Project n. 874395 - EXXTRA

EXcellence EXchange and Teaming-up between RAilway clusters and ecosystems (ESCP-4X)

D.13

Final assessment resulting from the continuous monitoring and quality evaluation of the exchanges realised under the "EXXTRA Exchange Scheme".

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PURPOSE OF THE REPORT

This report aims to offer a final assessment of the EXXTRA ClusterXchange scheme delivered during the project, based on the continuous monitoring and quality evaluation of the exchanges, and to draw a set of key conclusions based on it.

The document has a double purpose:

- An **internal one, strategic**, aimed to provide the EXXTRA Partners the measurement of their activity, in order to offer the basis for them to fine-tune – if necessary – and scale-up the "ClusterXchange" model as permanent service they are willing to offer to their members in Europe;

- An **external one, for dissemination and inspiration of peers**, aimed to provide the other ESCP-4X partnerships with useful insights for the deployment of their ClusterXchanges.

PRELIMINARY RECAP: THE EXXTRA CLUSTERXCHANGE

a. CLUSTERS AND ECOSYSTEMS INVOLVED

The Clusters and ecosystems involved in the EXXTRA partnership – and therefore in the preparation and delivery of the EXXTRA ClusterXchange scheme - were 7 from 6 COSME countries representing important hubs for railway and multi-modality technologies:

Figure 1 | Partners and territories

b. COVID-19 CRISIS AND IMPLEMENTATION OF THE CLUSTERXCHANGE

The COVID-19 crisis impacted the organisation, promotion and delivery potential of the EXXTRA project for more than two years. Apart from three "virtual" exchanges made during the period EISMEA allowed it, only one physical exchange took place before 2022 (in September 2021); then, all the exchanges took place between May and October 2022.

THE EXXTRA CLUSTERXCHANGES REALISED

a. OVERALL PICTURE

The ClusterXchanges realised within the EXXTRA project are shown in the following pictures and listed in the ANNEX.
Three of them were Virtual exchanges, while all the others were Physical ones.
All Host Organisations were Clusters. These include three Clusters outside the EXXTRA Partnership:

- Fondazione Torino Wireless (Piemonte Innova - Enabling the Future) from the SmartCTClusters ESCP-4X;

- Mobinov (MOBINOV – Cluster Automóvel) from the RECiPE4Mobility ESCP-4X;

- Berlin Partner (Berlin Partner) not involved as Partner in any ESCP-4X and then registered under EXXTRA.

All the EXXTRA Partners were Visiting Organisations – also on multiple occasions, as better described below, given the high quality of the exchanges organised.

Figure 2 | The EXXTRA ClusterXchanges: Host Organisations, Topics of the exchanges, eligible Visiting Organisations that participated in the Virtual Exchanges
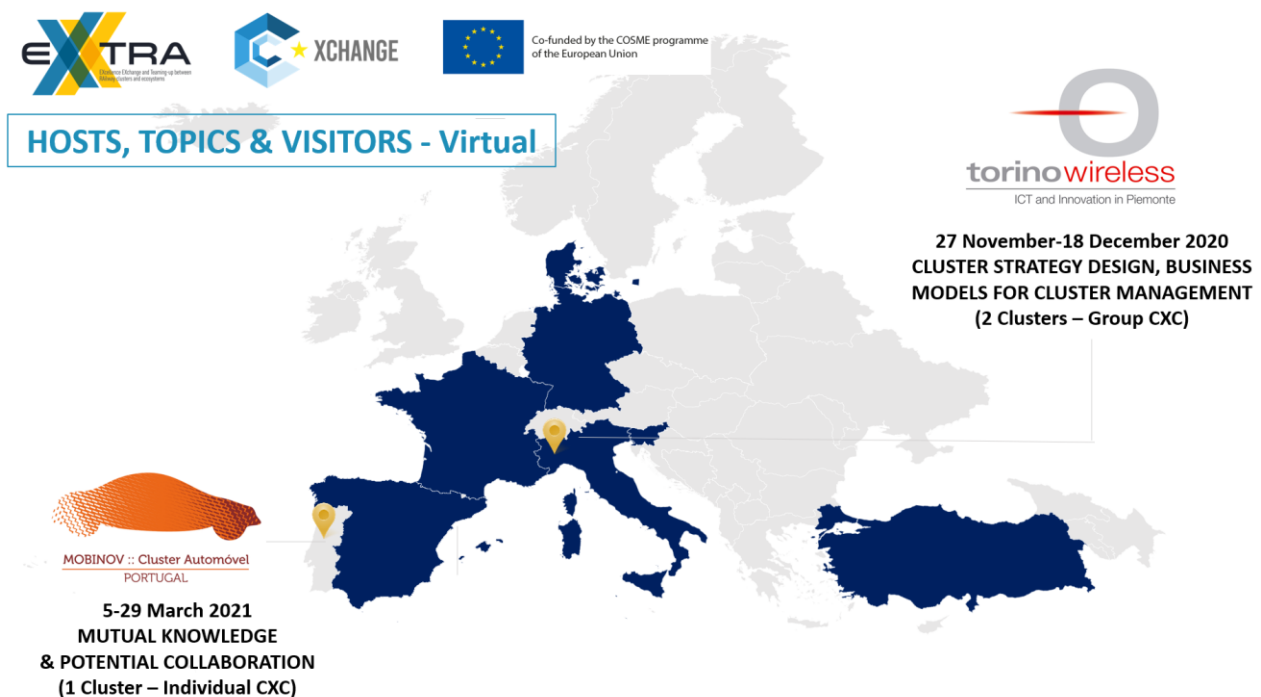
Figure 3 | The EXXTRA ClusterXchanges organised: Host Organisations, Topics of the exchanges, eligible Visiting Organisations that participated in the Physical Exchanges
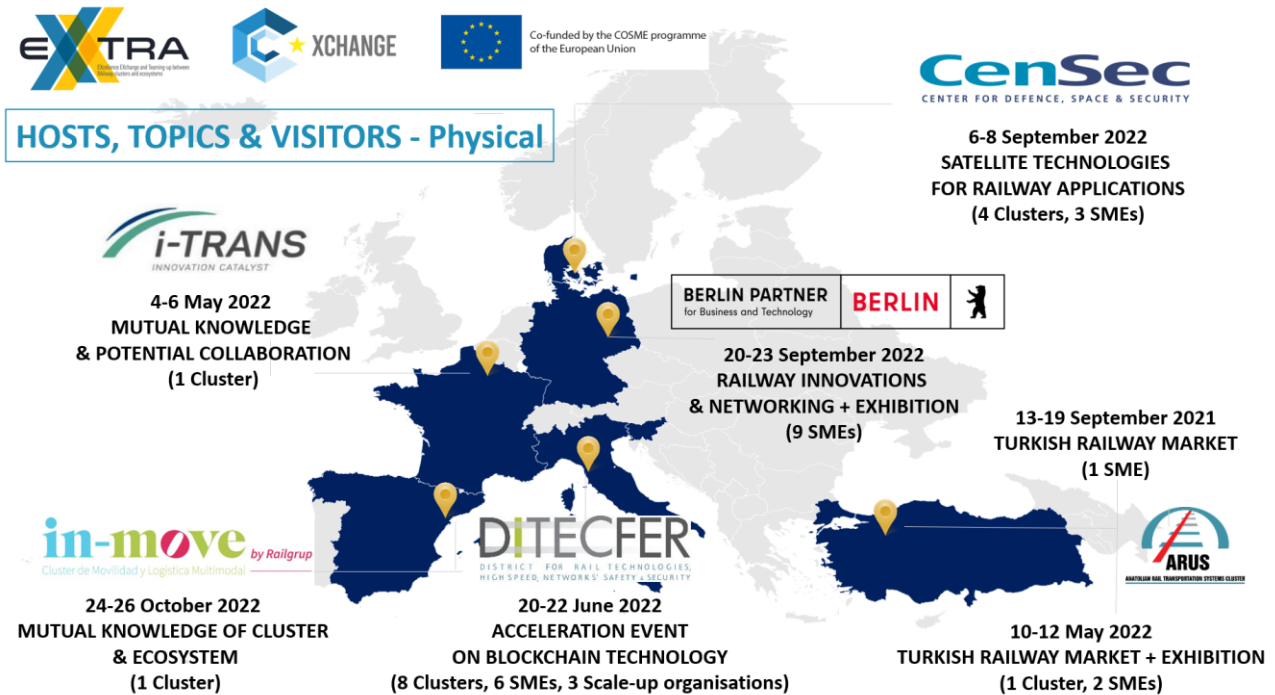
b. TYPE OF EXCHANGE: INDIVIDUAL *VS.* GROUP EXCHANGE

Out of the **7 physical ClusterXchange initiatives organised by the EXXTRA partnership,** 2 were Individual exchanges, and 5 were Group exchanges.

Out of the **2 virtual ClusterXchanges initiatives organised by other partnerships** and having Visiting Organisations from the EXXTRA partnership, 1 was an Individual exchange and 1 was a Group exchange.

Figure 4 | Type of exchanges realised by the EXXTRA partnership

c. DURATION OF THE EXCHANGES ORGANISED BY EXXTRA

Apart an Individual exchange organised in September 2021 for one SME in Turkey lasted 5 full days, all the exchanges designed and delivered by EXXTRA had the duration of 3 full days. Such a duration was assessed to be optimal in order to make it possible for the participants to travel to the host country and fly back within the same working week.

Figure 5 | Duration of the EXXTRA physical exchanges

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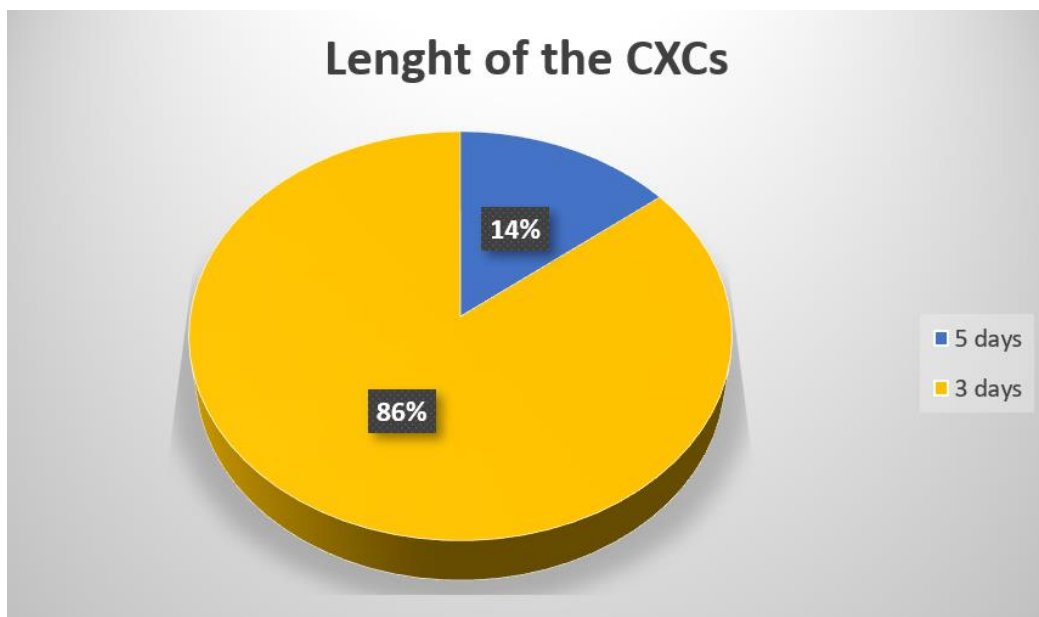
d. SUCCESSFUL *VS.* FAILED EXCHANGES

In total, **37 ClusterXchanges were organised (34 physical and 3 virtual)**. Out of them, **31 were successful** (the VOs attended the entire agenda) and 6 were declared 'failed' (the VOs attended the exchange but not the entire agenda of the physical exchange).
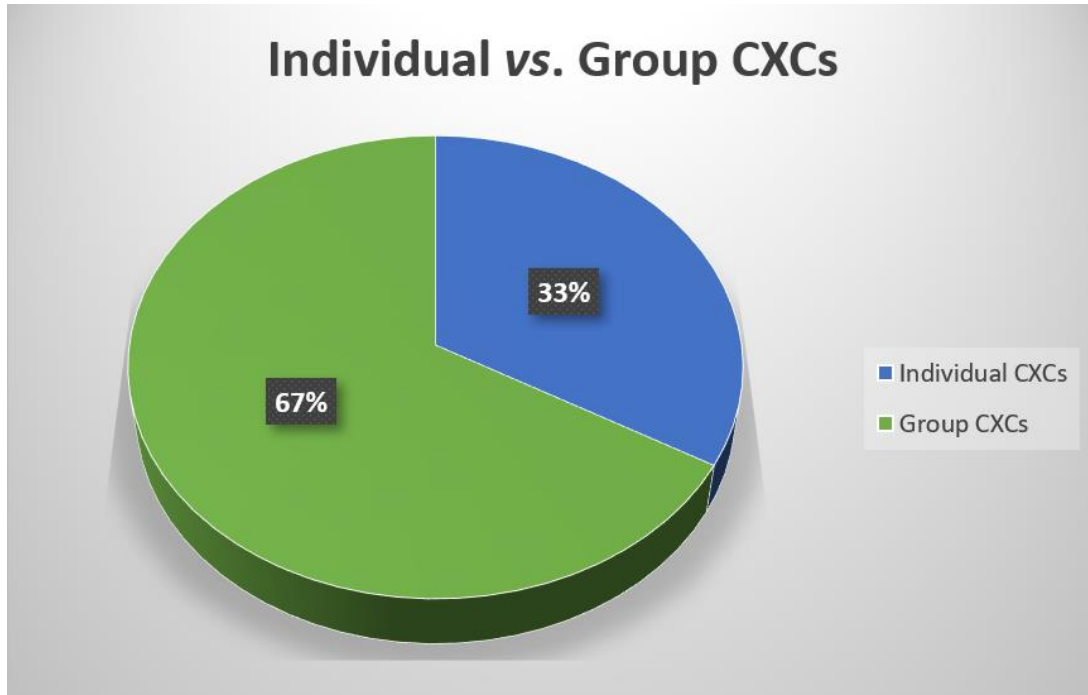
Figure 6 | The EXXTRA exchanges organised
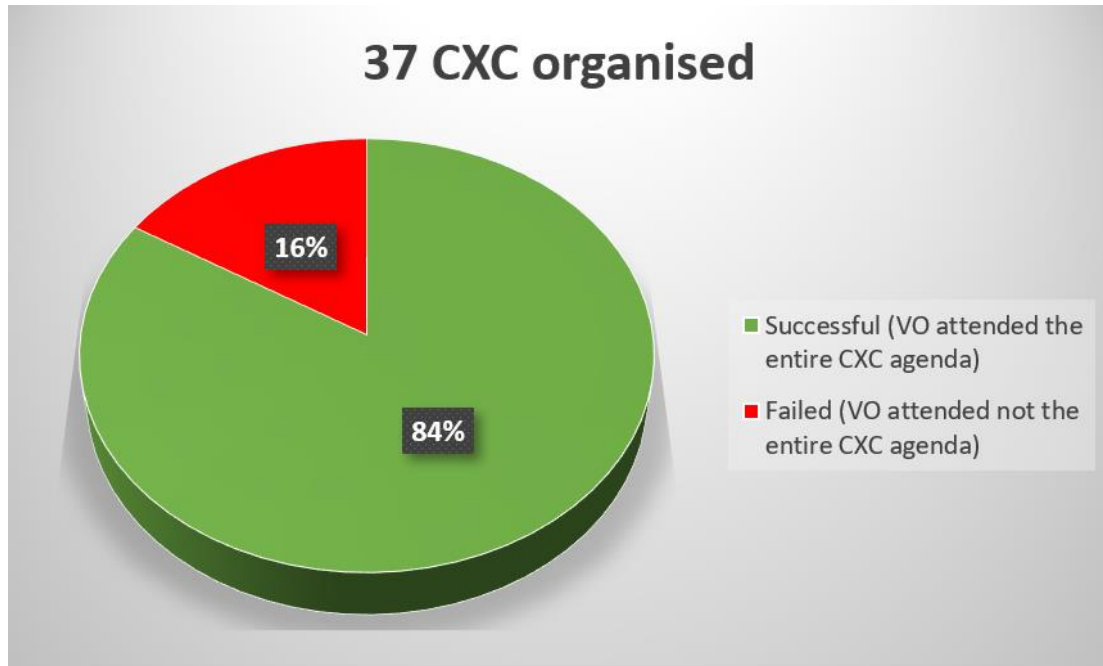
e. TYPE OF PARTICIPATING VISITING ORGANISATIONS

The participants to the EXXTRA ClusterXchanges were **from all type of eligible organisations**, according to the Call. The following picture is based on the 31 organisations having completed successfully the CXC.

Figure 7 | Typology of the Visiting Organisations that attended successfully the EXXTRA physical exchanges
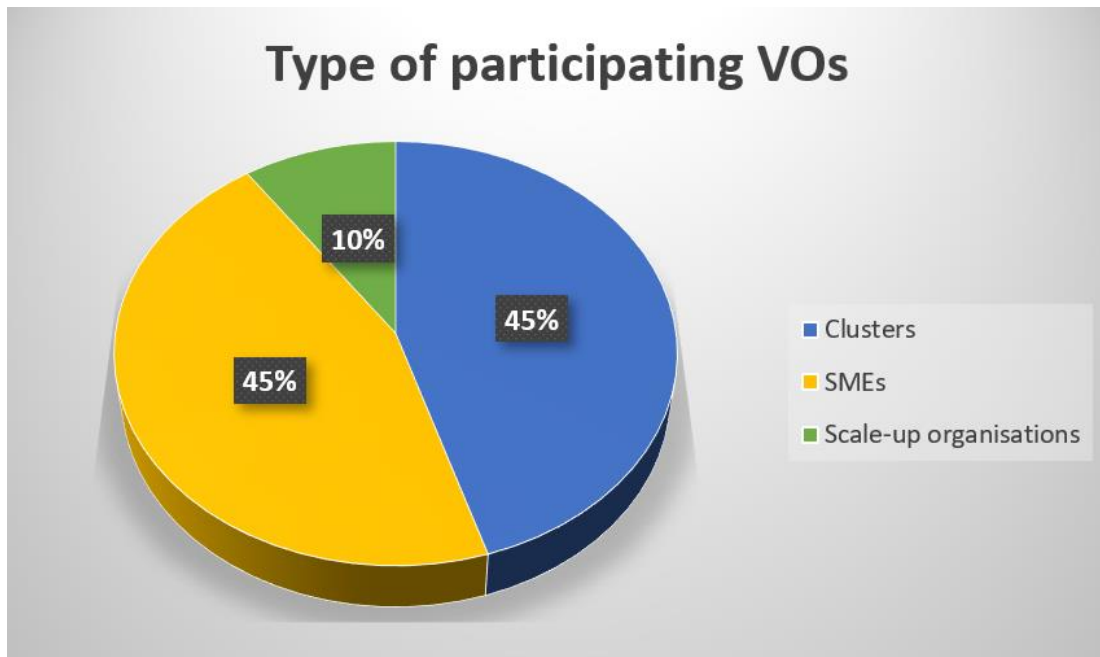
Furthermore, **36 more persons from 33 more organisations participated in the exchanges organised**, although not eligible for the following reasons:

- 2 SMEs had already attended an EXXTRA CXC, and were not eligible anymore (Italy)

- 2 Clusters had already attended a physical EXXTRA CXC, and were not eligible anymore (Germany, Italy)

- 2 Cluster managers attended with another colleague, and were eligible only for one person (Germany, Spain)

- 1 Large company attended (Italy)

- 1 University attended (United Kingdom)

- 29 different type of organisations attended but were not eligible as from the same country of the Host Organisation (Germany, Italy).

f.   PROVENANCE OF THE VISITING ORGANISATIONS

The total 31 Visiting Organisations came from 10 countries, as shown in the figure below.

Figure 8 | Countries of provenance of the total 31 Visiting Organisations

Provenance of the VOs

Legend: TR, ES, IT, DE, SE, BE, BG, PL, DK, FR
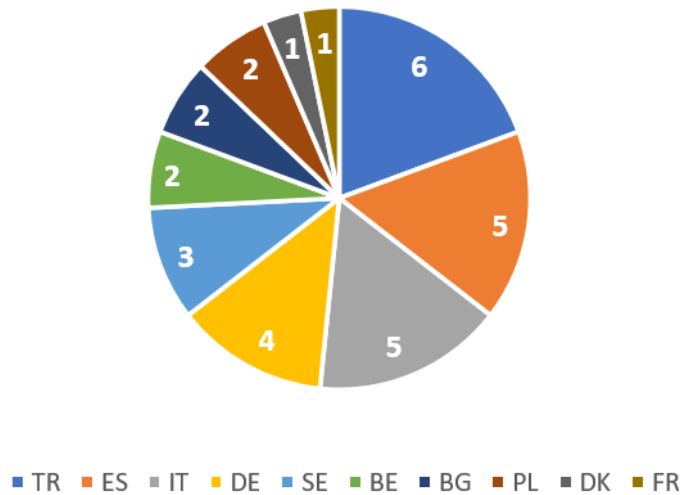
g. TOPICS OF THE EXXTRA EXCHANGES

The topics covered in the ClusterXchanges realised can be classified as follows, also given the expectations of the Visiting Organisations:

- in the <u>blue lines</u> the physical exchanges (the G-type includes 1 VO from B-type and the 5 VOs from E-type, as such exchanges had two objectives)
- in the <u>yellow lines</u> the virtual exchanges.

Figure 9 | The topics of the EXXTRA exchanges organised

(A) Internationalisation in the target country	(B) Cluster Upskilling and collaboration	(C) Knowledge of the Railway Innovation trends and ecosystems	(D) Focus on Advanced Technologies	(E) Cross-sectoral knowledge and transfer of technologies	(F) Knowledge of the local entrepreneurial ecosystem	(G) Knowledge of the local innovation ecosystem
2	2	9	15	5	1	6
Turkey Turkey	France Spain	Germany	Italy	Denmark	Turkey	Denmark Spain
-	3	-	-	-	-	-
	Virtual					

ASSESSMENT OF THE QUALITY OF THE EXXTRA EXCHANGES

a.   THE RESULTS OF THE FINAL REPORTS ISSUED BY THE VISITING ORGANISATIONS

At the end of each successful exchange, the Visiting Organisations were requested to fill a Final Activity Report developed by the ECCP IT Tool and aimed to assess both the overall satisfaction and the one specific per several aspects. Here below how the EXXTRA Visiting Organisations have assessed their experience (physical exchanges).

Figure 10a-b | Out of the total 28 successful physical exchanges, to what extent the VOs assessed the objectives and outcomes to have been achieved (data of 3 SMEs missing)

To what extent the exchange objectives defined in the Commitment to Quality were achieved
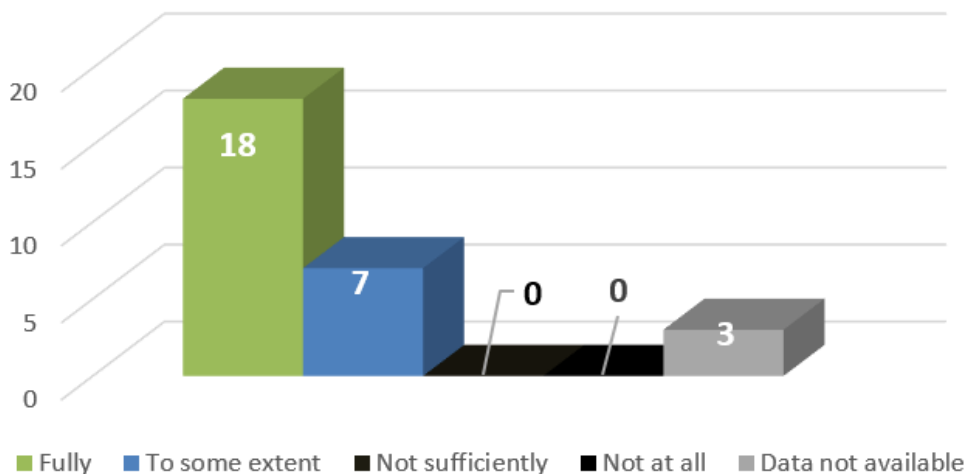
To what extent the expected outcomes defined in the Commitment to Quality were achieved
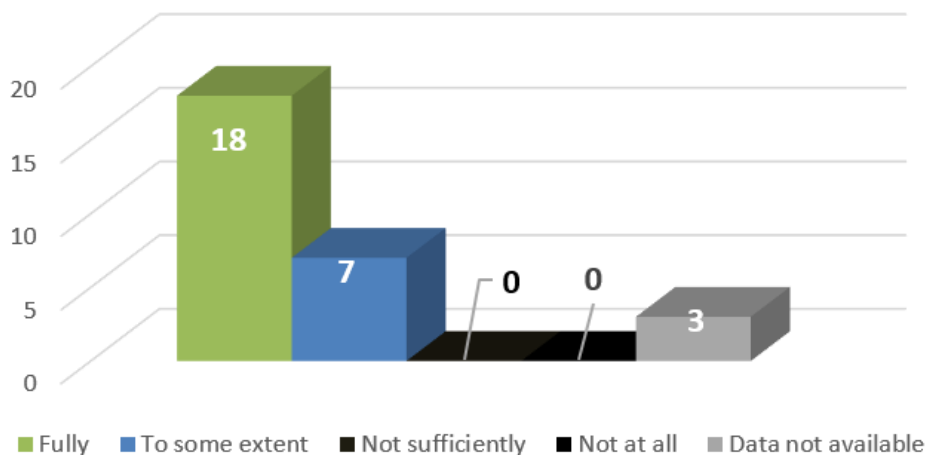
The different types of benefits that were identified in the Report as the ones achievable through a ClusterXchange were rated as follows by the Visiting Organisations (the data of 3 SMEs missing).

The result shows a *significant* benefit in participating for 59% or the Visiting Organisations (VOs), and a *moderate* benefit for 29% of the VOs. It is worth to be noted that the lower rates have been received for the exchange organised during the railway exhibition "InnoTrans". In the conclusions we will explain reasons and lessons learnt.

How you benefitted from your participation in the exchange	Significantly	Moderately	Not sufficiently	Not at all
Broadened your sector- and nonsector specific skills and knowledge	21	3	1	-
Gained insights into the operation and techniques used by your host	21	4		-
Expanded your network of contacts	17	6	1	1
Developed new cross-border partnerships	13	10	1	1
Found innovative solutions to upgrade your business, products and services	11	11	2	1
Created new business opportunities	13	7	5	-
Got involved in new innovative projects	11	6	6	2
Gained knowledge on visitor(s)´ foreign market(s) and cultures	11	11	2	1
	<u>59%</u>	<u>29%</u>	<u>9%</u>	<u>3%</u>

The Final Report then aims to understand how relevant certain factors are in the choice a Visiting Organisation makes, and how well the expectations on such factors were met.

The table below shows the answers of the EXXTRA Visiting Organisations (the data of 3 SMEs missing). The results show that, in general, all the factors were mostly *Very relevant* during the choice, and that **the expectations were met at an even higher extent**.

(A) How relevant were the following factors when deciding to host the exchange?	(B) How well were these expectations met during your actual stay?	(A) Very relevant	(B) Very well	(A) Quite relevant	(B) Well	(A) Moderately relevant	(B) Moderately	(A) Irrelevant	(B) Not at all
Country of your stay		14	19	5	5	4	-		1	1
Host´s sector of activity		18	23	4	2	2	-	-	-
Host´s organisation type/business activities		19	19	4	6	1	-	-	-
Host´s knowledge and experience		17	21	6	4	1	-	-	-
Command of the language used to communicate with the host		16	20	6	5	2	-	-	-

The duration of the exchanges organised also was assessed. As anticipated, all lasted 3-full days except one lasting 5-full days. 20 out of 24 (as 4 data are missing) confirmed the duration of 3-full days as optimal. 2 out of the 3 respondents answering *Too long* participated in the exchange during the rail exhibition "InnoTrans". Also for this aspect we will explain the reasons and lessons learnt in the conclusions.

Figure 11 | Evaluation of the duration of the exchanges. The 24 answers considered refer all to the 3-full days duration.
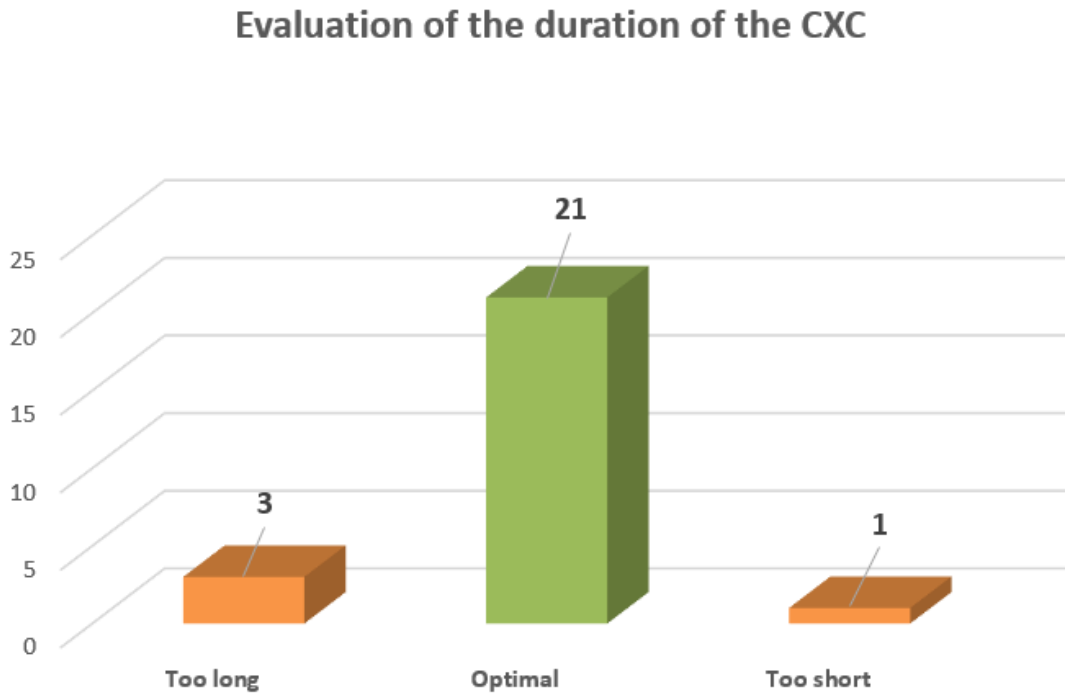
To conclude with the evaluations resulting from the Final Activity Reports, the overall quality of the initiatives organised emerges from this last figure, showing 25 answers (3 data missing).

Figure 12 | Satisfaction rating of the EXXTRA Visiting Organisations (data of 3 SMEs missing)
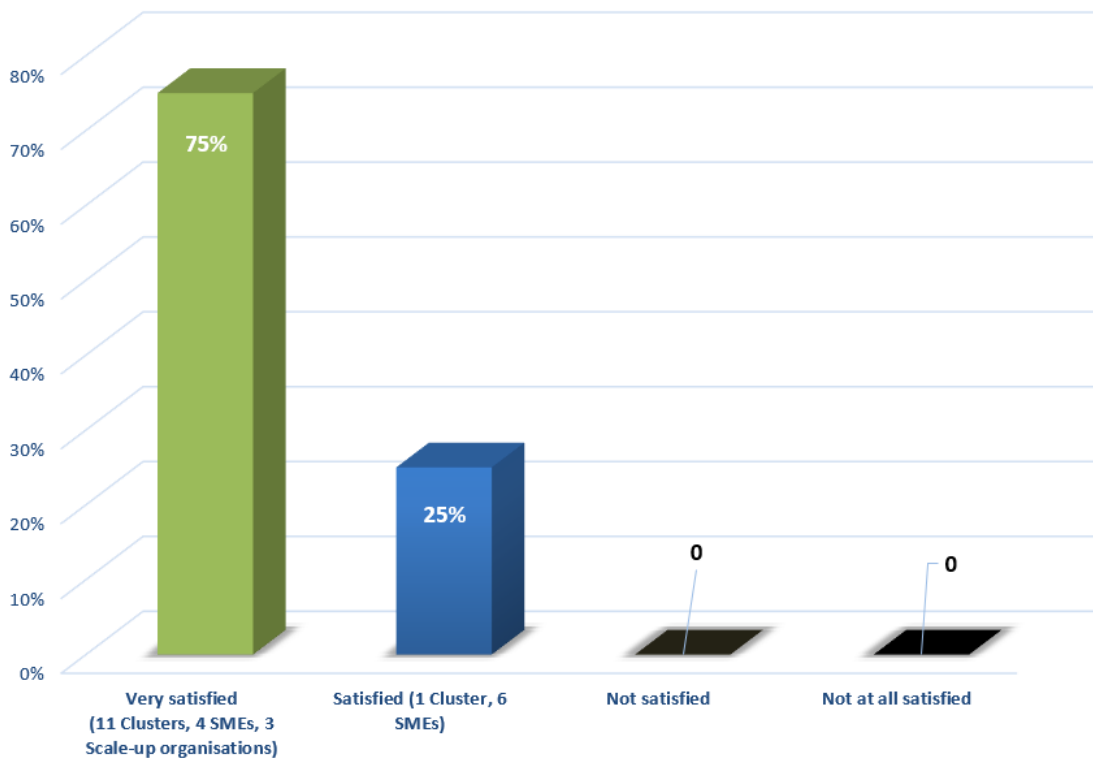
b. SOME FEEDBACKS FROM THE VISITING ORGANISATIONS

Here below, public comments shared on the social media by Visiting Organisations about their experience with the EXXTRA ClusterXchange.

Figure 13 | CXC in Turkey, September 2021

"Thanks to the EXXTRA project, to DITECFER and to ARUS, Z Lab can finally experience first-hand the warm and professional hospitality of Turkish companies. We didn't sign any contract or agreement during the exchange though we are completely satisfied and we think we have a high possibility to reach to our objectives now as we are in contact with all the companies that we met."

Figure 14 | CXC in France, May 2022

"Each participant was delighted to share experience and possibilities of cooperation. The identified steps for future collaboration are to sign a LOI and a cooperation agreement in order to reinforce potential strategic international operations."

Figure 15 | CXC in Turkey, May 2022

"I tried to 'pack' some of the images taken during my EXXTRA ClusterXchange past week in Eskişehir Turkey perfectly organised by Anadolu Raylı Ulaşım Sistemleri Kümelenmesi (ARUS). This powerful tool developed by the European Commission under the #COSME programme of the EU promotes short exchanges between territorial ecosystems. And actually what I discovered is a Railway ecosystem highly developed and very innovative, with whom one only can wish to cooperate. My thanks go to my wonderful Host, to the Eskişehir Sanayi Odası for the official dinner, and to each company that welcomed me so gently and to those that opened their factories for us: Das Lager Germany, ESRAY A.Ş., TÜRASAŞ, Savronik, AlbayrakAldoor."

Figure 16 | CXC in Italy, June 2022

"We have discussed about cybersecurity and blockchain in railways and multimodal transportation, with interesting use cases and applications as well as state-of-the-art on technologies and regulations. It has been also a good occasion to exchange opinions and visions with many other railways stakeholders from Italy and abroad."

Figure 17 | CXC in Denmark, September 2022

*"In the past 3 days we have been guests of CenSec in Denmark, with a delegation of companies within the European project EXXTRA ClusterXchange.
We are truly grateful for this kind of professional exchange.
Thanks to CenSec: the exchange trip was a really interesting and useful experience."*

Figure 18 | CXC in Spain, October 2022

*"We look back on three days of Cluster Exchange at our Catalan ERCI partner cluster IN-MOVE by Railgrup under the EXXTRA partnership! In the last few years, the former pure rail industry cluster Railgrup has developed into a pace-setting mobility cluster in Spain! This fresh spirit is reflected by the name and was always noticeable!
We thank IN-MOVE, its members as well as its partners like ACCIÓ, Eurecat - Technology Centre of Catalonia and CIT UPC, UPC BarcelonaTech Technology Center who gave us insight in their work and way of thinking and collaborating with each other.
It was a really intensive but also inspiring time! We go back to Germany with a lot of suggestions for our own cluster work, even with some concrete starting points for cross-cluster events as well as R&D projects.
And last but not least with the cognition, that Florida is just a quick metro ride away from Barcelona!"*

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CONCLUSIONS WITH LESSONS LEARNT

The experience of the ClusterXchange was for the EXXTRA Partnership a very important test. At the very beginning, also due to the Covid-19 preventing the potential participants from travelling, it was resulting hard to motivate them to exploit the instrument. Then we prepared a "Delivery Plan", capitalising on the strengths of each Partner (skills, ecosystems, exhibitions, events, etc.) but working on **creativity**:

⇨ 1 exchange having 1 Cluster as HO and 1 Cluster as VO also included meetings with the local companies at the premises of the HO in order to inspire upskilling and potential of collaboration

⇨ 1 exchange having 1 Cluster as HO and 1 Cluster as VO also included meetings and visits with technological organisations outside the premises of the HO in order to inspire upskilling and potential of collaboration

⇨ 1 exchange having 1 Cluster as HO and 1 SME as VO included many visits at the local companies in order to show the key competences in the local ecosystem

⇨ 1 exchange having 1 Cluster as HO and 1 Cluster + 1 SME as VOs included accompanied meetings with the local companies at the railway exhibition in order to offer the overview of the national manufacturer, plus visits at the premises of several other local companies, in order to introduce the VOs to the national industrial ecosystem

⇨ 1 exchange having 1 Cluster as HO and 15 different other organisations as VOs was conceived as acceleration event on a key advanced technology, with different types of activities 'on the job', in order to stimulate the adoption of such technology and autonomy in identifying suitable use cases

⇨ 1 exchange having 1 Cluster as HO and 2 Clusters + 3 SMEs as VOs was a discovery tour in the country to get known with technologies from a different sector, in order to stimulate technology transfer and cross-sectoral collaboration

⇨ 1 exchange having 1 Cluster as HO and 9 SMEs as VOs consisted in a set of innovation presentations, B2B, technical visits organised in the framework of the world railway exhibition, in order to offer a very wide overview of innovations and meetings with innovation stakeholders.

The last one was the least successful both in terms of number of 'failures' (5 failed exchanges out of 9) and in terms of satisfaction of the VOs having attended the full agenda. The lesson we learnt from this has nothing to do with the quality of the agenda, that was of very high level and variety. Rather, we learnt that the VOs were "challenged" by the 'alternative offer' of the world railway exhibition itself, that was already very very rich. For this reason, we will avoid similar situations in the future exchanges that we will organise.

In fact, although the EXXTRA project finishes here (November 2022), its partners will now scale it, defining an adequate business model as instrument to promote innovation between our ecosystems. Following this successful project, in fact, the EXXTRA Partners have established their meta-cluster as Brussels-based legal entity built upon the EXXTRA Joint Partnership Strategy: "ERCI – European Railway Clusters Initiative ASBL" (https://eurailclusters.com).

ANNEX – THE LIST OF THE EXXTRA CLUSTERXCHANGES REALISED

	VO	Country of VO	HO	Country of VO	Period	Reference number
	Virtual CXC					
1	MAFEX	ES	Torino Wireless	IT	21.11-18.12.20	outside IT Tool
2	Railgrup	ES	Torino Wireless	IT	21.11-18.12.20	outside IT Tool
3	Polish Composite Cluster	PL	MOBINOV	PO	5-29.03.21	outside IT Tool
	Physical CXC					
4	Z LAB	IT	ARUS	TR	13-17.09.21	EG422RA3
5	Polish Composite Cluster	PL	i-Trans	FR	04-06.05.22	EG756CA4
6	DITECFER	IT	ARUS	TR	10-12.05.22	EG470PA7
7	Teldat	ES	ARUS	TR	10-12.05.22	EG593FA7
8	CETIC asbl	BE	DITECFER	IT	20-22.06.22	EG701IA7
9	OTTIMA plus Sp. z o.o.	PL	DITECFER	IT	20-22.06.22	EG629UA4 *failed*
10	ARUS	TR	DITECFER	IT	20-22.06.22	outside IT Tool
11	Ostim Zone	TR	DITECFER	IT	20-22.06.22	EG889ZA9
12	Teknopark Istanbul	TR	DITECFER	IT	20-22.06.22	outside IT Tool
13	Berlin Partner for Business and Technology	DE	DITECFER	IT	20-22.06.22	EG486NA1
14	Mafex	ES	DITECFER	IT	20-22.06.22	outside IT Tool
15	CenSec	DK	DITECFER	IT	20-22.06.22	outside IT Tool
16	IFASTURK EGITIM ARGE VE DESTEK DANISMANLIGI A.S.	TR	DITECFER	IT	20-22.06.22	EG659QA9
17	SMSK BILGI TEKNOLOJILERI VE TICARET LTD.STI.	TR	DITECFER	IT	20-22.06.22	EG534YA6
18	Ostertag CS	DE	DITECFER	IT	20-22.06.22	EG391VA7
19	Järnvagsklustret	SE	DITECFER	IT	20-22.06.22	EG841IA3
20	Ozenray Demiryolu	TR	DITECFER	IT	20-22.06.22	EG639CA3
21	Multitel	BE	DITECFER	IT	20-22.06.22	EG215PA4
22	In-move by Railgrup	ES	DITECFER	IT	20-22.06.22	outside IT Tool
23	Elfi	IT	CenSec	DK	06-08.09.22	outside IT Tool
24	Bulgarian Digital Cluster	BG	CenSec	DK	06-08.09.22	outside IT Tool

	VO	Country of VO	HO	Country of VO	Period	Reference number	
25	Fashion.bg Ltd.	BG	CenSec	DK	06-08.09.22	outside IT Tool	
26	NEUROSPACE GmbH	DE	CenSec	DK	06-08.09.22	EG104QA3	
27	i-Trans	FR	CenSec	DK	06-08.09.22	EG904HA2	
28	ISE	IT	Berlin Partner	DE	20-23.09.22	EG340LA1	
29	On Elektronik	TR	Berlin Partner	DE	20-23.09.22	EG779ZA8	*failed*
30	Simulaciones y Proyectos SL	ES	Berlin Partner	DE	20-23.09.22	outside IT Tool	*failed*
31	Smart Motors	ES	Berlin Partner	DE	20-23.09.22	EG346FA0	*failed*
32	RXD - Research eXchange Development AB	SE	Berlin Partner	DE	20-23.09.22	EG876NA8	
33	Te.Si.Fer. Srl	IT	Berlin Partner	DE	20-23.09.22	EG834WA8	
34	ETS S.r.l.	IT	Berlin Partner	DE	20-23.09.22	EG565FA5	*failed*
35	Albayrak Makine Elektronik San. ve Tic. A.Ş	TR	Berlin Partner	DE	20-23.09.22	EG348RA2	*failed*
36	ARTEX AB	SE	Berlin Partner	DE	20-23.09.22	EG867VA6	
37	Rail.S	DE	In-move by Railgrup	ES	24-26.10.22	new IT Tool	