	ECHO_D9.4_v1.0	1.0	05/02/2020
<b>D19</b>	D9.5 Event Calendar	ECHO_D9.5_v1.0	1.0	31/01/2020
<b>D20</b>	D9.6 Market Analysis	ECHO_D9.6_v1.0	1.0	14/05/2020
<b>ARC1.3</b>	Appraisal Requirements for CMMI, Version 1.2 (ARC, V1.2)	ARC v1.3	<a href="#">link</a>	26/07/2021

Table 2: Reference documents

## 1.5 Intellectual Property Rights

Based on the legal framework provided in the ECHO Grant Agreement and the Consortium Agreement, ECHO specific IPR procedures have been established to protect the innovations and knowledge developed within this deliverable. More specifically, the IPR Registry has been updated to reflect the innovation and knowledge generation developed by this deliverable.

## 1.6 Glossary of acronyms

Acronym	Description
<b>ADKAR</b>	Awareness, Desire, Knowledge, Ability, Reinforcement
<b>BoD</b>	Board of Directors
<b>CMCR</b>	Catalogue Management and Customer Relations
<b>CMMI</b>	Capability Maturity Model Integration
<b>CNO</b>	Collaborative Networked Organisation
<b>COBIT</b>	Control Objectives of Information and related Technologies
<b>COM</b>	Current Operating Model
<b>DE</b>	Digital Europe (the EU's programme to drive the digital transformation of Europe)
<b>DevTeam</b>	The ECHO WP3 D3.4 Development Team
<b>ECSCON</b>	EU Cyber Security Collaborative Network
<b>ECSO</b>	European Cyber Security Organisation
<b>ECCC</b>	European Cybersecurity Industrial, Technology and Research Competence Centre (established in Bucharest under R630)
<b>EDIHs</b>	European Digital Innovation Hubs <sup>2</sup>
<b>EU MS</b>	Military Staff of the European Union
<b>ENISA</b>	European Union Agency for Cybersecurity
<b>EDA</b>	European Defence Agency
<b>EUROPOL</b>	European Union Agency for Law Enforcement Cooperation
<b>FG</b>	The ECHO WP3 Focus Group on Governance and Management
<b>FOC</b>	Full Operating Capability
<b>HE</b>	Horizon Europe (the EU's key funding programme for research and innovation)
<b>GA</b>	General Assembly
<b>GIMS</b>	Governance Information Management System
<b>GM</b>	Governance and Management
<b>I&amp;T</b>	Information and Technology
<b>IOC</b>	Initial Operating Capability
<b>IPR</b>	Intellectual Property Rights
<b>KPI</b>	Key Performance Indicator
<b>NATO</b>	North Atlantic Treaty Organisation
<b>NCCs</b>	National Coordination Centres (National level bodies of the future EU Cybersecurity Competence Network according to the R630)
<b>NCIA</b>	NATO Communications and Information Agency
<b>NHs</b>	ECHO National Hubs
<b>PD</b>	Partnership Development

<sup>2</sup> European Commission, "EDIHs," Shaping Europe's digital future, accessed July 26, 2021, <https://digital-strategy.ec.europa.eu/en/activities/edihs>.

Acronym	Description
<b>PIIs</b>	Practice Implementation Indicators
<b>PDCA</b>	Plan-Do-Check-Act Cycle of the organisational change and improvement
<b>PESTLE</b>	Analysis approach on Political, Economic, Social, Technological, Legal, and Environmental factors
<b>R630</b>	Regulation of the European Parliament and of the Council establishing the European Cybersecurity Industrial, Technology and Research Competence Centre and the Network of National Coordination Centres <sup>3</sup>
<b>R&amp;D</b>	Research and Development
<b>RACI</b>	Responsible, Accountable, Consulted, Informed matrix
<b>RASCI</b>	Responsible, Accountable, Support, Consulted, Informed matrix
<b>SGs</b>	ECHO Service Groups
<b>SIPOC</b>	Diagram of relations Suppliers-Inputs-Process-Outputs-Customers
<b>SLA</b>	Services Level Agreement
<b>SPP</b>	Strategic Planning Process
<b>STC</b>	Scientific and Technology Committee
<b>SWOT</b>	Analysis approach on Strengths, Weaknesses, Opportunities, and Threats of an organisation
<b>ToC</b>	Table of Contents
<b>TOM</b>	Target Operating Model
<b>WP</b>	Work Package
<b>ECHO Governance Model related acronyms</b>	
<b>ECHO</b>	European network of Cybersecurity centres and competence Hub for innovation and Operations
<b>AC</b>	Audit Committee
<b>MSIEC</b>	Multi-Sector Innovation and Exploitation Committee
<b>E-CCS</b>	ECHO Cybersecurity Certification Scheme
<b>E-CSF</b>	ECHO Cybersecurity Skill Framework
<b>E-EWS</b>	ECHO Early Warning System
<b>E-FCR</b>	ECHO Market Place for Cyber Range providers
<b>E-GCS</b>	ECHO Governance Consultancy Services
<b>E-GM</b>	ECHO Governance Model
<b>E-MAF</b>	ECHO Multi Assessment Framework
<b>GA</b>	General Assembly
<b>IA</b>	Internal Audit

<sup>3</sup> European Commission, “Regulation (EC) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the Establishment of a Common Classification of Territorial Units for Statistics (NUTS)” (EUR-Lex, 2018), <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02003R1059-20180118&from=EN>.



Acronym	Description
<b>ECHO Work Packages, Tasks and Deliverables related acronyms</b>	
<b>D3.1</b>	Deliverable 3.1 (of T3.1): Governance needs and objectives
<b>D3.2</b>	Deliverable 3.2 (of T3.3): Governance Alternatives
<b>D3.3</b>	Deliverable 3.3 (of T3.3): Governance model description
<b>D3.4</b>	Deliverable 3.4 (of T.3.3): Governance model implementation plan
<b>D3.5</b>	Deliverable 3.5 (of T3.4 and T3.5): ECHO Operations status report (repeatedly updated 2020-2024)
<b>D3.6</b>	Deliverable 3.6 (of T3.2): ECHO Information sharing models
<b>AR</b>	Annual Report (of T3.4, D3.5, see [D3])
<b>PAC</b>	Project Advisory Committee
<b>T3.3</b>	Task 3.3: Governance models definition
<b>T3.4</b>	Task 3.4: Governance Operation
<b>T3.5</b>	Task 3.5: New partner engagements
<b>WP1</b>	Project coordination and management
<b>WP2</b>	Multi-sector needs analysis
<b>WP3</b>	ECHO Governance Model
<b>WP4</b>	Inter-sector Technology Roadmaps
<b>WP5</b>	ECHO Early Warning System
<b>WP6</b>	Federated Cyber Range
<b>WP7</b>	Network-wide integration, installation and test
<b>WP8</b>	Demonstration Cases
<b>WP9</b>	Dissemination, Exploitation, and Innovation Management
<b>WP10</b>	Ethics requirements

Table 3: Glossary of acronyms, initialisms, and abbreviations

## 2. Methodology for developing the Implementation Plan

### Background

The research on D3.4: Governance model implementation plan aims to develop a change management framework for the governance model, outlined in D3.3: Governance model description[D7] within WP3's T3.3: Governance models definition. This implementation plan will be the basis for project activities within T3.4: Governance operation, leading to the actual transformation of the project network into a functioning, collaborative network, as well as within T3.5: New partner engagements to bring on board new members of the ECHO Network and establish collaboration with the other three pilot projects, ECSO<sup>4</sup> and ECCC (Bucharest) and NCCs network.

There are several important stepping stones used as inputs for D3.4:

- The *vision* defined by European Commission: *Establishing a Cybersecurity Competence Network to implement the EU's vision for a more secure European Digital Single Market and the EU Cyber security strategy, Regulation on ECCC and Network of NCCs*;
- The *Current Operating Model (COM)* of ECHO: project consortium organisation combining the expertise and efforts of 30 ECHO consortium partner organisations<sup>5</sup> in 16 countries. The main objective of the Consortium is to strengthen the proactive cyber security and resilience of the European Union, enhancing Europe's technological sovereignty through effective and efficient multi-sector and multi-domain collaboration. The procedures for the internal management of the project, incl. the consortium governance, project monitoring and project reporting are described in D1.1: Project Handbook[D1], Assessment of the maturity of the COM made under T3.4: Annual reports on Governance model operation for 2019 and 2020;
- The *Target Operating Model (TOM)*: processes, organisational structure and requirements needed in order to establish the ECHO Network (as a model of EU Cyber Security Collaborative Network – ECSCON) with central hub, national (regional) chapters and service groups (functional entities) that will provide interface with institutional partners, as well as work with market customers to provide services. The Governance and Management model is defined in D3.3. (in the future steps of the ECHO project spiral updates of D3.1–D3.4 will provide improvement of the governance requirements, model design and its implementation plan, reflecting the achieved level of maturity and development of the partnership network in D3.5: Governance operations;
- The documents and deliverables of the ECHO Project, described in Section 3.1.

The Implementation Plan aims to answer the following two important questions:

1. What are the steps needed in order to reach the desired to-be (TOM) state starting from the as-is (COM) from August 2021 to January 2023 passing through Initial Operating Capability (IOC) end of 2021 and Full Operating Capability (FOC) at the end of 2022;

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<sup>4</sup> European Cyber Security Organisation, "Home Page," ECSO, accessed June 14, 2021, <https://ecs-org.eu>.

<sup>5</sup> As of end of January 2021, there are 5 newly added participants to ECHO. Newly joining participants and partners will be actively addressed by the activities within D3.4 updates.

2. How to manage the transition successfully in order to achieve Capability Maturity Model Integration (CMMI) level 4 for the key processes and structures defined in D3.3 for the FOC.

Setting up a Collaborative Networked Organisation (CNO) through the transition from a project organisation poses various challenges that need to be addressed during the preparation for – and implementation of – the transition and implementation plan. Among these are ensuring buy-in in the various project organisations and aligning to a single model regarding: organisational structure, decision making, performance metrics, responsibilities and authorities (RASCI matrix<sup>6</sup> for the key processes).

The focus of D3.4 is to ensure the successful management of the change from COM to TOM. The CNO established after the transition has to be able to engage with European Competence Centre in Cyber Security in Bucharest (ECCC) and National Coordination Centres (NCCs) for funding under Horizon Europe (HE) and Digital Europe (DE) horizontal programs of EU on cyber security as well as to exploit the market opportunities identified in WP9 (after January 2023). One legitimate goal could be to have at least one European Digital Innovation Hub (EDIH) per MS, specialising in or covering cyber security.

Managing and leading change in organisations is a rich area of scientific and practitioners' focus and informs the development of this Implementation Plan. Clarity of the goal and sharing information among all project partners and participants affected by the change, as well as affirmative leadership and dedicated and empowered change management team are among the key factors we will focus on. Leadership for change is provided by Project Coordinator (PC) and Project Implementation Coordinator (PIC), supported by WP9 E-GCS (Governance Consulting Services) team formed under WP3 and validated through incorporation of governance and management aspects in the WP8: Demo cases.

It is important to note the differences in experience, ambitions, structures and capabilities of the consortium partner organisations as well as their number. Preparation of the transition should thus allow for individual assessment of the organisations' change capacity and readiness to proceed with deepening the collaboration, as well as to identify the necessary actions to ensure alignment and smooth transition.

### *Vision for the change*

ECHO partners have stated the vision for the future beyond the project ends:

**“2023 AND BEYOND:** Develop and establish the ECHO Network as an NGO with Chapters and Central Hub to be the ECHO Cyber Competence Community (CCC) after the end of the project, supporting evolving ECHO service groups around the assets to be exploited.”<sup>7</sup>

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<sup>6</sup> The RASCI matrix is a tool to assign responsibilities and roles within an organisation, where R means Responsible, **A** – Accountable, **C** – Consulted, **S** – Supported, and **I** – Informed.

<sup>7</sup> Decisions taken during the [ECHO Workshop on Governance Model Description, held on 17-18 January 2021](#).

This vision defines a clear direction and requirements for the transition from project organisation governance and coordination to a federated future set-up, involving the establishment of legal entities, specific organisational design and governance model.

## 2.1 Managing change in organisations

Organisations have been changing constantly since humans organised some activities to be performed collectively for the achievement of common goals. The systematic study of organisational change however is a rather new – albeit proliferous – field in social sciences. Since mid-20th century, many researchers and practitioners from different fields of science have contributed to enhancing our understanding of what organisational change means, why and how it happens, and what factors influence its success and sustainability.

Based on the literature review and shared understanding, we define organisational change as *a set of individual and group occurrences, activities and actions, which develop over time in a certain context and lead to an empirically observable difference in quality, form and state of an organisational entity.*

Change in organisations may be triggered by both shifts in the external environment and developments in the internal environment, which may or may not be associated with external ones. Both external and internal factors may unlock opportunities and threats, and respectively provoke reactive or proactive change; organisations may undertake a change to influence the environment.

*Change Management is associated with business-oriented approach, emphasises the effective and efficient implementation of changes, refers to a specific project (or initiative) with well-defined scope, goals and objectives. Change Management interventions are usually structured approaches facilitating the acceptance of changes in processes, behaviours, practices by individual employees<sup>8</sup>.*

Change management literature attempts to prescribe guidelines, steps and actions to facilitate change implementation in an organisation addressing a specific project at hand. Various researchers and practitioners identify important success factors and propose change management frameworks, such as John Kotter<sup>9</sup>, W. Warner Burke and George H. Litwin<sup>10</sup>, R.J. Bullock and Donde Batton<sup>11</sup>, among others. Major

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<sup>8</sup> See also: Creasey, T., Jamieson, D. W., Rothwell, W. J. & Severini, G., 2016. Exploring the Relationship between Organisation. In: W. J. Rothwell, J. M. Stavros & R. L. Sullivan, eds. *Practicing Organisation Development: Leading Transformation and Change*. 4th ed. Hoboken, New Jersey: John Wiley and Sons, Inc.

<sup>9</sup> John P. Kotter, Vanessa Akhtar, and Gaurav Gupta, *Change: How Organizations Achieve Hard-to-Imagine Results in Uncertain and Volatile Times*, 1st edition (Hoboken, New Jersey: Wiley, 2021).

<sup>10</sup> W. Warner Burke and George H. Litwin, "A Causal Model of Organisational Performance and Change," *Journal of Management* 18, no. 3 (September 1992): 523–45, <https://doi.org/10.1177/014920639201800306>.

<sup>11</sup> R.J. Bullock and Donde Batten, "It's Just a Phase We're Going Through: A Review and Synthesis of OD Phase Analysis," *Group & Organisation Studies* 10, no. 4 (December 1, 1985): 383–412, <https://doi.org/10.1177/105960118501000403>.

consultancy firms support their clients in implementing various changes and have also developed their own change management frameworks.

## 2.2 The ADKAR model

Most models seek to **integrate in a holistic manner the human aspect of change with strategy and technology**, and thus to enable the coordinated efforts necessary to bring about strategic change<sup>12</sup>. This is the reason to select in D3.3 (and even in D3.2). Strategic Planning, Innovation and Catalogue Management (Technology management), as well as Partnership development (human aspects) as the key processes to implement change in ECHO Project organisation.

The Implementation Plan Development Team (DevTeam) has selected from practical and operational perspective the **Awareness, Desire, Knowledge, Ability, Reinforcement (ADKAR)** change management model, developed by Jeffrey Hiatt,<sup>13</sup> for several reasons:

- It covers all important aspects of the process of implementing change identified by most Change Management models and provides a methodology for diagnosis, required to assess the diverse partners' base of ECHO; and also accommodates training as an instrument of change, providing an opportunity to utilize ECHO Cyber Skills Framework (E-CSF) asset to address the induction training to ECHO Network;
- It has been tested and proved useful for changes of different scale and scope at various organisations worldwide;
- The Implementation Plan DevTeam members are familiar with and have successful experience in implementing changes at complex settings by applying ADKAR methodology.

The model offers a framework for change management activities which address major factors identified in change management literature, such as readiness assessment, sponsorship, communication, coaching, training, recognition and resistance management. ADKAR describes a sequence of five *building blocks* to manage the people side of change:

- **Awareness** of the need for change: it reflects a person's understanding of the nature and necessity of the change, and what are the risks of not changing, information about the factors (internal and external) necessitating the change, as well as the benefits on a personal level from the change;
- **Desire** to support and participate in the change: it represents an individual's willingness to engage and support the change, and reflects the personal choices to be made based on an individual's personal situation, motivators, as well as the nature of change itself;
- **Knowledge** of how to change: it is associated with the training, education and access to the necessary information for individuals to know how to change – it refers to behaviours, processes, tools, systems, skills, job roles and techniques needed to implement a change;

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<sup>12</sup> Worren, N., Ruddle, K., Moore, K., 1999, From Organisational Development to Change Management. The Emergence of a New Profession. *The Journal of Applied Behavioral Science*, 35(3), pp.273-286.

<sup>13</sup> Hiatt, J.M., 2006. *ADKAR: A Model for Change in Business, Government and Our Community*. Loveland, Colorado: Prosci Learning Center Publications.

- **Ability** to implement required skills and behaviours: it represents the execution of the change, the ability to turn knowledge into action;
- **Reinforcement** to sustain the change: it describes the external (such as recognition, rewards and celebrations) as well as internal (such as individual satisfaction with own achievements or other personal benefits obtained) reinforcements that help sustain the change after the project ends.

The model states that the five steps above follow a natural sequence and require achieving high scores on one step before moving to the next – i.e., if a person knows how to change (Knowledge) but does not want to (Desire), this person is unlikely to change. ADKAR points at the main factors influencing success and suggests tactics and measures to be planned to address these factors.

More detailed description of ADKAR's building blocks can be seen in Annex 1, ADKAR building blocks.

## 2.3 Structure of the Implementation Plan

The development of an implementation plan for a change initiative can be seen as a part of the actual implementation – it is in the preparation phase and actually with the updates of the plan during the implementation (M36, M48) it will provide for the spiral implementation model, creating the basis for the continuous improvement after reaching CMMI level 4 of the key processes. Change management models call for engagement and communication at the earliest possible stage of the process. In line with the ADKAR model, raising awareness is the first step which, if done properly, increases the chances of building desire for the change.

Thus, we approach the development of Implementation Plan as the first opportunity to assess – as well as build – awareness of (and desire for) the proposed transition to ECHO Network. The specific activities that help along the process include:

- *A Focus Group*, aimed at getting understanding of the initial level of awareness with regards to the change amongst representatives of the ECHO partner organisations, directly involved in the project;
- *Interviews*, aimed at reaching out to decision makers within the partner organisations (who are not necessarily part of – and closely following – the ECHO Project activities) to get understanding of their level of awareness and possible requirements of information to decide for joining the future ECHO Network;
- *Strategic Planning Simulation Game*, aimed at testing the Strategic Planning Process and decision making in the future ECHO CNO.

These activities inform the analysis of current status, desired status and gaps to be addressed through the Implementation Plan. During the implementation itself, we plan to extend some of these instruments to include the other three pilot projects<sup>14</sup> and European Cyber Security Organisation (ECSSO) as well as, to the extent possible, to engage with core ECCC staff and NCCs in the member states', where ECHO have active partners. This is important to address larger stakeholder community with influence on the success of our transition efforts.

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<sup>14</sup> Funded under H2020: CONCORDIA, SPARTA, CyberSec4Europe

At the same time in the two spirals of change, supported by updates of the Implementation plan, we will play simulation games on the other key processes – Partnership Development Process; Catalogue Management and Customers Management Process; and Innovation Management Process.

## 2.4 Aligning Change Management Initiative and ADKAR Lifecycle

The change management model ADKAR suggests a lifecycle for implementation of the change. It aligns the building blocks of the ADKAR with a transformation project lifecycle from planning to deployment of the change. Thus, explaining, planning and designing the change (Awareness and Desire); developing the tools for change (Knowledge and Ability) and finally, deploying new capabilities through Reinforcement.

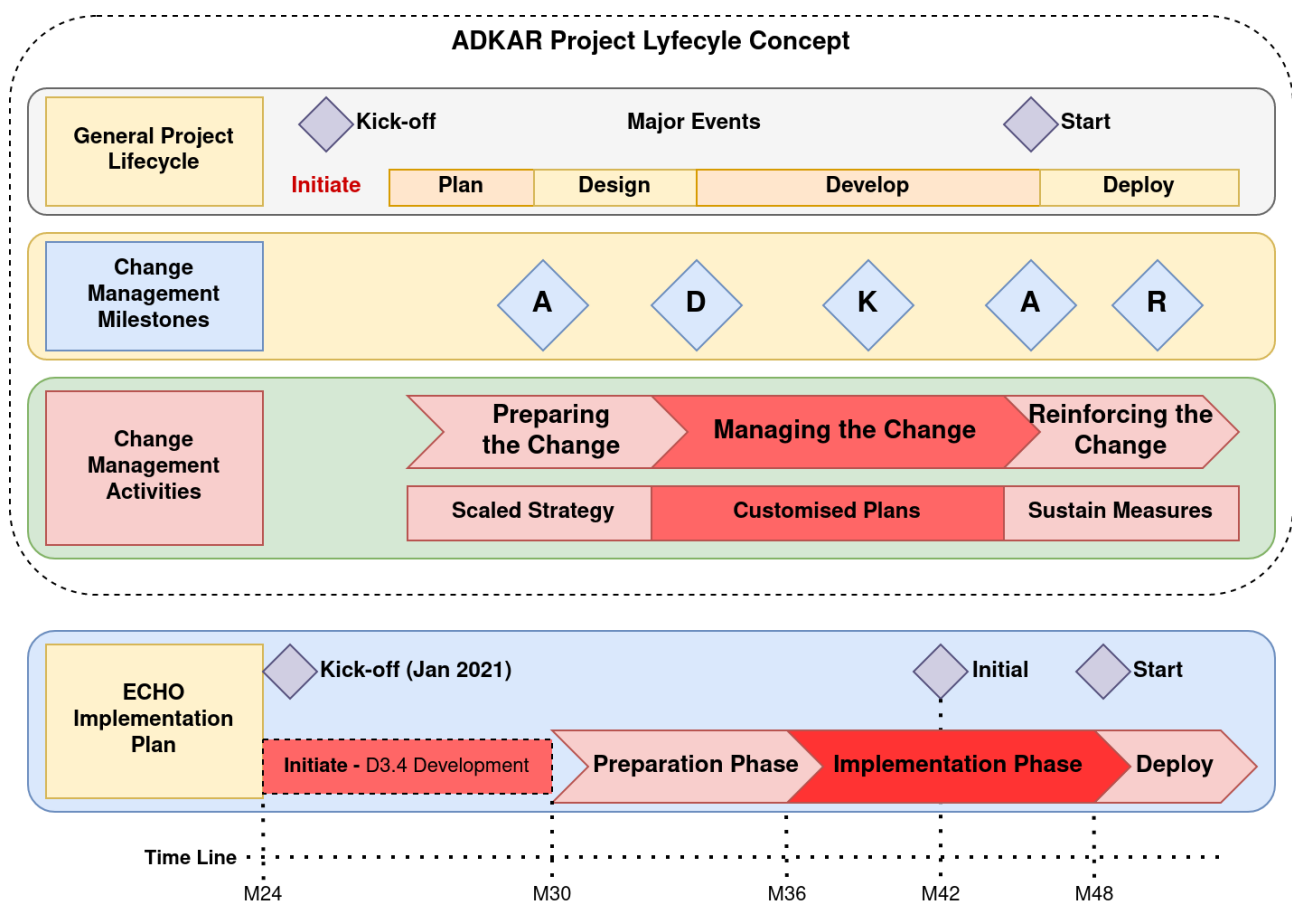


Figure 2: ADKAR Project Lifecycle and Implementation Plan

The Figure 2 presents the lifecycle relationships and project activities. The figure also shows the timetable and change management activities within ECHO in regard to ADKAR model.

It can be argued that many activities related to planning, design and developing of the project are already in place. Processes and structures are planned and designed in general already in D3.2[D6] and D3.3[D7]. Many major activities for Awareness and Desire are done within deliverables from D3.1[D5] to D3.6[D8]. Currently, these events are continued through activities related to demo cases (WP8).



In this regard the D3.4 can be considered as official initiation of change management project with structured activities, roles and responsibilities and timeline, but some parts of the initial design and developing phases are already in place.

The ECHO CNO Implementation Plan has its specific characteristic – the networking environment of partners willingly participating to the network with different levels of commitment. Therefore, more Awareness, Desire and Ability is needed and the implementation phase is divided in one additional important Initial Milestone. At this milestone one or more National Hubs and Service Groups should be established as a testing ground of networking organisation.

All phases, specific activities and major events, as well as the roles and responsibilities for their execution can be found in Sections 4.2 and 4.3.

## 2.5 Measuring the change

In order to know where we are and how close are we to the change goals we should have a framework for measuring the progress.

*In this regard, the Current status* has several aspects, and helps assess *Awareness*, and to a certain extent *Desire* stages:

- *Current Operating Model (COM)* describes the organisational structure, procedures and mode of operations. COM should be assessed from the perspective of whether it can support the implementation of the (new) vision and strategy of the organisation. For the ECHO Project, COM is defined in a number of documents, such as D1.1: Project Handbook, Assessment of the maturity of the COM made under T3.4, Annual reports on Governance Model operation for 2019 and 2020;
- *Attitudes* to the proposed change – these are assessed through the activities detailed below: focus group, interviews, a strategic planning simulation game;
- *Current behaviours, processes* – these are assessed using available information such as assessments of the maturity of the COM made under T3.4 in Annual reports on Governance Model operation for 2019 and 2020. Further steps will be made through Internal Audit (IA) missions aligned with the demonstrations and simulation games (under T3.4) to assess the CMMI level of the key processes and organisational structures as defined in D3.3.

*The Desired status* is defining the status we want to achieve and also supports *Awareness* & *Desire* stages, and includes:

- *Vision and Strategy* – the Implementation Plan is based on the vision adopted by ECHO partners. The first draft of the ECHO Network strategy is to be developed within the Strategic Planning Simulation (detailed below), aligned with the EU Cyber Security Strategy, the regulation on ECCC/NCCs, the new NIS Directive and the development of HE/DE horizontal programs;
- *Target Operating Model (TOM)* is described in D3.3, including organisational structure, key processes, responsibilities and authorities (to be updated at M36 and M48 with a contribution from D3.1, D3.2 updates and annual reports under T3.4/ partnership development reports under T3.5 to form the D3.5 content at M48);
- *Requirements for new behaviours, and processes* are assessed based on the defined structure and processes in D3.3.



Current status of is assessed through the interviews, set-up and discussions through Focus Group comprised of managers, and conducting a Simulation Game on Strategic Planning.

The current status is assessed from the desired status point of view. Defined and actual achieved levels of KPIs are compared and discrepancies are identified. On the basis of this comparison remedy activities are identified and planned (if needed) for the next steps and phases of the Implementation Plan. One key instrument is the induction training for partners in ECHO project and the new partners joining through the T3.5 activities.

The ADKAR building blocks in initiation of the plan are assessed through five questions within the Interviews. Main obstacles for the change are also identified and ranked by the interviews' participants. The results are presented as an entry point in Section 4.1.2. The main factors, enablers and responsibilities for successful ADKAR implementation is given in Table 11, Section 4.2. This table will be used in next assessment of the levels of the ADKAR building blocks.

## 2.6 Strategic plan and legal documents

The final phase – the full deployment of ECHO CNO will start after M48 (January 2023) – the last ECHO Project's month. Until this date the CNO should have Strategic Plan defining the strategic goals and their implementation, as well as well-defined By Laws describing procedures within organisation.

In the context of ECHO transition from a project to a collaborative network organisation, working on the ECHO Strategic Plan in parallel to implementing the transition plan is important for several reasons, including:

- The ECHO Project has a clear set of goals and approach how to achieve them, in compliance with the Grant Agreement. However, in order to design – and implement – the transition to CNO, the Agreement does not provide sufficient strategic guidance, especially beyond its expiration. Planning and implementing the transition requires a shared agreement on the vision as well as strategic guidance and plan beyond the term of the current ECHO project;
- The ECHO Strategic Plan will serve as a first working version to guide the change implementation. It should reflect the ambitions of the partner organisations, as well as the environmental setup and factors (such as EU Cybersecurity Strategy; EU structures already existing or being set up in the field – ECCC, NCC, European Joint Research Centre's Cyber ATLAS Project<sup>15</sup>; the other 3 pilot projects; other relevant international players, e.g., NATO digital and cyber related organisation);
- The Strategic Plan will serve as a demo case to test and refine (if necessary) the strategic planning process, in order to have a functioning process as soon as the new ECHO network organisational structure is set and operational (we assume that the strategic planning process provides a framework for other selected key processes as Partnership Development, Catalogue Management and Customer Relation Management, and Innovation Management).

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<sup>15</sup> European Commission, "European Cybersecurity Atlas," accessed March 30, 2021, <https://cybersecurity-atlas.ec.europa.eu/>.

The development of the ECHO Strategic Plan will rely on several instruments proven useful in the strategic management field. The Annex 1 (The Balanced Score Cards and the Strategic Maps) provides description of methodology of Balanced Score Cards, which will be used in the development of the Strategic Plan.

One of the most important aspects of change is to communicate both the strategic plan and the implementation of transition to human actors, which enables the clarification of the long-term direction from a project organisation to a collaborative networked organisation.

The Annex 1 also provides a description of other methods for managing change which will be used during the Implementation Phase of the Implementation Plan (see Figure 2), like aspects of Project Management and Organisational Capacity for Change.

### 3. Inputs to ECHO Governance Implementation Plan

This chapter is dedicated to description of starting point for the development of the Implementation Plan. The inputs for the Plan are identified and presented within two sections respectively as organisational development and as analysis of the intentions for change.

*D3.3: Governance model description [D7]* already presented the analysis on ECHO documents availability and development. A brief summary of progress in all WP3 related deliverables is given in order to achieve the common picture. The consideration of the external aspects of the ECHO transformation is also given. Finally, in Section 3.1.3 the description of ECHO Governance Consultancy Service (E-GCS) is provided as a change supporting service.

#### 3.1 The organisational development and external environment

Within the sections below main developments are pointed out without detailed analysis. Such kind of analyses were provided in submitted deliverables, as well as during preparation and organisation of activities and events within ECHO Project and its working packages. The aim here is just to highlight the most important inputs for the Implementation Plan.

##### 3.1.1 ECHO deliverables and documents

###### ECHO Information sharing models (D3.6)

Chronologically, the D3.6 was delivered first within the WP3 framework (in M9). It provides a description of information sharing models and mechanisms in networking organisations. The importance of this deliverable for the suggested change to ECHO CNO can be seen, if we look at how trust and security of information exchange are important in crucial field such as Customer and Innovation Management.

During discussions and development of the D3.3 the need for a *common Governance and Management Information System (GMIS)* was identified. GMIS should provide unification, transparency, and quality of management information, as well to assure fast and optimised processes in organisation comprising many different partners.

*Input for the Implementation Plan:* The GMIS will be described as requirements and concept model in D3.3 update in M36 and have to be planned accordingly as architecture and implementation after that. The GMIS description will be product of cooperation between teams working on T3.2: Information sharing models definition and T3.3: Governance models definition under the framework of WP3.

###### Governance needs and objectives (D3.1)

The description of theory good practices and variety of IT, cyber security and R&D network organisations was provided by the D3.1. The deliverable also summarises the common need and objectives in different types of organisations (for-profit or non-for-profit).

The D3.1 was used as input for analysis and development in D3.2 and D3.3.

*Input for the Implementation Plan:* The D3.1 will be updated in M36 and M48 respectively in deliverables D3.8 and D3.9. These updates will provide information for the environment and organisational changes, which have to be taken into account during the period of implementation.

#### Governance alternatives (D3.3) and Governance model description (D3.3)

The D3.2: Governance alternatives provides comprehensive multidimensional analysis of four identified alternatives for future ECHO CNO. The combined alternative (named A0) was identified. The A0 was discussed and accepted on WP3 Workshop on Governance Model Alternatives Assessment and Selection, held on 12 May 2020.

The selected alternative A0 prescribes development of ECHO Collaborative Networked Organisation as a matrix organisation with National Hubs, Service Groups and Central Hub, implementing four specific core processes. The updates of D3.2 should investigate the changes in the environment and organisational set-up and to suggest respective measures.

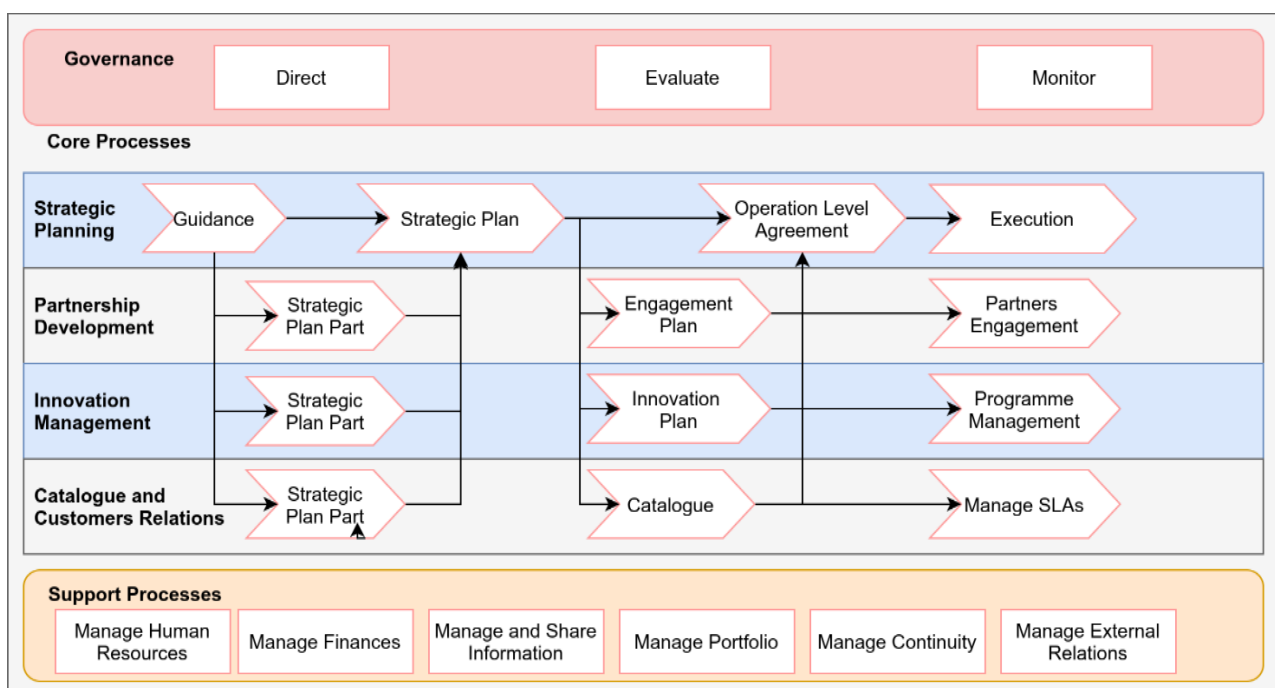


Figure 3: Key processes relationships<sup>16</sup>

<sup>16</sup> The source of the Figure is the D3.3, p. 35.

D3.3: Governance model description is the main source for developing the Implementation Plan since it describes the framework of Business Process Management as the approach used for identification, description, implementation and improvement of the four core processes identified in D3.2 alternative A0:

- Strategic Planning Process;
- Partnership Development;
- Catalogue Management and Customers Management Process;
- Innovation Management.

The overall scope and relations among processes identified in D3.3 is presented in Figure 3.

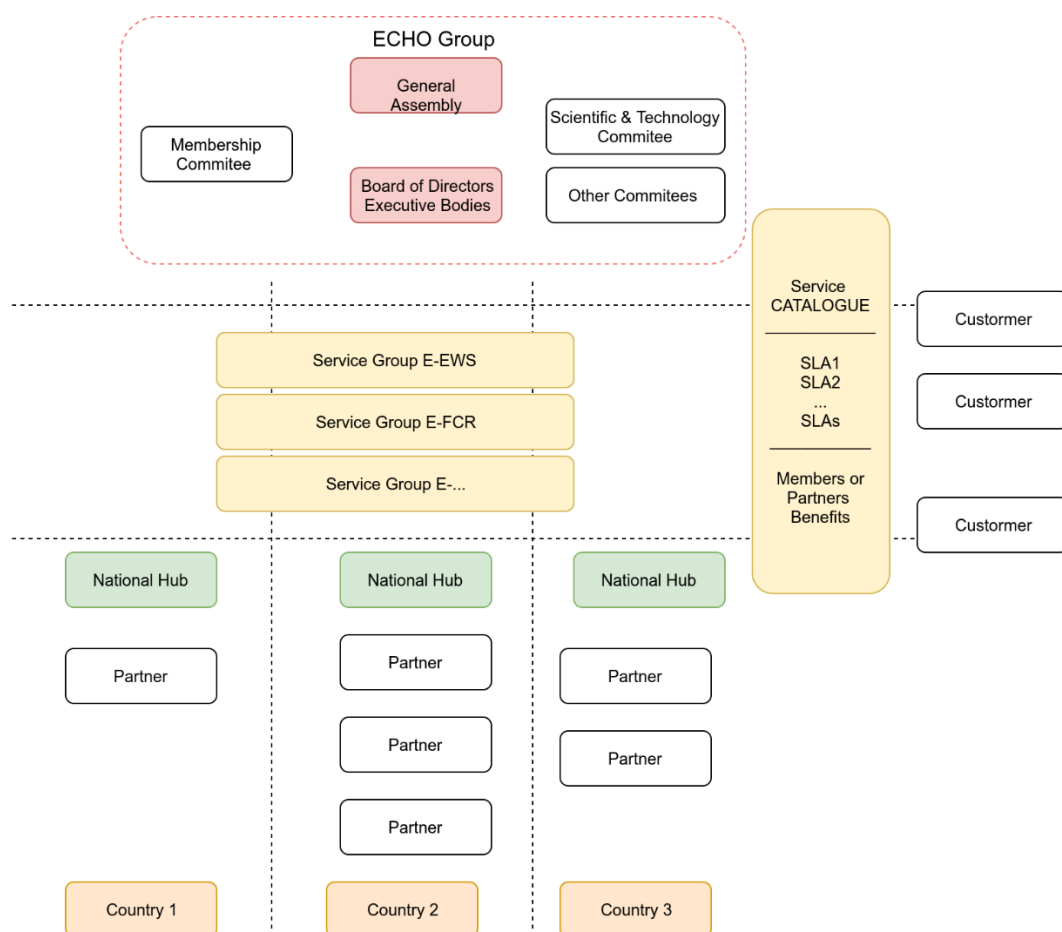


Figure 4. ECHO CNO structure identification<sup>17</sup>

The processes are implemented in networking structure established around the Central Hub with General Assembly, Board of Directors and several Advisory Committees. The membership management and Partnership Engagement is provided on National Hubs level and the Catalogue of services is provided as a

<sup>17</sup> The source of the Figure is the D3.3, p. 46

common effort by Service Groups organised around ECHO assets and coordinated by the Central Hubs' advisory committees, as it is shown on Figure 4.

*Input for the Implementation Plan:* The D3.3 provides a general, high-level description of the processes and structures. These will be further detailed in updates to D3.3 (in M36 and M48). Updating D3.3 is a process which will be executed in close cooperation with all other WP3 tasks and especially with updates of the D3.4. The detailed processes description and documents provided by D3.3 will be used in implementation, thus raising the Knowledge, Ability and Reinforcement building blocks of the ADKAR.

Months	Tasks						
	T3.1	T3.6	T3.3			T3.4	T3.5
M9		D3.6					
M12	D3.1						
M18			D3.2				
M24				D3.3.			
M30					D3.4		
M36	D3.8		D3.10	D3.12	D3.14		
M48	D3.9		D3.11	D3.13	D3.15	D3.5	D3.5
Phases	Study		Assessment, Design and Planning			Deployment	

Table 4: The way ahead for Governance model development in ECHO project

Table 4 presents the timetable for the deliverables of WP3 related to development of the Implementation Plan. Green colour shows the foreseeable updates of the respective deliverables.

#### Other related deliverables and tasks activities

Other important inputs to the Implementation Plan are as follows:

*T3.5: New partner engagements* and task's input to *D3.5: ECHO Operations status report* (M48) are important for Partnership Development Process. This core process is currently well developed and it will be additionally tested in Partnership Development Simulation Game in October 2021.

Engaging and accepting new partners will be used to gradually growing the network and its scope of activities.

*T3.4: Governance Operation* and its *Annual reports*, as well as D3.5 are (and will be) used in monitoring and improving the ECHO organisation. The activities related to monitoring functions are detailed in Section 4.4.

*WP8 Demonstration cases* deliverables are important for testing and proving the concept of many aspects of the Governance model's core processes development.

Other sources for D3.4 and D3.3 updates are the *deliverables of ECHO Assets Exploitation Strategies* and *WP9 Innovation Strategy* related deliverables. In relation to dates of the deliverables, two more simulation games

are planned for 2022 – one on Catalogue Management and Customers Relation Management; the other on Innovation Management.

### 3.1.2 External aspects

The external aspects were discussed in deliverables D3.2 and D3.3. In D3.2 the strategic autonomy of the future ECHO CNO was discussed. The same idea of the environment was agreed and presented in D3.3.

During the communication and meeting of Focus Group on Governance of four pilot projects the ECHO representatives shared the vision for EU Cyber Security Collaborative Network (ECSCON). The suggested CNO – ECSCON – is to cover European Cybersecurity Competence Community (see Figure 5), where on one side it will communicate with ECCC and NCCs as an institutional framework and, on the other, will interface with EC and EU MS, ENISA, EDA, EUROPOL and NATO Communication and Information Organisation (NCIO) as executive partners. On the “partnership” side it will work with “market” customers, based on service (project) offering developed by the functional service groups, presented through the Catalogue of services (in the form of a federated catalogue).



Figure 5: ECSCON and EU cyber security context

The work of the Focus Group on Governance continues on White Paper on Governance (and ECSCON) and the final document (and decisions) are expected.

New developments in external environment during D3.4 period (M24-30) are as follows:

- Decision to establish European Cybersecurity Competence Centre (ECCC) in Bucharest<sup>18</sup>;
- New NIS directive<sup>19</sup>, suggested by the EC – the directive was the part of the Strategic Planning Simulation Game and was discussed by the participants (see the scenario in Section 3.2.3);
- The developments in European Digital Innovation Hubs (EDIHs) through initiative of the Digital Single Market package<sup>20</sup>.

The above developments should be discussed within the ECHO Project management and the decision taken should be implemented accordingly. It can lead to accepting some other form of future ECHO CNO – it is possible to establish National Hubs and to align these hubs with National Cybersecurity Competence Centres (NCCs) or to EDIHs. Such kind of option was discussed during the Workshop on Governance Alternatives, held on 12 May 2020.

Current decision is to prepare for full scale ECHO CNO with Central Hub, NHs and SGs, this decision might be changed before end of the ECHO project. The final decision should be taken in M42-48 depending on development of other EU cybersecurity networks.

### 3.1.3 ECHO Governance Consultancy Services

The idea to establish ECHO Governance Consultation Services (E-GCS) was presented during development of D3.2, and more detail was provided in D3.3.

The intentions are for the E-GCS to be among the first established services with the following tasks:

- To gather all experiences, lessons learned and application of methods during the ECHO project;
- To provide knowledge and training to ECHO Partners' management;
- To optimise planning and operational activities within all ECHO structures;
- To support auditing functions.

The formation of the E-GCS is suggested to be done around WP3 team and partners with close cooperation of ECHO Cyber Skills Framework (E-CSS) service and partners.

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<sup>18</sup> Council of the EU, "The New European Cybersecurity Competence Centre to Be Located in Bucharest, Romania," Council of the EU, accessed July 7, 2021, <https://www.consilium.europa.eu/en/press/press-releases/2020/12/10/the-new-european-cybersecurity-competence-centre-to-be-located-in-bucharest-romania/>.

<sup>19</sup> European Commission, "Revised Directive on Security of Network and Information Systems (NIS2)," Shaping Europe's digital future, accessed July 19, 2021, <https://digital-strategy.ec.europa.eu/en/library/revised-directive-security-network-and-information-systems-nis2>.

<sup>20</sup> European Commission, "Digital Innovation Hubs," Smart Specialisation Platform, accessed July 7, 2021, <https://s3platform.jrc.ec.europa.eu>.



The main services' end-users will be the internal structures of the ECHO CNO. Thus, funding sources are expected to be based mainly on fees from the Central Hub, NHs and SGs. This should be cleared during the first six months (M36-42) of the Plan's Implementation Phase.

The current document of D3.4 develops initial plan for setting up the first training course in cooperation with E-CSF asset. The planned activities and the course curricula are described respectively in Section 4.5 and Annex 6 – Induction training course blueprint.

### 3.2 The intentions for change

In order to receive information and feedback for the perception and readiness for the proposed organisational change following three main activities were planned and executed during the development of the D3.4:

1. **Gathering and sustaining the Focus Group (FG) on Governance and Management.** The Focus Group provided a structured discussions and interactions of participating organisations and their representatives on topics of interest on future ECHO organisational development and change;
2. **Organise interviews** within the Focus Group with ECHO Partners' managers in order to assess the readiness and intentions for change, as well as to assess building blocks of the ADKAR;
3. **Test the proposed Strategic Planning Process** (within development of the D3.3) and provide additional awareness and knowledge to participants by organising a Simulation Game.

During the FG work the Development Team (DevTeam) was established with 15 members from ECHO Partners involved in WP3. The DevTeam worked actively during the period of developing the D3.4 in bi-weekly meetings. DevTeam and FG are still operational and they will be used in planned activities throughout the execution of the Implementation Plan.

The sub-sections below explain in brief the activities, their organisation and results. More detailed descriptions are given in Annexes 2 and 3.

#### 3.2.1 The Focus Group

The Focus Group Kick-off meeting was held on 21<sup>st</sup> of January 2021 during the telco meeting in MS Teams. The preparation for Focus Group on Governance and management was initiated even earlier during the WP3 workshop on Governance Model Description, held on 17–18 December 2020. The main objective of establishing the Focus group were to:

- Reach general understanding about all partner organisations' attitudes with regards to the proposed change to a Collaborative Network Organisation (CNO);
- Identify the factors that will support or hamper the transition process;
- Start a discussion with regards to how the proposed change aligns with internal goals and strategies of the partners;
- Discuss and prepare for Strategic Planning Simulation Game;
- Set-up the way ahead in organisational change.

Twenty-eight partners from the ECHO Consortium attended the **two break-out sessions** of the Focus Group on 21 January 2021. The organisation of the Kick-off meeting included developing and sending pre-reading materials supporting the discussion, as well as appointing the facilitators and Analytical team, where participants had to take notes and provide analysis of the discussion.

The participants discussed six questions. The final session of the Kick-off meeting was dedicated to presenting and considering the results from the two sessions. Final decision on developing the D3.4 and further activities was taken. During the break-out and final sessions, the facilitators and minute takers from the Analytical team were appointed. Below the analysis of the discussion, as generalised by the Analytical team, is provided.

**The first discussed question was** “How do you see the *future of ECHO* after the completion of the project in 2023?”

Most of the participants in the Focus Group (FG) supported the idea of the need to guarantee the sustainability of ECHO after the completion of the project in 2023. Some of the typical arguments in support of transforming ECHO into a Collaborative Network Organisation (CNO) are the following:

- “My personal opinion is that ECHO will have to survive in the future in order to keep track of what is going on and continue with those activities. What we are doing right now is more creating a base on which we can rely in the future. And in the future, since we already have the contacts between all the companies and institutions, it is going to be easier to improve our level of security”;
- “I believe that ECHO should remain as a CNO with the current members of the consortium, as it is. And we should be willing to participate in the Cybersecurity Competence Centres network as assisting to the training activities through the E-FCR, and also be a part of the European cyber shield by utilizing the EWS that have been developed and implemented during the ECHO Project”;
- Most of the participants stressed the need to keep closer cooperation in the framework of ECHO and other ongoing EU cybersecurity initiatives (other EU funded projects and the new-established Centre of Excellence in Bucharest);
- “I think it is important that we stay close to ongoing initiatives, not to diversify and build a separate platform for information sharing, but to maintain this unity, so that for everyone interested it will be relatively simple to find the information they need, and that we will be closely aligned with European organisations”;
- “There is also this new Competence Centre in Romania, which has been established. And this is what is different for ECHO and all four pilots, so to speak. So, the momentum, and maturity and potential that the Centre has because that is to be seen – that can also be an influencing factor to the success of ECHO”.

The issue of funding the future ECHO network was also discussed.

- “Currently the whole funding for ECHO Project is actually limited to our grant from the European Commission and of course in-kind contribution from partners and new partners that are coming without funding from the European Commission. But this is essential”;
- “Personally, I think that some sort of hybrid approach should be implemented. So, let’s say that 50% of the funding is coming from the European Commission, so in any way from public institutions, while the other 50% should come from private companies”.

**The second question that the participants discussed** was related to the benefits and the obstacles that they see for the transformation from a project organisation to a collaborative networked organisation and a more active role on the European cybersecurity landscape.

Some participants raised the question “are we sure that all the partners are willing to remain in the network?” and suggested, “We should probably also look at what capabilities we have within the consortium and whether we have the workforce and the specialists needed to establish the future network and everything that comes together with it”.

*Some participants underlined the importance of the new partner’s engagement.* “I think we should look at the capabilities and workforce needed, also maybe financial resources through the administrative part of the network for the first several months of the existence.”

The identified possible obstacles are related to the integration of organisations with different cultures, the need to keep partners engaged, the need to establish common values and vision, the alignment of the organisation’s strategic goals and processes with the new CNO, etc.

- “Because we are trying to align different cultures, practices and approaches – I am talking about cybersecurity now, about information sharing, about the fundamental trust issues. So, we are talking about double-edged swords, we are talking about mixed blessings here. The diversity of partners is a strength, but it is also a challenge”;
- “I think it is very important to establish the same vision of this organisation and apply it successfully. This will allow this organisation to become a functional one”;
- “I think that all the partners have to see some kind of value in an organisation. And usually, if you do not see the value, you do not join the organisation”;
- “A potential problem could be funding, as well as competition among companies. It is important to have a vision of how to go together to the EU market.”

**The third discussed question was:** “How does the proposed transition to a collaborative network organisation align with the internal goals and strategies of your organisation?”

Most of the academic partners in the consortium expressed their interest in continuing cooperation in the framework of ECHO, and they consider their internal strategies and goals in alignment with the proposed CNO.

“We are an academic organisation, and for us, it is a win-win situation. Because of our goals, our strategies, the purpose of our being around are research and education. And most of these projects are about research, and some of them are also about education. So, this is fully aligned, to start with. But what is most important for us, and would make it more appealing, is collaboration... we are very happy that we are producing collectively what we are producing”.

The industrial partners also expressed interest in continuing cooperation in the framework of ECHO, particularly between industry and academia. They consider a high level of alignment of their strategic goals if the interests of each partner are clear and if there is a shared understanding of CNO goals and

achievements. At the same time, some participants stressed the problem with a willingness to share specific information of companies with the external world.

- “We would like to continue exploiting our products and gain also some visibility thanks to this continuation. This is something that will be aligned with our strategy, to further develop the technical solutions. When looking at the graph that was displayed earlier today, I probably foresee our interest directed towards the Functional Service Groups, especially those related to Early Warning Systems (EWS) and Federated Cyber Range (FCR)”;
- “We are aligned to the ECHO vision also because, as I stated to the first question, we are directly linked to the Early Warning System and Federated Cyber Range, also, on what we are internally doing in the R&D department”.

**The fourth question that was discussed was:** “How do you see the role of your organisation within the future ECHO Network?”

On the whole, the participants see the continuation of their current activities as their main role in the future CNO. They will bring diverse expertise starting from R&D, education and training, technological solutions, etc.

- “As my organisation is in shipbuilding, I guess that the main role that we can take is giving the sort of state-of-the-art, what are the type of vessels that are crossing our oceans and seas, and the technologies that are implemented over those vessels. So, giving this to the network would provide a sort of testbed, or the state-of-the-art of how the vessels are, in order to see what are the weaknesses, or which are the possible strands also of technologies, in terms of cybersecurity. So, this is a real scenario in which we can test and develop our training simulator. So, I guess we are going to keep this role in the future organisation”;
- “My role in the ECHO CNO depends on what will be the objectives and activities. Depending on the final result, we will provide our expertise.”;
- “We need to know what will be the objectives and the scope of the activities of the ECHO network, to see whether we can contribute with our expertise. It depends on what services the organisation will supply to its members. We can think of ourselves as both suppliers and users”.

**The fifth discussed question was:** “To what extent your internal organisational structure and processes, as well as leadership styles, are in line and supportive of the vision for transforming the ECHO Project into a CNO?”

There was a common opinion shared by the participants in the FG that organisational structure and processes, as well as leadership styles, are in line and supportive of the vision for transforming the ECHO Project into a CNO. The leading factors in this process are opportunities for joint research and development, creating a good business model supported by the organisations in the consortium, well-designed governance model of the CNO, meaningful level of integration of the different organisations, clear commitment and engagement of the partners and clear obligations and benefits, as well as a multicultural mind-set and European approach to the project.

- “If we consider ECHO Network as a kind of partnership network for exploiting opportunities for joint research and development in the area of cybersecurity, our internal organisational structure,

processes and leadership style are really in support of such type of collaborative network organisation”;

- “I think that there are two aspects of the question. In the first part, I guess it is not clear right now what we have to do, to change our own organisation. And the second aspect of the question – to what extent our processes can be supportive – I guess the answer will be: our networking and consortia-building style of generating these would be the answer to this question. And I guess this is the answer for the next question”;
- “The structure and processes that we follow are in line with such a vision and such initiatives as turning ECHO Project into a CNO. We are focusing on such collaborations, and I actually believe both labs do so. The head of each lab should be considered as the key decision-maker. I would say that we would need to discuss both labs internally, and after we see the exact terms and conditions under which we will participate in such initiatives, I am confident that we will want to be part of it and we are strongly in support of these kinds of actions”;
- “The main question is what will be the business model of the future CNO. It is of importance for strategic decision-making in companies. More information is needed to decide. What changes are expected from us?”;
- “I think we need more information on whether and how we have to change our current processes and activities. It depends on the business model of the CNO. In terms of which our processes will be supportive of the new network, it depends on how we are doing business now. I think that CNO should facilitate collaboration among partners”;
- “At this point when we do not have full information about the processes, the service catalogue and ECHO assets will be difficult to discuss the alignment”.

**Finally, the participants discussed the sixth question:** “Does your organisation have experience with organisational transformation similar to the suggested ones?”

Most of the participants declared that they had no previous experience with organisational transformation of such scale to include European networks. The transformation of ECHO from a project to a CNO will be a unique experience.

Despite this fact, the participants consider the transformation “a really nice idea”. The key factor for success “is to make sure that the partners that want to participate are really committed. The only difficult part was that many partners wanted to participate at first and then when things got going, we saw that some of the partners were not that committed to this process. So, that is why I believe the most important one is to keep the focus of all partners and their commitment in the high levels.”

The commitment of all partners, continuous engagement and inclusion appears to be of key importance for the successful transformation of the ECHO Project into the ECHO CNO.

The full description and analyses of the Focus group is given in Annex 2 – Focus group report.

### 3.2.2 Interviews with managers

The expert interviews were organized in the framework of the development of the Implementation plan for the governance model of the future ECHO CNO.

**The goal of this expert survey** was to measure the level of awareness and attitudes of the decision-makers in partners' organisations regarding the envisaged transformation of ECHO Project into a CNO after the completion of the Project in 2023.

The survey was based on the *self-reporting to an online questionnaire* containing 19 questions with 7-point Likert type scale with minimum score 0 (named "Not at all") and maximum 6 (named "A lot"), as well as three open-ended questions. The questions are not mandatory, that's way we received empty answers on some questions. These answers are given below as "Not available" and with abbreviation "NA". We consider respondents which do not answer as "none decided".

The development of the online form is based on the experience gained during development of the D3.2: Governance Alternatives. In order to answer the form, each survey's participant had first to agree on the GDPR-related policy. The open source LimeSurvey online system was used, installed on a web-server of the Institute for Institute of Information and Communication Technologies (IICT), with special security prerequisites.

Annex 4 – The questions list provides brief description and full text of the questions.

On the whole, 45 experts from the ECHO Consortium filled out the online questionnaire, including 13 members of the DevTeam. The 32 managers from ECHO Partners were briefed on the goal and questions by the DevTeam members before answering the survey.

With respect to the field of employment, 29.7% of the respondents come from large companies (more than 250 employees), 24.3% are from small and medium enterprises, 43.2% - from academia and 2.7% - from military organisations.

### Survey results

The questionnaire of the survey contained:

- Several groups of questions, to measure the level of awareness and attitudes of the respondents towards transformation of ECHO into CNO;
- Perceptions of possible obstacles for the transformation;
- Vision about funding opportunities for the process of transformation from ECHO Project into a CNO;
- Perception of necessary knowledge and availability of resources to implement the process of transformation; and
- Perception of potential negative consequences for your organisation as a result of the transformation of ECHO into a CNO.

The aggregated responses are presented below.

#### Awareness and attitudes of the respondents towards transformation of ECHO into CNO

Most of the respondents (62.2%) declare that they are fully aware (scores 5 and 6) of the vision to transform ECHO into a Collaborative Network Organisation with a Central hub, National chapters and Functional service groups after completion of the project in January 2023. In addition, 15.5% respond with scores 3 and 4 which means also high level of awareness. Those who are not aware (scores 0 and 1) are 13.7%, and 8.9% are unsure (see Figure 6).

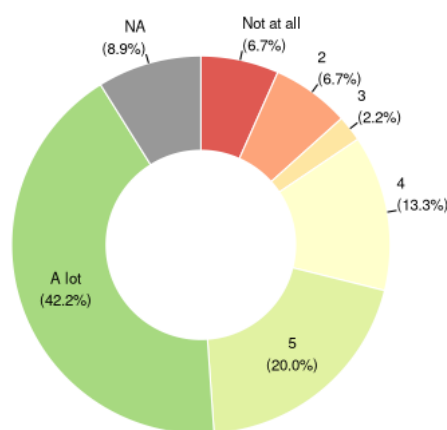


Figure 6: To what extent you are aware of the vision to transform ECHO into a CNO

The level of support of the idea for the transformation of ECHO into a CNO after completion of the project in 2023 is also high. Most of the respondents (60.0%) respond with scores 5 and 6. Besides, 26.7% chose scores 3 and 4. Those who are not supportive (score 2) are 4.4%, and 8.9% are undecided (see Figure 7).

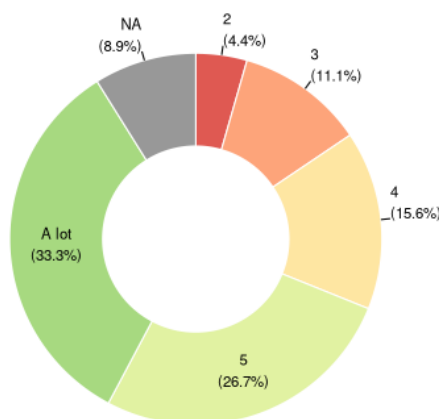


Figure 7: To what extent you are supportive for the transformation of ECHO into a CNO?

The predominant part of the respondents (73.3%) prefer attraction of new members as an option for the transformation of ECHO into a CNO. Those who prefer to keep the CNO with the current members of the consortium, as it is, are 11.1% and 15.6% cannot decide or do not give answer, as it is shown in Figure 8.

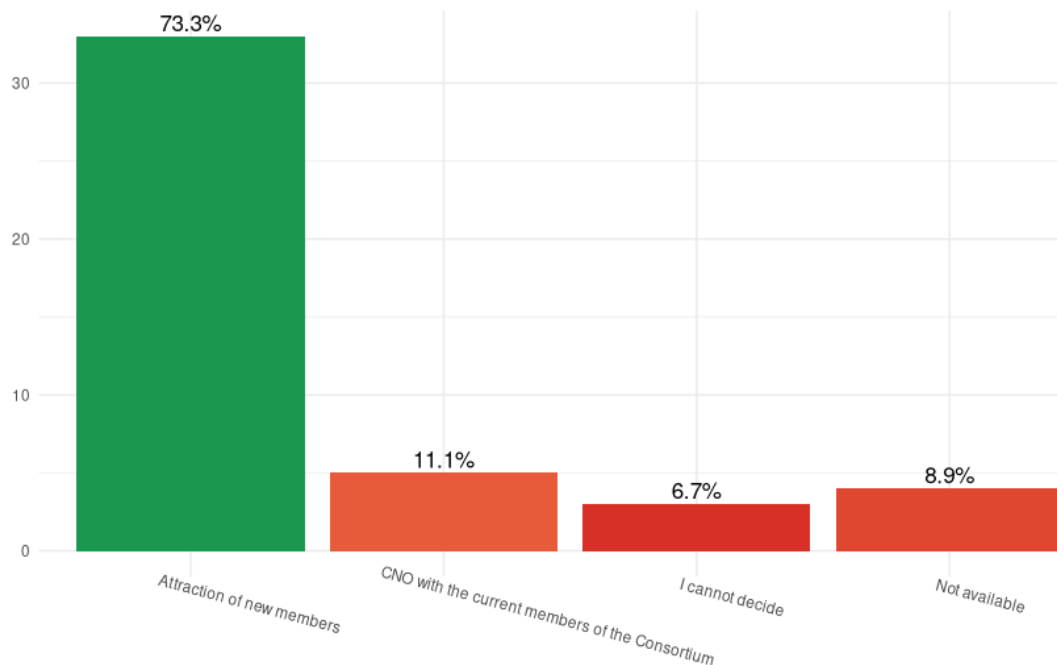


Figure 8: What option for the transformation of ECHO into a CNO do you support?

Regarding the question “To what extent you are supportive for the idea to establish ECHO Network as a non-governmental organisation that is facilitating business goals and objectives of the companies?”, the opinions of the respondents are mostly positive. *Almost one-half (46.7%) responded with scores 5 and 6 which means full support. Moreover, 20.0% responded with score 4 – high support.* The respondents who are not supportive (score 1) are 6.7% and 11.1% are undecided (see Figure 9).

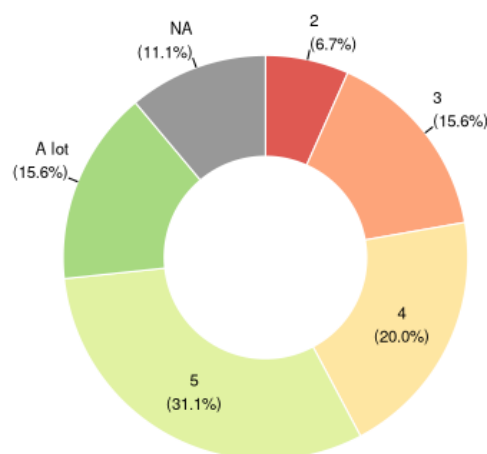


Figure 9: To what extent you are supportive for the idea to establish ECHO Network?

The responses to the question “To what extent you feel the environmental context in the EU cybersecurity landscape will be suitable for the transformation of ECHO into a CNO after completion of the project in 2023?” are dispersed as it can be seen in Figure 10. *Less than one third (28.9%) are fully supportive (scores 5 and 6) of the statement that the EU cybersecurity landscape will be suitable for the transformation of ECHO into a CNO.*



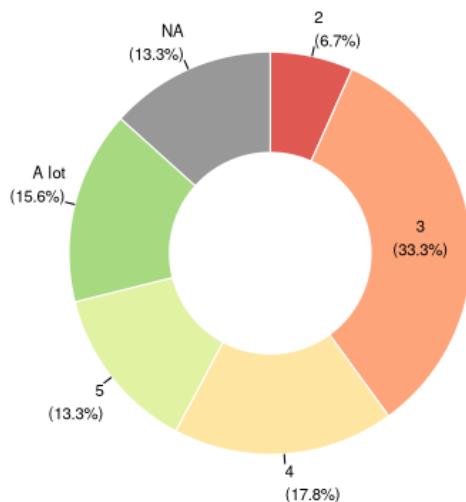


Figure 10: Opinion on how suitable is the environmental context in the EU cyber security landscape

*In addition, 17.8% gave scores 4 or high support. Comparatively high is the percentage of the respondents who cannot respond - 33.3%, and 6.8% think that the EU cybersecurity landscape will not be suitable for the transformation of ECHO into a CNO. One can speculate that probably the respondents do not have sufficient information, or they did not understand the question, and therefore gave such responses.*

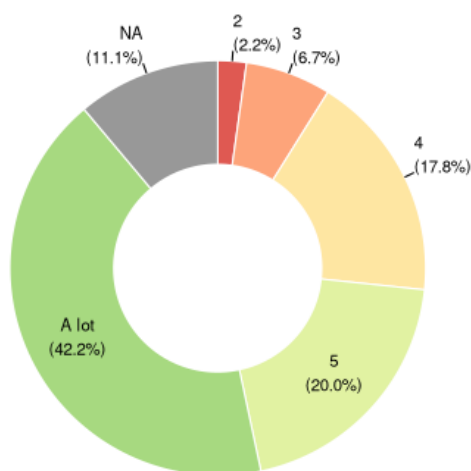


Figure 11: Opinion on support of strong links to already ongoing projects in the European landscape?

*Most of the respondents (62.2%) are fully supportive (scores 5 and 6) for the idea that ECHO Network to be strongly linked to already ongoing projects in the European landscape, i.e. Sparta, SC4E, and Concordia, as well as ECSO, the European Competence Centre in Cyber Security (ECCC) in Bucharest, and National Coordination Centres network. In addition, 17.8% respond with score 4 which means also high level of support. Those who are not supportive (scores 2 and 3) are 8.9%, and 11.1% are unsure (see Figure 11).*

*As Figure 12 shows, most of the respondents (57.7%) are fully supportive (scores 5 and 6) for the statement "ECHO CNO will create synergy, we will share competencies and resources". Additionally, 15.6% respond with scores 4 which means also high level of support. Those who are not supportive (scores 2 and 3) are 13.4% and 13.3% are unsure.*

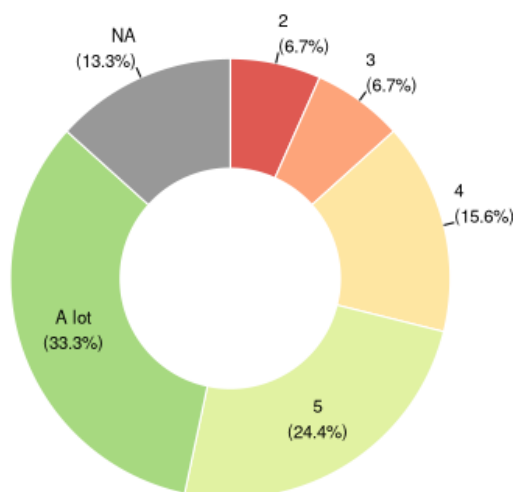


Figure 12: Support of: “ECHO CNO will create synergy, we will share competencies and resources”?

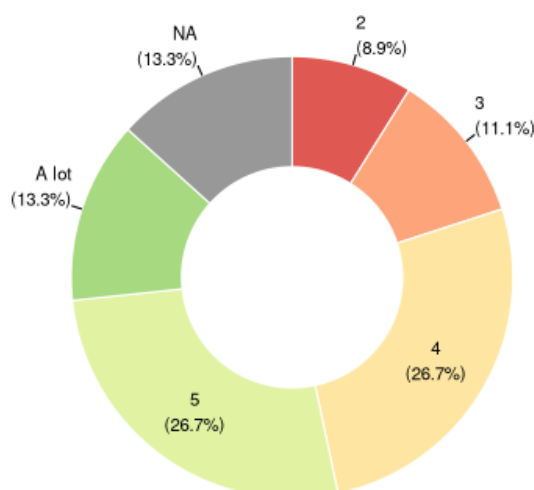


Figure 13: Support of: “ECHO CNO will provide sustainability after completion of the project in 2023”

Regarding the statement “ECHO CNO will provide sustainability after completion of the project in 2023”, the opinions of the respondents are predominantly positive. *Less than half (40.0%) respond with scores 5 and 6 which means full support. Moreover, 26.7% respond with scores 4 – high support.* The respondents who are not supportive (scores 2 and 3) are 20%, and 13.3% are undecided, as presented on Figure 13.

The Figure 14 provides results about the support of the statement “ECHO CNO will give opportunity to share information, to share infrastructure and to build consortia for new projects”, *the overwhelming part of the respondents (71.1%) are fully supportive (scores 5 and 6).* Furthermore, 11.1% respond with scores 4, which means also high level of support. Those who are not supportive (scores 2 and 3) are 6.6% and 11.1% are unsure.

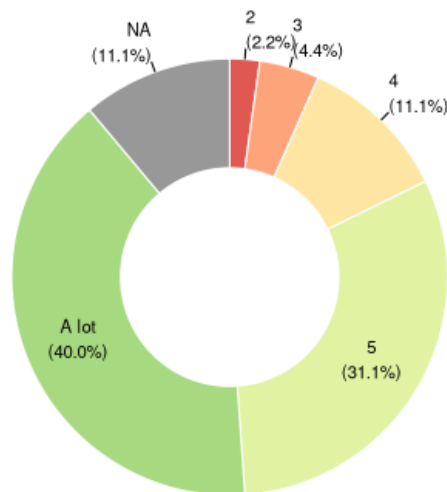


Figure 14: Support of: “ECHO CNO will give opportunity to share information, to share infrastructure and to build consortia for new projects”

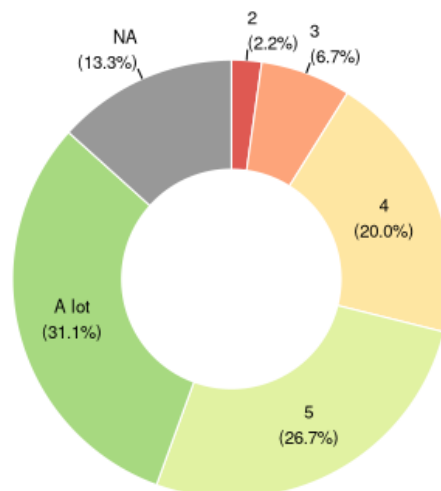


Figure 15: Support of: “ECHO CNO will create opportunity for the companies to benefit a lot from collaboration with universities”

*Most of the respondents (57.8%) are fully supportive (scores 5 and 6) for the statement “ECHO CNO will create opportunity for the companies to benefit a lot from collaboration with universities”. In addition, 20.0% respond with scores 4, which means also high level of support. Those who are not supportive (scores 2 and 3) are 8.9%, and 13.3% cannot decide (see Figure 15).*

#### Important change management activities

The eleventh question “How important will be the implementation of the following activities during the process of transformation from ECHO project into a CNO?” comprises from 12 activities as options, which respondents have to assess in scale from 0 to 6 points. Figure 16 presents averaged scores across answers. More detailed description for each activity is given below as a percentages structures of given answers for each activity.

The share of the respondents who think that the creation of national chapters in each country represented in the ECHO Consortium (**Act1**) is very important, are 37.8%. In addition, 22.2% think it is an important activity. Those who are on the opposite opinion or against are less than one third - 28.9%, and 11.1% cannot decide.

The portion of the respondents who think that the Participation in the Cybersecurity Competence Centres network (**Act2**) is very important are more than two thirds - 64.5%. Additionally, 15.6% think it is an important activity. Those who are of the opposite opinion or against, are 13.3%, and 6.7% cannot decide.

Respondents assess the Creation of a clear strategy for new partners' engagement (**Act3**) as very important (scores 5 and 6 – 60%). Important is the evaluation of 15.6% (score 4) of respondents. 13.3% of respondents finds that this activity is not so important (scores 2 and 3) and 11.1% cannot decide.

Half of the respondents (51.1%) share the opinion that the establishment of strong commitments from each partner (**Act4**) is a very important activity. In addition, 17.8% think it is an important action. Those who are of the opposite opinion or against are 13.3%, and 17.8% cannot decide.

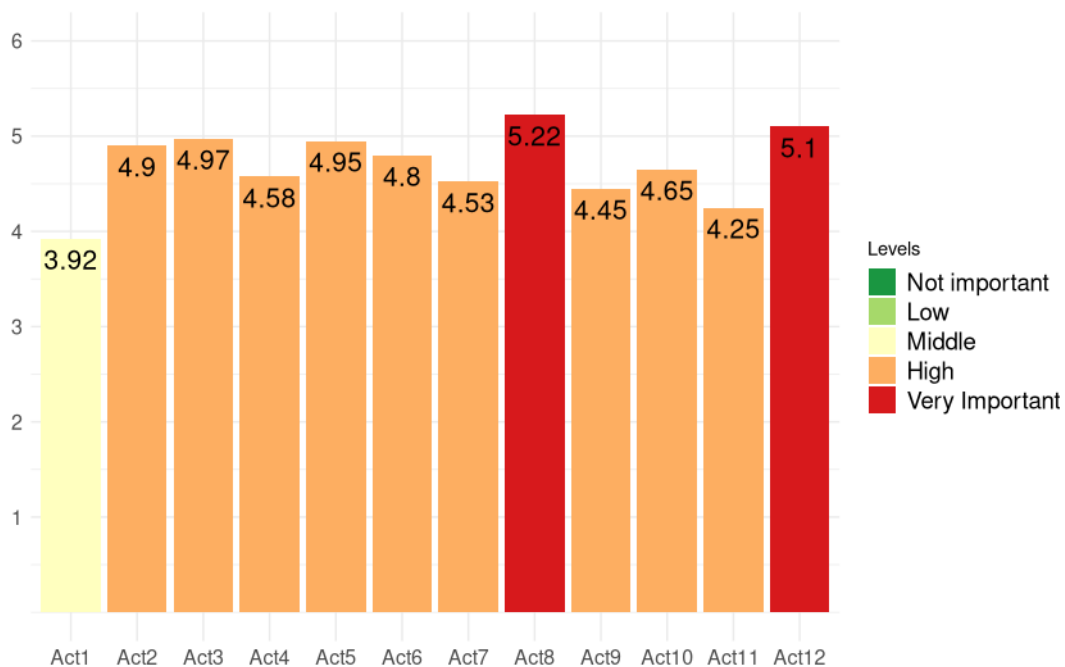


Figure 16: Important activities

The majority of the respondents (75.5%) are fully supportive to the statement that all of the partners have to see some kind of value in the new organisation (**Act5**). Furthermore, 6.7% think it is an important that everybody recognise the value in the membership in the CNO. Those who are of the opposite opinion or against are 13.3%, and 4.4% have no opinion.

Another very important issue which is supported by 42.2% of the respondents is clear commitment and engagement of the partners from the beginning of the transformation process (**Act6**). Besides, one third (33.3%) consider this process as important. Just one-tenth (11.1%) maintain the opinion that the commitment of the partners from the very beginning of the transformation process is not important, while 13.3% have no opinion.

*Most the respondents (55.5%) share the opinion that there is a need to establish common values and vision of the new CNO (**Act7**) and consider this as a very important activity. In addition, 20.0% think it is an important action. Those who are of the opposite opinion or against are 17.8%, and 6.7% cannot decide.*

*The need of alignment of the internal goals and strategies of the organisations that are going to join the ECHO network (**Act8**) is fully supported by 40% of the respondents. Close to one-third (31.1%) consider this process as important. Those who are of the opposite opinion or against are 15.6%, and 13.3% have no opinion.*

*Vast majority of the respondents (68.9%) consider as very important the process of creation of a good business model (**Act9**) supported by the organisations in the consortium and 15.6% think it is an important action. Those who are of the opposite opinion or against are 11.1%, and 4.4% have no opinion.*

*Similarly, 62.2% of the respondents strongly maintain the opinion that there is a need of clear commercialization policy, governance model and sustainability plan (**Act10**). Also, 20.0% think it is an important action. Those who are on the opposite opinion or against are 13.3%, and 4.4% have no opinion.*

*Vast majority of the respondents (68.9%) consider as very important to establish clear obligations and benefits (**Act11**) for the partners in the consortium from the very beginning of the transformation process. Besides, 8.9% think it is an important action. Those who are of the opposite opinion or against are 11.1%, and another 11.1% have no opinion.*

*Finally, close to half of the respondents (47.9%) share the opinion that there is a need to establish multicultural mind-set (**Act12**) and European approach to the project. Additionally, one third (33.3%) consider this an important action. Those who are on the opposite opinion or against are 15.6%, and 4.4% cannot decide.*

#### Perceptions of possible obstacles for the transformation from ECHO Project into a CNO

*Close to half of the respondents (48.9%) consider the process of integration of organisations with very different cultures into CNO as no problem at all or as a light problem. About one-fourth (24.4%) think it would be a very serious potential obstacle. Additionally, 6.7% maintain that the integration of different organisational cultures would be a serious hindrance, and 20.0% are not decided.*

*The potential lack of funding would be a very serious obstacle for the transformation of ECHO Project into a CNO according to 71.1% of the respondents. In addition, 4.4% think the funding would be a serious issue. Significantly smaller is the percentage of the respondents (15.5%) who do not expect problems with funding, and 6.7% cannot decide.*

*Regarding possible lack of willingness for information sharing among project partners, 37.7% of respondents think this would be very serious, and 20% expects it to be a serious issue. Above one-fourth (26.7%) do not expect serious problems with the lack of willingness for information sharing among project partners, and 15.6% are not decided.*

*Similar are the perceptions of the respondents regarding fundamental trust issues among project partners as a possible obstacle for collaboration. There is no predominant opinion among the respondents. About one fourth of them (26.6%) maintain that the mutual trust would be a very serious problem. Moreover, 22.2% consider it a serious issue. Close to one-third (28.9%) are the respondents that do not expect problems with the trust among project partners, and 22.2% cannot decide.*

*Close to half of the respondents (46.7%) consider the lack of involvement and commitment of partners to contribute as a very serious problem for the collaboration. In addition, 20% maintain it would be a serious*

obstacle. The share of the respondents who do not consider commitment of the partners as a problem is significantly lower (13.3%), and 20.0% cannot decide.

The share of the respondents who consider *competition among companies* as potentially very important obstacle for collaboration is almost one fourth (24.5%). Additionally, 22.2% maintain it would be a serious problem. Of the opposite opinion are one-fifth of the respondents - 20.0%. It is worth mentioning the significant share of respondents (31.1%) who cannot decide. On this question there is no dominating opinion among the respondents.

Approximately *one-fourth of the respondents (24.5%) expect that conflicting interests among project partners* would be a very serious obstacle for cooperation. Moreover, 24.4% expect serious problems as a result of conflicting interests. Of the opposite opinion are 22.2%, and earning comparatively high percentage (26.7%) cannot decide. This is another example of the lack of consensus among the respondents and non-existence of dominating opinion.

*Significant part of the respondents (42.2%) maintain that unsatisfactory business model and governance model of the future CNO would be a very serious obstacle* for the transformation of ECHO into a CNO. Also, more than one-fourth (26.7%) consider the lack of good business and governance models as a serious obstacle. Of the opposite opinion are one fifth of the respondents (20%), and 26.7% cannot decide.

Finally, the share of the respondents who consider *very different organisational structures and processes* of the current organisations potentially joining future CNO as a potential very serious obstacle for collaboration, is almost one fourth (24.4%). In addition, 11.1% maintain it would be a serious problem. Of the opposite opinion are one-third of the respondents - 33.3%. Here again, a significant share of respondents (28.9%) cannot decide.

#### Vision about funding opportunities for the process of transformation from ECHO Project into a CNO

*Vast majority of the respondents (61.5%) would prefer to have hybrid funding from the European Commission and in-kind contribution from the partners for the future CNO.* On the second place with close to one-third respondents (30.3%) is the option for 100% public funding from the European Commission. Only 2.2% of respondents support an entirely customer-based funding model, and 6.1% cannot decide.

Other possible options for funding of the future CNO suggested by the respondents are a combination of the above-mentioned “EC plus in-kind plus customer”; “To begin with public funds, then customer funding”; “Combination of public and customer funding”; “Combination between public, in-kind and commercial funding”; “Hybrid funding plus customer funding”; “Some initial public funding, and after a period of about 2 years - switch to customer funding”.

#### Perception of the respondents of necessary knowledge to implement the process of transformation from ECHO Project into a CNO

*Above one fourth of the respondents (26.7%) think they have the necessary knowledge required for their organisation to participate in the transformation of ECHO into a CNO* after completion of the project in 2023. Besides, close to one-third (31.1%) maintain they rather have the required knowledge. Of the opposite opinion, i.e. that the respondents lack enough knowledge, are also close to one-fourth (24.4%), and 17.8% cannot decide.

In accordance with the described perceptions, *35.6% of the respondents think they would need additional knowledge* so that their organisation could participate in the transformation of ECHO into a CNO after completion of the project in 2023. Furthermore, 8.9% would rather need additional information and knowledge about the process of transformation.

The question of knowledge is presented graphically in Figure 20 below in Section 4.1.2 only for managers which participated to the interviews.

What exactly the respondents do need to know in addition to the existing information about the transformation of ECHO into a CNO?

Most often the need of additional information is related to the business and governance models of the future CNO, as well as clear procedures and steps to be undertaken as follows:

- “At the moment I cannot say to have enough knowledge for a complete vision of what my organisation needs to participate in the transformation of ECHO into a CNO after completion of the project in 2023. Internal discussion with my management will help in this sense”;
- “terms and conditions, e.g. the minimal necessary involvement, costs, effort”;
- “Cost benefit analysis - what are costs, what are benefits? Legal, financial and operational risks are unclear”;
- “A clear roadmap should be defined. The transformation process is complex, so it requires clear steps”;
- “Knowledge in legal and procedural activities to set up a cross border entity”;
- “Complex services (such as FCR as a service, EWS) business model and management (CNO is distributed model, but business must be centralized) multi-stakeholder cost beneficiary model (it is not the "sum" of products and services) marketing and market strategy (global, not EU only!) Strategic partnering with large competing (to CNO) services providers”;
- “Better communication towards the potential partners in connection with the tactical steps”.

Also, many of the respondents *need additional information about the funding model*:

- “For me the biggest question is on the funding model. This is critical to understand if and how we can support the transition phase and the future CNO”;
- “Any information is desirable, especially funding opportunities”.

Moreover, many respondents state the need of clear definition and information about what is expected from any organisation, what will be benefits and responsibilities, as well as possible following risks:

- “I need to know what is expected from my organisation: (1) the duties, the work to be done, the duration of plans (2) the necessary competence, effort etc. needed for participation, and (3) how the initiative will be funded”;
  - any risk that may occur in joining such a transformation;
  - precise amount of commitment before/ during/ after the process of transformation;
  - the approximate amount of time this process might require from the very beginning to the last steps”;
- “Need to understand obligations and advantages of partners”; What will be the benefits for a partner who's not a security vendor?”;
- “Examples of benefits. Note opening up opportunities is not benefit to large organisations”;



- “Cost benefit analysis - what are costs, what are benefits? Legal, financial and operational risks are unclear.”

Perception of the respondents of the availability of resources and capabilities of the organisation to implement the process of transformation from ECHO Project into a CNO

*One-third of the respondents (33.3%) think that their organisation has enough resources so that it can participate in the transformation of ECHO into a CNO after completion of the project in 2023. On the opposite position are 40.0% of them and more than one-fourth (26.7%) cannot decide.*

*Almost half of the respondents (46.7%) consider their organisation is capable (intellectually, physically, and psychologically) to participate in the transformation of ECHO into a CNO after completion of the project in 2023. On the opposite position are close to one-fourth (24.4%), while more than one-fourth (28.9%) cannot decide.*

Perception of potential negative consequences for the respondents' organisation as a result of the transformation of ECHO into a CNO after completion of the project in 2023

*The vast majority of respondents (64.4%) do not expect negative consequences for their organisation as a result of the transformation of ECHO into a CNO after completion of the project in 2023. In addition, 15.6% would rather not expect negative consequences. On the opposite position are just 4.4% of them and 15.6% cannot decide.*

The main concerns of the respondents with respect to future transformation of ECHO into a CNO are summarised below. Most often the concerns were related to unclear future, possible mistakes in the development and implementation of the transition process, unclear procedures and undefined risks:

- “At the end of the day the legal, operational and financial risks are too big at this stage”;
- “My concern is about how to apply the rules and policies. If there is not a clear mechanism to go ahead, and decision have not clear commitments, we could create an organisation not taking decision or decisions not being accepted by members in this 'collaborative way'. This would produce a very slow organisation based on consensus, where partners could put their interests ahead of the interest of the organisation”;
- “We could have negative consequences in case we engage in a project without having clear industrial plan, where it is well defined what we could achieve a what we have to offer, understanding who is accountable and who is responsible”;
- “Undefined and probably larger than expected "in-kind" contributions & resources (based on unclear or underfunded business model) - we cannot afford such "investment"”;
  - financial risk;
  - reputational risk.

Aspects of special attention about the transformation of ECHO Project into a CNO

Most of the suggestions are again related to the need to develop and implement proper business and governance models, as well as transition plan to describe obligations of the partners. Also, funding issues are discussed:



- “The business model has to base on real performances and accurate accounting, have to make a special attention needs to pay to innovation and the new challenges”;
- “The business model has to base on real performances and accurate accounting, have to make a special attention needs to paid to innovation and the new challenges”;
- “The proper defining of the business model for the future CNO so to have clear definition of the funding”;
- “It would be fine to construct a strategy (roadmap) for the transformation process. The roadmap should be based on the formulated main goal of the organisation”;
- “Identifying feasible funding models for the CNO”;
- “The legal and operational and management aspects of the governance model”;
  - the draft of a clear and thorough plan to define every aspect of the transformation;
  - a clear view of the effort required from each organisation;
  - a clear definition of the organisational model and the procedures structure since the beginning of the process;
- “In the survey you have captured the aspects that I believe are critical to the success of the ECHO CNO transformation: the need of funding (especially for the start-up phase) , the need of new business model (s), risks related to the competition among companies, the need to find a common vision to gain the commitment of the partners involved”;
- “The business model must be designed to signify the real accomplishment of the partners”;
- “Funding scheme - not clear yet, added value on becoming part of the ECHO CNO - not clear yet, Relationship with the ECCC - not clear yet, Relationship with ECSO - not clear yet”.

In all those questions there is a single question regarding marketing and sales. In a transition from funded to self-funded the selling part should be dominant. Understanding what to sell, how to sell, recognition and commission for sellers, commitment from providers ... and selling escalation procedures, communication, marketing, identification and segmentation of markets (clients), product introduction programs. Those activities require much attention and will determine the success or failure of the initiative.

The second group of suggestions focuses on the issues of internal commitment of the partners and development of partnerships with external stakeholders:

- “Internal involvement of current partners, lobbying activities with EC, Clear definition of bylaws agreed by majority”;
- “1) External communication - We need to make CNO very appealing, 2) Partner selection - Partners have to earn the right to be part of CNO. Everyone has to proactively contribute to CNO projects”;
- “Transparency and proper communication between the stakeholders”;
- “You should be totally aligned with the EU strategies and policies. You should also be very inclusive with the Eastern and Southern countries. A good marketing for the potential customers is also important”;
- “Commitments in promoting ECHO from all the partners (existing and new) and in looking for consensus”;
- “Integration with other ongoing and planned initiatives, be very active in providing input to the Commission now that they are deciding on institutional structures and the way in which the network will be developed and sustained”;
- “Evaluate carefully the national context, ecosystems, and other actors.”

## Summary

**Very high level of consensus exists among the respondents regarding most of the questions measuring their awareness and attitudes towards the process of transformation of ECHO in CNO.**

*Most of the respondents declare that they are fully aware of the vision to transform ECHO into a Collaborative Network Organisation with a Central hub, National chapters and Functional service groups after completion of the project in 2023.*

*The level of support of the idea for the transformation of ECHO into a CNO is also high.*

*The predominant part of the respondents prefers as an option for the transformation of ECHO into a CNO attraction of new members.*

*Most of the respondents are fully supportive for the idea ECHO Network to be strongly linked to already ongoing projects in the European landscape, e.g. Sparta, CS4E, and Concordia, as well as ECSO, the European Competence Centre in Cyber Security in Bucharest and National Coordination Centres network.*

*Most of the respondents are fully supportive for the statement “ECHO CNO will create synergy, we will share competencies and resources”.*

*The overwhelming part of the respondents are fully supportive of the statement “ECHO CNO will give opportunity to share information, to share infrastructure and to build consortia for new projects”.*

*Most of the respondents are expecting ECHO CNO to create opportunity for the companies to benefit a lot from collaboration with universities.*

*The participation of ECHO CNO in the Cybersecurity Competence Centres network is evaluated as very important.*

*The predominant part the respondents consider as very important all of the partners to see some kind of value in the new organisation, to establish clear commitment and engagement of the partners from the beginning of the transformation process, to establish common values and vision of the new CNO and to achieve alignment of the internal goals and strategies of the organisations that are going to join the ECHO CNO.*

*Vast majority of the respondents consider as very important the process of creation of a good business model supported by the organisations in the consortium and to establish clear obligations and benefits for the partners from the very beginning of the transformation process. Likewise, the respondents strongly uphold the opinion that there is a need of clear commercialization policy, governance model and sustainability plan.*

*There are some questions on which the opinions of the respondents are dispersed and the level of consensus is lower. Such questions are regarding the creation of national chapters in each country, to establish ECHO Network as a non-governmental organisation that is facilitating business goals and objectives of the companies and to regarding the environmental context in the EU cybersecurity landscape as suitable for the transformation of ECHO into a CNO after completion of the project in 2023. Probably this result is based on the need for more information or unclear formulation of the questions.*

## **Perceptions of possible obstacles for the transformation from ECHO Project into a CNO**

*Very high level of consensus exists among the respondents regarding some possible obstacles to successful collaboration. Among the most important obstacles for the transformation from ECHO Project into a CNO is*

the *potential lack of funding*. The second important obstacle is related to *unsatisfactory business model and governance model* of the future CNO and their implementation. The third important potential obstacle is the *lack of willingness for information sharing among the CNO partners*.

The responses of the respondents are dispersed and the level of consensus lowers on questions related to *the integration of organisations with very different cultures* into CNO, *trust issues* among project partners and *competition among companies*.

#### **Vision about funding opportunities for the process of transformation from ECHO Project into a CNO**

*Vast majority of the respondents would prefer to have hybrid funding from the European Commission and in-kind contribution from the partners. The second choice is the option for 100% public funding from the European Commission. The entire customer funding is not supported by the respondents.*

#### **Perception of availability of necessary knowledge, resources and capabilities of the organisation to implement the process of transformation from ECHO Project into a CNO**

Regarding the *level of knowledge to implement transformation process*, the respondents are divided and there is not a consolidated opinion. There is clear need for providing additional information and knowledge so that their organisation can decide to participate in the transformation of ECHO into a CNO after completion of the project. Most often the need of additional information is related to the business and governance models of the future CNO, as well as clear procedures and steps to be undertaken. Besides, many of the respondents need additional information about the funding model. Finally, *clear definition and information is needed about what is expected from each organisation, what will be the benefits and the responsibilities*, as well as possible risks.

*Regarding the perceived availability of resources of the organisation to implement the process of transformation from ECHO Project into a CNO*, the respondents are also divided in their opinions with prevailing perception of the lack of resources.

*Finally, the opinions of the respondents regarding the perceived capabilities (intellectual, physical, and psychological) of the organisation to participate in the transformation of ECHO into a CNO*, are also divided. Less than half of the respondents think they have the needed capabilities in their organisations to implement the transformation.

#### **Perception of potential negative consequences for the respondents' organisation as a result of the transformation of ECHO into a CNO.**

*The vast majority of respondents do not expect any negative consequences for their organisation as a result of the transformation of ECHO Project into a CNO. The share of those who expect some negative consequences is very low. Most often the concerns of the respondents are related to possible mistakes in the development and implementation of the transition process, unclear procedures and undefined risks.*

### **3.2.3 Strategic planning simulation game**

The Strategic planning simulation game was organised on 22-23 April 2021, according to the decision taken during the D3.4 Kick-off meeting. The preparation of the Game includes developing of the simulation scenario, pre-reading materials, as well as appointment of the participants to respective future structures of the ECHO CNO. The participants from the DevTeam were divided in discussion facilitators and Analytical

Team. The Analytical Team members observed the discussion during the sessions. They also provide analysis of the discussions after the end of the Game.

### *The objectives*

The Game had following objectives:

- To enhance the awareness on ECHO Governance Model development;
- To test and verify the Strategic Planning Process developed in D3.3;
- To receive feedback from participants on proposed Strategic Planning Process;
- To develop first draft of Strategic Plan for ECHO Network to guide the transition and give direction for the Target Operating Model;
- To identify deficiencies and to assess the maturity of the planning processes.

### *The scenario*

The game scenario, as introduced to game participants, is presented below.

#### *The Annual Report and the environment changes*

The ECHO Collaborative Networked Organisation (ECHO CNO) is established and is working for two planning and budget cycles.

The Annual Report from the previous year provides following important aspects for strategic planning information:

- The demand for the E-EWS increases by 12%;
- The demand cannot be fully satisfied and Customers have to wait for services. Some of them subscribe to competitive providers of EWS;
- The demand for E-FCR also rises. Customers are looking for diversity of services, mainly in new training, but also in R&D for different sectors.

The analysis shows that the following factors explain the market changes:

- Increase of numbers and sophistication of cyber-attacks in the EU and globally;
- Positive image of the ECHO CNO and the quality of its services;
- Diversification of attacks – more industry sectors are affected, and their geographic spread is increasing rapidly.

The new Directive on security of network and information systems (NIS 2) influences the above mentioned developments in the following aspects:

- New, broader scope of sector coverage;

- New classification, as the NIS 2 no longer distinguishes between operators of essential services and digital service providers but instead classifies entities, and the services they provide, in the “essential” and “important” categories;
- New rules introduce, for the first time with explicit governance requirements, requiring management of subjected entities to approve and supervise cybersecurity risk management measures and to introduce cybersecurity training;
- The Customers are making more enquires in regard to the changes anticipated in the NIS 2 directive;
- Coordinated vulnerability disclosure practices – the EU’s cyber security agency, ENISA, would be required to develop and maintain a European vulnerability registry.

The European Cybersecurity Competence Centre is established and the process of certification of the National Competence Centres is launched. The other pilot projects – CyberSec4Europe, CONCORDIA and SPARTA – are working and establishing their networks. The Cybersecurity Competence Community is also developing and the coordination among pilot projects is enhanced.

#### Possible courses of action

##### **Stay on current track:**

1. Do not change anything – the current level of development is sufficiently good. The changes affect also other ECHO services and the change is too complicated and costly;
2. Our services are easily adaptable to the technical changes required by the NIS 2.

##### **Specialise:**

1. Increase prices in regard to the increased demand;
2. Keep and, where possible, increase the quality of service;
3. Specialise on current portfolio of industry sectors.

##### **Change:**

1. Develop new capacity for both E-EWS and E-FCR;
2. Change accordingly the other ECHO services – E-MAF, E-CSF, etc.;
3. Adapt the E-EWS to the new Vulnerability registry.

Following is a brief description of the results. Full report of the Analytical Team is provided in Annex 2 – Focus group report.

#### *Report on results*

The participants were assigned to play the respective Groups’ roles in the Strategic Planning Process. During the Simulation Game, the different Groups were split into breakout sessions.

The roles of the different groups are presented below.

### The Central Hub

**The Central Hub (CH)** is the overall governing and coordination level for the whole collaborative network organisation.

**The Board of Directors (BoD)** is responsible for steering, coordinating and monitoring of the strategic planning process. BoD is accountable to the General Assembly (GA) and is supported by Secretariat of the BoD (or Executive Board) which consists of Chief Executive Officer, Chief Financial Officer and other chief officers with responsibilities for functional areas). The BoD is elected by the GA, and has representative functions to stakeholders, partners and key customers (i.e. the European Commission, ECCC, etc).

**Advisory Committees** are formed with a special purpose and could be permanent or bounded by certain time period (i.e. exist until achieving a defined goal or completion of defined tasks).

Currently, there are two Advisory Committees:

The *Membership Committee* plays role in member acceptance, evaluation and certification. During the execution and monitoring phases, the Committee should also be the main actor in settling the conflicts between members and ECHO CNO in an Escalation procedure. The Membership Committee is a permanent advisory committee supporting the work of BoD and GA.

The *Scientific and Technology Committee* proposes and advises on the Group level requirements and standards with regards to technology and solutions. The Committee is active in scientific research and innovation creation, as well as its dissemination amongst the ECHO members. The Scientific and Technology Committee is a permanent advisory committee supporting the work of BoD, and actively interacting with Service Groups.

The goals of the advisory committees are:

- To develop Strategic Planning Guidance (define goals and resource framework) and send out to National Hubs (NHs) and Service Groups (SGs). The Guidance communicated *describes timeline, main strategic issues, and required changes*;
- To coordinate and approve inputs to Strategic Plan received from NHs and SGs.

### **Task 1 (Day 1): Develop Strategic Planning Guidance (set up goals and resource framework) and send it out to NH and SG**

The NH and advisory committees had 60 min per breakout session to discuss within Board of Directors, Membership Committee, and Scientific and Technology committee.

This was followed by a joint 30-min session of all Central Hub participants where they collectively decided based on BoD and Advisory Committees' inputs on the Strategic Planning Guidance.

*The output was* Strategic Planning Guidance containing (a) the strategic goals agreed on Central Hub level, and (b) proposed resource framework to support the agreed strategic goals' achievement. This Guidance was disseminated to National Hubs and Service Groups (through the Simulation Game facilitators).

The suggested topics of discussion were the following:

- Are the trends and developments described in the pre-reading materials all the important ones we need to consider?
- If not, what else we need to take into account (i.e. would have impact on ECHO)?

- Is our current Strategy (defined in the Partnership handbook) relevant to the changes in the environment? What needs to be reviewed and amended? Which are our strategic objectives for going forward?

The participants in the BoD used *PESTLE* framework to structure the discussion, i.e. *What changes* in the Political, Economic, Social, Technological, Legal, Environmental trends will shape the future? *What does it mean* for ECHO CNO? What *opportunities* and *threats* do these changes pose for ECHO CNO?

The *Membership Committee* discussed the following topics: How do customers see us? (Customer perspective); What must we excel at? (Internal perspective; capabilities).

The *Scientific and Technology Committee* discussed the following topics: Can we continue to improve and create value? (Innovation and learning perspective); How do we look to shareholders? (Financial perspective).

### **Task 2 (Day 2): Coordination and approval of inputs to the Strategic Plan**

The participants had 45 min to discuss and align (where conflicting) the inputs received from National Hubs and Service Groups. In addition, they had 30 min to discuss within the large group (incl. NH and SG) and take decisions.

The *output* was a decision on what needs to be changed in the current Strategic Plan in order to reflect the environmental trends and developments, as well as ECHO CNO strengths and weaknesses.

The suggested topics of discussion were the following:

- Did the inputs received from the NH and SG conflict in certain areas?
- Will the resulting Strategic Plan enable ECHO CNO to succeed in the changed environment?

The participants considered the resources requirements posed by each NH & SG plan, e.g.: *Do we have resources to fulfil all requests?* If not – *do we need to redistribute resources, and in what way?*

They used *SWOT* framework to structure the discussion, i.e.: Does the resulting Strategic Plan consider *our strengths and weaknesses*? Are there *capabilities we lack*, and *how can we develop or acquire* them to enable us to fulfil the Strategic Plan? What services and to what target audiences do we offer? Is our business model adequate to the new environment? Which part of the service delivery is implemented by the Service Group and which part should be assigned to the Central Hub?

### **The National Hubs**

The National Hubs (NHs) are established and bring together ECHO partners and members on national level. The NHs also provide contact point and alignment with relevant national authorities and organisations, such as NCC, governments with regards to national cybersecurity strategies, national-level customers etc.

The NHs have a role in identifying national-level stakeholders, customers, and partners, as well as potential new members.

The National Hubs have inputs for the development and implementation of ECHO Group strategy and business plan and translate these to local specifics. They were responsible to develop a Strategic Plan and a Business Plan on National Hub level.

**Task 1 (Day 2): Using the Strategic Planning Guidance, make decisions what the strategic plan on NHs level should be. Would you suggest changes to the strategic plan on CNO level?**



The participants had 60 min per breakout session to discuss and take decisions within each National Hub.

*The output:* In response to the Strategic Planning Guidance: (a) inputs to CNO Strategic Plan (if needed), and (b) changes to Strategic Plan on National Hub level. These decisions had been sent back to Central Hub for alignment and coordination on CNO level (through the Simulation Game facilitators).

The suggested topics of discussion were the following:

- Are there trends and developments specific to your national level – that are not captured in the Strategic Planning Guidance? Consider such trends that would have impact on NH and require action on your side;
- Consider how feasible is it for the NH in your country to follow the goals set in the Strategic Guidance, given the resources allocated.

The participants used the *PESTLE* framework to structure the discussion as follows:

- *What changes* in the Political, Economic, Social, Technological, Legal, Environmental trends will shape the future in your country?
- *What does it mean* for ECHO NH in this country?
- *What opportunities and threats* these changes pose for ECHO NH in this country?

Besides, they used the *Balanced Scorecard* framework to structure their discussion, i.e.:

- How do customers see us? (Customer perspective);
- What must we excel at? (Internal perspective; capabilities);
- Can we continue to improve and create value? (Innovation and learning perspective);
- How do we look to shareholders? (Financial perspective).

### The Service Groups

The Service Groups (SGs) are formed internationally on the basis of service development and delivery and reflect the specialization and capabilities in certain areas. The available services are presented to potential customers through the Service Catalogue, which is the basis for provisioning the service delivery through the Service-level Agreements (SLA).

SG' focus is on actively identifying and engaging customers on national and multinational level. The Service Groups have inputs for the development and implementation of ECHO Group strategy and business plan, and translate these to the specific service area.

The goal of the SGs was to Develop Strategic Plan and Business Plan on Service Group level.

***Task 1 (Day 2): Using the Strategic Planning Guidance, take decisions what the strategic plan on SG level should be. Would you suggest changes to the strategic plan on CNO level?***

The participants had 60 min per breakout session to discuss and take decisions within each Service Group.

*The Output:* In response to the Strategic Planning Guidance: (a) inputs to CNO Strategic Plan (if needed), and (b) changes to Strategic Plan on Service Group level. These decisions will be sent back to Central Hub for alignment and coordination on CNO level (through the Simulation Game facilitators).

The suggested topics of discussion were the following:



- Are there trends and developments specific to your Service Group – that are not captured in the Strategic Planning Guidance? Consider such trends that would have impact on the SG and require action on your side;
- Consider how feasible it is for the SG to follow the goals set in the Strategic Guidance, given the resources allocated.

The participants used the *PESTLE* framework to structure their discussion, i.e.:

1. *What changes* in the Political, Economic, Social, Technological, Legal, Environmental trends will shape the future in your specialized field?
2. *What does it mean* for your Service Group?
3. *What opportunities and threats* these changes pose for your Service Group?

Besides, they used the *Balanced Scorecard* framework to structure their discussion, i.e.:

- How do customers see us? (Customer perspective);
- What must we excel at? (Internal perspective; capabilities);
- Can we continue to improve and create value? (Innovation and learning perspective);
- How do we look to shareholders? (Financial perspective);
- What services to what target audience does the Service Group provide? Are there any changes expected in the demand?
- Do we have the right capabilities to respond to the new environment – and if not, how can we develop or acquire the necessary capabilities?
- Is our business model adequate to the new environment?
- Which part of the service delivery is implemented by the Service Group and which part should be assigned to the Central Hub?

The simulation game shows that there are high-level of interest and desire to participate in ECHO transition and change. Nevertheless, the main lesson-learned is that the level of complexity should be lowered. In case of the Strategic Planning Game the complexity came from relatively long period and engaging on two main phases of the Strategic Planning Process, thus trying to apply two very broad methodologies. The level of complexity should be considered carefully while planning next three simulation games in 2021 and 2022.

More detailed description of the simulation game is provided in Annex 3 – Report of the Analytical Team.

## 4. The Implementation Plan

The framework of Business Process Management (BPM) and its implementation in the future ECHO CNO operation is provided by the deliverable *D3.3 Governance model description [D7]*. This framework was used for the initial identification of core processes and the structure of the ECHO CNO.

The BPM's five main stages of Process Discovery, Analysis, Implementation, Monitoring and Optimisation provide a well-developed and popular methodology for continuous improvement and change of the organisations. Nevertheless, the BPM is suitable mainly for existing organisations with established processes and structures. In case of establishing the future organisation, especially a collaborative one, there is a need to reach agreement among participating organisations, to make steps of implementing gradually the agreements and to adapt and improve the organisational structures and processes, thus providing well established business process management of the organisations.

The gradual approach of the implementation plan for establishing and improving the ECHO CNO is described below.

### 4.1 Overall goals and phases

The **main goal of the Implementation Plan** development *is to provide a rational way of establishing the ECHO as a Collaborative Networked Organisation by using the decisions, analyses and methodology from previous deliverables. The planned activities have to be aligned with other planned activities, decisions and analysis of the ECHO Project.*

The tasks, which should be executed in order to reach the implementation goal are defined as follows:

- To use a structured methodological way of implementation;
- To minimise the uncertainty by dividing the implementation process into gradual steps, which follow the logic of proposing-agreeing-improving the decisions;
- To involve Partners in implementation activities;
- To provide input and to use results from other deliverables and activities of the ECHO Project.

In order to implement these tasks, the structured approach of Awareness, Desire, Knowledge, Ability and Reinforcement (ADKAR) will be used during the transition to ECHO CNO and achieving its Full Operating Capability (FOCs). From this perspective, the ADKAR can be considered as follows:

- Awareness—make the Partners aware of what we intend to do, and how we are planning to do it;
- Desire – rise the intention for change among Partners;
- Knowledge – to develop a methodology, to disseminate information and to educate the Partners how to do the change;
- Ability – to provide training and to establish skills required;
- Reinforcement – to plan for the key monitoring point, Key Performance Indicators (KPI) setup, provision for accountability and ways for improvement.

#### 4.1.1 Main phases

The overall approach towards the activities dedicated to Awareness, Desire and Knowledge is outlined in Section 4.1 and further described in Sections 4.2 and 4.3, while section 4.4 focuses mainly on Reinforcement and section 4.5 on Ability.

The high-level goals of activities to be undertaken in the next months until the end of the project can be summarised in the following phases:

1. **Preparation Phase** – the preliminary phase focusing on addressing remaining discussion points and reaching a common understanding of the desired vision of the ECHO CNO across the consortium;
2. **Implementation Phase** – the actual implementation of processes and governance model of the ECHO CNO. The implementation phase will include the establishment of the CNO, with the goal to reach the Full Operating Capability (FOC) by the end of the project in January 2023.

The Plan is divided in these two phases according to the requirements to minimise uncertainty in regard to the planned ECHO activities and deliverables. The first, Preparation Phase is developed below in more details and the description of the second, Implementation Phase, is given in general with regard to future updates and decisions.

During these two phases, the following activities are also planned in order to implement the ADKAR and BPM approaches:

1. Evaluation – activities in certain points in order to check the results and the direction;
2. Change and Improvement – activities to reinforce the change if there are some deficiencies from the accepted decisions or to improve the activities if such opportunities occur.

The evaluation and improvement activities are presented in the following sections.

#### 4.1.2 Iterative implementation approach

The implementation will be further divided into several iterative cycles focusing on the core processes of the future ECHO CNO. The schedule of planned activities was designed to support the iterative evaluation of developed governance and management processes according to the Plan, Do, Check, Act (PDCA) method - the iterative design and management method used for the control and continuous improvement.

The cycle of the PDCA was introduced by Walter Shewhart and was used and made popular by Edward Deming into the middle of the Twentieth century<sup>21</sup>. Since then, all management approaches for implementation and change management are based on PDCA approach. The BPM cycle is also developed according to this approach.

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<sup>21</sup> Ron Moen and Cliff Norman, “Evolution of the PDCA Cycle”.

The iterative approach allows the verification and optimization processes of the future ECHO CNO. When the ECHO CNO is established, and the FOC is reached, the BPM cycle will be fully implemented. The development of the BPM for the ECHO CNO will be in D3.13 update of D3.3 in M48. Here we are using a more general and easy-to-use approach of PDCA (on which BPM is based) as a proxy to the FOC.

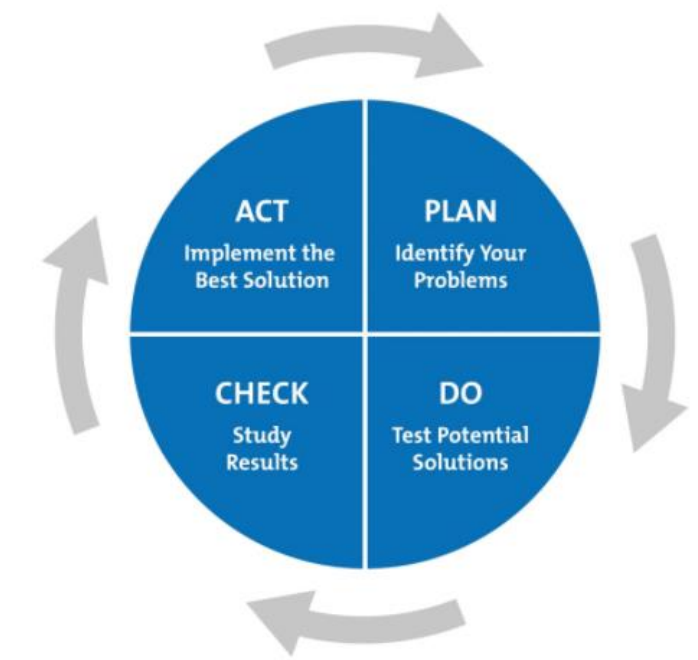


Figure 17: The Plan-Do-Check-Act Cycle

The cycle of the PDCA is shown in Figure 17, and the description of the phases with regard to the ECHO CNO Implementation plan is given below:

- **Plan** – identification of the focus area. The reoccurring meetings of task T3.3 Governance models definition serve as a platform to plan future activities, raise concerns and suggestions;
- **Do** – test potential solutions. Upon the initial draft of relevant processes, the consortium schedules a Simulation Game devoted to the evaluation of the initial design;
- **Check** – Study Results. Consortium evaluates the results of implementation in regard to the KPI setup;
- **Act** – Implement the best (or better) solution. Improved solutions are documented in deliverables and selected for implementation by respective decision.

The overall design of the Governance and management model, as well as the Implementation Plan will be also re-evaluated and improved. The updates will be documented in M36, M42 and M48.

## *Roles and responsibilities*

The main roles and responsibilities for the preparation and implementation activities are assigned in the Responsible, Accountable, Supportive, Consulted and Informed (RASCI) matrices as follows:

- **Change leaders** (Responsible) – change leaders must be empowered to make business process change decisions, to formulate and transmit the vision for the change, and to resolve resistance issues and concerns. In ECHO, partners involved in WP3 are leading the change and are responsible for the implementation of the governance model;
- **Sponsor of the change** (Accountable) – typically, accountable for change. Sponsors may or may not be change leaders. In the context of activities planned for implementation, this role is assigned to PIC, WP leader or task leader, based on the scope of the activity or sub-activity;
- **Stakeholders** (Supportive, Consulted and Informed). Major supportive role is planned for partners developing the business, innovation and exploitation strategy within tasks T9.3 ‘Market Analysis, Business Model and Exploitation’ and T9.4 ‘Innovation Management’. Aspects of the implementation plan will be often consulted with new ECHO Participants, Collaborators and ECHO Advisory Committee. All partners will be informed of the plan and implementation steps during the General Assembly meetings held twice a year.

The following sections describe a more detailed view of the goals and activities planned for the Preparation phase and outline the preliminary plan for the Implementation phase. In line with the iterative approach, a more detailed plan of implementation activities and their schedule will be specified based on the outcomes and findings collected during the Preparation phase.

## *Assessing the ADKAR building blocks*

During the Implementation Plan the progress toward ADKAR blocks should be measured in order to provide additional action and to prevent organisational resistance to the change.

The first measurement is done within the Interviews with managers.

The main aspects of rising the levels of ADKAR blocks during the Preparation Phase of the Plan are given in Section 4.2, Table 13.

The ADKAR blocks assessment will be done regularly on 6 months basis and correcting activities will be taken, if needed.

The five question related to the ADKAR in interviews are as follows:

**AWARENESS:** *Question 1:* To what extent are you aware of the vision to transform ECHO into a Collaborative Networked Organisation (CNO) with a Central Hub, National Hubs and Functional Service Groups after completion of the project in 2023?

**DESIRE:** *Question 2:* To what extend extent are you supportive for the transformation of ECHO into a CNO after completion of the project in 2023?

**KNOWLEDGE:** *Question 14:* To what extent do you feel you have the necessary knowledge required for your organisation to participate in the transformation of ECHO into a CNO after completion of the project in 2023?

**ABILITY:** *Question 18:* To what extent do you think your organisation is capable to participate in the transformation of ECHO into a CNO after completion of the project in 2023?

**REINFORCEMENT:** *Question 17:* To what extent do you think you have enough resources so that your organisation can participate in the transformation of ECHO into a CNO after completion of the project in 2023?

As it was explained in Section 3.2.2 the used scale is in 7 points range – from “Not at all” (0 points) to “A lot” (6 points). Annex 4 – The questions list provides brief description and full text of the questions.

Figure 18 shows averaged points within managers from ECHO Partners group of respondents to the questions presented above. The DevTeam group of the interviews’ participants has similar results.

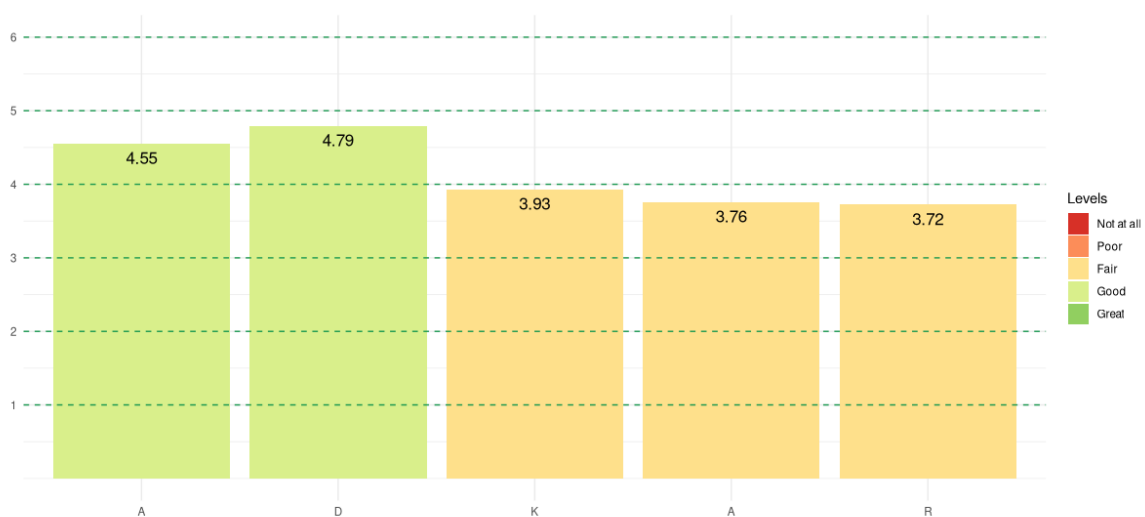


Figure 18: ADKAR building blocks first assessment

The distribution of answers is given in Figure 19.

The results presented in the two figures above are logical. At the beginning of transformation, we can expect that *Awareness* and *Desire* will have highest scores. The higher scores of the *Desire* than the *Awareness* can be explained with the fact that the interviewed high-level managers of ECHO Partners were not part of discussions and groups working towards transformation. Practically, the interviews were their first engagement with the developments in WP3.



Figure 19: The distribution of answers across ADKAR building blocks

The distribution of answers shown on Figure 19 also presented relatively good levels of Knowledge, Ability and Reinforcement, but with main grouping around middle scores – from 3 to 4.

## Obstacles

Analysis of obstacles also can be done through the interviews. The Question 12 is dedicated to assessment of nine possible obstacles.

*Question 12:* To what extent do you consider the following to be possible obstacles for the transformation from ECHO project into a CNO?

1. Integration of organisations with very different cultures;
2. Lack of funding;
3. Lack of willingness for information sharing among project partners;
4. Fundamental trust issues among project partners;
5. Lack of involvement and commitment of partners to contribute;
6. Competition among companies;
7. Conflicting interests among project partners;
8. Unsatisfactory business model and governance model of the future CNO;
9. Very different organisational structures and processes of the current organisations that are going to join future CNO.

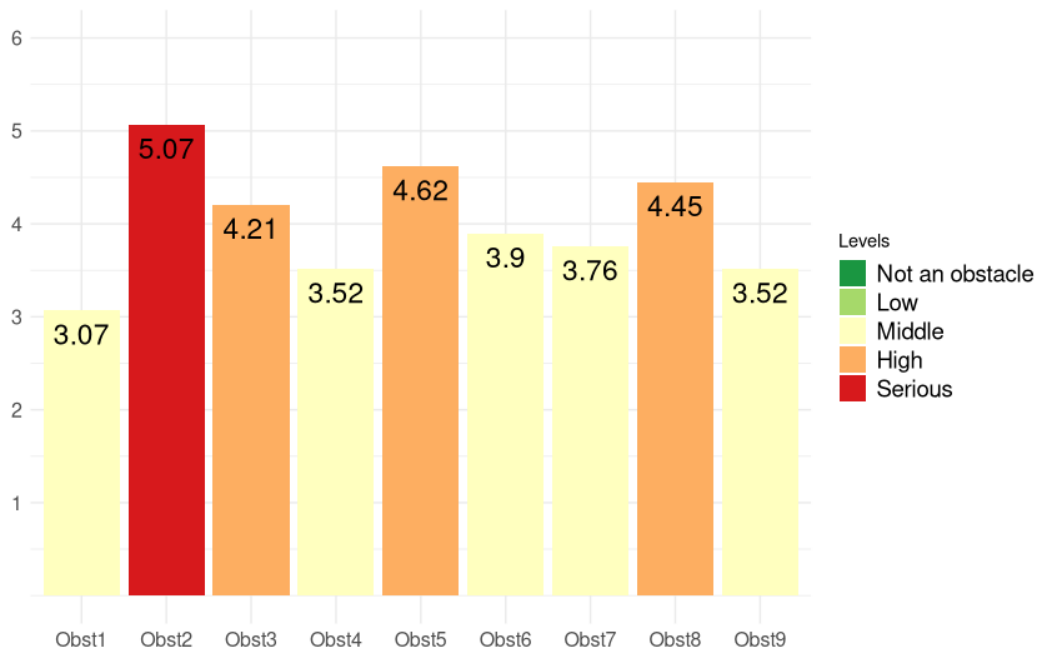


Figure 20: Obstacles for transformation to ECHO CNO

All managers identified all obstacles as levels “Middle” and above. The most important obstacle is Obstacle 2, related to funding, followed by Obstacles 5 and 8, respectively related to Partners’ involvement and commitment and to complexity of the organisational structures.

The following sections describe a more detailed view of the goals and activities planned for the Preparation phase and outline the preliminary plan for the Implementation phase. In line with the iterative approach, a more detailed plan of implementation activities and their schedule will be specified based on the outcomes and findings collected during the Preparation phase.

## 4.2 Preparation phase (months M31-36)

### 4.2.1 Goals and the Key Performance Indicators

The main goal of the Preparation Phase is to clarify the remaining aspects of the CNO’s governance as well as the business model, to identify preconditions that need to be fulfilled in order to begin the successful transition to collaborative network organisation.

The preparation phase begins in August 2021 and will last until January 2022. Its results will be summarised in D3.14 Governance model implementation plan update.

The key areas requiring attention during the preparation phase can be summarised in three groups:

- Strategic plan;
- Business model;
- Operational agreement.



The Business Model and the exploitation strategies for the ECHO assets have to be developed in close cooperation with the task *T9.3 Market Analysis, Business Model and Exploitation*.

ABOUT US	
PAST	Where we have been
TODAY	Where we are now
VISION	Where we should go and why
MISSION	Who we are, how we work toward our vision, what makes us unique
CORE VALUES	Guiding principles of our work and how we operate
GOALS	
OBSTACLES	What could prevent us from realizing our vision
LONG TERM GOALS	What we will do to realize our vision
SHORT-TERM GOALS	What will be done YR1, YR2, YR3 etc.
MEASUREMENTS OF SUCCESS	What benchmarks will be used as indicators of success
STRATEGY	
RESOURCE ASSESSMENT	Infrastructure required to realize vision
FINANCING	Assess strategy financial needs and avenues of income
IMPLEMENTATION	Plan what will be done with completion deadlines
DISSEMINATION	How the plan will be announced/ assigned and to whom
MEASURE PROGRESS	How we will oversee progress, monitor success, and implement revisions

Table 5: Aspects of the strategic plan to be addressed during the preparation phase

The preparation phase aims to formulate the first version of the Strategic plan, leading the direction of implementation activities. The strategic plan should provide the consolidated, updated view on goals and strategies of the future ECHO network listed in Table 5 and Table 6.

The Strategic Plan should also include a SWOT analysis, assessed not only from the point of view of the ECHO as a project, but of the future ECHO network.

SITUATIONAL ANALYSIS (SWOT)	
INTERNAL FACTORS	
STRENGTHS ( + )	WEAKNESSES ( - )
EXTERNAL FACTORS	
OPPORTUNITIES ( + )	THREATS ( - )
SWOT ANALYSIS	

Table 6: ECHO Network SWOT analysis - template

Table 7 provides an overview of key aspects of the Business Model to be discussed and confirmed during the Preparation Phase. For visualisation purposes, topics are categorised according to areas of the Business Model Canvas.

In order to define terms and conditions of the Operational Agreement describing interrelations within the ECHO network, ECHO Partners will organise activities leading to decisions regarding the following topics:

- Specification of the structure, functions, roles and responsibilities of the ECHO Central Hub, NHs, SGs;
- Legal status of SGs and NHs;
- Financing of ECHO Central Hub, NHs, SGs.

<b>KEY PARTNERS</b>  How do we establish and maintain relationships with other pilot projects, European organisations and organisations on the national level?  What other partnerships are vital for the CNO?  Should we consider outsourcing some operational activities (i.e., accounting)?	<b>KEY ACTIVITIES</b>  Clarification of key activities of the CNO: - collaborative research and innovation - cooperation with external stakeholders - provision of services to enhance the cybersecurity resilience - operational activities - other  <b>KEY RESOURCES</b>  What resources do we need and how to obtain them? - Intellectual (licenses, applications to support the CNO’s processes, IP including the IP co-created during the project) - Human resources – to establish and operate CNO’s processes - Financial resources - Physical resources - other (i.e., distribution channel)	<b>VALUE PROPOSITION</b>  What bundles of services are we offering to each customer segment?  What value do we provide to each stakeholder category? - customers - partners - ECHO CNO members and service providers	<b>CUSTOMER RELATIONSHIPS and PARTNERSHIP MANAGEMENT</b>  What relationships will we establish with each stakeholder category? Are they aligned with the rest of business model?  What involvement options do we offer? What are the related benefits, tasks and responsibilities to each involvement option?  <b>CHANNELS</b>  What distribution channels do we foresee to provide services? - E-FCR Marketplace - other How will we integrate them with customer routines?	<b>CUSTOMER SEGMENTS</b>  Which groups of customers will we be creating value for? What are our most important customers? Why? - private organisations - public organisations  What opportunities are there to reach new customers segments?
<b>COST STRUCTURE</b>  What are the main costs related to implementation? What are the main Fixed costs (operational expenses per body) and Variable costs? Are there possible economies of scale or economies of scope? Which Key Resources are the most expensive?			<b>REVENUE STREAM(S)</b>  What are our revenue streams? - possibility of funds? - commercial activities – what are the estimated revenues? Pricing policy.  How much does each revenue stream contribute to the overall revenues? Which revenue stream will support which key activity?	

Table 7: Aspects of the Business Model to be addressed during the preparation phase

During the Preparation Phase, the ECHO Consortium also aims to reach the agreement on which ECHO Partners will be a part of the future ECHO network and which partners will be involved in which functions and activities.

Key Performance Indicators (KPIs) of the successfully completed preparation phase are listed in Table 8. It describes the minimum values targeted for the phase.

KPI	Measure	Comment
<b>The number of Simulation Games</b>	1	
<b>The number of participants of each Simulation Game</b>	15	
<b>The number of participants of the GA workshop</b>	50	At least 1 per partner
<b>The number of key topics to be agreed on<sup>22</sup></b>	90%	Minor aspects of some topics may be clarified during the implementation phase
<b>The number of partner organisations participating in the vote</b>	30	Out of 30 partners

Table 8: Preparation phase: KPIs

The KPIs defined in Table 8 are related just to the Implementation Plan's Preparation Phase and are not related to the ECHO Project KPIs agreed in Grant Agreement.

#### 4.2.2 Activities and schedule

To implement the primary goal of the preparation phase and cover the critical topics presented above, the preparation phase activities will be structured around three following key directions:

- (P1) CNO's Strategic Plan and Business Model development;
- (P2) CNO's Operational Agreement development;
- (P3) Training course development.

Being implemented on a day-by-day basis, the Preparation Phase activities will be closely connected with a series of events to be specifically organised to collect the ECHO participants' expectations and ideas as for future CNO's implementation aspects. Also, the General Assembly (GA) meeting planned in November 2021 will be a critical milestone to validate the developments and fine-tune the outcomes of the preparation stage. In this way, a continuous connection between the WP3 team and the whole ECHO consortium will be maintained. As well, the cyclicity will be established that is critical for the development of such complex issues like the business model and strategic plan.

During the August 2021 – January 2022 period, the following activities will be implemented in line with the PDCA management method.

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<sup>22</sup> Out of key aspects of Strategic Plan and Business Model identified in the Table 5 and Table 7.

### CNO's Strategic Plan and Business Model development

(P1) CNO's Strategic Plan and Business Model development will include the following sub-activities:

- Planning of the "CNO's Strategic Plan and Business Model" Workshop with the primary aim to prepare a solid background and formulate appropriate discussion topics for the workshop participants, thus maximising the workshop efficiency (*August 2021*);
- Implementation of the "CNO's Strategic Plan and Business Model" workshop to present the critical aspects of the strategic plan and business model to the ECHO participants and collect opinions, ideas and concerns regarding the discussed topics (*September 2021*);
- Drafting of the CNO's Strategic Plan and Business Model (at least at the high decision-making level, not going into all details) in line with the workshop findings and outcomes; Exploitation Strategy developed within WP9; Service Catalogue prepared within the packages WP1, WP3-5 (*September – November 2021*);
- Discussion of the first versions of the CNO's Strategic Plan and Business Model during the November 2021 GA to agree and fix the high-level strategic and business decisions (*November 2021*);
- Finalisation of the first version of the CNO's Strategic Plan and Business Model to create a solid understanding of the ECHO CNO operation after ECHO project completion and enable ECHO partners to take reasonable decisions as for joining the ECHO CNO (*December 2021 – January 2022*).

### CNO's Operational Agreement development

(P2) CNO's Operational Agreement development will include the following sub-activities:

- Planning of Partnership Development Simulation Game as a source of knowledge and ideas for further preparation of the CNO's Operational Agreement. While planning this game, the July 2021 GA outcomes regarding the willingness of the ECHO partners to be a part of the future ECHO CNO and interest in the exploitation of main ECHO assets or prototypes will be taken into account (*August 2021*);
- Implementation of the Partnership Development Simulation Game to simulate establishment (operational and legal) and sustainable operation (resources and finances) of the National Hubs (NHs) and Service Groups (SGs) as well as processes of new partners' engagement to NHs and SGs (*September 2021*);
- Processing of the Partnership Development Simulation Game outcomes to formulate the key modalities and pre-requisites of the NHs and SGs establishment and operation (*September – November 2021*);
- Implementation of the "Operational Agreement" Workshop during the November 2021 GA with the focus on the relationship between the CNO bodies, particularly the ECHO Central Hub, the National Hubs, and the Service Groups. Event to gather feedback from the working group to develop a feasible Operational Agreement between organisations of the ECHO CNO (*November 2021*);
- Preparation of the CNO's Operation Agreement in line with the outcomes of the Partnership Development Simulation Game and the "Operational Agreement" Workshop to enable the legally-based creation of the first CNO bodies (NHs and SGs) during the implementation phase (*December 2021 – January 2022*).

### Training course development

(P3) Training course development as a part of E-GCS service will start after the GA decision in November 2021. The course is described in Section 4.5 below.

Table 9 presents the timetable for activities according to months of their execution.

Activities and sub-activities	M31	M32	M33	M34	M35	M36
	Aug 2021	Sept 2021	Oct 2021	Nov 2021	Dec 2021	Jan 2022
<b>CNO's Strategic Plan and Business Model development</b>						
Planning of the "CNO's Strategic Plan and Business Model" Workshop						
Implementation of the "CNO's Strategic Plan and Business Model" Workshop						
Drafting of the CNO's Strategic Plan and Business Model						
Discussion of the CNO's Strategic Plan and Business Model during the November 2021 GA				GA		
Finalisation of the CNO's Strategic Plan and Business Model						D3.11, D3.12
<b>CNO's Operational Agreement development</b>						
Planning of Partnership Development Simulation Game						
Implementation of the Partnership Development Simulation Game						
Processing of the Partnership Development Simulation Game outcomes						
Implementation of the "Operational Agreement" Workshop during the November 2021 GA				GA		
Preparation of the CNO's Operation Agreement						
Planning of Catalogue and Customer Management Simulation Game						
<b>Training course development</b>						

Table 9: Activities from M31 to M36

The successful implementation of these preparation activities will create a solid basis for the implementation phase activities to begin in February 2022.

#### 4.2.3 Roles and responsibilities

Table 10 below summarises the roles and responsibilities of the ECHO consortium members and partners during the implementation phase following the RASCI model methodology (R= Responsible, A=Accountable, S=Supportive, C=Consulted, I=Informed).

Activities and sub-activities	Leaders of activities and sub-activities	T3.3, T3.4 partners	ECHO Assets exploitation leaders	ECHO participants and collaborators	ECHO Advisory Committee (MSIEC, STC)	ECHO General Assembly
<b>CNO's Strategic Plan and Business Model development</b>	<b>A</b>	<b>R</b>				
Planning of the "CNO's Strategic Plan and Business Model" Workshop	A	R	S		C	
Implementation of the "CNO's Strategic Plan and Business Model" Workshop	A	R	S	S	S	
Drafting of the CNO's Strategic Plan and Business Model	A	R	C		C	
Discussion of the CNO's Strategic Plan and Business Model during the November 2021 GA	A	R	S	S	S	S
Finalisation of the CNO's Strategic Plan and Business Model	A	R	I	I	I	I
<b>CNO's Operational Agreement development</b>	<b>A</b>	<b>R</b>				
Planning of Partnership Development Simulation Game	A	R			C	
Implementation of the Partnership Development Simulation Game	A	R		S	S	
Processing of the Partnership Development Simulation Game outcomes	A	R			C	
Implementation of the "Operational Agreement" Workshop during the November 2021 GA	A	R	S	S	S	S
Preparation of the CNO's Operation Agreement	A	R	I	I	I	I
Planning of Catalogue and Customer Management Simulation Game	A	R			C	
<b>Training course development</b>	<b>A</b>	<b>R</b>				

Table 10: Activities, Roles and Responsibilities (RASCI matrix)

The definition of the roles is the following:

- Responsible (R): person responsible for performing the task, i.e., who has to lead the effort to plan, do and complete the task;
- Accountable (A): person responsible for the task, has the power to delegate the task to be done by the person responsible, and has control over the resources to do the task;
- Supportive (S): person or team playing supportive role in the implementation of task;
- Consulted (C): person or team who does not participate in the task execution, but who needs to be consulted before or while the task is being performed;

- Informed (I): person or team who does not participate in the task execution, nor needs to be consulted before the task is being performed, but who needs to be informed when the task is completed.

All activities above will be outlined in the update of D3.4. Also, in parallel with implementing these activities, partners involved in WP3 will update previously created deliverables. The following activities will be taken into consideration during the definition and specification of the Implementation Phase:

- Governance Management Information System (GMIS) development through updates of D3.2 and D3.3;
- Processes and Methodology development through updates of D3.3 and D3.4;
- Environment changes monitoring through the D3.1 updates;
- Other Project's activities such as Demonstration Cases and other strategic documents development like Assets' Strategies.

#### 4.2.4 Monitoring

Implementation of the planned activities and relevant KPIs will be monitored by RHEA as a Task 3.4 leader during the monthly WP3 meetings.

Completion of the main activities, just as monitoring of other main project milestones and achievements will be monitored by partners involved in the task T1.3 'Monitoring, control, risk and quality management'.

Following the ADKAR methodology, partners identified factors influencing the success of the preparation phase, enablers and most influential players and activities. ADKAR building blocks for the Preparation phase can be found in table Table 11. The elements will be evaluated after the end of the preparation phase (January 2022) and used for the formulation of the analogical table for the Implementation phase.



ADKAR elements	Factors influencing success	Enablers	Most influential players and activities
<b>Awareness of the need for change</b>	<ul style="list-style-type: none"> <li>Discussion on CNO's values and benefits;</li> <li>Communication on operations and structures;</li> <li>Communication on the Suggested Strategic Goals and Tasks.</li> </ul>	<ul style="list-style-type: none"> <li>Communication and discussion activities: <ul style="list-style-type: none"> <li>GA event in July;</li> <li>Workshop on Strategic Planning;</li> <li>Strategic Game on Partnership Development.</li> </ul> </li> <li>Close involvement of the Sponsors in the process;</li> <li>Rise the governance and management aspects in discussions within the Project</li> <li>Provide participants with ready access to business information through Governance and Management Information System (GMIS) – will be available after M36 or M38 through SharePoint.</li> </ul>	<p>WHO: Sponsors: ECHO Project Management, PIC and deputy; Direct managers: WP3 Leader, Assets Leaders</p> <p>HOW: Workshop; Simulation Game; Deliverable and documents development, ECHO events</p>
<b>Desire to support and participate in the change</b>	<ul style="list-style-type: none"> <li>Agreed values and benefits as draft Business Model</li> <li>Developed deliverables' update with more detailed description of SPP and Partnership Development Processes</li> <li>Partners' motivation watching through Focus Groups and Interviews</li> </ul>	<ul style="list-style-type: none"> <li>Form at least two "coalitions of willing" to form NHs and SGs</li> <li>Accepted through GA decisions documents on Partnership Development and Operational Agreement</li> <li><i>Engage partners in the process through Focus Groups on Workshops.</i> Sustain effective communication within Focus Groups during the whole period</li> <li>Assess the risks and change resistance within Groups</li> </ul>	<p>Sponsors: ECHO Project Management, PIC and deputy; Direct managers: WP3 Leader, Assets Leaders</p> <p>HOW: Workshop; Simulation Game; Deliverable and documents</p>
<b>Knowledge of how to change</b>	<ul style="list-style-type: none"> <li>Enhance knowledge through direct communication and coaching during Workshops and Simulation Game</li> </ul>	<ul style="list-style-type: none"> <li>Workshops, GA events and deliverables development;</li> <li>Knowledge sharing through Focus Groups and coalitions of willing</li> </ul>	<p>Sponsors: ECHO Project Management, PIC and deputy; Direct managers: WP3 Leader, Assets Leaders</p> <p>HOW: Workshop; Simulation Game; Deliverable and documents</p>
<b>Ability to implement required skills and behaviours</b>	<ul style="list-style-type: none"> <li>Extend abilities through Development Teams on deliverables and documents related to the Governance Model</li> <li>Allocate needed resources – mainly people and time, to the development of workshops and documents</li> </ul>	<ul style="list-style-type: none"> <li>Make sustainable Development Teams and Focus Groups</li> <li>Exercises during Simulation Games to involve management of Partners</li> </ul>	<p>WHO: Sponsors: ECHO Project Management, PIC and deputy; Direct managers: WP3 Leader, Assets Leaders</p> <p>HOW: Coaching, training</p>
<b>Reinforcement to sustain the change</b>	<ul style="list-style-type: none"> <li>Demonstrate the positive consequences of the change</li> <li>Evaluate change initiative implementation and provide meaningful feedback</li> </ul>	<ul style="list-style-type: none"> <li>Provide and disseminate the lessons learned from the Simulation Game and Workshop;</li> <li>Disseminate and explain decisions and agreement</li> <li>Provide assessment of the processes and plan implementation through CMMI SCAMPI.</li> </ul>	<p>WHO: Primary sponsors, direct supervisors</p> <p>HOW: Sponsorship, coaching</p>

Table 11 : ADKAR building blocks for the Preparation Phase

## 4.3 Implementation phase (months M37-48)

### 4.3.1 Goals and the Key Performance Indicators

The main goal of this phase is the implementation of the processes and governance model of the ECHO CNO, with the goal to reach the Full Operating Capability by the end of the Project in January 2023.

The implementation phase begins in February 2022 and will last until January 2023. Its results will be summarised in D3.15 (Update 2 of the D3.4: Governance model implementation plan in M48).

Key Performance Indicators of successfully completed implementation phase are listed in Table 12. It describes the minimum values targeted for the phase.

KPI	Measure	Comment
<b>The number of Simulation Games</b>	2	
<b>The number of participants of each Simulation Game</b>	15	
<b>The number of participants of the GA workshop</b>	50	At least 1 per partner
<b>The number of key topics to be agreed on<sup>23</sup></b>	100%	
<b>The number of partner organisations participating in the vote</b>	30	Out of 30 partners
<b>The number of processes implemented</b>	100%	
<b>The number of established National Hubs</b>	5	
<b>The number of established Service Groups</b>	2	At least E-EWS and E-FCR
<b>The number of trained participants</b>	45	At least one by ECHO Partners (KPI for new engaged partners are 15)

Table 12: Implementation phase: KPIs

The KPIs defined in Table 12 are related just to the Implementation Plan's Implementation Phase and are not related to the ECHO Project KPIs agreed in Grant Agreement.

### 4.3.2 Activities and schedule

To fulfil the goals of the implementation phase, activities will be structured around the following key topics:

- (I1) CNO's Documents and Decisions Preparation;
- (I2) Training course;
- (I3) CNO's Structures Establishment and Implementation.

Topics will be addressed in several phases during several events. Dates will be specified according to the internal and external events calendar.

<sup>23</sup> Out of key aspects of the Strategic Plan and Business Model identified in the Table 5 and Table 7.

Main key points decisions and respective agreement received through voting of Partners are as follows:

- **General Assembly – spring 2022**  
Vote: Strategic Plan, Operational Agreement, selection of the Board and Executive Management, Directions on NHs and SGs set-up and establishment.
- **General Assembly – middle 2022**  
Vote: Review of reports and on strategic decisions.
- **General Assembly – autumn 2022**  
Vote: the remaining aspects of transition to CNO and commercialisation of ECHO assets; review the reports.

Table 13 presents the timetable of planned activities during the Implementation Phase of the Plan. The table is divided in three main types of activities related to implementing and enhancing the different ADKAR Building blocks. Brief explanation of activities and their relations are given below.

#### CNO's Documents and Decisions Preparation

(I1) The documents' development will decrease organisational uncertainty and will enable development of the Training course. It is related to all ADKAR building blocks, but here the main blocks which will be supported are *Knowledge* and *Ability* to change.

Both **Simulation Games on Catalogue Management and on Innovation Management** will use updated D3.3 and related WP7, 8, 9 deliverables in order to develop a scenario. The experience of previous two games (on Strategic Planning and Partnership Development) in the Preparation Phase will be used. The tasks of the games will be to discuss, test and to improve the developed processes and to prepare for full document base and legal document related mainly to the SGs and advisory committees of the Central Hub.

The games should be oriented toward all ADKAR building blocks which are still not on satisfactory levels.

- **Catalogue Management Simulation Game – April 2022**
  - **Topic:** The approach to catalogue management (interactions between SGs, the role of GA, the Board and Scientific and Technology Committee);
  - **Strategic documents:** Part of the ECHO CNO Strategy and Strategic Plan for Customer Relations;
  - **Agreements:** Catalogue of Services and Service Level Agreement;
  - **Deliverables:** Assets Exploitation Strategies; D3.3 and D3.4 updates.
- **Innovation Management Simulation Game – October 2022**
  - **Topic:** The approach to management the innovation and (interactions between SGs, the role of GA, the Board and Scientific and Technology Committee);
  - **Strategic documents:** Part of the ECHO CNO Strategy and Strategic Plan for Innovation and IPR;
  - **Agreements:** IPR management agreement; R&D budget;
  - **Deliverables:** Innovation Strategy and Management related; D3.3 and D3.4 updates.

The **Development and improvement of Strategic Planning Process (SPP) and other core processes** will be done through D3.3 updates. This activity should provide design of all four core processes and finally in M48 to produce all By Laws, agreements templates – Operational-level Agreements for Partners with SGs, NHs and CH, as well as Service-level Agreements for Catalogue Management.

In order to present and discuss the changes related to the progress toward ECHO CNO **Awareness and Desire Workshops** on CNO's will be organised and held before or during the General Assembly. The Workshops will support the decisions for transformation which the ECHO consortium will have to take.

Another important role of the Workshop is to update the Implementation Plan in order to adapt it to the external and internal developments with regard to assessment and reports provided by T3.4: Governance operations and work on D3.3 and D3.4 updates.

#### Training course

(I2) The training course is solely aimed in enhancing the Knowledge and Ability of the management to apply the organisational change. It will be developed in cooperation between WP3 and T2.6: Derivation of ECHO Cyber Skills Framework and related trainings. In terms of ECHO assets and services – the cooperation will be between teams of E-Cyber Skills Framework Service and E-Governance Consultation Service.

The **Content ready** activity is final preparation of the course based on training course related activities within the Preparation Phase.

The Initial courses will be held and their content will be improved on the basis of experience gained, until M42. After M42, those Regular courses will be available for partners.

#### CNO's Structures Establishment and Improvement

(I3) The activities related to the actual set-up and establishment of the ECHO CNO structures aim to provide Reinforcement of the change (R from the ADKAR) through leadership, initial resource allocation and management.

The important activity of **Initial establishment of NHs and SGs** will be the first important test and experience in actual organisational transformation. It will be result of growing the ECHO Network during previous actions in T3.5. Another important enabler of the change here is the development of organisational documents.

The activity of **Initial establishment of Advisory Committees** will use the experience gained and will prepare the reinforcement of the ECHO CNO final transformation in M48 and its Full Operating Capability (FOC).

The transformation progress will be evaluated and directed through reporting activities in T3.4 and WP1, as well as through Annual Reports of ECHO Network.

Monitoring and reporting will use CMMI evaluation methods regarding to overall Governance and Management Model methodology framework, as well as to the maturity level 4 KPI requirement. Assessment of ADKAR levels will be done at the beginning of the Implementation Phase (M36) and will be repeated again in M42 in order to monitor the ADKAR levels and to suggest actions for improvement.

The evaluation of ADKAR building blocks will be based on a table similar to Table 11, which will be filled after each evaluation.

The next section provides more details on monitoring and reporting.

Activities and sub-activities	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48
	Feb 2022	Mar 2022	Apr 2022	May 2022	June 2022	July 2022	Aug 2022	Sept 2022	Oct 2022	Nov 2022	Dec 2022	Jan 2023
<b>CNO's Documents and Decisions Preparation</b>												
Simulation Game on Catalogue Management												
Simulation Game on Innovation Management												
Development and improvement of SPP and other core processes through D3.3 updates												
Awareness and Desire Workshop on CNO's structures and process development and implementation – GA events.												
<b>Training course</b>												
Content ready												
Initial courses and content improvement												
Regular courses												
<b>CNO's Structures Establishment and Improvement</b>												
Initial establishment of NHs and SGs		GA										
Report on Processes implementation, NHs and SGs						GA						
Initial establishment of Advisory Committees												
Report on Processes implementation and structures activities										GA		
Registration of ECHO CNO (FOC)												

Table 13 : The Implementation Phase activities and timetable

#### 4.3.3 Roles and responsibilities matrix

Table 14, below presents the initially suggested RASCI matrix for the Implementation Phase of the plan.

Activities and sub-activities	Leaders of activities and sub-activities	T3.3, T3.4 partners	ECHO Assets exploitation leaders	ECHO Participants and Collaborators	ECHO Advisory Committee (MSIEC, STC, PAC)	ECHO General Assembly
<b>CNO's Documents and Decisions Preparation</b>	<b>A</b>	<b>R</b>				
Simulation Game on Catalogue Management	A	R	S	I	C	
Simulation Game on Innovation Management	A	R	S	I	C	
Development and improvement of SPP and other core processes through D3.3 updates	A	R	I	I	I	I
Awareness and Desire Workshop on CNO's structures and process development and implementation	A	R	C	C	I	I
<b>Training course</b>	<b>A</b>	<b>R</b>				
Content ready	A	R	R	I		
Initial course and content improvement	A	R	R	I	S	
Regular courses	A	R	R	I	S	
<b>CNO's Structures Establishment and Improvement</b>	<b>A</b>	<b>R</b>				
Initial establishment of NHs and SGs	A	R	R	S	S	C
Report on Processes implementation, NHs and SGs	A	R	C	I	I	I
Initial establishment of Advisory Committees	A	R	R	C	R	I
Report on Processes implementation and structures activities	A	R	C	I	I	I
Registration of ECHO CNO (FOC)	A	R	I	I	I	S

Table 14: The Implementation Phase RASCI matrix

The Leadership of this Phase is crucial for successful transformation to the ECHO CNO. The possible conflicts should be resolved and different goals and approaches should be coordinated in order to reinforce the change.

Table 14 is prepared in similar way to the Table 10 for the Preparation Phase. It has to be detailed and agreed and updated during period M36-M42.

## 4.4 Maturity appraisal and improvement

### *The maturity level appraisal*

The use of Capability Maturity Model Integration (CMMI)<sup>24</sup> in relation to COBIT is described into the WP3 Methodology Framework, presented in details in D3.3 and in its Annex 3.

The COBIT is a comprehensive framework, which includes relations to the processes and their maturity assessment. There is also a tool that provides mapping between the COBIT objectives and CMMI levels<sup>25</sup>.

It is also possible to evaluate the future state of the organisation on the basis of current organisational developments. In SCAMPI Methodology (described below) it is called the “Type-C” appraisal. It is the easiest and fastest type of appraisal<sup>26</sup>. In D3.4 we are appraising the Strategic Planning Process as it is developed in D3.3. This can be considered also as a training for future more detailed and rigorous maturity appraisals.

Annex 5 provides brief description of key parts of the CMMI, as well as explanation of Appraisal Plan preparation background. The last part of the Annex presents results of the appraisal.

#### 4.4.1 Types of CMMI appraisal

Capability Maturity Model Integration (CMMI) is a process level improvement training and appraisal program. Administered by the CMMI Institute, a subsidiary of ISACA, it was developed at Carnegie Mellon University (CMU). CMMI provides a set of practices for improving processes, resulting in a performance improvement system that paves the way for better operations and performance.

CMMI is structured in Capability Areas, Practice Areas, and Practices. It should be noted that the most relevant connection points between the COBIT and CMMI models are Practices.

The CMMI involves following five aspects:

- **Maturity Levels:** a 5-level process maturity where the uppermost (5<sup>th</sup>) level is a notional ideal state where processes would be systematically managed by a combination of process optimization and continuous process improvement. Maturity levels are: *Initial, Managed, Defined, Quantitatively Managed, and Optimizing*;

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<sup>24</sup> CMMI Institute, “CMMI V2.0,” accessed September 5, 2019, <https://cmmiinstitute.com/cmmi>.

<sup>25</sup> ISACA, *Maximizing the Combined Effects of COBIT 5 and CMMI: A Guide to Using the Practices Pathway Tool* (Rolling Meadows, IL, USA: ISACA, 2017).

<sup>26</sup> SCAMPI Upgrade Team, “Handbook on Standard CMMI® Appraisal Method for Process Improvement (SCAMPISM)” (SEI, 2011), [https://resources.sei.cmu.edu/asset\\_files/Handbook/2011\\_002\\_001\\_15311.pdf](https://resources.sei.cmu.edu/asset_files/Handbook/2011_002_001_15311.pdf).

- **Key Process Areas:** A Key Process Area identifies a cluster of related activities that, when performed together, achieve a set of goals considered important;
- **Goals:** the goals of a key process area summarize the states that must exist for that key process area to have been implemented in an effective and lasting way. The extent to which the goals have been accomplished is an indicator of how much capability the organisation has established at that maturity level. The goals signify the scope, boundaries, and intent of each key process area;
- **Common Features:** common features include practices that implement and institutionalise a key process area. There are five types of common features: *commitment to perform, ability to perform, activities performed, measurement and analysis, and verifying implementation*;
- **Key Practices:** The key practices describe the elements of infrastructure and practice that contribute most effectively to the implementation and institutionalization of the area.

Each process area is defined by a set of goals and practices. There are two categories of goals and practices as follows:

- **Generic goals and practices** – part of every process area;
- **Specific goals and practices** – specific to a given process area.

A process area goals are satisfied when the processes of a company cover all of the generic and specific goals and practices for that process area.

The Capability Maturity Model Integration is a process framework to develop, optimise, and assess organisational processes.

#### 4.4.2 Appraisal method classes

The Standard CMMI Appraisal Method for Process Improvement (SCAMPI) is designed to provide benchmark quality ratings relative to Capability Maturity Model Integration models. It is applicable to a wide range of appraisal usage modes, including both internal process improvement and external capability determinations.

**Appraisal Method Class** — A family of appraisal methods that satisfy a defined subset of requirements in the Appraisal Requirements for CMMI (ARC). These classes are defined so as to align with typical usage modes of appraisal methods.

The **SCAMPI family** of appraisals includes Class A, B, and C appraisal methods as follows:

- *SCAMPI A* is the most rigorous method and the only method that can result in a rating;
- *SCAMPI B* provides options in model scope, but the characterization of practices is fixed to one scale and is performed on implemented practices;
- *SCAMPI C* provides a wide range of options, including characterisation of planned approaches to process implementation according to a scale defined by the user.

At the most general level, every SCAMPI appraisal has three primary phases: (1) plan and prepare for the appraisal, (2) conduct the appraisal, and (3) report the results (see Table 15).



These phases each contain a set of processes that can be tailored, within certain parameters, by the user.

Phase	Process
<b>1. Plan and prepare for appraisal</b>	Analyse requirements
	Develop appraisal plan
	Select and prepare team
	Obtain and inventory Initial Objective Evidence
	Prepare for appraisal conduct
<b>2. Conduct appraisal</b>	Prepare participants
	Examine Objective Evidence
	Document Objective Evidence
	Verify Objective Evidence
	Validate preliminary findings
	Generate appraisal results
<b>3. Report Results</b>	Deliver appraisal results
	Package and archive appraisal assets
<b>4. Action plan reappraisal</b>	Action plan reappraisal

Table 15: SCAMPI Phases

*This document is developed for the first phase and for the Strategic Process within the framework of T3.4 and T3.3. It represents the first, already prepared plan for appraisal in Type-C class.*

#### 4.4.3 Plan and prepare for appraisal – analyse requirements

The minimum requirements for conducting planning processes and creating artefacts are specified in this section. For SCAMPI C, we must identify:

**Appraisal Objectives** — The desired outcome(s) of an appraisal process [ARC1.3].

**Appraisal Input** — The collection of appraisal information required before data collection can commence [ISO 98C and ARC1.3].

**Appraisal Outputs** — All of the tangible results from an appraisal (see “appraisal record”) [ISO 98C and ARC1.3].

**Appraisal Record** — An orderly, documented collection of information that is pertinent to the appraisal and adds to the understanding and verification of the appraisal findings and ratings generated [derived from ISO 98C and ARC1.3].

#### Appraisal Objectives

**The objective of the maturity assessment** should be to assess the availability (*and maybe the capabilities*) of the following items in future ECHO CNO practice:

- **Reports, documents and data for direction** of the ECHO CNO Governance and Management model and organisation (*inputs from previous periods – these can be deliverables and other documents from the ECHO Consortium at the CNO’s first year – after M48 of the Consortium*);

- **Methodology for planning and decisions** (*as well as the above – documents at M48, the Assets Exploitation Strategies*);
- **Procedures for direction** of the CNO's management and changes' implementation.

### Appraisal outputs

Analysis of **objective evidence**, as well as other data collected for the appraisal, **transforms the data into appraisal results** that are then documented and reported to appropriate stakeholders.

Using the definitions for **objective evidence**, we can define **Practice Implementation Indicators (PIIs)** to manage the information collected during an appraisal.

As a data structure, the use of **Practice Implementation Indicators (PIIs)** is required. Specific requirements are:

- The classification of artefacts into direct and indirect indicators of practice implementation
- Labelling affirmations as a distinct source of data
- Associating each item of evidence with a particular practice in a CMMI model (or a non-model category)
- Associating each item of evidence with either a given project or an organisational function
- Using inventories of data based on this framework to establish that sufficient data have been examined to support appraisal outcomes.

The **data sources** used in appraisals focus primarily on interviews with technical and managerial staff as well as a review of documentation. Presentations made by members of the organisation, along with demonstrations of tools, may also be used as data sources.

**In SCAMPI C, information is sought that describes the approach taken (or planned for the future) to implement practices consistent with the intent of CMMI.**

The SCAMPI C and SCAMPI B methods require the generation of **findings statements**. Using a **red-yellow-green scale**, the two methods also support the derivation of detailed results **mapped to each model practice**. In the SCAMPI C, a characterization scale reflecting the fidelity of the approach in reference to the intent of CMMI is available: the intent is to describe **the extent to which the organisation has accounted for how each practice contributes to the achievement of the goal to which it relates**.

SCALE	SCAMPI C
LOW	The intent of the model practice is judged absent or inadequately addressed in the approach; goal achievement is judged unlikely because of this absence or inadequacy.
MEDIUM	The intent of the model practice is judged to be partially addressed in the approach, and only limited support for goal achievement is evident.
HIGH	The intent of the model practice is judged adequately addressed in the set of practices (planned or deployed) in a manner that supports achievement of the goal in the given process context.

Table 16: SCAMPI Type-C scale

Table 16 presents the scale and intentions of appraisal of class Type-C.

### *Appraisal Input for SCAMPI C: required contents*

#### Appraisal purpose

The main **organisers of the process are the Secretariat (Executive Managers) and Board of Directors (BoD).**

**The Advisory Committees** involved provide expert opinion in their respective areas as follows:

- Membership Committee - Partners Engagement strategy, Partnership Development Process and organisation – requirements to new partners, partners' certification and monitoring;
- Scientific and Technology Committee – Technology Roadmaps, Innovation strategy, Innovation Management;
- Financial Committee – Resource Framework; Financial Targets and Execution Monitoring issues; Reports;
- Auditing Committee – Audit Methodology, Auditing Plans and Execution.

The ACs consists of representatives of Partners' from NHs and SGs, so it can be argued that the will of the network participants is presented through them. The representation rules should exist, and the representatives are chosen and appointed by the General Assembly.

The BoD and the Secretariat acting as coordinators and procedures' organisers, as well as conflict resolution bodies. The BoD has final decision authority about unresolved issues.

BoD should address the Strategy decisions to present them to the GA.

Definition Phase of the **Strategic Planning Process** can be seen as an important process of **directing and changing the Governance Model according to the CNO's environment (COBIT EDM 01).**

It starts with input from previous year (or previous periods) reports and data and finishes with the decision for changes (if needed) implemented in a document "Planning Guidance" which is a Network-wide (CNO) (CNO) instruction for the next period planning activities.

The procedure's goals are to provide common agreement and understanding of the CNO's goals and future desire for development. It also should provide transparency and accountability among Partners, as well as ground for possible conflicts resolution.

The Process is given in Suppliers-Inputs-Process-Outputs-Customers (**SIPOC diagram**) format in Table 17.

Supplier	Input	Procedures	Output	Customer
<b>Secretariat (Executives)</b>	See Figure 4 GMIS	1. Identify the CNO's wide issues in reports and address them to Advisory Committees' area of competence		
		2. Prepare the Directive on Planning Guidance preparation	Planning Directive Draft (including timeframe,	<b>Board of Directors (BoD)</b>

Supplier	Input	Procedures	Output	Customer
			issues and units involved)	
<b>Board of Directors</b>	Planning Directive Draft	1. Consider and Approve the Directive	Planning Directive	<b>Central Hub bodies</b>
		2. Advisory Committees (ACs) consider the issues.		
		3. Do we need change in methodology?		
		4. Do we need change in Strategy?		
		5. Do we need changes in organisation?		
		6. Do we need changes in resources framework and Partners' commitment?	List of issues and suggested decisions	<b>Secretariat</b>
<b>Secretariat (Executives)</b>	AC Lists	1. Compile lists and address decision levels	List of decisions	<b>BoD</b>
<b>BoD</b>	List of decisions	1. Decides on issues in his levels (based on AC suggestions)		
		2. Prepare the Strategy decision to General Assembly (GA)	Suggestions for GA	<b>GA</b>
<b>GA</b>	BoD proposal	1. Consider and Votes on strategic whole-CNO issues	Changes in CNO's documents	<b>BoD and Central Hub</b>
<b>Secretariat, BoD, ACs</b>	Changes from GA	1. Prepare and approve the Planning Guidance	Planning Guidance	<b>National Hubs and Services Groups</b>

Table 17: SIPOC diagram for Strategic Planning Process

Model scope, process context and constraints of the targeted Strategic Planning Process are given in Annex 5 – Strategic Planning Process appraisal framework.

#### 4.4.4 Plan and prepare for appraisal – develop appraisal plan

##### *Required contents of the appraisal record*

The method shall require the development of an **appraisal plan** that, at a minimum, **specifies** required **contents** of the Appraisal Record (**AR**).

**Appraisal Record** — An orderly, documented collection of information that is pertinent to the appraisal and adds to the understanding and verification of the appraisal findings and ratings generated. **[derived from ISO 98C and ARC1.3]**.

The **definitions for different kinds of objective evidence** are as follows:

- **Direct Artefact:** The tangible **outputs resulting directly from implementation of a specific or generic practice**. An integral part of verifying practice implementation. May be explicitly stated or implied by the practice statement or associated informative material;
- **Indirect Artefact:** An artefact that is a **consequence of performing a specific or generic practice** or that substantiates its implementation, but which is not the purpose for which the practice is performed. This indicator type is especially useful when there may be doubts about whether the intent of the practice has been met (e.g., a work product exists but there is no indication of where it came from, who worked to develop it, or how it is used);
- **Affirmation:** An **oral or written statement confirming or supporting implementation of a CMMI model practice**. Affirmations are usually provided by the implementers of the practice.

#### 4.4.5 Plan and prepare for appraisal – prepare for appraisal conduct

The appraisal team leader shall:

- Use the appraisal input, appraisal plan, and other artefacts created in planning the appraisal to plan for the collection of objective evidence;
- Use one or more readiness reviews to evaluate the feasibility of the plan for collecting objective evidence and the plan for the appraisal in general;
- Make minor adjustments or major revisions to the plan for collecting objective evidence, as needed.

For a SCAMPI C conducted by a single appraiser over a one-day period, confirming the availability of documentation, and/or key interviewees based on a previous agreement may be all that is needed.

This confirmation could be accomplished with a phone call or an email.

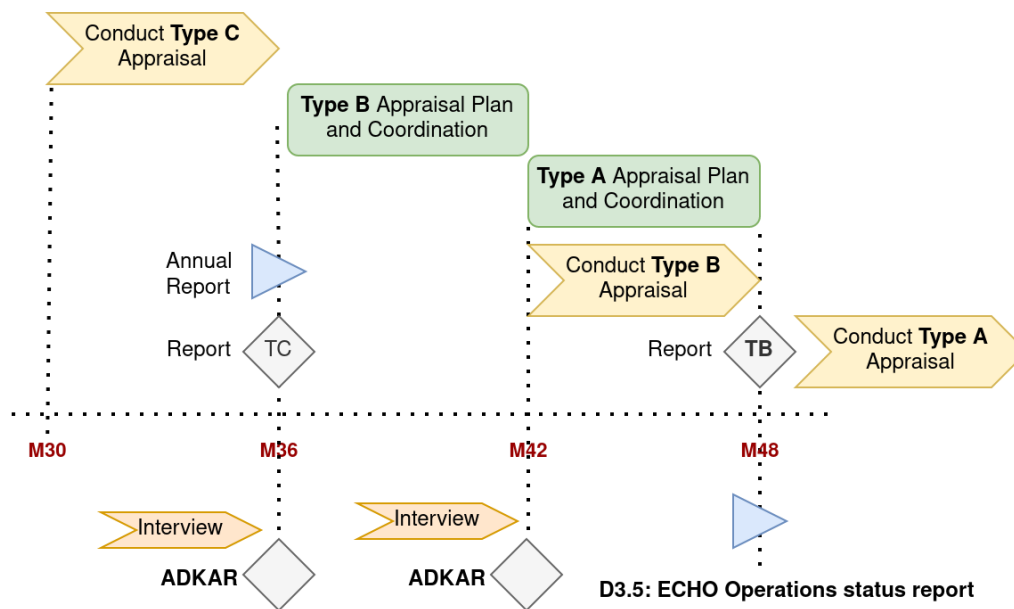


Figure 21: The Implementation Plan monitoring and evaluation framework and timetable

In a SCAMPI C, the **data collection plan** has the greatest potential for tailoring. The availability of direct or indirect evidence can be augmented with interviews, instruments, or presentations.

#### 4.4.6 Combining the CMMI appraisal and ADKAR evaluation

In Figure 21 the framework for aligning the CMMI appraisal activities is presented.

The graduated approach is used from less to more complicated classes of appraisal. The final, most accurate Type-A will be used after M48 and full set-up of ECHO CNO's structures. In the same month the report for Type-B have to be provided.

Annual Reports and D3.5 are also important part of the ECHO transformation monitoring, evaluation and improvement activities, which will be part of the Implementation Plan, as they are envisaged in Table 9 and Table 13.

Brief interviews with managers for evaluation of ADKAR building blocks and obstacles will be conducted (on the bases of current, D3.4 Interviews) and will be presented in M36 and M42.

#### 4.5 Training for change

The induction training is an integral part of the implementation of the ECHO strategic plan and transition to the Target Operating Model (TOM). The training will be delivered as asynchronous e-learning course to the decision makers and all interested to participate actively in the transition processes towards structuring and operating the future CNO. The general objective of the training is to provide knowledge and abilities to the responsible and accountable persons for active participation and reinforcement of the processes that lead to a fully operational ECHO Collaborative Network Organisation. Besides that, the training content will

ensure, at one place, a transparency and reasoning about the arguable and unclear courses of action towards the building of the ECHO CNO.

It considers the specifics of the target group through translating and interpreting the needs and objectives of the ECHO governance model, the decisions taken so far about the governance model, the structure assumed for the Target Operating Model, the responsibilities and benefits within the Target Operating Model and its elements and managing the ECHO operational and service agreements.

The induction training will enable the managers and decision makers of the ECHO partner organisations to pilot their experts, teams and legal bodies to the future ECHO CNO in an informed, transparent and participatory manner. After the completion of the training the decision makers will be able to interpret and communicate the ECHO values, mission and vision at organisational, supply chain and national level. In addition, the learners will be able to evaluate and analyse the effects and impact of the future CNO to their organisations and national strategies in the domain of cybersecurity.

In the context of the ADKAR change management model (see Figure 22), the induction training aims at providing the decision makers and partners' management (existing and potential partners) with information and knowledge about the Target Operating Model as follows:

- How the transition will affect their operations, people, competences, products, incomes and all components of their business models and organisational structures;
- What type of commitment they should be able to accept; what type of partnership exists in the future ECHO CNO;
- Which are their potential partners and customers in the ECHO CNO;
- What kind of steps and activities they could undertake to build an effective excellence-based community;
- To what kind of assets they will have access in the fully operational future network.

After the end of the training, the trainees participate actively in the work related with the transition processes and manage smoothly and effectively the attitudes of their colleagues involved as experts or administrators.

The related content and delivery tools will be ready for distribution in February 2022 (M36). It is expected that by June 2022 (M40) at least 40 managers and decision makers will accomplish the first instance of the training and to provide their feedback for improvement or change of the content and delivery tools. The decision makers of the ECHO partners will be actively encouraged to enrol and finish the training. They will be asked for feedback not only about the content and methods but also about their vision and opinion on the future CNO. Thus, the WP3 team will gain additional information and will be able to undertake steps for improvement or refinement of the ECHO CNO governance model.

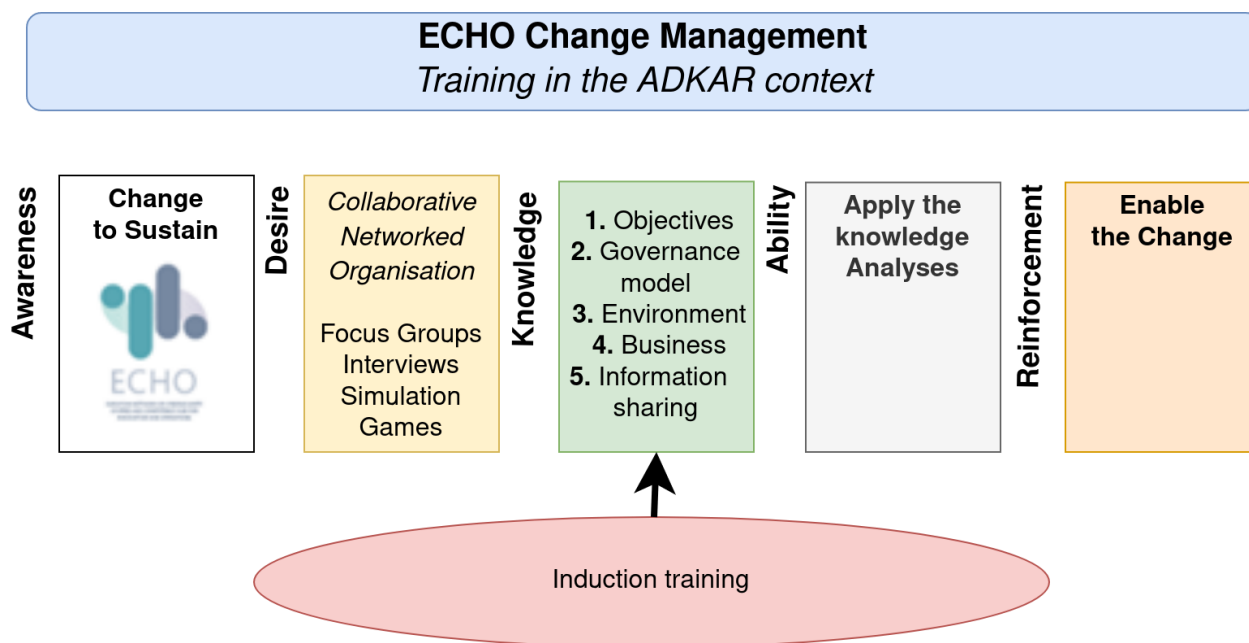


Figure 22: The induction training in the ADKAR context

The following content is assumed for the induction training:

- Module 1: ECHO Governance Needs and Objectives
- Module 2: ECHO Governance Model at a Glance
- Module 3: ECHO Partnership Development and National Hubs
- Module 4: ECHO Business
- Module 5: Information Sharing Model and Governance Information Management System
- Module 6: Managing ECHO Operational and Service Agreements

The structure follows the structure of WP3. The related content will be validated within the WP3 team and constantly updated when is necessary with the results from the work of focus groups, simulation games, interviews and exploitation activities until February 2022. After the active involvement of the learners in the transition processes they will still have access to the training content and to project management and sharing system (SharePoint). Therefore, the instructional designers do not expect the need for significant updates after February 2022 excluding the implementation of the learners' proposals about the content and delivery tools.

The time for passing through each module will vary from 20 min to 60 min and a participant should be able to finish the training in a week. The overall training time will not exceed 4.5 hours. The content will be provided with graphical and image enhanced methods and tools. The instructional designers will involve as much as possible interactive and action-required instruments. The enrolled learners will be able to access the content and materials constantly according to their availability and agenda (asynchronous self-guided e-learning). The instructional designers will consider the option to include a forum function in the e-learning platform where the participants could ask questions or discuss the topics with their co-learners and colleagues.



## 5. Summary of the way ahead

### 5.1.1 Future updates in M36 and M48

Until M36 (January 2022), the focus will be on initial testing through a simulation game of the Partnership development process in order to streamline this process for full implementation under T3.5 in 2022.

At the same time, following the Induction training with the leadership of the Consortium members and new Partners with a focus on the Governance model (D3.1–4), the team will be able to:

- Raise the awareness (A of ADKAR);
- Raise desire and decision (D of ADKAR) for starting of change in 2022;
- Improve the knowledge and abilities of involved people (K and A of ADKAR);
- Help developing reinforcement mechanisms (R of ADKAR).

Therefore, the update at M36 will be able to assess the new achieved levels of ADKAR building blocks. The level of knowledge and ability will be special aspects of the assessment – not only for members of the Consortium, but for the newly attracted partners. The assessment will be the basis for proposing how to update the Implementation Plan for 2022.

The decision will be taken for the relations with the European Cybersecurity Competence Centre (ECCC) in Bucharest and the development of National Hubs – using the model of ECHO chapters or selecting EDIHs to play the role of ECHO national hubs.

Realistic planning will be implemented not just for changes in 2022, but as a contribution to the WP8 on testing governance model during the Demonstration of use cases and change management aspects of the E-GCS asset under the WP9 Exploitation strategy development.

Formally, as the T3.3 is closed, the development of the update will go under T3.4 as part of Partnership Development and under T3.5 as part of the assessment of the maturity of the core processes.

### 5.1.2 Key additional elements in M48 updates

The main focus will be on the improvement of the change and transition planning after M48. Simulation games will be organized to optimize the Catalogue management process (M42) and Innovation management process (M48).

This last update will be based on the practical implementation of the Governance model, including the transformation of the Project governance and management bodies in ECHO CNO structure. Relations with ECCC will be essential, and establishment on the National Hubs (ECHO chapters or selected regional EDIH to play the role of national cybersecurity hubs) need to be reflected in the Implementation Plan.

The main focus is the decision on the ECHO Group – is it going to be the core of ECHO CNO as initially planned after the end of the project, or will we seek a kind of federation with the other three pilot projects under joint Central Hub, or even to consider merging with ECSO, where the ECSO central body will play the role of the Central Hub for the federated network of National Hubs and associated communities of cybersecurity entities.

It is not possible to predefine the content of the M48 update – it will follow practical developments under T3.4 and T3.5 in relation with WP8 and WP9 as well as developments under FG Governance with the other three pilots and ECSO.

With the delivery of D3.4 at M30 we have all key WP3 deliverables – D3.1, D3.2, D3.3, D3.4, D3.6 and the baseline for D3.5 along the Annual Governance model reports (under T3.4). It means that updates will be based on implementation, consultations and maturity assessment (under T3.4) to reflect additional

knowledge gained with systematic documentation of the progress in *D3.5 Governance model implementation report*.

The last D3.4 update will consolidate all agreed steps ahead under different working packages for the future of ECHO CNO and with a starting point the assessed state of the Consortium and Network, documented in D3.5.

It means D3.5 and D3.4 with related strategies, plans, catalogue of WP9 will provide the comprehensive overview of achievements of the way ahead.

## 6. Conclusions

This deliverable reflects the efforts since the start of the activities of *WP3: ECHO Governance Model* in May 2019 with the focus to define the main building blocks of change management for the transition project, which will be implemented during the ECHO Project period. Thus, providing the ground for the transition from ECHO Consortium organisation to a fully developed and established ECHO Collaborative Networked Organisation.

One of the additional goals of these activities was to build awareness and desire for the change among all the Partners and ECHO WPs about the role of the Governance Model of ECHO CNO; to engage them directly through the development of preparation activities and events; and by gathering their opinion.

The main conclusion from the work that was performed so far is that high levels of awareness and desire for change exist. The development of other ADKAR building blocks will be the target for activities until M48 – the end of the Project.

Key processes, organisational structures and RASCI matrix, as well as key change initiatives, are identified to be designed in updates of main WP3 deliverables in relation to the Implementation Plan. The coherent change planned in this deliverable is the next consequent step and will be an important part of ECHO CNO transformation after the project period.

## Annexes

### Annex 1 – Methodology description

#### *D3.4 preparation activities*

##### *Focus group*

A focus group is a powerful research method applied in a number of scientific fields ranging from sociology and psychology to political sciences, marketing and engineering.

Focus groups usually allow for more in-depth understanding of opinions and attitudes of a group of participants through a guided discussion which may be structured (along predefined questions) or not. Focus groups facilitators may assign roles – facilitator, who engages the focus group participants, and observer, who observes the group dynamics, non-verbal communication and other factors which may aid the analysis of the proceedings. In case the focus group participants are representative for the studied group, their opinions and attitudes may be considered to reflect the larger group itself.

For the purposes of preparation of the Implementation Plan, the focus group format was considered useful to help establish the current status and Awareness. The specific objectives of using focus group in this context are to:

- Understand all ECHO partners' initial attitudes towards the proposed change (closer integration into a Collaborative Networked Organisation – ECHO Network);
- Identify factors that could support/hamper the transition process;
- Identify initial requirements from ECHO Partners for engagement in closer integration into ECHO Network;
- Initiate a discussion on how the proposed changes align with internal strategies and aspirations of ECHO partners;
- Obtain insights to inform the process of designing the appropriate interventions and activities into the Implementation Plan to ensure the success of the transition.

The selected mode includes guided discussion with pre-defined questions. As the purpose of the focus group is to assess organisational rather than individual attitudes to the extent possible, participants received the questions in advance and were asked to consult internally where possible. The focus group questions were designed to enable collection of information to inform the next activities, as well as to help raise awareness:

- How do you see the *future of ECHO* after completion of the project in 2023?
- The *vision for ECHO project* is federation into a CNO (ECHO Network) and more active role on the European cybersecurity landscape. What *benefits and obstacles* do you see for the transformation path from a project organisation to a collaborative networked organisation?
- How does the *proposed transition* to a collaborative network organisation *align with the internal goals and strategies* of your (partner) organisation?
- How do you see the *role of your organisation* within the future ECHO Network?
- To what extent your *internal organisation structure and processes*, as well as *leadership styles* are *in line and supportive* to the vision for transforming ECHO project into a CNO?

- What *factors (and key decision makers) in your organisation* would have a role in taking the decision for closer integration within ECHO Network?
- Do you (your organisation) have *experience with organisational transformation* similar to the suggested one? If so, could you share what went well (even better if)?

The focus group was conducted online, into two parallel breakout sessions. All ECHO partner organisations were invited to register at least one participant per organisation. Pre-reading materials were distributed, including the above questions and D3.3: Governance model description (submitted for EC review).

Preliminary registration resulted in 38 focus-group participants from 24 partners including 1 individual participant. During the focus group, most of the registered participants actually took part: the two breakout sessions were attended by 28 participants.

General guidelines applied by the focus group facilitators:

- There are no right or wrong answers. All opinions are valuable;
- One or two participants should not dominate in the discussion. Everyone should have the opportunity to express an opinion;
- No details are needed, only summarized opinions, conclusions and recommendations. The specific examples that the participants gave are important;
- It is important to try achieving a predominant opinion in the group, which is shared by most of the participants;
- It is also important to state the arguments for the opinion held;
- The facilitator should not speak more than the participants. This is not an educational event or Q&A session.

After induction training the focus-groups could be repeated for the update of D3.4. in order to compare the results and assess the readiness.

### *Structured interviews with managers*

Interviews are a widely used method to collect information applicable in both qualitative and quantitative research. Interviews allow for understanding underlying motivations, attitudes, preferences or behaviours<sup>27</sup>. Interviews are very effective qualitative tool to get interviewed people to talk about their opinions, feelings and experiences, to get insights into how they interpret their surroundings.

There are various forms of interviews, and some of the most used include face-to-face and telephone interviews. Depending on the research setting and goals, interviews may be conducted in a structured, semi-structured or unstructured way.

For the purposes of preparation of the Implementation Plan, the interview format provides an opportunity to reach out to decision makers in ECHO Partner organisations to identify their attitudes, level of understanding of the planned change, need of additional information to take decisions. Interview questions

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<sup>27</sup> Ang, S.H., 2014. Research Design for Business & Management, London: Sage Publications Ltd.

are designed on focus group proceedings and analysis basis, which identify major concerns and attitudes within Implementation Plan development team members.

Taking the decision makers opinion at early stages of D3.4 developments, has the following benefits:

- Involving key decision-makers as early as possible in planning the transition would provide valuable inputs to design the appropriate interventions in the Implementation Plan. These interventions should address the needs (of information, knowledge etc.) identified through interviews;
- Interacting with decision makers would help to identify the preliminary level of commitment of partners, as well as what their commitment depends on;
- Initiating a discussion on how the proposed changes align with internal strategies and aspirations of ECHO Partners;
- The early interaction with key decision makers in the ECHO organisations also hides some risks that need to be managed within the D3.4 developments:
- Important inputs to the decision-making process are still unavailable – such as business model and business plan of the CNO (to be developed under WP9) to allow for a cost-benefit analysis;
- Legal status to identify the specific legal obligations etc. to be undertaken by future ECHO Network members. These legal issues will be resolved and decision will be taken until the end of the Project under WP1;
- Quantifiable advantages and disadvantages to allow for informed choice and decision.

To address the above benefits and risks, we have structured the interviews as follows:

- The Interviewers established first contact with the interviewees (phone/virtual meeting or face-to-face meeting, depending on the epidemiological requirements) to explain the purpose of the interviews, provide additional information on ECHO project and ECHO Network and get agreement to send link to interview questions. The process was supported by an introductory presentation developed for this purpose and made available to interviewees and interviewers. This presentation contains the main aspects of the new CNO organisation and issues to be addressed prior and during the transition;
- Interviewees then received a link to online questionnaire (closed and open questions) to allow for flexibility and provide time for preparatory consideration;
- Interviewers followed up after the online questions have been answered to get additional comments and inputs, if any, from the interviewees;
- All verbal comments and observations were captured by interviewers and used for the analysis of the interviews.

### *Strategy and Strategic Planning Process*

When planning change, one of the first challenges organisations face is to recognize when change is necessary<sup>28</sup> - understanding the drivers helps define the context and scope of the changes.

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<sup>28</sup> Self, D. R. & Schraeder, M., 2009. Enhancing the success of organisational change. Matching readiness strategies with sources of resistance. *Leadership & Organisation Development Journal*, 30(2), pp. 167-182

The answer to the question “Why change is necessary?” relates to defining the desired future and the strategy to get there. Defining the desired future helps identify the gap between the current and future state and plan the steps to close that gap. Strategy is an important input to transition plan design and change management. Change may be necessary because of both objective and subjectively perceived reasons. The perception and the legitimacy of the reasons influence the motivation and support of the organisational members, and respectively the success of the change<sup>29</sup>. And one of the success factors is the shared vision – as well as shared understanding of why change is necessary, and what are the consequences of not to change. Typically, the Strategic Plan (or even Strategic Planning process) is the context in which organisations define the need of change. When ambitious long-term goals are not achievable with the current organisational set-up, the organisation needs to undertake changes in the mid-term. That means, first implement a transition to a new set-up that that would position the organisation to achieve its longer-term strategic goals.

In the context of ECHO transition from project to collaborative networked organisation, working on the ECHO Strategic Plan in parallel to designing the Implementation Plan is important for several reasons, including:

- ECHO Project has a clear set of goals and approach how to achieve them, in compliance with the Grant Agreement. However, in order to design – and implement – the transition to ECHO Network, the Agreement does not provide sufficient strategic guidance, especially beyond its expiration. *Planning and implementing the transition requires a shared agreement on the vision as well as strategic guidance and plan beyond the term of the current ECHO project;*
- ECHO Strategic Plan to be developed as part of D3.4 updates (D3.14/D3.15) will *serve as a first working version to guide the change implementation*. It should reflect the ambitions of the partner organisations, as well as the environmental setup and factors (such as EU Cybersecurity Strategy; EU structures already existing or being set up in the field – ECCC, NCC, European Cyber ATLAS, the other 3 pilot projects; other international players – NATO Cyber Organisation);
- The Strategic Planning Simulation Game will *serve as a demo case to test and to refine where necessary the strategic planning process, in order to have a functioning process* as soon as the new ECHO network organisational structure is set and is operational (we accept that the strategic planning process provides a framework for other selected key processes as partnership development, catalogue / CRM and innovation management).

### Strategic planning game

The purpose of the Strategic Planning Simulation game (in table-top exercise form) is to test the process developed in D3.3. The game is a follow up of the D3.3: Governance model definition development and the results will be used in D3.4: Governance model implementation plan and other deliverables and task related to the work of the WP3.

The objectives of the Strategic Planning Simulation Game are as follows:

- To enhance the awareness on ECHO Governance Model development;
- To test and verify the Strategic Planning Process developed in D3.3;

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<sup>29</sup> Rousseau, D. M. & Tijoriwala, S. A., 1999. What's a Good Reason to Change? Motivated Reasoning and Social Accounts in Promoting Organisational Change. *Journal of Applied Psychology*, 84(4), pp. 514-528

- To receive feedback from participants on proposed Strategic Planning Process;
- To develop first draft of Strategic Plan for ECHO Network to guide the transition and give direction for the Target Operating Model;
- To identify deficiencies and to assess the maturity of the planning processes.

*ECHO CNO*: The Strategic Planning Process (SPP) starts at ECHO Central Hub with definition and approval of Guidance and is passed to the National Hubs and Services Groups (multiple elements of the ECHO Network). That is, the Process is initiated top-down, and then followed up by bottom-up involvement of National Hubs and Service Groups being the main actors under the coordination of the ECHO Central Hub.

The Planning Guidelines, Strategic, Change Management and Business Plans are agreed at Central Hub level through voting of representatives in General Assembly (GA), supported by the Advisory Committees.

Involvement of National Hubs and Services Groups to the Business Plan is accepted by agreement between ECHO Central Hub and each of National Chapters and Services Groups.

The Execution is monitored by use of a Monitoring System whose outputs include Annual Reports for each National Chapter and Service Group. These Annual Plans are approved at ECHO Central Hub level, and the ECHO CNO Annual Report is provided by the ECHO Central Hub to GA for approval.

D3.3. defines the responsibilities on the different ECHO Network organisational levels – Central Hub, National Chapters and Service Groups using the RACI matrix (Responsible, Accountable, Consulted, Informed). These are used for the purposes of the Strategic Planning Simulation game.

Key for the Strategic Planning Simulation game is to nominate “actors” for all the “roles” in ECHO Network and to form a “white cell” to drive the external events from stakeholders as EC, ECC, NCCs, customers, etc.



### ADKAR building blocks

ADKAR elements	Factors influencing success	Examples of enablers	Most influential players and activities
<b>Awareness</b> of the need for change	<ul style="list-style-type: none"> <li>A person's view of the current state</li> <li>How a person perceives problems?</li> <li>Credibility of the sender of awareness messages</li> <li>Circulation of misinformation or rumours</li> <li>Contestability of the reasons for change</li> </ul>	<ul style="list-style-type: none"> <li>Develop effective and targeted communications to share the business reasons for the change and the risks of not changing</li> <li>Sponsor (lead) the change effectively at the right level in the organisation; share why the change is needed and how the change aligns with the overall business direction and vision</li> <li>Enable managers and supervisors to be effective coaches during the change process; prepare them to manage change and help them to reinforce awareness messages with their employees</li> <li>Provide employees with ready access to business information</li> </ul>	<p>WHO: Primary sponsors, direct supervisors</p> <p>HOW: Sponsorship (leadership), communications, coaching</p>
<b>Desire</b> to support and participate in the change	<ul style="list-style-type: none"> <li>The nature of the change (what the change is and how it will impact each person)</li> <li>The organisational or environmental context for the change (his or her perception of the organisation or environment that is subject to change)</li> <li>Each individual's personal situation</li> </ul>	<ul style="list-style-type: none"> <li>Enable business leaders to effectively sponsor the change; create a coalition of sponsorship at key levels in the organisation</li> <li>Equip managers and supervisors to be the effective change leader; enable them to manage resistance</li> <li>Assess the risks associated with the change and design special tactics to address those risks</li> <li>Engage employees in the change process at the earliest possible stages of change</li> </ul>	<p>WHO: Primary sponsors, sponsor coalition, direct supervisors</p> <p>HOW: Sponsorship, coaching, resistance management</p>

ADKAR elements	Factors influencing success	Examples of enablers	Most influential players and activities
	<ul style="list-style-type: none"> <li>What motivates a person (intrinsic motivators that are unique to an individual)</li> </ul>	<ul style="list-style-type: none"> <li>Align incentive and performance management systems to support the change</li> </ul>	
<i>Knowledge</i> of how to change	<ul style="list-style-type: none"> <li>The current knowledge base of an individual</li> <li>The capability of this person to gain additional knowledge</li> <li>Resources available for education and training</li> <li>Access to or existence of the required knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Implement effective training and education programs</li> <li>Use job aides that assist employees in the learning process</li> <li>Provide one-on-one coaching</li> <li>Create user groups and forums to share problems and lessons learned between peer groups</li> </ul>	<p>WHO: Project team, training team, HR</p> <p>HOW: Training, coaching</p>
<i>Ability</i> to implement required skills and behaviours	<ul style="list-style-type: none"> <li>Psychological blocks</li> <li>Physical abilities</li> <li>Intellectual capability</li> <li>The time available to develop the needed skills</li> <li>The availability of resources to support the development of new abilities</li> </ul>	<ul style="list-style-type: none"> <li>Foster the day-to-day involvement of supervisors</li> <li>Provide access to subject-matter experts</li> <li>Implement programs for performance monitoring</li> <li>Provide hands-on exercises during training that allow employees to practice what they have learned</li> </ul>	<p>WHO: Direct supervisors, project team, HR, training team</p> <p>HOW: Coaching, training</p>

ADKAR elements	Factors influencing success	Examples of enablers	Most influential players and activities
<b>Reinforcement</b> to sustain the change	<ul style="list-style-type: none"> <li>The degree to which the reinforcement is meaningful and specific to the person impacted by the change</li> <li>The association of the reinforcement with actual demonstrated progress or accomplishment</li> <li>The absence of negative consequences</li> <li>An accountability system that creates an ongoing mechanism to reinforce the change</li> </ul>	<ul style="list-style-type: none"> <li>Celebrate successes and implement recognition programs</li> <li>Give rewards for the successful implementation of the change</li> <li>Gather feedback from employees</li> <li>Conduct audits and develop performance measurement systems; identify root causes for low adoption and implement corrective action</li> <li>Build accountability mechanisms into the normal day-to-day business operations</li> </ul>	<p>WHO: Primary sponsors, direct supervisors</p> <p>HOW: Sponsorship, coaching</p>

Table 18: ADKAR model – elements, success factors, enablers, players and activities<sup>30</sup>

<sup>30</sup> Hiatt, J.M., 2006. *ADKAR: A Model for Change in Business, Government and Our Community*. Loveland, Colorado: Prosci Learning Center Publications

## *Project management*

A third important group of activities and instruments used for the development of Implementation Plan relates to Project Management. In essence, the transition from project to collaborative networked organisation can be viewed as a project itself – with clear beginning, ending, goals to be achieved, milestones and KPIs to track the process, and opportunity to review and revise the plan if/where necessary.

Project Management is a proliferous area of approaches and methods applicable to various types of projects and contexts. It is outside of our scope here to analyse and compare the benefits and risks of different Project Management approaches, as this has already been done in previous ECHO project deliverables. We follow the decision taken to apply SCRUM method – both to the development of D3.4 and to the result of D3.4 – the Implementation Plan itself.

## *The SCRUM approach*

SCRUM method is developed by Ken Schwaber and Jeff Sutherland as a framework to develop, deliver and sustain complex products<sup>31</sup>. The SCRUM definition consists of roles, events, artefacts, and the applicable rules to tie them together. The method has been widely used since early 1990s, largely in the context of developing software, hardware, embedded software, networks of interacting function, autonomous vehicles, schools, government, marketing, managing operations etc. SCRUM is founded on empirical process control theory, and stresses its three pillars – transparency, inspection, and adaptation.

The WP3 project team has decided to use SCRUM to guide its work and ensure effective process to manage results (project deliverables) as of September 2019 (see Figure 23).

SCRUM approach will be applied to the development of D3.4, and its principles will be embedded into the Implementation Plan.

The implementation of the Transition Plan will allow for reviewing and updating where necessary the planned transition activities. We see the two processes – development and implementation of the Transition Plan – as integral parts, and these will allow for further elaboration in the D3.4. updates.

Specific activities will help deepen the assessment of the capacity and desire to change of the partner organisations, as well as allow for the development of the actual ECHO Strategic Plan. These activities are presented below.

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<sup>31</sup> Schwaber, K., Sutherland, J., 2017. The Scrum Guide. The Definitive Guide to Scrum: The Rules of the Game

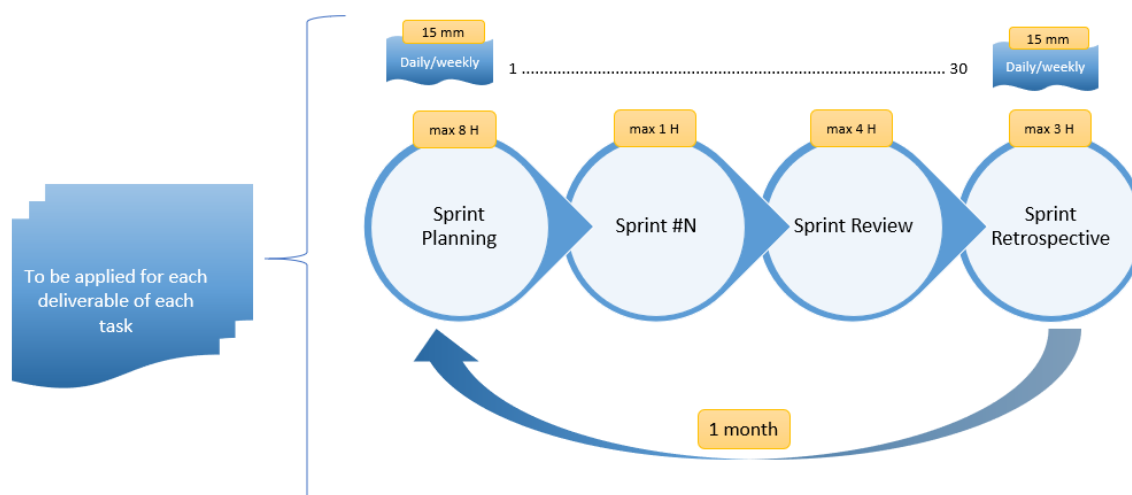


Figure 23: SCRUM approach to WP3 deliverables

Source of the figure is ECHO WP3 Internal document – SCRUM taxonomy and methodology

### Organisational capacity for change

One area of organisational change research seeks to understand what factors influence the chances for success. Assessing the readiness for change in an organisation proves to be very helpful in defining and designing the applicable interventions, especially in the context of implementation of planned change.

Readiness for change is one of the success factors and is associated with the beliefs, attitudes and intentions of the members of the organisation which should ultimately lead to changing their behaviours<sup>32</sup>; the shared commitment within the organisation to a certain change initiative and shared conviction that the organisation is able to implement it<sup>33</sup>.

Another concept increasingly attracting attention of the researchers is Organisational Capacity for Change (OCC). OCC provides a useful perspective to distinguishing the competitive organisations which successfully adapt to new threats and opportunities<sup>34</sup> while at the same time maintaining their operational capabilities and performance<sup>35</sup>. OCC generally refers to the extent of openness, tolerance of, and commitment to

<sup>32</sup> Armenakis, A. A., Harris, S. G. and Mossholder, K. W. (1993) 'Creating Readiness for Organisational Change', *Human Relations*, 46(6), pp. 681-703

<sup>33</sup> Weiner, B. J. (2009) 'A theory of organisational readiness for change', *Implementation Science* Vol.4, No.67, [online] <http://www.implementationscience.com/content/4/1/67> (Accessed on 28 January 2021)

<sup>34</sup> Judge, W. Q. and Elenkov, D. (2005) 'Organisational capacity for change and environmental performance: an empirical assessment of Bulgarian firms', *Journal of Business Research*, 58, pp. 893-901

<sup>35</sup> Meyer, C. B. and Stensaker, I. G. (2006) 'Developing Capacity for Change', *Journal of Change Management*, Vol.6, No.2, pp. 217-231

change<sup>36</sup> while not being associated with a particular change project or initiative. Thus, OCC can serve organisations implementing multiple – and often conflicting and/or overlapping change initiatives. OCC is the capacity of organisations to sustain repetitive changes over time while balancing conflicting goals.

The OCC questionnaire used for the purposes of the Implementation Plan builds on previous research in the area. It seeks to assess four groups of factors which are generally found to impact the continuous success of organisations to change without jeopardizing short- and long-term performance.

The OCC questionnaire will be used due to following reasons:

- ECHO Network is yet a non-existing organisation, and thus no existing structure and team are available. Moreover, the ECHO Partner organisations are very diverse in terms of size, location, scope of business activities, aspirations and strategies. We assume that any of these organisations are running their own change implementation projects and initiatives to respond to their changing environments;
- The transition to ECHO Network would be an additional change project which would need to align and run in parallel. Thus, assessing the capacity for change is viewed as a more appropriate framework as compared to change readiness. In addition, one of ECHO's KPIs is to bring on board 15 new members of ECHO Network from different countries during the project. This poses the need to assess these new members as capacity to be part of the change, to contribute to the success of the transition from project organisation to CNO;
- OCC addresses the majority of key success factors as identified in change management literature. This gives us the necessary level of confidence that the results would adequately inform the transition process and its specific interventions;
- OCC would give inputs to assessing the gap between current and desired state. It also links to the Awareness dimension of the ADKAR model;
- This OCC questionnaire was administered in different context which could allow for comparative analysis of results to provide further insights.

### *The Balanced Score Cards and the Strategic Maps*

The Balanced Score Cards is a technique that measures not only financial but balanced operational benefits like cycle time and defect rates (see Figure 24). It is used in the strategic performance management.

When translating the vision into operational goals (from project to a CNO) it is important to appoint the following set of questions in order to situate performance measures: How do customers see us? (Customer perspective); What must we excel at? (Internal perspective); Can we continue to improve and create value? (Innovation and learning perspective); and How do we look to shareholders? (Financial perspective).

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<sup>36</sup> McGuiness, T., Morgan, R. E. and Oxtoby, B. (2002) 'Organisational Change Capability: The Theoretical Construct and Its Operational Measurement', *Conference on Organisational Knowledge, Learning and Capabilities 2002, Track: Academic*

A Strategy Map is a simple graphic that shows a logical, cause-and-effect connection between strategic objectives. It is one of the most powerful elements in the balanced scorecard methodology, as it is used to quickly communicate how value is created by the organisation (see Figure 25).

The process of change will build upon engagement through focus groups and interviews, simulation games in order to implement change diagnosis, maintain continuous training and in coordination of WP1 (Strategic Planning), WP3 (Partnership development) and WP9 (Catalogue management and Innovation management) to develop initial set of products for establishing of ECHO CNO with maturity assessment of the processes under T3.4. and extending of the network under T3.5. to be reflected in D3.5.

The Balanced Score Cards and Strategic Maps are to be used for the Strategic planning, when other frameworks are to be implemented under WP9 for Catalogue management and Innovation management.

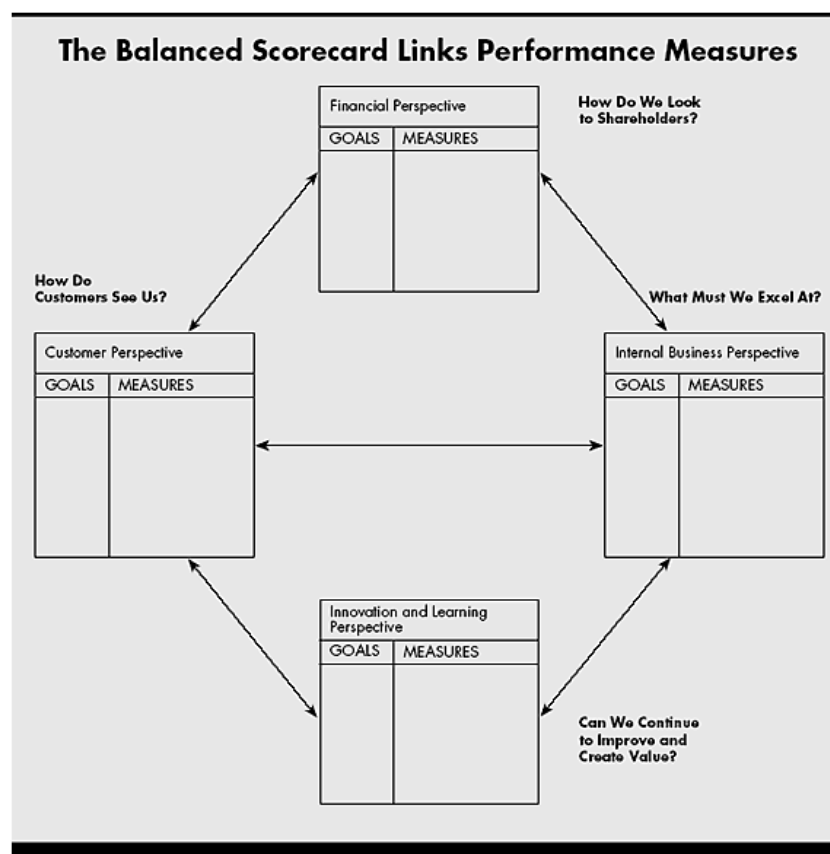


Figure 24: Balanced Scorecard Perspectives

Source of the Figure is Kaplan, R. S., & Norton, D. P., 1992. *The Balanced Scorecard—Measures that Drive Performance*, Harvard Business Review

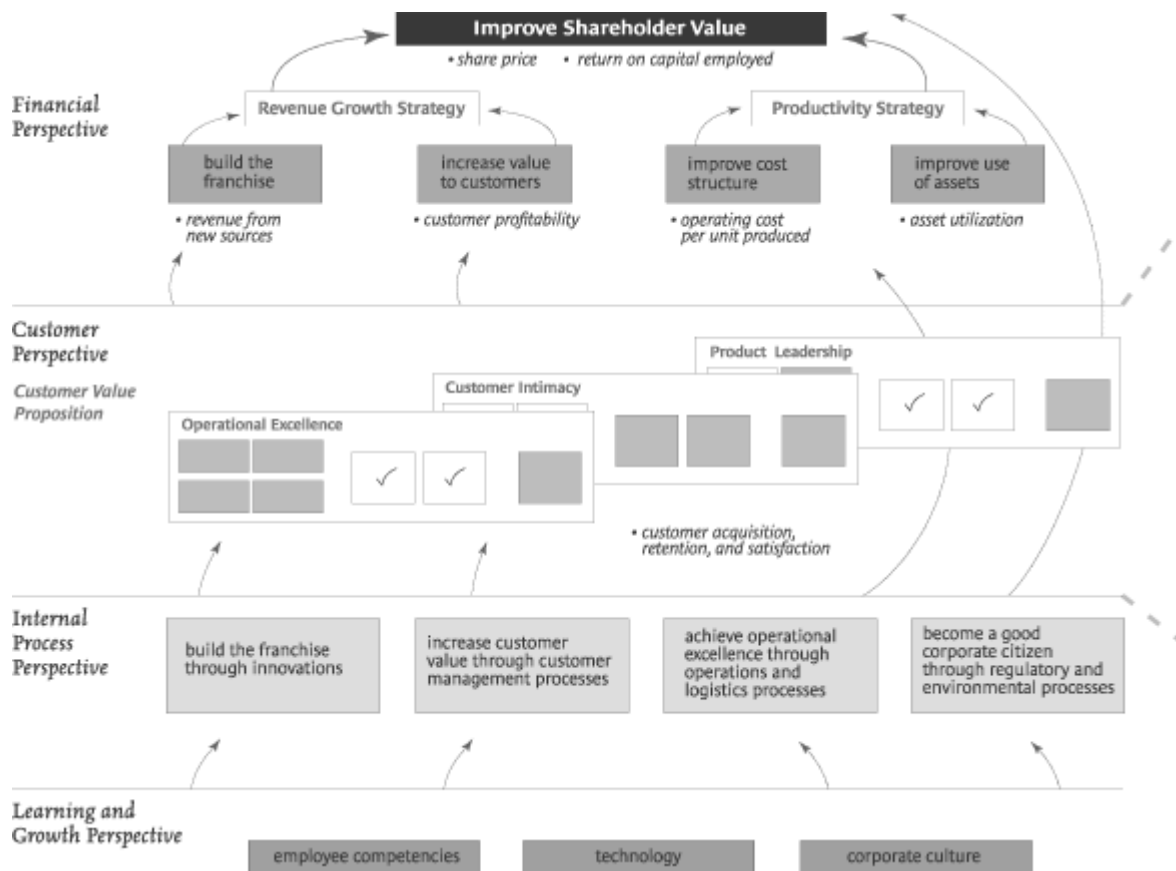


Figure 25: Strategy Map

Source: Kaplan, R. S., & Norton, D. P., 2000. *Having Trouble with your Strategy? Then Map it*, Harvard Business Review



## Annex 2 – Focus group report

Twenty-eight partners from ECHO consortium attended the two break-out sessions of the focus group on 21 Jan 2021. The participants discussed on six previously formulated and distributed among them questions.

### 1. How do you see the *future of ECHO* after completion of the project in 2023?

Most of the participants in the focus group (FG) supported the idea for the need to guarantee sustainability of ECHO after completion of the project in 2023. Some of the typical arguments in support of the transforming of ECHO into a Collaborative Network Organisation (CNO) are the following:

- “My personal opinion is that ECHO will have to survive in the future in order to keep track of what is going on and continue with those activities. What we are doing right now is more creating a base on which we can rely in the future. And in the future, since we already have the contacts between all the companies and institutions, it is going to be easier to improve our level of security”;
- “I believe that ECHO should remain as a CNO with the current members of the consortium, as it is. And we should be willing to participate in the Cybersecurity Competence Centres network as assisting to the training activities through the EFCR, and also be a part of the European cyber shield by utilizing the EWS that have been developed and implemented during the ECHO project. So, I believe we should leverage the main assets that we have developed during all these years and try to be part of something bigger, later on after the project is completed”;
- “I think that we will have a good chance to maintain an important place in the future landscape if we keep ... and focus on the different assets and services because they can be linked to already ongoing topics in the European landscape”;
- “In our team we believe that ECHO should not stop at the end of the project, it should continue to keep a close collaboration between the developers to ensure that results really bring in the benefits and impact on European scale”;
- “We want to see such a European-wide network where we could participate with clear rules – rules that are giving opportunity to share information, to share infrastructure, to build consortia for Horizon Europe and Digital Europe calls.”;
- “ECHO CNO will create synergy, we will share competencies and resources”;
- “ECHO can be a CNO. The main question is prevention and detection of cyber incidents. We should focus all our services on this topic”;
- Most of the participants *stressed the need to keep closer* cooperation in the framework of ECHO and other ongoing EU cybersecurity initiatives (other EU funded projects and the new-established Centre of Excellence in Bucharest);
- “I think it is important that we stay close to ongoing initiatives, not to diversify and build separate platform for information sharing, but to maintain this unity, so that for everyone interested it will be relatively simple to find information they need, and that we will be closely aligned with European organisations. So, I see it as an opportunity to cooperate with other projects and see also what their objective is”;
- “There is also this new Competence Centre in Romania, which has been established. And this is what is different for ECHO and all 4 pilots, so to speak. So, the momentum, and maturity and potential that Centre has, because that is to be seen – that can also be an influencing factor to the success of ECHO. And see how closely integrated we would be – or we could be with this. Consider for example ENISA. ENISA was established about 10-15 years ago, or more. It was in a similar kind of situation;

For many years ENISA was an advisory, or the “white-paper-producing” organisation, but now it has a strong mandate. However, the cyber Competence centre in Romania will now have a budget to use and to handle. So I wonder what the processes, or mechanisms, or arrangements will be for the four pilots in particular, and more specifically for ECHO”;

- “And what we could offer as a network for the success of ECC and NCC. One approach is just to wait for any calls to appear. Another is we to use our network in order to generate proposals, to generate ideas and to work through ECHO Group and our national authorities for these to be accepted on EU level”;
- “The transformation of ECHO in CNO will be of importance if we cooperate closely with the Centre of Excellence in Bucharest, as well as it should be inclusive at the EU level.”;
- “We can contribute to the Bucharest centre of excellence because we have assets to be exploited for training and EWS in the context of EU Cybersecurity strategy. We think that ECHO can contribute with these assets”;
- “The ECHO cannot be seen as a competitor to CoE in Bucharest, there is no way. The only option is to become a part of CoE keeping our ECHO flavour providing a set of services like EWS, cyber ranges, etc. We can deliver service like EWS to the EU Commission”;

The issue of *funding of the future ECHO Network* was also discussed.

- “Currently the whole funding for ECHO project is actually limited to our grant from the European Commission and of course in-kind contribution from partners and new partners that are coming without funding from the European Commission. But this is essential. So, if in your answers you are able to identify at least in your opinion about potential funding coming from different sources that will maintain support to ECHO Network will be very useful”;
- “Personally, I think that some sort of hybrid approach should be implemented. So, let’s say that 50% of the funding is coming from the European Commission, so in any way from public institutions, while the other 50% should come from private companies – maybe within the network, or maybe outside the network that just pay for knowing what is the state-of-the-art, or maybe submitting some specific application that they want to protect or whatever it is. So, why a hybrid approach? For two reasons. First, because if the funding is coming just from public institutions, we might lose track of what the technology is going to be. Because generally the companies are the ones that are more in line with what possible customers are, they basically know how to drive the business”;
- “I believe that it cannot be fully based on public sector financing, we need some private sector business, as well. I think it will allow us to be more flexible as an organisation in the future, whereas public sector financing always comes with a lot of rules, or how do I see it – it is usually grant money. So it should be – as someone already mentioned it here – a mix. And I would start from looking at the work we’ve done and what is the value that we can offer. And based on that we can better define what type of an organisation we can be”.

**2. The vision for ECHO project charts a closer integration into a CNO (ECHO Network) and more active role on the European cybersecurity landscape. What benefits and obstacles do you see for the transformation path from a project organisation to a collaborative networked organisation?**

The discussion on the first question was focused more on what would be benefits of transforming ECHO into a CNO. In this section are described also the obstacles, the bottlenecks, the issues that one sees if ECHO becomes a CNO, closer integrated.

Some participants raised the question “are we sure that all the partners are willing to remain in the network?” and suggested “We should probably also look at what capabilities we have within the consortium and whether we have the workforce and the specialists needed to establish the future network and everything that comes together with it”.

*Some participants underlined the importance of new partner’s engagement.* “I think we should look at the capabilities and workforce needed, also maybe financial resources through the administrative part of the network for the first several months of the existence. And I can see it linked also to new partner engagement. Whenever we are preparing a strategy for new partner engagement, who should be approached, and how they should be approached – we should keep in mind our needs in the future.”

The identified *possible obstacles* are related to integration of organisations with different cultures, the need to keep partners engaged, the need to establish common values and vision, alignment of organisation’s strategic goals and processes with the new CNO, etc.

- “Maybe the obstacles will be, given our experience from the table top exercise, being a little bit more practical. From the table top exercise, we saw some differences between the different types of constituencies. Surprisingly, I think, academia would share less, but more frequently, and so forth. There are different kinds of cultures developing, or existing, in different sectors. And trying to join all these together under a CNO umbrella – maybe, which would be an obstacle”;
- “Because we are trying to join different cultures, practices and approaches – I am talking about cybersecurity now, about information sharing, about the fundamental trust issues. So, we are talking about double-edged swords, we are talking about mixed blessings here. The diversity of partners is a strength, but it is also a challenge”;
- “In my opinion, if we are not creating an ECHO Network and having these lines, or at least meetings, or general assemblies – I do not know, something like that – the risk is that in the near future people will lose interest in that because there is always time to do it. So, one obstacle, and my proposal is creating from time to time some meetings, some papers that we want to write, or something like that in order to create these lines and to push people to contribute”;
- “I think it is very important to establish the same vision of this organisation and apply it successfully. This will allow this organisation to become a functional one”;
- “I believe the main potential obstacle is formulated in the next question – it is alignment of the internal goals and strategies of the organisations which join the network. That is why, I believe that while creating the network, while creating some strategic plans for the upcoming five years, it will be important to look at both the market needs, the beneficiaries’ needs to create something really valuable, which can be commercialized and used by the society. But it is also necessary to align this strategic plan with the organisations which will join the network to ensure that it is interesting for them to put efforts into collaborative working, to the network strategy achievement”;

- “I believe all the obstacles have been more or less mentioned by the previous speakers. But I believe that since there are a lot of different organisations with different perspectives and goals and ambitions and so on, I do believe that we need a plan for each and every one of them to actually commit to the vision of creating this CNO. That is why, I believe it is really important to establish strong commitments from each partner regarding their role and how they will contribute to the next stages of this initiative. That is my point – we need strong commitments from each and every one of the interested partners, beforehand”;
- “I think we should track a common path, leading everyone to the same direction through fostering, let’s say, or improving, or maybe building on the common commitment to the same goal”;
- “I think that all the partners have to see some kind of value in an organisation. And usually if you do not see the value, you do not join the organisation. So, I think if we can offer something to all the partners, which I think will be a bit difficult, I see this as we have a lot of different partners. Then, one thing is getting their commitment, another is that for their commitment we have to give something in return. Of course, the private companies are interested in profits, and so forth. And if it becomes too much work, then I suspect some companies will not continue to put so much effort in it. So, keeping the partners active and giving them what they need in return, I think will be a challenge”;
- “A potential problem could be funding, as well as competition among companies. It is important to have a vision how to go together to the EU market”;
- “A challenge is how to transform a project into more sustainable structure. We have to think realistically and to keep it as simple as possible. The quality is most important”;
- “We could be and should be ready for EU cybersecurity market. Problems might be funding to start. Other possible problem might be the internal competition between companies. The issue is how to get together to the EU market”;
- “There are a set of issues. The first one is the real opportunity for the companies to work together. We should keep things as simple as possible, to focus on a few assets. There are two sides – to make money and to collaborate. I do not expect many organisations to be involved in collaboration”;
- “The transition will be complex because not all the partners would agree to be involved and very few partners will accept huge changes”;
- “Looking at opportunities and challenges/obstacles, I think a challenge would be how to transfer already funded project in more sustainable ECHO system that can run on its own. This is also opportunity because if the service provided by ECHO is good enough it would be self-sustained on the market. The key is the quality of our products”;
- “ECHO network could be and NGO, but we need to go to the market and be a bit aggressive if we would like to be interesting to the companies”;
- “In my opinion, I think that the most of the assets that we have in ECHO are owned by the Government. For example, the EWS is not owned by my company we rely on EWS that is owned by the national government. It is not our tool/asset. The ownership should be taken into account in transformation plan as a possible issue/obstacle”.

### 3. How does the proposed transition to a collaborative network organisation align with the internal goals and strategies of your organisation?

Most of the academic partners in the consortium expressed their interest in continuing cooperation in the framework of ECHO, and they consider their internal strategies and goals in alignment with the proposed CNO.

- “We are an academic organisation, and for us it is a win-win situation. Because our goals, our strategies, the purpose of our being around are research and education. And most of these projects are about research, and some of them are also about education. So this is fully aligned, to start with. But what is most important for us, and would make it more appealing, is collaboration... we are very happy that we are producing collectively what we are producing”;
- “I believe this is very important for all the academic-related partners to enhance our collaborations with multiple partners, and actually focus on research around such topics is really aligned with the internal goals and strategies of CERTH as well”;
- “So for us it is the same reason to join the network, to be in collaboration with experts with advanced competencies. But for us I believe if all these benefits will be multiplied by the factors that we are from Ukraine, we are not from the European Union. So collaboration, and you may know for Ukraine joining EU is a national strategic priority. So for us it will be extremely important to continue collaboration with ECHO Network”;
- “Alignment depends on the kind of organisation and the interest for cooperation. It is important to identify what would be the goals, activities and engagement”;
- “For us it is a matter of alignment with our area of expertise. We are involved in education and training of cybersecurity skills. This is the area of expertise that we can bring to future ECHO network. We need to know what will be the goals of the organisation and what will be benefit from the services we can supply”;
- The industrial partners also expressed interest in continuing cooperation in the framework of ECHO, particularly between industry and academia. They consider high level of alignment of their strategic goals if the interests of each partner are clear and if there is shared understanding of CNO goals and achievements. At the same time, some participants stressed the problem with willingness to share specific information of companies with the external world;
- “Most of the time what companies are willing to do is just discussing about their problems internally, inside their organisation, not to show to the possible customers their weaknesses. Or maybe they think – ok, since we are a huge company, we can solve it. And sometimes that is not so easy. I think that having a different point of view that is not business-based, like universities, is very important. Because their opinion is not strictly based on how is the cash flow, so they can have a different perspective. And most of the time I think that is the right way. In order to conclude and summarize what I said – I guess that companies would benefit a lot from collaboration with universities in order to have a point of view that is not driven by the business itself”;
- “We would like to continue exploiting our products and gain also some visibility thanks to this continuation. This is something that will be aligned with our strategy, to further develop the technical solutions. When looking at the graph that was displayed earlier today, I probably foresee our interest directed towards the Functional Service Groups, especially those related to Early Warning Systems (EWS) and Federated Cyber Range (FCR)”;

- “The point here is that obviously we in ECHO Network cannot be successful if we focus on profit generation, because it will really contradict with the goals and objectives of the companies. Of course, we could facilitate the forming consortia by sharing information. ....so, my point is that most probably, and it is something we to decide at a certain point, hopefully in the next 6 months. We are looking at ECHO Network as a non-governmental organisation that is facilitating business goals and objectives of the companies, but definitely is not in competition with any of the companies. It is more in the business of building a network, providing access to people, to knowledge, to open transparent and fair dialogue with European institutions, with national authorities”;
- “For us, cybersecurity is one of the key strategy directions because we have experience in providing e-learning and e-training solutions, being involved in developing digital content related to cybersecurity aspects. Also, we are offering cybersecurity solutions in different sectors – energy, border security, also as an integrator in many research and innovation projects. And I guess this proposed transition aligns with our strategy”;
- “We are aligned to the ECHO vision also because, as I stated to the first question, we are directly linked to the Early Warning System and Federated Cyber Range, also, on what we are internally doing in the R&D department. So, as I said before, if you have to put a lot of effort in a project, I think for us, as per our condition, we can put this effort because it is not something going on outside the company, as a separated project or product, but it is strictly linked to what we are doing also internally in this R&D division”;
- “Obviously we are eager to see what will be the track, line towards the transition. We want to participate, obviously, strongly in this process. We will align strategies according the choices of the agreement, doing this within the consortium. We are quite flexible, but our main interest is to follow up the project and to see where the future will lead us”;
- “I think we are, of course, more interested in the functional services, as we are a cybersecurity company, but a tech company. So, we are interested in what we can do with the technology – what will be the functionality, and how this will be handled within the CNO”;
- “In principle the idea is well known for cybersecurity unit of our company. It could be considered coherent. The idea for CNO is a good opportunity for as. It is in alignment”;
- “It is important to know what type of organisation we are going to build, what will be the business model and then to decide on joining”.

#### **4. How do you see the role of your organisation within the future ECHO Network?**

On the whole, the participants see continuation of their current activities as their main role in the future CNO. They will bring diverse expertise starting from R&D, education and training, technological solutions, etc.

- “As my organisation is in shipbuilding, I guess that the main role that we can take is giving the sort of state-of-the-art, what are the type of vessels that are crossing our oceans and seas, and the technologies that are implemented over those vessels. So, giving this to the network would provide a sort of testbed, or the state-of-the-art of how the vessels are, in order to see which, the weaknesses are, or which are the possible stands also of technologies, in terms of cybersecurity. So, this is a real scenario in which we can test and develop our training simulator, for example, of FI and our group, giving it to the cyber ranges to the possible maritime scenarios. So, I guess we are going to keep this role in the future organisation”;



- “For us, for academia, we have a lot of interest, of course, in education. So, we would like to promote and capitalize on deliverables like the FCR, for example. We have courses in cybersecurity, for lots of our graduates and postgraduates. So, we have got a lot of investment and interest in cybersecurity and we could certainly start using this. But that means also we can develop an environment here to attract and train and educate professionals, as well”;
  - “At least from my point of view and from some discussions that I had with my CERTH colleagues, our role would be to participate and maybe organize some educational events or some training exercises, and of course be a part of the research that will take place either to enhance some of the technologies that we have already built or maintained, and so on. I believe the role of CERTH could be either to the functional group and any development that needs to be done later on, or just to participate in such educational and training events that may come up in the future”;
  - “My role in the ECHO CNO depends on what will be the objectives and activities. Depending on the final result, we will provide our expertise”;
  - “We need to know what will be the objectives and the scope of the activities of the ECHO network, to see whether we can contribute with our expertise. It depends on what services the organisation will supply to its members. We can think as suppliers or users”;
  - “Depending on the goals of the CNO, we can provide our expertise as an ICT company, but also with knowledge on cybersecurity market. We can be national player, but also depending of circumstances we can play a role in the Board of the CNO”.
- 5. To what extent your internal organisation structure and processes, as well as leadership styles are in line and supportive to the vision for transforming ECHO project into a CNO? What factors (and key decision makers) in your organisation would have a role in taking the decision for closer integration within ECHO Network?**

There is a common opinion shared by the participants in the FG that organisational structure and processes, as well as leadership styles are in line and supportive to the vision for transforming ECHO project into a CNO. The leading factors in this process are opportunities for joint research and development, creating a good business model supported by the organisations in the consortium, well designed governance model of the CNO, meaningful level of integration of the different organisations, clear commitment and engagement of the partners and clear obligations and benefits, as well as multicultural mind-set and European approach to the project.

- “If we consider ECHO Network as a kind of partnership network for exploiting opportunities for joint research and development in the area of cybersecurity, our internal organisational structure, processes and leadership style are really in support of such type of collaborative network organisation”;
- “First of all, it is a matter of creating a good business case, which is something up to the team here, to the internal stakeholders of the organisation to make. So, this is one of the factors. But the challenging thing is – where will it be placed. It has to be some kind of entity or sub-entity present, this is how I see it. For example, I am thinking of the CERTH. We had similar problems with CERTH, because the academic CERTH that we are running has an academic research aspect, and it has an operational aspect. So, it was very hard to join an academic and a non-academic departments ....I think this would be a challenge”;

- “I think it has to do with the level of integration of the organisation. The CNO will have its own governance structures and so on. But it will be tapping into organisations, as well. So that is something that is not clear to me”;
- “It is not clear what will be the level of engagement, and what will be the legal basis of engagement in future CNO. Because if we talk about internal structure in our university, we have a department of ICT and cybersecurity. The department is really willing to continue with ECHO, to join the future Network. But if we come to the legal aspects, we have a very rigorous vertical structure in our organisation and such involvement of the university in some network, in some organisation at university level, the decision is taken by the rector, together with administrative and legal department, and all these bureaucratic guys. So – what factors will be important for us, it is how, and at what level and with which obligatory commitment we may become a part of the future network. It will be very important to understand and to deliver to our administration the benefits and definitely they will discuss about the obligations. So, the combination of the obligations and benefits will be the factor to make a positive or negative decision, any decision”;
- “In general, I think that our organisation, as I said before, has an R&D department with which we can be engaged. In general, our teams are not vertical within different countries, but for example the security team is one and it is spread among the different countries. So it is like we have, in general, a multicultural mind-set and European approach to the project. This surely helps in the engagement with ECHO. But, perhaps I have no more information from a higher level management point of view for this question”;
- “For us, the CFO or the CEO would be the decision maker. And in order to assess our involvement, we would need to present some options and more details. I know it is difficult at this stage to provide any details. But from what I can tell, for sure we would require to know what will be the terms and conditions expected for the integration or participation, what will be the costs and benefits. So, definitely we would require a lot of information before committing to involvement”;
- “I think that there are two aspect of the question. The first part I guess it is not clear right now what we have to do, to change in our own organisation. And the second aspect of the question – to what extent our processes can be supportive – I guess the answer will be: our networking and consortia-building style of generating these would be the answer to this question. And I guess this is the answer for the next question”;
- “We can say that in this aim we are quite new, some virgin land. So, our internal organisation must be properly restructured, probably an internal board must be created, and the right people must commit to participate in all the processes which will take place. As regards the key decision makers, we can say that just the administration board will be the people discussing about and taking decision for the closer integration in the upcoming ECHO Network. Unfortunately, they are not experts, so probably I, the general manager, and probably one other person will be the real decision-makers. In order to propagate to all the board members the right information, I think we need 3 clear and very important factors. The commercialization policy, the governance model and the sustainability plan should be easy and clear in order to make them understand even if they are not experts of the field”;
- “I guess the key decision-maker for us is the CEO. I can’t really comment that much on the structure and the processes yet. I think we need to see how this transition will go, and need to keep our management in the loop. I do not know how much they will be involved in the process, but they will



be aware of it. I think generally they are supportive, but they are also practical. I really can't say much right now, it is too vague to, sort of, align with our processes";

- "The structure and processes that we follow are in line with such a vision and such initiatives as turning ECHO project into a CNO. We are focusing on such collaborations, and I actually believe both labs do so. The head of each lab should be considered as the key decision-maker. I would say that we would need to discuss both labs internally, and after we see the exact terms and conditions under which we will participate in such initiatives, I am confident that we will want to be part of it, and these kind of actions we are strongly in support of";
- "The main question is what will be the business model of future CNO. It is of importance for the strategic decision-making in the companies. More information is needed to decide. What changes are expected from us?";
- "Creating national chapters in each country represented in the consortium may be too ambitious. Probably, we have to go first with establishment of something general, an umbrella organisation and after that to set as a secondary goal creation of national chapters";
- "The main question is the business model. It depends very much on the model. If we find good solutions, we can participate in the network";
- "I think we need more information whether and how we have to change our current processes and activities. It depends on the business model of the CNO. In terms of which our processes will be supportive of the new network, it depends on how we now are doing business. I think that CNO should facilitate the collaboration among partners. As organisations we have to conduct some kind of strategic analysis and try to influence various agencies at national and EU level and to provide some ideas about direction cybersecurity should go";
- "At this point when we do not have full information about the processes, the service catalogue and ECHO assets will be difficult to discuss the alignment";
- "One of the most important thing that we have to focus after the project ends is ROI (return of investments). This is the key factor that we have to consider";
- "The ECHO project managers are the proxies in convincing the top level managers about the transformation into CNO, about benefits and ROI, joining or not joining future CNO. We need to straighten the exploitation strategy. We need to consider not just one business model. To have a high level strategy for exploitation of ECHO assets, several assets".

**6. Do you (your organisation) have experience with organisational transformation similar to the suggested one? If so, could you share what went well / even better if?**

Most of participants declared that they had no previous experience with organisational transformation of such scale to include European networks. The transformation of ECHO from a project to a CNO will be a unique experience.

*Despite of this fact, the participants consider the transformation "a really nice idea". The key factor for success "is to make sure that you have the commitment of the partners that want to participate. The only difficult part was that a number of partners wanted to participate at first and then when things got going, we saw that some of the partners were not that committed to this process. So, that is why I believe the most important one is to keep the focus of all partners and their commitment in the high levels."*

*The commitment of all partners, the continuous engagement and inclusion appears to be of key importance for the successful transformation of ECHO project into a CNO. "This process has to be quite inclusive for the*

partners, because of the commitment. And the expectations are set on the right level, and what the involvement and the requirements and the effort is – it has to be made clear as much as possible, to the extent possible from the beginning, at the outset of this exercise, the transformation project. Otherwise – you always expect that you will lose people along the way, I think that is normal, that is natural. But, nevertheless, you want to minimize the losses, and if possible also to gain some new partners along the way. Because, don't forget, we have the External Partnership Involvement program, as well”.

Some of the participants gave a good example with the European Cyber Security Organisation (ECSO). “The ECSO is this cyber public-private partnership initiative, it is partially funded by the European Commission, partially by the fees of members. So, if you compare ECHO Network as we discuss it now with ECSO, what is the difference, is there added value of ECHO network, or we just work to merge our project with ECSO? And actually work with the other 3 pilots to join ECSO and to extend ECSO to the mandate, to the governance model we are developing”.

The idea for cooperation and partnership with ECSO was supported also from other participants. “I think it is definitely worth researching and considering to partner with. We may not choose to go this path. But if we would like to establish something separately in competition with ECSO, that would probably not be the most efficient way how to maintain the information platform in Europe. I definitely think it is an idea worth discovering.”

## Annex 3 – Report of the Analytical Team

### *Introduction*

Members of the Analytical Team:

- Consuelo Colabuono
- Lina Smovziuk
- Emanuele Sansebastiano
- Brid Davis

### *Goal:*

- To observe the whole process from the beginning of the preparation until the actual simulation meeting is complete;
- To develop a report on how the strategic planning process worked, what needs to be improved, etc.
- The members of the analytic team will participate in and will observe the implementation of the different sessions/activities according to the agenda.

#### Day 1, 22 April 2020

- Break-out Session (A) - Consuelo Colabuono
- Break-out Session (B) - Lina Smovziuk
- Break-out Session (C) - Emanuele Sansebastiano
- Develop Planning Guidance to National Hubs and Service Groups - Brid Davis

#### Day 2, 23 April 2020

- Break-out Session (A) - Consuelo Colabuono
- Break-out Session (B) - Lina Smovziuk
- Discussion on inputs from National Hubs and Service Groups - Emanuele Sansebastiano
- Decision-making session on changes to Strategic Plan - Brid Davis

Each member of the analytic team prepared a short report about the quality of the implementation of different activities during the simulation game, identified possible issues in decision-making process and recommendations for improvement.

#### Template for observation:

The members of the analytic team covered to the following main topics:

- Main activities implemented;
- Topics discussed;
- Quality of group discussion process: Active participation of all group members or single active participants that dominate the discussions;
- Achievement of the formulated goals in the pre-reading materials and guidance of the Central hub;
- Difficulties and issues in the Decision-making process;

- Key decisions made;
- Recommendations for improvement of the decision-making process;
- Quality of feedback to the Central Hub;
- Any other issues and suggestions that deserve attention.

## Results

Day 1 – 22 April 2021

Break-out Session (A) Board of Directors (BoD), Central Hub

Participants:

- Wim Mees – RMA
- Matteo Merialdo – RHEA
- Douglas Wiemer– RHEA
- Nikolai Stoianov - BDI
- Todor Tagarev - IICT
- Pavel Varbanov – ESI

Observer: Consuelo Colabuono

The goal is to understand how to improve strategic goals to support success implementation within the NH and SG.

- Change or add new markets and sectors;
- Specialize sectors;
- Organisation change with SG (non-profit, spin off etc.).

They discuss what is missing with respect what the external market is demanding. In order to improve strategy, we need first investigate better the industry sectors of interest and the new potential members or other promising sectors. Promising sectors can be sectors evolving very fast or sectors in which we have expertise.

### 1. Complexity of the process

There are different options to reach the requested goal, so they discuss about the benefits of considering different options. Time is limited to deepen the discussion.

### 2. Good points

Active participation of all group members.

People participating to the session have already leadership positions in workday life, so they are comfortable in starting the discussion and they have no hesitation. They have leadership in different backgrounds (business, academic, etc.) so the strategic decisions and directions can be taken considering different interesting perspectives.

### 3. Main issues and conflicts

Strategic direction seems remaining too much high level, leaving the details to the specific committees and to the net day of the simulation game.

Concert decisions are not still made at day 1, there is only the identification of the key discussion points. This can suggest that also in real life in the future the decision process should be about 2 steps, one gathering the inputs and elaborating them second taking the concrete decisions involving more needed stakeholders like chairs of committees and so on.

### **1. What is missing?**

Perhaps, it would be useful that in BoD are participating also the chairs of specific committees or/and SG to have people able to give a more detailed strategic guidance because as it is it could be too much theoretic.

With decision points, they should also define the goal for each decision point to enable people take the decision but in the correct direction. A decision can be good, but “it is not what was needed”.

In the future, the pre-reading materials and guidance of the Central hub should evolve in a kind of input document coming from NH, SG or internal audit function.

At the end of the Day 1, few people remain to better detail the aforementioned key decision points and detail better the tree of decisions. The same people are able to specify the possible different options that during the ad hoc session were only mentioned.

#### **Break-out Session (B) Membership Committee, Central Hub**

Participants:

- Experts: Nina Dorsimont – RHEA
- Luis Angel Galindo Sanches and Luis Alberto Maria – TME
- Facilitator: Irena Mladenova – IICT

Observer: Lina Smovziuk – NAU KhAI

### **1. Main activities implemented**

Irena briefed the session participants regarding the role of the Membership Committee within the current organisational structure of the already functioning ECHO CNO. She also explained the main discussion topics during the session: current trends and developments in the external environment, needed changes in the CNO's strategy of new member's engagement, strategic objectives to going forward as a network.

The team discussion and decision-making were mainly focused on the ECHO CNO collaboration vs. competition with the other three cybersecurity pilots and the potential influence of these scenarios on new members' engagement activities.

### **2. Topics discussed**

Participants started with a discussion of the new members' engagement to the ECHO network. As Nina explained, there is no particular strategy for organisations selection now; the ECHO network welcomes all interested organisations. But in the future, after the project completion, it will be essential to complete the ECHO network with members having particular technological expertise or representing the sector(s) of interest. Another key issue will be the number of members to be engaged to grow the network and reach KPIs.

It was agreed among the participants that it is important to aim for both quality and quantity of new network members in parallel. It is expected that high numbers might be achieved via engagement of many SMEs and micro-SMEs companies, but these companies will not be able to contribute to the network having limited resources on-board. Otherwise, large companies might be very picky and will need a clear value proposition to decide to join the network.

Discussion of the new members engagement goals raised a question about potential competition among different networks, i.e. the NCCs (National Competence Centres) network initialised by the EC, networks to be created by other three cybersecurity pilot projects.

After a discussion, the participant agrees that there are two possible scenarios for the ECHO CNO: (1) becoming a part of a common collaborative network across the four pilots that is encouraged by the EC, and (2) operating in the competitive environment where the ECHO CNO might have difficulties with new members or customers engagement.

**3. Quality of group discussion process:** Active participation of all group members or single active participants that dominate the discussions

A discussion was open and collaborative, however not every time in the scope of the simulation game. There was a misunderstanding within the team regarding the current status of the CNO simulated during the game: either CNO is already operating for two years, or we are at the stage of the ECHO H2020 project implementation, so the CNO creation is a future objective.

**4. Achievement of the formulated goals in the pre-reading materials and guidance of the Central hub**

Despite not responding directly to the key question of the Board of Directors regarding the CNO's staying on a current track, specialisation or development of new capacities, the Membership Committee raised an important question of the ECHO CNO further operation in collaboration or in competition with other cybersecurity pilots and networks to be presented at the EU landscape.

An answer to this question will influence the new members engagement strategy.

**5. Difficulties and issues in the Decision-making process**

It was challenging for the discussion participants to decide regarding the further ECHO collaboration vs. competition with other cybersecurity pilots in isolated discussion at the level of the Membership Committee because such decision needs an understanding of preferences of all ECHO bodies and partners.

**6. Key decisions made**

Raise a question of the ECHO collaboration vs. competition with other cybersecurity pilots and potential networks to the Central Hub, National Hubs and Service Groups.

**7. Recommendations for improvement of the decision-making process**

The Membership Committee session demonstrated that the level of the decision-makers awareness and readiness for the discussion significantly influences the discussion results. In the case of hop-on meetings, a detailed introductory presentation about the state-of-the-art of the topic/issue to be discussed might maximise the efficiency of the whole decision-making processes.

**8. Quality of feedback to the Central Hub**

The feedback provided to the Central Hub can be summarised as a recommendation to integrate/merge with the other cybersecurity pilots. In this case value proposition of the common CNO to its members/partners will be equal to the sum of the value proposition from each pilot.

The question to National Hubs and Service Groups regarding their interest and readiness to merge with other cybersecurity pilots was formulated.

The proposed template “Decision – Argumentation – Next Steps” was not precisely followed.

#### **9. Any other issues and suggestions that deserve attention**

N/A

Break-out Session (C) Scientific and Technological Committee

Participants:

- Main Chairperson: Ewa Konieczna – VisionSpace
- Chairperson 1: Kornél Tóth – SU
- Chairperson 2: Antal Bódi – SU
- Chairperson 3: Lucian Vlad – NDU
- Facilitator: Yantsislav Yanakiev – BDI

Observer: Emanuele Sansebastiano – FNC-SEA

#### **1. Description of the break-out session topic**

According to the Annual Report, there is a significant increment of both customers and required service diversity. However, the current capabilities of cyber-range providers cannot satisfy the demand easily. The reason behind this demand increment is directly related to the high quality of services and the positive image of ECHO CNO. Moreover, The Directive on security of network and information systems (the NIS Directive) is evolving.

The Scientific and Technological committee has to elaborate a strategic planning guidance to cover one of the following courses of action:

1. Stay on current track: keep the current state-of-the-art because adapting ECHO products is too expensive or irrelevant to customer satisfaction;
2. Specialize: understanding how improve ECHO offer (price, software development, etc...) to meet new market and legislation necessities without developing new tools from scratch;
3. Change: significantly change and adapt ECHO products to fully meet market necessities and to fully accomplish legislation requirements.

As result of this session, the committee has to produce a short document describing Decisions, Argumentation, and the Next Steps.

#### **2. Analysis of the break-out session**

After a quick introduction to the topic given by the facilitator, everyone started to share their ideas. Most of the time has been spent to elaborate the DECISION section (30 min), while the other two sections (ARGUMENTATION and NEXT STEPS) required 10 minutes each. The remaining 10 minutes were spent to set up the document, choose the main chairperson, and “break the ice”.

At the beginning of the session everybody agreed that improving ECHO offer and following legislation requirements is mandatory. “Stay on the current track” is not an option. However, there was no time to exactly define which course of action is better according to our case of study among “Specialize” and “Change”. Both legislation and technical fields has been taken in to account generating a sort of hybrid concept “Specialize-Change”. A very aggressive line has been established to meet legislative requirements (ISO, regulations, etc.), while a softer one has been defined about developing new tools. Since ECHO is tightly bonded to EU institutions and international agencies, the consortium has to be constantly compliant with legislation (at least EU ones). Improving services and technical tools is always a good practice, but it mostly helps to be competitive on the market.

The material provided to discuss during the break-out session was rich, but on the same time it was very compact. It was very exploitable and the facilitator had no issues to resume everything in a couple of minutes at the beginning of the session. The given time (60 minutes) was enough to cover most of the ideas, but the group could not deeply analyse most of them in term of financial sustainability. As matter of fact, it was just a simulation.

To conclude, this break-out session has been very well managed and allowed the group to reach some quite interesting considerations.

#### Develop Planning Guidance to National Hubs and Service Groups

Participants:

- Pavel Varbanov
- Ewa Konieczna
- Luis Angel Galindo Sanches
- Nikolai Stoianov

Observer: Dr. Brid Davis

#### **1. Main activities implemented**

The three teams re-convened after the parallel breakout sessions to discuss the ideas pertaining to the development of the planning guidance for the National Hubs and Service Groups. In terms of the procession, the Board of Directors (Pavel) were the first team to present, followed by the Membership Committee (Luis) and lastly the Scientific and Technology Committee (Ewa).

On conclusion of the session, the organising WP3 team devised a plan (a framework) for partners to work from on the second day.

#### **2. Topics discussed**

##### *a. Board of Directors presentation:*

The team highlighted the need to coverage across a number of sectors and an organisational response to work towards changes in demands of the new market. This team also detailed that collaboration with other committees particularly with regards to legal and financial perspectives (and their respective expertise) was required. The team acknowledged that ECHO has the scope to expand networks and services but needed to be mindful of market demands and determine profit scope. The team recommended that documents need to be updated (in collaboration with the other members, which would mostly likely be an iterative process).



Adapting governance processes and devising guidance to develop plans considering new options was also deemed crucial.

*b. Membership committee presentation:*

The team discussed 2 possible scenarios. If pilots are competing, value proposition should be defined and differ from the other pilots. The team also posited that while autonomy for each pilot needed to be maintained, collaboration in association with the different assets which were/are developed across different pilots should take place. This team also highlighted that the majority of companies across the EU are SME's - therefore it would be beneficial to merge in a common CNO. Determining how fees will be distributed was also highlighted as a prerequisite; evaluating what the current contribution for each pilot has towards the common CNO was also emphasized.

*c. Scientific and Technology Committee presentation:*

This team stated that establishing when/how ECHO should innovate was warranted (course of action for innovation). The team posited that it is crucial to continue to adapt (beyond the benchmarks of the project) and continue to be competitive. Furthermore, the team highlighted the need to align with needs of stakeholders and continue collaboration with respect to R&D. The committee stated that be all work should fall within the remit of current, relevant legislation – services need to meet the requirements (sectoral requirements, etc.). Likewise, as legislation may impact market need, there is a need to take into consideration other sectors – common vulnerabilities or synergies. The committee referenced standardization as a means of fulfilling and complying with security requirements.

In summary, the committee stated the following attributes should be given high priority: a) compliance with legislation (in order to maintain a customer-base and avoid fines was a main priority; b) keep on top of the evolving environment (new threats but also to keeping a high standard of service for customers); c) maintain customers and stay competitive.

The committee's recommendations were as follows: establish responsible leads for R&D and innovation, while also having firm grounding in legislation (incorporating advice from a expert in legislation and regulations); continue research endeavours (gathering data and fostering partnerships); engage in active monitoring (wherein partners fulfil requirements and regular audits are conducted).

There appeared to be overlap across the team discussions, for instance it was highlighted that better alignment was identified as a key consideration across the board. Areas of agreement was deemed to be the focus point for the decision-making process (to guide same). There was an expectation that the groups (in parallel) would have the same line of thinking, but that was not the case.

**3. Quality of group discussion process: Active participation of all group members or single active participants that dominate the discussions**

It appeared that the group leaders from each session and the moderators lead a great deal of the discussion, which is understandable, given that these participants had a high level of expertise in the assigned areas and were nominated by their peers to speak on behalf of the respective committees.

**4. Achievement of the formulated goals in the pre-reading materials and guidance of the Central hub**

Yes, all the participants engaged very well with the materials and guidance of the central hub. No areas were lacking.

## **5. Difficulties and issues in the Decision-making process**

There was some discord at a higher level initially, as to what was the best way to approach the task (proposing options in the first instance or devising the options organically at a group level). At a group level there was hesitancy as to which was the most suited path. This was resolved in a timely manner across the collective group wherein the organising group set about devising a framework to work from for the following day's session.

## **6. Key decisions made**

To devise clear guidance for the participants to work from for the following day's session.

## **7. Recommendations for improvement of the decision-making process**

No recommendations for improvement of the decision-making process are suggested, as there was majority agreement across the collective participants.

## **8. Quality of feedback to the Central Hub**

Each team presented highly detailed considerations; the quality of feedback to the Central hub was satisfactory.

## **9. Any other issues and suggestions that deserve attention**

Inclusion of other partners who may have expertise in specific fields (i.e., legal/ regulatory)

Have a basic framework to work from in the first instance to serve as a loose guideline, which could be amended during discussion.

Day 2 – 23 April 2021

Discussion on inputs from National Hubs and Service Groups

Main Speakers:

- National Hub: Georgi Penchev
- E-EWS Service Group: Ewa Konieczna
- E-FCR Service Group: Pavel Varbanov

Observer: Emanuele Sansebastiano

### **1. National Hub discussion report**

Spain and Hungary were represented. Main difference is the fact that Spain is more decentralized system than Hungary. The main opportunity they see in the CNO is the improvement and specialization on cyber security among small and medium enterprises.

One of the main goals the CNO should achieve is collaboration of the national level to other pilots. Has been asked at the end of the presentation if there is the will to subscribe those pilots to the ECHO Network at a certain point. They might be considered part of the CNO, but it will depend on each pilot specifically. Each organisation might choose to be involved into the CNO at different levels. Understanding which subscription profiles will be available into the CNO is important for the partnership management committee.

Intellectual Property Rights appears to be one of the main issues CNO should address in order to properly collaborate among all partners.

National Hub strongly supports the idea of not being a profitable organisation not to be too influenced in its decisions and to keep its integrity. This Key decision would improve stability in terms of guidelines; the market is too volatile.

## **2. E-EWS Service Group discussion report**

ECHO network has many strengths (foundations, an existing product, an already existing network, etc.). Basically, the product is ready to be launched on the market.

The CNO should focus its effort to establish a strategy to address which are the expected capabilities of the system in order to present a fully defined product to the potential customers.

A possible opportunity to take into account is allowing E-EWS host external products (plug-in, external services, etc.) in order to make the system customizable according to customer needs. Moreover, creating a certification procedure for those external products is mandatory to keep the quality high.

E-EWS is very versatile to adapt itself on many scenarios due to its nature. It can serve various sectors. However, adapting E-EWS to an already existing product has a cost and we cannot establish this price right now. Each adaptation will lead to a specific cost.

ENISA will definitely play a major role into the “validation” of E-EWS. ENISA will help the CNO to overcome competitors if it sponsors the E-EWS, but we cannot force them.

Finally, the suggested strategy to present E-EWS to the market is presenting at first as it is and later, proportionally to the revenues, increasing its capabilities and features.

Collaborating with National Hubs and other cybersecurity pilots is definitely a great opportunity, but increasing the number of actors involved in a play will increase the complexity of the plot. It has to be considered, but the CNO has to also understand its limits not to overpass them. Moreover, enlarging the number of organisations actively involved in ECHO might reduce the level of independence.

Another way to commercialize E-EWS services is creating spin-off companies. Those will be new legal entities and the CNO should have to be sure they will be strictly linked to the Central Hub.

At this stage of E-EWS service analysis, the business model has not been discussed deeply.

## **3. E-FCR Service Group discussion report**

Increasing the features of E-FCR is mandatory, but like for E-EWS, it might lead to an unmanageable developing process.

Commercializing service by means of creating spin-off appears to be better because spin-off companies are generally more flexible and simpler to be managed according to the situation. Obviously, they have to be strictly linked to the Central Hub.

### **General Comment**

The pre-reading material provided has been fully used. Everyone agreed on cooperating with other organisations and pilots, but it might be risky. Expanding system features is mandatory, but it has to be

gradual process. Rushing is never an option. Most of the revenues has to come directly from sold services and from European institutions not to be compromised the CNO freedom.

The overall discussion was interesting and the participants raised many points. However, at the very end of the session, some of the participants highlighted the necessity of practically implement all has been written on paper. Defining procedures is fundamental, but leaving them on paper is useless.

#### Break-out Session (B) E-FCR Service Group

Participants:

- Matteo Merialdo – RHEA
- Pavel Varbanov – ESI CEE
- Facilitator: Todor Tagarev – IICT

Observer: Lina Smovziuk – NAU KhAI

##### **1. Main activities implemented**

In line with the guidance of the Central Hub, the E-FCR Service Group team analysed potential changes regarding (1) the CNO's market positioning and (2) the CNO's organisational structure.

The team followed the SWOT analysis methodology while discussing and evaluating the options proposed by the Central Hub for each point.

##### **2. Topics discussed**

- a. Regarding the CNO's market positioning, two very distinct options were analysed: (1) specialisation in the areas covered by the ECHO services and (2) increasing the market share or expanding to new sectors and/or services.

Matteo was obvious recommending the horizontal expansion of E-FCR to other sectors and new services because the E-FCR, in fact, is not sector-specific and already covers potentially all sectors of interest. In terms of the E-FCR, a specialisation strategy will mean losing market opportunities/revenues/profit, while E-FCR was originally created as a market place whose goal is to make revenue and profit.

- b. Regarding the CNO's organisational structure, the team evaluated all three proposed options: (1) do not change organisation structure, (2) integrate with other cybersecurity pilots, (3) create a commercial entity (spin-off).

The option of integration with other cybersecurity pilots was completely discarded because the E-FCR is designed within the ECHO, and there would be low chances to have a common ground with other pilots. However, an involvement of individual partners from other pilots makes sense if needed to obtain complementary competencies valuable for E-FCR.

All participants agreed that the current operational structure of the CNO has its strengths in terms of knowledge/expertise generation and exchange, high networking potential across the different fields, close connections with the EU institutions. However, the multi-body CNO structure is slow to innovate and respond to the actual market needs.

Though, to reach self-sustainability and generate revenues, flexibility in decision-making and operation is required. Such flexibility may be achieved via commercial entity creation. There will be many challenges like

IPR, legal issues, revenues sharing. But it is expected that these issues would be basically solved during the ECHO project implementation and before the commercial entity creation.

- c. In addition to the options proposed for discussion by the Central Hub, the team also discussed the pros and cons of a combination of E-FCR, E-EWS and other services under the umbrella of one commercial entity. Such an approach may help promote and advertise better the services of E-FCR, certification and training design, cover more market demand, and achieve financial/economical sustainability and balance when dealing with more services.

**3. Quality of group discussion process:** Active participation of all group members or single active participants that dominate the discussions

All participants are well familiar with the E-FCR concept, development progress and prospects, so the discussion was mainly homogenous.

**4. Achievement of the formulated goals in the pre-reading materials and guidance of the Central hub**

The team strictly followed the guidance/discussion matrix proposed by the Central Hub and finalised the work with clear and relevant outcomes.

**5. Difficulties and issues in the Decision-making process**

There were no particular difficulties during the decision-making process simulation. All participants had similar positions regarding the options under discussion with a higher or lower level of optimism and confidence in the strategy recommended.

**6. Key decisions made**

Regarding the CNO's market positioning, it was recommended to expand to new services, particularly towards non-cyber security services or non-training services, to become an "Amazon of cybersecurity services" in the future. In parallel, it was recommended to cover other sectors than maritime, energy distribution and health to operate at a larger extent.

Regarding the CNO's organisational structure, it was agreed that the only way to sustain and explore the E-FCR is to commercialise services via spin-off (new legal entities) creation because the E-FCR is mainly a market place that goal is to make revenue and profit. However, there is still a concern about the E-FCR feasibility in the market.

**7. Recommendations for improvement of the decision-making process**

The decision-making process simulated during the game is realistic and viable, based on large organisations' best practices. However, in the case of strategic decision making, it is essential to have a complex analysis of available options from different prospects: technological challenges and opportunities, legislative restrictions, market prospects, resources available, financial projections. Thus, the involvement of people with various expertise / from different CNO bodies is crucial.

**8. Quality of feedback to the Central Hub**

The E-FCR Service Group team prepared structured feedback to the Central Hub. However, it should be noted that SWOT components were not fully covered for some options under discussion, mainly for those initially refused by the team. Also, there was a slight domination of strength (S) and opportunities (O) arguments for the options recommended, which might be treated as over-optimism of the discussion participants.

## 9. Any other issues and suggestions that deserve attention

N/A

Decision-making session on changes to Strategic Plan

Participants:

- Georgi Penchev
- Todor Tagarev
- Irena Mladenova
- Matteo Merialdo
- Nikolai Stoianov
- Antal Bódi
- Ewa Konieczna
- Luis Angel Galindo Sanches

Observer: Dr. Brid Davis

### 1. Main activities implemented

All participants (i.e., service groups' partners, national hubs partners, T3.4 leads and facilitators) re-convened to discuss the strategic plan

### 2. Topics discussed

Georgi Penchev presented a PowerPoint slide containing questions which were used to guide the discussion. The questions posed were as follows:

- Do we need to change our mission, vision, strategy?
- Do we need to change our strategic plan (change management plan)?
- Do we need to improve our processes?
- Do we need to change our organisation?

Irena Mladenova stated that given the complexity of the decisions posed, the mission, vision and strategy may not be addressed or changed at this juncture.

Todor Tagarev spoke about an online Horizon-Europe launch event that he recently attended and stated that it appeared that the commission would be highly interested in commercial entities being established after the research projects have conclude and taking certain market shares. Todor posited that this would also need to an area that the ECHO project needs to consider (i.e., commercial entities)

Todor noted that IPR and financial arrangements need to be considered now for the future spin-offs, so disputes don't occur in the near future. Likewise, there were expressions of apprehensions that these new entities might lose the benefits of being part of a big network like ECHO...Todor stated that while this may not necessarily be the case, ECHO still needs to consider how these entities will continue to be involved in the network going forward. The National Hubs will not be established as commercial entities... if they are established as legal entities they will be not-for-profit. Reason to move from commercial groups to spin-offs is to make room for innovation... faster in responding to market demands, grow if there is an opportunity and also make profits.

Irena Mladenova highlighted that the purpose of the session was to also bring more partners on board to see what the future of the network will look like (and work on and refine smaller 'nitty gritty' details).

Matteo Merialdo highlighted that efforts need to be renewed on the IPR aspect of ECHO.

Nikolai Stoianov – stated that the connection between ECHO and the spin-offs (who will have the capability to develop and sell products and services) should be very strong. Niki also stated that that given that two years of the project have subsided, a proof of concept (i.e. governance model, national hubs in different countries, etc.) needs to be prioritised.... Links into the commercialisation of the ECHO project.... Create hubs, etc. (move from paper to reality) and determine if it is viable. Provable in front of the commission,

Antal Bodi – agreed with Nikolai and highlighted that the roadmap should be defined and work on what elements should be prioritized (by consensus).

Ewa Konieczna highlighted (in addition to what was already suggested) that roles and responsibilities need to be defined – for example market research, product research (R&D innovation).

Ewa also noted that financial aspects – how will national hubs and central hubs be funded, etc. – were not sufficiently addressed over the two days but should be a priority nevertheless... idea with regards to funding from membership fees... however need to be aware of costings.

Irena Mladenova noted that elements which need to be further clarified, addressed, improved, etc. also need to be addressed.

Georgi Penchev spoke of the next steps...in June steps will be taken towards establishing the organisation and moves towards exploring how this will work in practice. Full operating capabilities (organisation, financial, etc.) will be examined. Georgi also wanted to determine if the simulation game concept was an effective exercise and what elements need improvement.

Luis Angel – stated that the game was a very time efficient process.

Ewa Konieczna – a very helpful exercise, while could be incorporated as part of the General Assembly.

- 3. Quality of group discussion process:** Active participation of all group members or single active participants that dominate the discussions

The T3.4 leads and facilitators posed very broad questions to the General Assembly and allowed participants sufficient time to give contribute and give feedback, however, there seemed to be some hesitancy from participants to engage.

Todor highlighted that all the groups across the board worked very diligently and engaged with the task at heart in a comprehensive manner and provided good input.

- 4. Achievement of the formulated goals in the pre-reading materials and guidance of the Central hub**

While perspectives differed, there was great alignment across the board.

- 5. Difficulties and issues in the Decision-making process**

No difficulties were encountered. Irena facilitated an active discussion with many perspectives. All points which were raised were duly noted.

- 6. Key decisions made**

Summarise what the outcomes of the strategic simulation game were and to communicate it to the service groups... as a means of stimulating discussion and start planning decisions in advance.

Share the outcomes of the 2-day session with the exploitation groups.

Ensuring the network and the hubs are established and sustained post Horizon2020: move towards making key decisions and how to arrange key details.

#### **7. Recommendations for improvement of the decision-making process**

More time could be given to the specific issues raised during the session that require special consideration – i.e. R&D, financial, spin-off arrangements, etc. Perhaps host (short but focused) dedicated sessions with partners who have expertise in these areas in the future.

If feasible, more ECHO partners could be included (even in the general discussion, or perhaps part of the General Assembly) – as it would introduce more perspectives and expertise to the decision-making process.

#### **8. Quality of feedback to the Central Hub**

High quality. Many of the discussion points raised were high-level. Great foundation to draw from. (Suggestion to move from theoretical aspects to real life practice, proof of concept)

#### **9. Any other issues and suggestions that deserve attention**

No other issues and suggestions that deserve attention come to mind at this time.



## Annex 4 – The questions list

Table 19 contains questions used in interviews with experts.

Array type questions are answered in seven score scale from “Not at all” (0) to “A lot” (6), as it is shown in Figure 26.

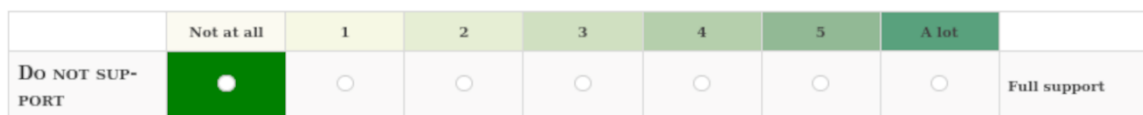


Figure 26: Scale of the array questions

Questions 3, 13 and 21 are multiple choice type of question with only one selectable exclusive option.

Questions 11 and 12 are of multiple choice type with assessment scale like in Figure 26. This type of question is also called matrix multiple choice question.

Questions 20 and 22 are of long text type (with more than 255 characters text). In these questions responders can give their own answers.

ID	Type	Question
1	Array	To what extend you are aware of the vision to transform ECHO into a Collaborative Networked Organization (CNO) with a Central Hub, National Chapters and Functional Service Groups after completion of the project in 2023?
2	Array	To what extend you are supportive for the transformation of ECHO into a CNO after completion of the project in 2023?
3	Multiple choice	What option for the transformation of ECHO into a CNO do you support?
		<ol style="list-style-type: none"> <li>1. CNO with the current members of the Consortium, as it is;</li> <li>2. Attraction of new members;</li> <li>3. I cannot decide.</li> </ol>
4	Array	To what extend you are supportive for the idea to establish ECHO Network as a non-governmental organization that is facilitating business goals and objectives of the companies?
5	Array	To what extend you feel the environmental context in the EU cyber security landscape will be suitable for the transformation of ECHO into a CNO after completion of the project in 2023?
6	Array	To what extend you are supportive for the idea ECHO Network to be strongly linked to already ongoing projects in the European landscape?
7	Array	To what extend you are supportive for the statement “ECHO CNO will create synergy, we will share competencies and resources”?

ID	Type	Question
8	Array	To what extend you are supportive for the statement “ECHO CNO will provide sustainability after completion of the project in 2023”?
9	Array	To what extend you are supportive for the statement “ECHO CNO will give opportunity to share information, to share infrastructure and to build consortia for new projects”?
10	Array	To what extend you are supportive for the statement “ECHO CNO will create opportunity for the companies to benefit a lot from collaboration with universities”?
11	Multiple choice	How important will be the implementation of the following activities during the process of transformation from ECHO project into a CNO?
		<ol style="list-style-type: none"> <li>1. Creation of national chapters in each country represented;</li> <li>2. Participation in the Cybersecurity Competence Centres network;</li> <li>3. Creation of a clear strategy for new partners engagement;</li> <li>4. Establishment of strong commitments from each partner;</li> <li>5. All the partners to see some kind of value in the organization;</li> <li>6. Clear commitment and engagement of the partners from the beginning of the transformation process;</li> <li>7. The need to establish common values and vision;</li> <li>8. Alignment of the internal goals and strategies of the organizations that are going to join the ECHO network;</li> <li>9. Creation of a good business model supported by the organizations in the consortium;</li> <li>10. Clear commercialization policy, governance model and sustainability plan;</li> <li>11. Clear obligations and benefits for the partners;</li> <li>12. Multicultural mind-set and European approach to the project.</li> </ol>
12	Multiple choice	To what extend you consider the following to be possible obstacles for the transformation from ECHO project into a CNO?
		<ol style="list-style-type: none"> <li>1. Integration of organizations with very different cultures;</li> <li>2. Lack of funding;</li> <li>3. Lack of willingness for information sharing among project partners;</li> <li>4. Fundamental trust issues among project partners;</li> <li>5. Lack of involvement and commitment of partners to contribute;</li> <li>6. Competition among companies;</li> <li>7. Conflicting interests among project partners;</li> <li>8. Unsatisfactory business model and governance model of the future CNO;</li> <li>9. Very different organisational structures and processes of the current organisations that are going to join future CNO.</li> </ol>
13	Multiple choice	How do you see the funding opportunities for future ECHO CNO?

ID	Type	Question
		<ol style="list-style-type: none"> <li>1. 100% public funding from the European Commission;</li> <li>2. Hybrid funding from the European Commission and in-kind; contribution from the partners;</li> <li>3. 100% Customer funding;</li> <li>4. I cannot decide;</li> <li>5. Other:</li> </ol>
14	Array	To what extend you feel you have the necessary knowledge required for your organization to participate in the transformation of ECHO into a CNO after completion of the project in 2023?
15	Array	To what extend you think you need additional knowledge so that your organization can participate in the transformation of ECHO into a CNO after completion of the project in 2023?
16	Array	If you think you need additional knowledge, please specify what exactly you need to know:
17	Array	To what extend you think you have enough resources so that your organization can participate in the transformation of ECHO into a CNO after completion of the project in 2023?
18	Array	To what extend you think your organisation is capable to participate in the transformation of ECHO into a CNO after completion of the project in 2023?
19	Array	To what extend you think there might be some negative consequences for your organization as a result of the transformation of ECHO into a CNO after completion of the project in 2023?
20	Long free text	If you think there might be some negative consequences for your organization as a result of the transformation, please specify what exactly do you expect them to be:
21	Multiple choice	Could you please specify the field of your employment?
		<ol style="list-style-type: none"> <li>1. Large company (250+ employees);</li> <li>2. Small and Medium Enterprise (less than 250 employees);</li> <li>3. Academia;</li> <li>4. Military;</li> <li>5. Other.</li> </ol>
22	Long free text	Are there any aspects of the transformation of ECHO project into a CNO that you believe we need to pay special attention to? (Please, specify). We would appreciate your comments and suggestions.

Table 19: The list of the interview's questions

## Annex 5 – Strategic Planning Process appraisal framework

### *CMMI key aspects*

The determination of a Maturity Level (ML) rating is straightforward and is derived from the ratings assigned to process areas. The ML determined is the highest level at which all process areas contained within the ML, and within all lower MLs, are rated as “satisfied” or “not applicable.” Thus, capability levels are cumulative, i.e., a higher capability level includes the attributes of the lower levels. The Table 20, below, defines the basis for capability level ratings:

Maturity Level	Process Area
<b>0 Incomplete</b>	An "incomplete process" is a process that is either not performed or partially performed. One or more of the specific goals of the process area are not satisfied and no generic goals exist for this level since there is no reason to institutionalize a partially performed process.
<b>1 Performed</b>	A “performed process” is expected to perform all of the Capability Level 1 specific and generic practices. Performance may not be stable and may not meet specific objectives such as quality, cost, and schedule, but useful work can be done.
<b>2 Managed</b>	A “managed process” is planned, performed, monitored, and controlled. Managing the process achieves both the model objectives for the process as well as other objectives, such as cost, schedule, and quality.
<b>3 Defined</b>	A “defined process” is a managed (capability level 2) process that is tailored from the organisation's set of standard processes according to the organisation's tailoring guidelines.
<b>4 Quantitatively managed</b>	A “quantitatively managed process” is a defined (capability level 3) process that is controlled using statistical and other quantitative techniques. Quantitative objectives for quality and process performance are established and used as criteria in managing the process.
<b>5 Optimizing</b>	An optimizing process is a quantitatively managed process that is improved, based on an understanding of the common causes of process variation inherent to the process. It focuses on continually improving process performance through both incremental and innovative improvements.

Table 20: CMMI Maturity Levels

### *Model scope*

Because no goal ratings or capability/maturity level ratings are permitted in classes B and C, there is no requirement to include an entire process area, although it is expected that most appraisals will sample according to process areas. For example, a sponsor might choose to examine a single goal (and its associated practices) within a particular process area, or a set of generic practices associated with one or more process areas.

#### **Process areas to be investigated and capability levels to be investigated for each process area**

The Strategic Process is linked to the Governance goal in COBIT 5, Domain Evaluate, Direct and Monitor (EDM):

01 Ensured Governance Framework Setting and Maintenance

The related Governance Practices are:

**EDM01.01 Evaluate the governance system.** Continually identify and engage with the enterprise's stakeholders, document an understanding of the requirements, and evaluate the current and future design of governance of enterprise IT.

**EDM01.02 Direct the governance system.** Inform leaders on IT governance principles and obtain their support, buy-in and commitment. Guide the structures, processes and practices for the governance of I&T in line with the agreed governance principles, decision-making models and authority levels. Define the information required for informed decision making.

**EDM01.03 Monitor the governance system.** Monitor the effectiveness and performance of the enterprise's governance of I&T. Assess whether the governance system and implemented mechanisms (including structures, principles and processes) are operating effectively and provide appropriate oversight of IT to enable value creation.

Leveraging the **CMMI COBIT Pathway Tool**, we can derive CMMI practices to investigate from the aforementioned **COBIT areas**.

NOTE: To be noticed that some CMMI practices are the same within the 3 COBIT areas, so in chapter 3 we will consider artefacts for each instantiation of the practice with respect the *different point of view* (Evaluate, Direct, Monitor).

**EDM01.01: Evaluate the governance system** is presented in Table 21.

Process Area	Capability	Maturity Level	Practice Reference	Practice
<b>Building Workgroups and Culture</b>	Communication and Coordination (P-CMM L2)	ML2	PCMM CC P1	The workforce-related policies and practices of the organisation are communicated to the workforce.
<b>Building Workgroups and Culture</b>	Communication and Coordination (P-CMM L2)	ML2	PCMM CC P2	Information about organisational values, events, and conditions is communicated to the workforce on a periodic and event-driven basis.
<b>Motivating and Managing Performance</b>	Compensation (P-CMM L2)	ML2	PCMM CP P2	The organisation's compensation strategy is periodically reviewed to determine whether it needs to be revised.

Table 21: EDM01.01 Processes–Practices relations

EDM01.02: Direct the governance system is presented in Table 22.

Process Area	Capability	Maturity Level	Practice Reference	Practice
<b>Project and Work Management</b>	Integrated Project/Work Management (L3)	ML3	CMMI IWM SP1.2	Use organisational process assets and the measurement repository for estimating and planning work activities.
<b>Building Workgroups and Culture</b>	Communication and Coordination (P-CMM L2)	ML2	PCMM CC P1	The workforce-related policies and practices of the organisation are communicated to the workforce.
<b>Building Workgroups and Culture</b>	Communication and Coordination (P-CMM L2)	ML2	PCMM CC P2	Information about organisational values, events, and conditions is communicated to the workforce on a periodic and event-driven basis.
<b>Motivating and Managing Performance</b>	Work Environment (P-CMM L2)	ML2	PCMM WE P8	Sources of frequent interruption or distraction that degrade the effectiveness of the work environment are identified and minimized.
<b>Motivating and Managing Performance</b>	Performance Management (P-CMM L2)	ML2	PCMM PM P1	Measurable performance objectives based on committed work are established for each unit.
<b>Motivating and Managing Performance</b>	Compensation (P-CMM L2)	ML2	PCMM CP P1	An organisational compensation strategy is developed.
<b>Motivating and Managing Performance</b>	Compensation (P-CMM L2)	ML2	PCMM CP P6	The organisation's compensation strategy is communicated to the workforce.
<b>Motivating and Managing Performance</b>	Career Development (P-CMM L3)	ML3	PCMM CD P6	Career options and development in the organisation's workforce competencies are discussed with affected individuals on a periodic or event-driven basis.
<b>Motivating and Managing Performance</b>	Competency Based Practices (P-CMM L3)	ML3	PCMM CBP P14	As the definition or requirements of its workforce competencies change, the organisation re-evaluates its workforce policies and practices and adjusts them, as needed.
<b>Shaping the Workforce</b>	Workforce Planning (P-CMM L3)	ML3	PCMM WP P5	The organisation establishes and maintains a strategic workforce plan to guide its workforce practices and activities.

Table 22: EDM01.02 Processes–Practices relations

For EDM01.03: Monitor the governance system is presented in Table 23.

Process Area	Capability	Maturity Level	Practice Reference	Practice
Building Workgroups and Culture	Communication and Coordination (P-CMM L2)	ML2	PCMM CC P1	The workforce-related policies and practices of the organisation are communicated to the workforce.
Building Workgroups and Culture	Communication and Coordination (P-CMM L2)	ML2	PCMM CC P2	Information about organisational values, events, and conditions is communicated to the workforce on a periodic and event-driven basis.

Table 23: EDM01.03 Processes–Practices relations

### Process context

The appraisal is conducted under the Task 3.4: Governance Operations and is aimed at the first “Define” phase of the Strategic Planning Process (SPP), developed within the D3.3: Governance model description.

The full implementation of the SPP has to be achieved at M48 of the ECHO Project Consortium. According to the CMMI requirements the TYPE-C, suitable for appraisal for future implementations is chosen.

The organisational units included into the appraisal plan belongs to CNO-wide decision coordinated and made within the Central Hub of the future ECHO CNO.

The decisions in this appraisal include all core processes and respective strategies about Catalogue and Customers Relations, Partnership Engagement and Innovation and R&D Management, as well as other strategic decisions into the financial and audit areas.

The inputs for the process are performance reports, change management reports (and plans) and decisions taken during the previous year (time period of the appraisal – 1 year). Taking in account that in M48 there will be no full set of inputs we are considering ECHO Project deliverables and results as initial set of documents. Applicable deliverables are notified into the Appraisal Plan tables below.

We suggest that the Central Hub’s bodies are formed by representatives from ECHO CNO members organisations. The rules of representation are not yet defined – it is a part of broader discussion among ECHO Partners, but this appraisal is a good starting point for such a discussion.

The appraisal falls entirely into the domain of strategy definition and Strategic planning. The future appraisal on national and services level planning will be held, after D3.4: Governance model implementation plan is ready. In this context the current appraisal can be considered as a template and test for future more detailed maturity level appraisals.

### Process constraints

**Resources, tools:** Word documents and Excel format to conduct appraisal.

**Schedule constraint, time used for each appraisal:** SPP process within April 2021



**Usage of appraisal output:** to be included as IA report in D3.5, to be used for T3.4 as an input for change management plan.

### *Plan and prepare for appraisal – develop appraisal plan*

#### Required Contents of the Appraisal Record

The method shall require the development of an **appraisal plan** that, at a minimum, **specifies** required **contents** of the Appraisal Record (**AR**).

**Appraisal Record** — An orderly, documented collection of information that is pertinent to the appraisal and adds to the understanding and verification of the appraisal findings and ratings generated [derived from ISO 98C and ARC v1.1].

The **definitions for different kinds of objective evidence** are:

- **Direct Artefact:** The tangible **outputs resulting directly from implementation of a specific or generic practice**. An integral part of verifying practice implementation. May be explicitly stated or implied by the practice statement or associated informative material;
- **Indirect Artefact:** An artefact that is a **consequence of performing a specific or generic practice** or that substantiates its implementation, but which is not the purpose for which the practice is performed. This indicator type is especially useful when there may be doubts about whether the intent of the practice has been met (e.g., a work product exists but there is no indication of where it came from, who worked to develop it, or how it is used);
- **Affirmation:** An **oral or written statement confirming or supporting implementation of a CMMI model practice**. Affirmations are usually provided by the implementers of the practice.

### *Appraisal Record: participants and initial objective evidence*

The SCAMPI C method does not require that a team be used but in ECHO we have already identified key people to be involved (see Table 24).

T3.4 Activity	Stakeholders	Process
Assessment of the progress on Mission and Vision Strategy Statement of ECHO Project	BDI, IICT, TME, SIV	Strategic Planning Process (SPP)
Assessment of the Implementation stages ECHO Project (M1 - 48)	BDI, IICT, RHEA	Strategic Planning Process (SPP)
Assessment of the readiness for the Sustainability (M48+) phase	BDI, ESI CEE, IICT, NUIM	Innovation Management (IM)
Assessment of the readiness and success of our Value Proposition: FCR Market Place	RHEA, TUT, ESI CEE, TBS, TME, EXP, GT SIV	Innovation Management (IM)
Assessment of the organisational development of ECHO	RHEA, BDI, ESI CEE, IICT, TME, SIV	Business planning and human resource management
Assessment of Governance level	RHEA, BDI, ESI CEE, IICT, TME, SU, SIV	Business planning and human resource management



T3.4 Activity	Stakeholders	Process
<b>Assessment of Demand management and current operations: EWS</b>	RHEA, BDI, VTCB, ESI CEE, TBS, CERTH, EXP, Z&P, BU, NG, NDU	Catalogue Management and Customer Relations (CMCR)
<b>Assessment of Demand management and current operations: FCR</b>	RHEA, BDI, VTCB, ESI CEE, TBS, CERTH, EXP, Z&P, BU, GT, NG, NDU	Catalogue Management and Customer Relations (CMCR)
<b>Assessment of Demand management and current operations: MAF</b>	RHEA, BDI, ESI CEE, TBS, CIRM, EXP	Catalogue Management and Customer Relations (CMCR)
<b>Assessment of Demand management and current operations: technology roadmaps</b>	BDI, TBS, CERTH, AGH, SU, BU, FIN, NG, NDU	Catalogue Management and Customer Relations (CMCR)
<b>Assessment of Demand management and current operations: Cybersecurity skills framework</b>	BDI, ESI CEE, TME, BU, SIV ENQ	Catalogue Management and Customer Relations (CMCR)
<b>Assessment of Demand management and current operations: Cyber security certification Scheme</b>	RHEA, VTCB, ACEA, TME, CIRM, FIN, SIV	Catalogue Management and Customer Relations (CMCR)
<b>Assessment of the relations with the EC, European Council and European Parliament, Member states.</b>	IICT	TBD
<b>Assessment of the relations with ENISA, EDA, NCIA and ECSO</b>	RHEA, BDI, ESI CEE, SU	TBD
<b>Assessment of the relations with Partners for service provision:</b> - Encourage collaboration and partnership among existing partners - Promote outreach activities to accept new partners - Review of membership applications - Partner acceptance management - Promotion of partner interaction with other members of the network - Partner interactions, satisfaction and dispute resolution	RHEA, BDI, KHAI, SU, VST, Z&P	Partnership Development (PD)
<b>Assessment of the relations with Customers and Customer satisfaction</b>	RHEA, VTCB, ESI CEE, NUIM, EXP, CIRM, SU, VST, FIN	Partnership Development (PD)
<b>Assessment of strategic planning and innovation management</b>	BDI, VTCB, ACEA, NUIM, TME, CIRM, KHAI, SU, Z&P, GT, FIN, SIV, ENQ	Innovation Management (IM)

T3.4 Activity	Stakeholders	Process
Assessment of Financial Management	RHEA	Business planning and human resource management
Legal support	RHEA, ENQ, TUT	Business planning and human resource management
Evaluation of operations on a regular basis, at least yearly	RHEA, BDI, IICT	Strategic Planning Process (SPP)
Assess any change required in the governance model	RHEA, BDI, IICT, ESI CEE, TME, EXP, CIRM	Strategic Planning Process (SPP)

Table 24: Participants and Initial Objective Evidence

Preparing **appraisal participants** to contribute effectively to the appraisal requires consideration of the **roles** they are to play. The appraisal plan must include activities intended to communicate such information to the appraisal participants.

For SCAMPI C, the **initial objective evidence** may be merely a set of notes written by the appraisal (team) leader during a telephone conversation with the sponsor.

While the initial set of objective evidence need not conform to the PII structure described above, the data used during the appraisal process must be organized in this way.

### *Plan and prepare for appraisal – prepare for appraisal conduct*

The appraisal team leader shall:

- Use the appraisal input, appraisal plan, and other artefacts created in planning the appraisal to plan for the collection of objective evidence;
- Use one or more readiness reviews to evaluate the feasibility of the plan for collecting objective evidence and the plan for the appraisal in general;
- Make minor adjustments or major revisions to the plan for collecting objective evidence, as needed.

For a SCAMPI C conducted by a single appraiser over a one-day period, confirming the availability of documentation, and/or key interviewees based on a previous agreement may be all that is needed.

This confirmation could be accomplished with a phone call or an email.

In a SCAMPI C, the **data collection plan** has the greatest potential for tailoring. The availability of direct or indirect evidence can be augmented with interviews, instruments, or presentations.

### *Appraisal results*

This will be added after the conduct of the appraisal.

## Annex 6 – Induction training course blueprint

### *Building and governance of the ECHO Collaborative Network Organisation*

#### Course structure

The course will consist of the following learning activities, covering a total of 100 minutes of learning.

- Course summary;
- ECHO Governance needs and objectives;
- ECHO Governance Model at a glance;
- ECHO Partnership Development and National Hubs;
- ECHO Business;
- Information sharing model and Governance Information Management System;
- Managing ECHO Operational and Service-level agreements;
- In closing.

Course Summary	
<b>Title</b>	Building and Governance of the ECHO Collaborative Network Organisation
<b>Duration</b>	4,3 hours
<b>Audience</b>	Decision Makers in the ECHO consortium  Decision Makers in organisations-candidates to join to the ECHO network
<b>Brief</b>	The induction training is an important step towards building and implementation of the ECHO Collaborative Network Organisation (ECHO CNO). The decision makers from the ECHO consortium and potential partner-organisations will be introduced with the context of the ECHO Governance Model, the main ECHO assets and results as well as with the vision about and mission of the future ECHO network and its place in the European Competence Centres Network. The training is one of the key elements in the bottom-up process of change management model of ECHO. The training content will be delivered to the trainees in a form of asynchronous (self-guided) interactive e-learning modules.
<b>Global Objective(s)</b>	In order to begin the transition processes, the decision makers in the ECHO consortium need to understand the context and how their responsibilities, skills, tools, and processes will be impacted by the evolution of the ECHO network. The training program is a part of the ADKAR change

Course Summary	
	management model which aims to make the ECHO transition process transparent and
<b>Learning Goals</b>	<p>After the completion of this course the learners will know:</p> <ul style="list-style-type: none"> <li>• The context of the ECHO network - results, assets, affected industries, the decisions taken so far;</li> <li>• The potential effects of the future network to individuals and organisations - benefits, responsibilities, contributions.</li> </ul> <p>After the completion of the this course the learners will be able to:</p> <ul style="list-style-type: none"> <li>• Translate and interpret the vision and mission of the ECHO CNO in the context of their organisation.</li> <li>• Analyze and communicate the ECHO CNO processes at individual organisation level.</li> </ul>
<b>Delivery Format</b>	Asynchronous self-guided e-learning
<b>Development Tool</b>	[To be added during the Course development]
<b>Version</b>	0.1
<b>Reference/ Client</b>	ECHO consortium, WP3
<b>Design Team</b>	<p>Subject Expert(s): George Penchev, Velizar Shalamanov</p> <p>Instructional Designer: George Petrisor, Pavel Varbanov</p>
<b>Review Team</b>	<p>Reviewer 1: Irena Mladenova</p> <p>Reviewer 2: Maria Vittoria Marabello</p>

Table 25: Induction training course elements

### *ECHO Governance Needs and Objectives*

<b>Duration</b>	<b>15 min.</b>
<b>Learning Objective</b>	To enhance the awareness among the decision makers of the ECHO partners on existing models for sustainable large international Industrial, Technology and Research networks

Adapted and interpreted content and conclusions from D3.1 Governance Needs and Objectives and D3.2 Governance Model alternatives

### *ECHO Governance Model at a Glance*

<b>Duration</b>	<b>15 min.</b>
<b>Learning Objective</b>	To enable the decision makers of the ECHO partners to analyze the role, place and commitment of their organisations in the context of the ECHO Governance model

Adapted and interpreted content and conclusions from D3.3 Governance Model Description

- Levels of Governance and Management;
- Organisational Structure;
- Core Processes.

### *ECHO Partnership Development and National Hubs*

<b>Duration</b>	<b>15 min.</b>
<b>Learning Objective</b>	To provide inputs for the development perspectives of the ECHO CNO.

Adapted and interpreted content and conclusions from D3.6 Information sharing models and the Onboarding Handbook for ECHO participants and collaborators.

### *ECHO Business*

<b>Duration</b>	<b>15 min.</b>
<b>Learning Objective</b>	To enable the decision makers of the ECHO partners to identify their capacity and interest in the development of the ECHO assets and ECHO services

Adapted and interpreted content and conclusions from the progress and deliverables in Task 9.3 Market Analysis, Business Model and Exploitation.

- Catalogue of Services and Innovation Management;
- Service Groups;
- Management of Service Groups.

### *Information Sharing Model and Governance Information Management System*

<b>Duration</b>	<b>20 min.</b>
<b>Learning Objective</b>	To enable the decision makers of the ECHO partners to identify and process information of the ECHO project implementation and deliverables

Adapted and interpreted content and conclusions from D1.1 Project Handbook[D1]

### *Managing ECHO Operational and Service-level Agreements*

Duration	20 min.
<b>Learning Objective</b>	To provide the decision makers of the ECHO partners with information about the implementation of the ECHO Governance model and enable to them to participate actively in the development of the ECHO network agreements.

Adapted and interpreted content and conclusions from D3.4 Governance Implementation Plan

### *In Closing*

This is the part where we need to reinforce key concepts and facts that are critical for learners to remember once the course is over. These should be those 5 to 10 take-away that will enable learners to communicate the transition process and promote the ECHO CNO.