D4.3 - Intermediate dissemination, communication, capacity building and training activities report

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Dissemination Level

- [X] PU: Public
- [ ] R-UE/EU-R: Restreint-UE/EU-Restricted
- [ ] SEN: Sensitive

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Glossary of terms and abbreviations used

Terminology/Acronym	Description
DoA	Description of Action
EC	European Commission
GA	Grant Agreement to the project

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Executive Summary

The current deliverable D4.3, “Intermediate dissemination, communication, capacity building and training activities report” is the second version of the series of deliverables aiming to report all the activities related to project outcomes disseminated and communicated either internally between the different stakeholders or externally to the consortium members.
This deliverable is part of the reports under the WP4, “Impact Maximization and Outreach” and directly relate to both tasks, T4.1” Dissemination, communication, and collaboration activities” and T4.2 “Capacity building with national & EU border authorities and training activities”.
Dissemination and communication activities aim to satisfy the project 5th objective, to accelerate the adoption and the take up of the project results in Europe and beyond, which is not feasible unless a well-planned and maintained Dissemination and Communication plan is put in place and adapted on the go during all the project lifecycle duration.
The deliverable monitors and controls a list of KPIs directly related to the activities within the scope of the WP4. As explained in the previous version of the deliverable, the D4.2, the WP4 is led by EBOS, and involve all the project partners in order to expose all the project results and findings to as mush audience as possible, specially within the cross-border authorities, border agencies, IoT and Big Data Communities, ICT SMEs, Academic and Research Communities, etc.

This document is organized using the following structure:

- Section 1 shows the introduction along with the mapping between the grant agreement, WP4 description and the D4.3 sections.
- Section 2 explains the dissemination, communication and collaboration status.
- Section 3 elaborates on the liaison with other projects.
- Section 4 shows the work under the capacity building.
- Section 5 shows the conclusion.

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1 Introduction

This deliverable focuses on the work depicted in both tasks T4.1 and T4.2, aiming to show the progress and follow up on all the dissemination, communication, and capacity building activities. This deliverable will be complemented by the deliverables D4.5 "Initial commercialisation and impact generation report" and D4.6 "Final commercialisation and impact generation report" which both aim to take the findings and results further, to exploit each separately or collectively and find commercial opportunities for either the whole toolkit or part of it.

1.1 Mapping FLEXI-cross outputs

As already done within the D4.2, this section introduces the FLEXI-cross' GA obligations of D4.3 under T4.1, and T4.2, taking into account the necessary actions to be performed by both T4.1 leader, EBOS and T4.2 leader, BEIA, with the contribution of the rest of the project partners.
Within this document, the reviewers can detect both task's requirements and achievements addressed in the various sections.
Table 1 below, shows the mapping of the FLEXI-cross GA and the different deliverable sections.

Table 1: Mapping of FLEXI-cross outputs

FLEXI-cross Task and GA Outline	Respective Document Section(s)	Justification

T4.1 – Dissemination, communication and collaboration activities
• Build the foundation and prepare FLEXI-cross "Dissemination, Communication and outreach activities to the defined target audience
• Constantly update the project website and the social media channels with latest project activities and outcomes.
• This task will also coordinate the efforts of FLEXI-cross partners in the dissemination of the project's achievements by:
  • submitting high quality papers at high impact, peer-reviewed journals and magazines.
  • presenting and publishing results in prestigious conferences.
  • organising workshops, trainings, conference sessions, and tutorials.
  • link the dissemination and communication activities with related initiatives and ongoing projects.
	Section 2	In this section of the report, the Dissemination and communication activities of the FLEXI-cross project are detailed. All efforts made by the project partners up to the delivery date of the current deliverable are mentioned in this report, as well as their roles and responsibilities during, and after the project comes to its end.

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FLEXI-cross Task and GA Outline	Respective Document Section(s)	Justification
Task 4.2 Capacity building with national & EU border authorities and training activities The aim of this task is to enable a continuous exchange of information with national and EU authorities as well as the communication with other relevant EU projects and initiatives. This task will target to address the logistics, administrative and EU regulations on the different authorities from different countries to reach a high level of compliancy and standardisation for the upcoming pilot cases. Moreover, this task will be responsible for the end-users' training activities, allowing them to use the FLEXI-cross platform and solutions and providing guidance to interested third parties.	Section 3 and 4	In this section the strategy for the capacity building and the training activities will be developed and planned

2 Dissemination, Communication and Collaboration Status

This section aims to build upon the foundation laid by the deliverable D4.2 "Initial dissemination, communication, capacity building and training activities report", it shows the progress that was witnessed under the T4.1 "Dissemination, communication and collaboration activities" since the delivery of D4.2. the content is organized into two sections, highlighting communication and dissemination activities.

2.1 Communication and Collaboration Activities

As outlined in the GA, this section provides the FLEXI-cross communication activities, and shows the project partners' various approaches in achieving such activities, while promoting the outcomes of the project to the wider community, such as, the general public, the media, etc.
A detailed description of the communication channels and tools of the project is provided, so that the FLEXI-cross consortium reaches its communication target values.

Below Table 2, lists all the communication activities that are expected during the whole course of the project, along with the corresponding KPIs that need to be met.
The current values per KPI are illustrated in each paragraph dedicated to a specific KPI.

Table 2: Communication activities

Communication Channels	Description	Target Audiences	Timeline & Target Values
Project Website	A project website allows easy retrieval of main action data with a few clicks while acting as the core source of information about the project's objectives and activities. The first version will be online by M02, and will be constantly maintained and updated regularly, running also for 3years after project end - **EBOS** undertakes the task.	All end-users	From M02 to 3 years after the end of the project Online by: **M02** Unique Visitors from M12: **>1,000** Unique Visitors from M36: **>2,500**
Social Media	FLEXI-cross will build and maintain actively its online presence in several social media channels, using X-platform and LinkedIn when interacting with research and innovation communities spreading out new publications, while Facebook and Podcasts will be used for wide community engagement, - **EBOS** undertakes the task.	All end-users	From M02 to M36 Size of online community (by M36): **>4,000** No. of impressions (monthly average): **>500**
e-Newsletters and Email Campaigns	e-newsletters will provide a snapshot of the main activities	Border Authorities	Quarterly Issues starting from M04

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Communication Channels	Description	Target Audiences	Timeline & Target Values
	and achievements of FLEXI-cross, whereas broadcasting messages to a target pool of contact points via email is a highly effective measure of engagement, especially when promoting events and outcomes among different domains. Professional marketing platforms (i.e., Sendinblue and Mailchimp) will be used to automate the distribution among contact points - **ENG** undertakes the task.	Staff, Technology Providers and Entrepreneurs, Frequent Travellers, Networks of Practitioners project.	e-Newsletters contributed/released: **9** Total Mailing List Contact Points: >**1,500**
General Spreading	Leveraging online publishing platforms (e.g., Medium, WIRED) and magazines (e.g. CORDIS Research EU Magazine) will enable FLEXI-cross to reach out to a broader audience. Also, all partners will disclose non-confidential information of the project in their national language to local/regional newspapers, media and press, and the impact of the demonstrated trials will be promoted – **ATP, KEMEA** and **BEIA** will be leading the public spreading and the authorities and citizen engagement around Europe, with main focus on the demo countries, and beyond.	ALL End-users with a focus on staff involved in border management.	From M09 to M36 Press releases: **>10** Events co-organised with local authorities: **>3** Attendance per event: **>100**
Joint Activities with relevant Actions	To further amplify and maximise the outreach of the project's results and to feed them into related international work streams, FLEXI-cross will pursue promotion strategies of various initiatives and clusters, and to contribute and support their actions; i.e., DAIRO through **WINGS**, AIOTI through **EBOS**, NESSI, FIWARE and EOS through **ENG**, COSI, EES, FRAN and eu-LISA through **HPOL**, EUROXR through **ICCS**, EARTO and ECSO through **KEMEA**.	All Stakeholders with a special focus on ICT Professionals, Societal Actors, Alliances, relevant Public Bodies, Vertical Associations.	From M18 to M36 Number of relevant initiatives and clusters to contribute: **5** Co-organised activities: **>4**

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Communication Channels	Description	Target Audiences	Timeline & Target Values
Printed Material	Reference promotional instruments when participating in events, including brochures, catalogues, posters and any other laid out paper-based resource. Most of the material will be available as e-documents and printing will occur as required. FLEXI-cross will explore alternatives for labelling gadgets and merchandise, which have turned out quite an effective means of promoting initiatives among a less specialised audience - **EBOS** undertakes the design.	ALL End-users attending physical events.	From M02 to M36 No. of hard copies (i.e., brochures, flyers, posters, etc.) distributed: **>2,000** Roll-up Banners: **>4**
Blogs	FLEXI-cross will connect and execute periodic broad promotion activities in open communities, blogs, non-profit organisations and channels such as: Gitter Communities - **ENG** undertakes the task.	Digital Innovation Hubs, Relevant Associations, Academia.	From M23 to M36 Unique Publications/Contributions to Blogs: **>6** Different Blogs to Post: **>4**
Multimedia	The project will produce multimedia material (a short video for each trial) to have a self-explanatory and appealing presentation of the project, leveraging available distribution channels of promotion (e.g., YouTube, Vimeo). Also, a set of video interviews, both from scientific partners and citizens, to collect inputs, taking advantage of plenary meetings and events of relevance will be implemented – **WINGS** undertakes the task.	ALL End-users focusing on Local Authorities and Revenant Actors.	From M09 to M36 No. of short videos and interviews produced (in total): **4** Number of views: **>3,000**

2.1.1 Project website

The FLEXI-cross website (https://flexicross-project.eu/) serves as the primary communication channel between the general public and the FLEXI-cross partners. It aims to provide information about the project and regular updates on various project activities.
The website is designed to be user-friendly and accessible across different operating systems and devices. Within this section we will show the progress in terms of project activities posted on the website in addition to some dashboard graphs that shows some analytics.

For the analytics, we will use the google analytics that will help the FLEXI-cross consortium document and track the project website pages that users are visiting. All the information are described in the cookies policy available at the dedicated page https://flexicross-project.eu/cookies-policy/. It is a methodical way to acknowledge users' interest in the project, improve the website content, and create a better online interaction with the project. The main aim of recording user's engagement on the project website and its various pages is to ensure that the project is well-disseminated and communicated, the content is understandable and of good quality, and hence, it ensures user's return and commitment to the FLEXI-cross website.

Below Figure 1 shows the project website home page.

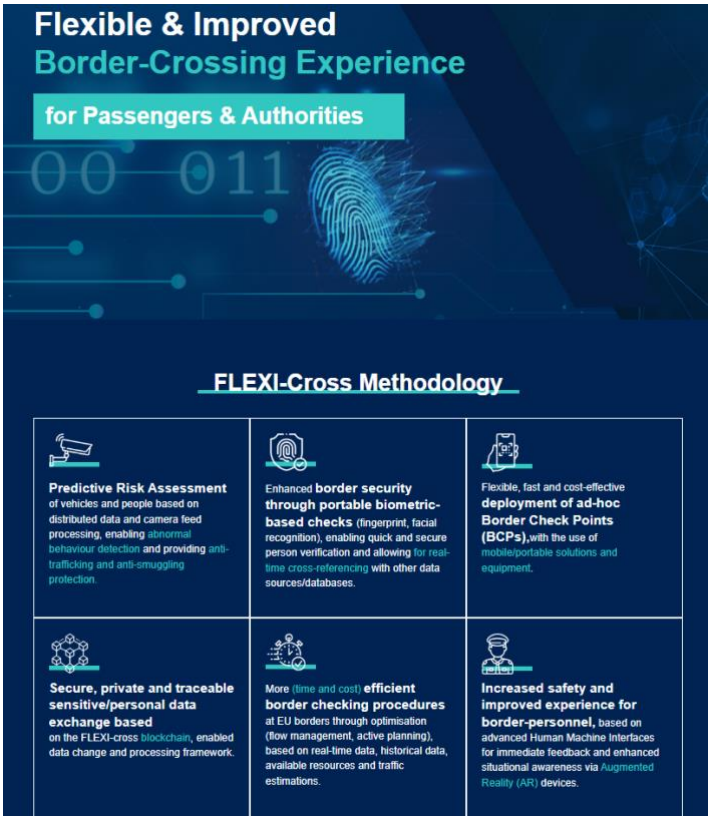


Figure 1: The FLEXI-cross project website home page.

2.1.1.1 Project website analytics

Since the 1st of September 2022, which marked the start of FLEXI-cross project, project partners participating in the WP4 "Impact Maximization and Outreach" and especially in the T4.1 "Dissemination, communication and collaboration activities" with the lead of EBOS, managed to engage and attract external stakeholders and expose the project research activities and achievements.

The effort invested was reflected by the number of users visiting the website and the number of engagements from the visitors, accordingly, the website was visited by 395 unique visitors and experienced around 514 engaged sessions until 11th of January 2024, most of the sessions were direct engagement or through organic search, below Table 3 show the number of new users acquired every month starting from February 2023 until December 2024. The table below shows the total number of visitors since the project start; at the end of each month, we check the unique visitors for the month and the cumulative unique visitors from the start of the project.

Table 3: The acquisition of new users per month.

	Website	
Month	**number of unique visitors**	**total number of unique visitors (from project starts)**
Feb-23	29	165
Mar-23	42	207
Apr-23	22	229
May-23	25	254
Jun-23	20	274
Jul-23	20	288
Aug-23	22	310
Sep-23	22	323
Oct-23	23	342
Nov-23	30	364
Dec-23	20	384
Current total	275	3140

Figure 2, shows the trend of the new users acquired since February 2023.

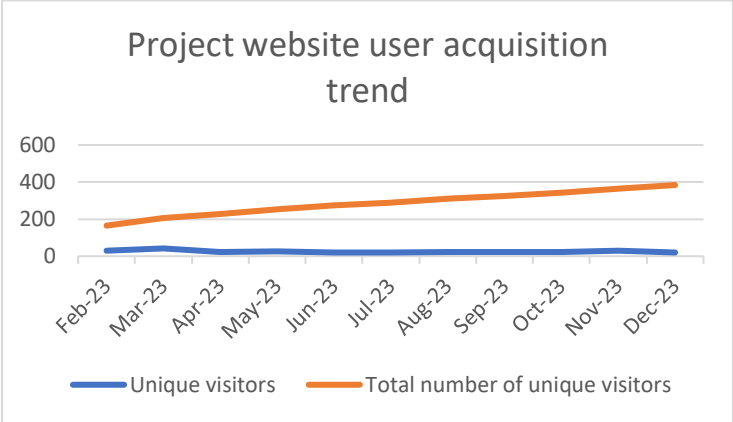


Figure 2: The Website user acquisition.

Below figures show some analytics for the project website.

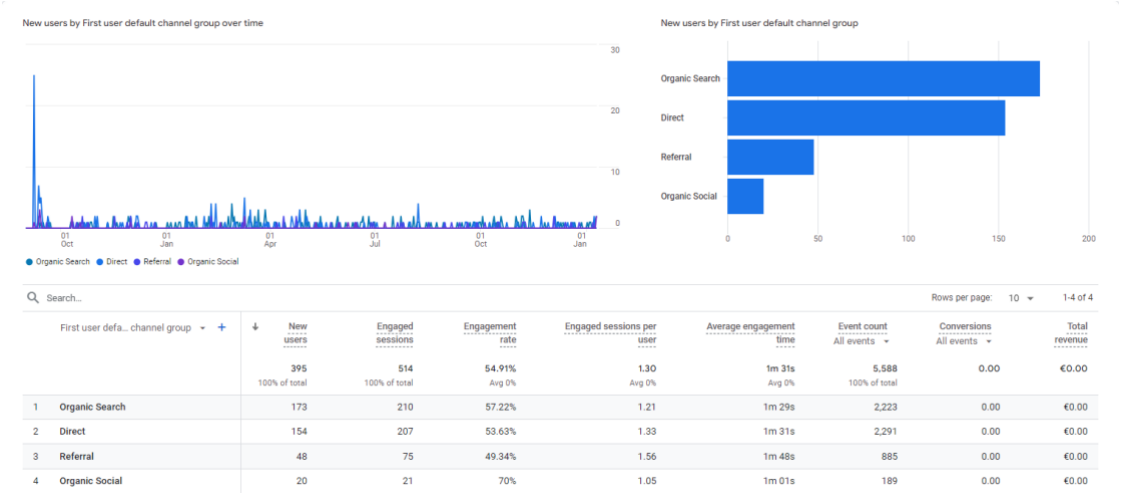
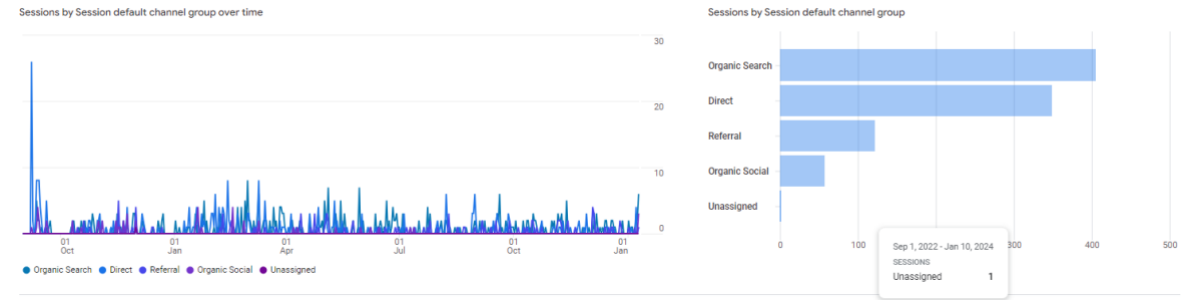


Figure 3: The user acquisition.

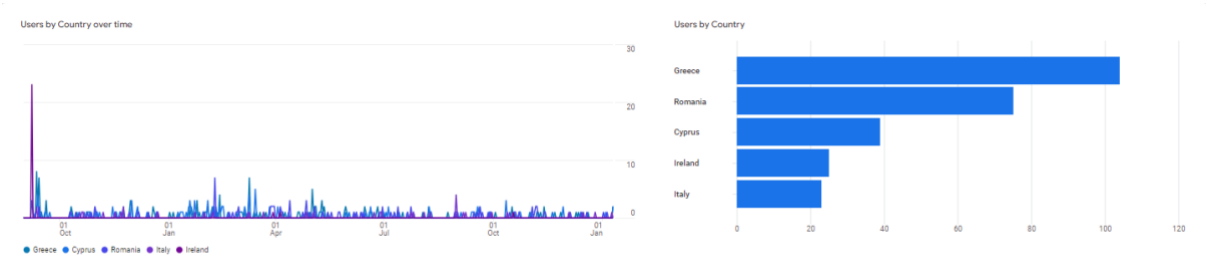
Figure 3 shows a high engagement rate, of 54.9% which reflect the high interest of the project audience.



	Session default channel group	Users	Sessions	Engaged sessions	Average engagement time per session	Engaged sessions per user	Events per session	Engagement rate	Event count All events	Conversions All events	Total revenue
		396 100% of total	936 100% of total	514 100% of total	38s Avg 0%	1.30 Avg 0%	5.97 Avg 0%	54.91% Avg 0%	5,588 100% of total	0.00	€0.00
1	Organic Search	195	405	234	38s	1.20	6.01	57.78%	2,433	0.00	€0.00
2	Direct	158	349	193	41s	1.22	6.32	55.3%	2,207	0.00	€0.00
3	Referral	58	122	59	30s	1.02	5.18	48.36%	632	0.00	€0.00
4	Organic Social	26	57	27	45s	1.04	5.53	47.37%	315	0.00	€0.00
5	Unassigned	1	1	0	4s	0.00	1.00	0%	1	0.00	€0.00

Figure 4: The traffic acquisition.

Figure 4 above shows the type of search per user. We can see that most of the users looked either organically, 195 users out of the 395 or direct, 158 out of the 395, those figures give an indication of the seriousness of the audience in following up on the project progress and achievements.



	Country	Users	New users	Engaged sessions	Engagement rate	Engaged sessions per user	Average engagement time	Event count All events	Conversions All events	Total revenue
		396 100% of total	395 100% of total	514 100% of total	54.91% Avg 0%	1.30 Avg 0%	1m 31s Avg 0%	5,588 100% of total	0.00	€0.00
1	Greece	104	104	139	64.95%	1.34	1m 49s	1,471	0.00	€0.00
2	Romania	75	75	88	56.77%	1.17	1m 17s	841	0.00	€0.00
3	Cyprus	39	38	116	53.46%	2.97	2m 35s	1,270	0.00	€0.00
4	Ireland	25	25	3	11.54%	0.12	6s	111	0.00	€0.00
5	Italy	23	23	29	37.18%	1.26	2m 05s	522	0.00	€0.00
6	Germany	13	13	12	66.67%	0.92	1m 18s	119	0.00	€0.00
7	Luxembourg	11	10	14	63.64%	1.27	33s	94	0.00	€0.00
8	Moldova	10	10	8	36.36%	0.80	1m 07s	111	0.00	€0.00
9	Belgium	9	8	7	33.33%	0.78	27s	75	0.00	€0.00
10	Spain	9	8	16	76.19%	1.78	2m 04s	157	0.00	€0.00

Figure 5: Users by country.

Most of the project website visitors came from the country where the consortium partners come from, which makes sense, Figure 5 above shows the users per country.

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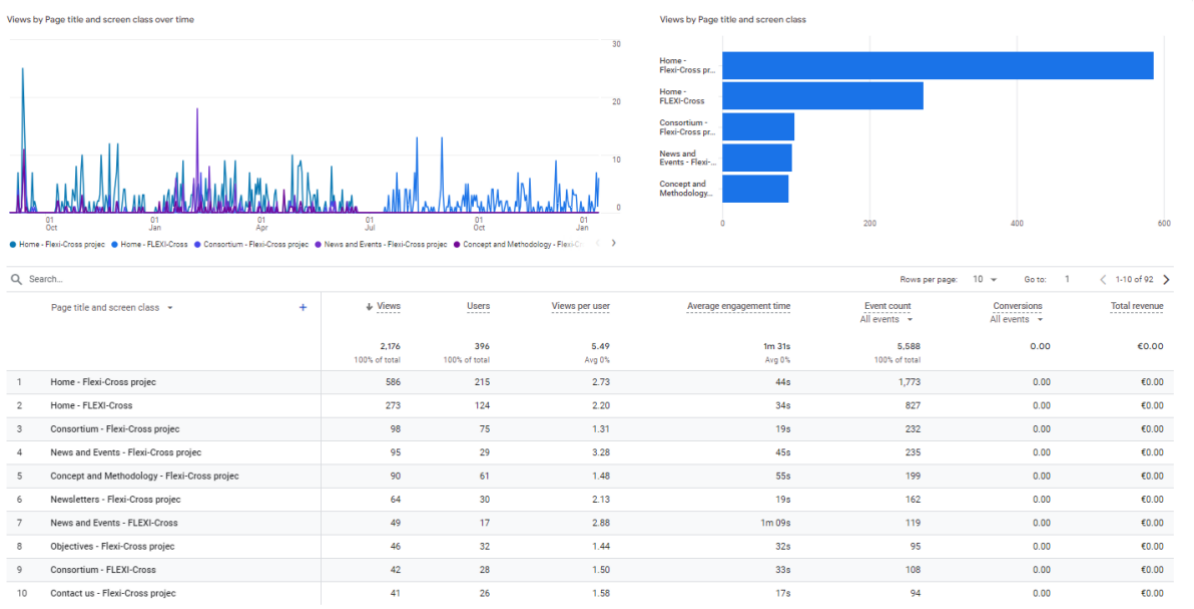

	Page title and screen class	Views	Users	Views per user	Average engagement time	Event count All events	Conversions All events	Total revenue
		2,176 100% of total	396 100% of total	5.49 Avg 0%	1m 31s Avg 0%	5,588 100% of total	0.00	€0.00
1	Home - Flexi-Cross projec	586	215	2.73	44s	1,773	0.00	€0.00
2	Home - FLEXI-Cross	273	124	2.20	34s	827	0.00	€0.00
3	Consortium - Flexi-Cross projec	98	75	1.31	19s	232	0.00	€0.00
4	News and Events - Flexi-Cross projec	95	29	3.28	45s	235	0.00	€0.00
5	Concept and Methodology - Flexi-Cross projec	90	61	1.48	55s	199	0.00	€0.00
6	Newsletters - Flexi-Cross projec	64	30	2.13	19s	162	0.00	€0.00
7	News and Events - FLEXI-Cross	49	17	2.88	1m 09s	119	0.00	€0.00
8	Objectives - Flexi-Cross projec	46	32	1.44	32s	95	0.00	€0.00
9	Consortium - FLEXI-Cross	42	28	1.50	33s	108	0.00	€0.00
10	Contact us - Flexi-Cross projec	41	26	1.58	17s	94	0.00	€0.00

Figure 6: User views.

The website witnessed around 2176 view sessions since the beginning of the project, most of the view session either converged to the home page or to the consortium and news and events pages. Figure 6 above, shows the corresponding number of views per each project website page.

2.1.2 Social Media activities

In line with project partner commitment for a transparent communication and widespread dissemination of project information, FLEXI-cross partners led by EBOS has established a strong presence on the main social media platforms, LinkedIn, Facebook, X (Former Twitter), and YouTube, which serve as dynamic pages and environment to engage with the project audience and share the latest developments and achievements.

1. **LinkedIn:** LinkedIn page serves as a professional platform for project connect addressed to industry experts, collaborators, and stakeholders.
   Regular updates on project activities, events and research findings and achievements are shared through this medium to foster a community of knowledge exchange.
2. **Facebook:** Facebook page provides a more casual and interactive space to target broader audience such as citizens.
   Announcement of events, and project highlights are shared through this medium.
3. **X** (Former Twitter): X page is used for quick information dissemination, ensuring that followers stay informed about the latest news and activities related to the FLEXI-cross project.
4. **YouTube:** Youtube channel is a powerful medium, and serves as a repository for project videos, webinars, and multimedia content.

By using the above social media platforms, project partners aim to improve the project awareness and audience engagement, the selection of the platform was strategically selected due to the profile of users using each of the platform which give the project more exposure and visibility.
In below Tables, 4, 5 and 6 we can find the posts created on each of the project social media pages, X-platform, LinkedIn and Facebook respectively, along with some analytics for each, during the respective month of postage.

Table 4: X-platform posts with analytics

X-platform						
Month	Total number of followers	Total number of tweets	Details	Total number of retweets	Total number of likes	Total number of views
Feb-23	57	1	ingenious virtual participation	1	2	146
Mar-23	62	2	Promenade	1	2	29
			1st Newsletter	1	1	21
Apr-23	66	1	RISE-SD participation	1	1	33
May-23	68	2	1st video for project	0	1	35
			RISE-SD happening now	2	3	96
Jun-23	76	2	FLEXI-cross at RISE-SD event	2	2	16
			PC presenting the project in project for policy seminar	1	3	41
Jul-23	79	0	-	-	-	-
Aug-23		0	-	-	-	-
Sep-23	115	4	4th plenary meeting	2	2	73
			87th Thessaloniki International Trade Fair	1	1	38
			synergy with TENSOR project	0	0	20
			PC participation in MEDEA panel session for border security	1	2	57
Oct-23	115	7	7 partners presented their companies and their contribution to the FLEXI-cross project	7	9	112
Nov-23	115	2	pre-1st technical workshop dissemination	2	4	34
			FLEXI-cross participation in METICOS final event - BES cluster	1	2	33
Dec-23	115	1	1st technical workshop	1	2	37
Jan-24		2	BEIA participation in Gotech 23			

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X-platform						
			workshop announcement with I-SEAMORE and ODYSEUS			

Table 5: LinkedIn posts with analytics

Linkedin					
Month	Total number of followers	Total number of posts	Details	Repost	Impressions
Feb-23	86	1	Ingenious virtual participation	2	269
Mar-23	92	2	Promenade	3	179
			1st Newsletter	2	246
Apr-23	96	1	RISE-SD participation	2	182
May-23	100	2	1st video for project	4	839
			RISE-SD happening now	10	417
Jun-23	107	3	FLEXI-cross at RISE-SD event	4	352
			Video for PC in RISE-SD	4	516
			PC presenting the project in project for policy seminar	1	249
Jul-23	108	0	-	-	-
Aug-23		0	-	-	-
Sep-23	132	4	4th plenary meeting	0	150
			87th Thessaloniki International Trade Fair	5	616
			synergy with tensor project	2	340
			PC participation in MEDEA panel session for border security	0	131
Oct-23	132	7	7 partners presented their companies and their contribution to the FLEXIcross project	10	1713
Nov-23	132	2	pre-1st technical workshop dissemination	4	160

Linkedin					
	132		FLEXI-cross participation in METICOS final event - BES cluster	1	95
Dec-23	132	1	1st technical workshop	2	150
Jan-24		2	BEIA participation in Gotech 23		
			workshop announcement with I-SEAMORE and ODYSEUS		

Table 6: Facebook posts with analytics

Facebook							
Month	total number of followers	total number of likes	Total number of posts	details	post impressions	post reached	post engagement
Feb-23	56	51	1	ingenious virtual participation	35	25	0
Mar-23	56	51	2	Promenade	26	24	3
				1st newsletter	30	27	8
Apr-23	58	53	1	RISE-SD participation	20	18	3
May-23	62	55	2	1st video for project	13	10	6
				RISE-SD happening now	8	5	0
Jun-23	61	55	3	FLEXI-cross at RISE-SD event	12	10	6
				Video for PC in RISE-SD	5	3	3
				PC presenting the project in project for policy seminar	30	29	2
Jul-23	61	55	0	-	-	-	-
Aug-23			0	-	-	-	-
Sep-23	62	56	4	4th plenary meeting	42	37	6
				87th Thessaloniki International Trade Fair	15	12	4

Facebook							
				synergy with tensor project	5	3	0
				PC participation in MEDEA panel session for border security	9	8	2
Oct-23	62	56	7	7 partners presented their companies and their contribution to the FLEXIcross project	44	32	2
Nov-23	62	56	2	pre-1st technical workshop dissemination	22	22	0
	62	56		FLEXI-cross participation in METICOS final event - BES cluster	27	25	2
Dec-23	62	56	1	1st Technical Workshop	2	2	4
Jan-24			2	BEIA participation in Gotech 23			
				Workshop announcement with I-SEAMORE and ODYSEUS			

Concerning the audience interaction with the project activities over the social media pages, it is imperative to highlight the high engagement, especially through user impressions that reflect the user interest with the project domain and achievements.
Below Table 7, shows the number of impressions recorded on monthly basis, and Figure 7 shows the trends of the impressions throughout the project progress on the different social media platform, and Figure 8 shows the total impressions from all the platform.

Table 7: Project impressions over the different social media platform

Impressions	LinkedIn	Facebook	X	Total
January 2023	882	125	280	1287
February 2023	755	44	166	965
March 2023	544	81	104	729
April 2023	392	32	85	509

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May 2023	1161	26	107	1294
Jun 2023	1364	67	161	1592
July 2023	220	0	106	326
August 2023	28	0	15	43
September 2023	1523	93	137	1753
October 2023	2053	65	208	2326
November 2023	368	62	118	548
December 2023	444	33	114	591

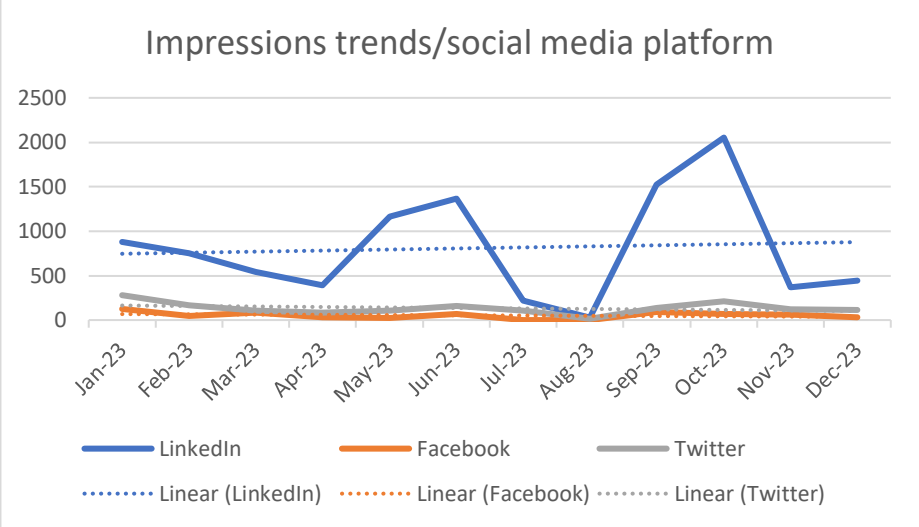

Figure 7: Impressions/ social media platform

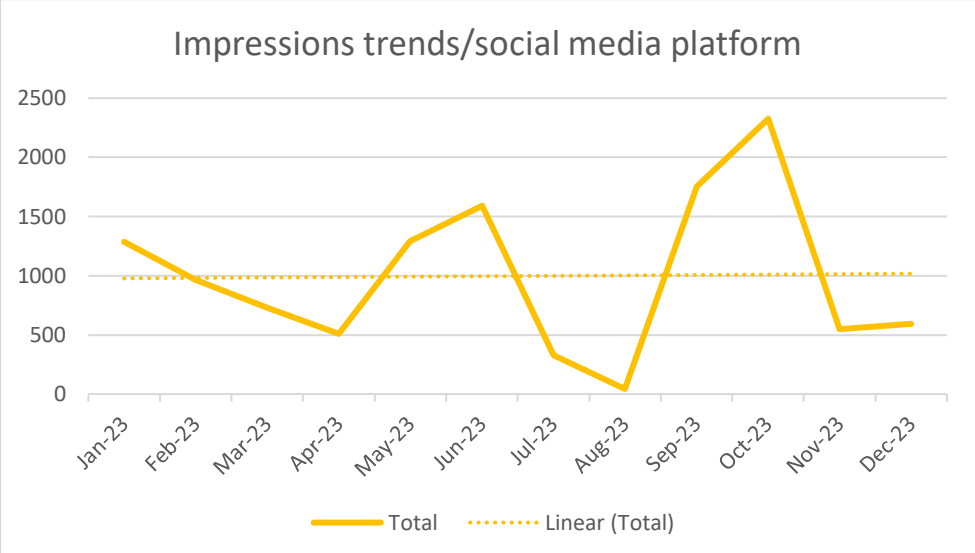

Figure 8: total impressions from all social media platform

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Throughout the year, the anticipated trend in social media impressions reveals a dynamic pattern. It is worth noting that the peaks in June and October exhibit an increasing trend, showcasing sustained growth in social media activity which makes us optimistic regarding the user interests.
For more insights on the user engagement, below Tables 8, 9 and 10, shows some additional metrics for measuring the user interactions.

Table 8: The Project Clicks/Reach/Engagement over the different social media platform.

Clicks/Reach/Engagement	LinkedIn clicks	Facebook reach	X engagement	Total
January 2023	57	91	27	175
February 2023	46	28	7	81
March 2023	30	58	8	96
April 2023	24	23	7	54
May 2023	7	15	15	37
Jun 2023	57	49	24	130
July 2023	63	0	0	63
August 2023	0	0	0	0
September 2023	276	68	18	362
October 2023	14	46	26	86
November 2023	21	56	13	90
December 2023	25	31	9	65

Table 9: The project posts over the different social media platform

Posts	LinkedIn	Facebook	X	Total
January 2023	3	4	5	12
February 2023	3	1	1	5
March 2023	2	2	2	6
April 2023	1	1	1	3
May 2023	2	2	1	5
Jun 2023	3	3	3	9
July 2023	0	0	0	0
August 2023	0	0	0	0
September 2023	5	4	4	13
October 2023	6	7	8	21
November 2023	2	2	2	6
December 2023	1	1	1	3

Table 10: The project likes and reactions over the different social media platform

Likes and reactions	LinkedIn	Facebook	X	Total

January 2023	45	8	4	57
February 2023	32	0	2	34
March 2023	52	8	5	65
April 2023	24	2	3	29
May 2023	74	1	5	80
Jun 2023	127	6	7	140
July 2023	3	0	5	8
August 2023	2	0	0	2
September 2023	102	5	1	108
October 2023	85	2	13	100
November 2023	27	2	4	33
December 2023	13	2	7	22

The main key observations from above tables are listed below.

1. LinkedIn Impressions:
    - The project started the year with a substantial 882 impressions on LinkedIn in January.
    - Impressions on LinkedIn experienced a significant surge in October, reaching the highest point at 2,053.
    - Overall, LinkedIn engagement showed fluctuations but demonstrated a positive trend with peaks during certain months.
2. Facebook Impressions:
    - Facebook impressions had a steady start in January but experienced a decline, reaching the lowest point with 33 impressions in December.
    - The project witnessed minimal to no engagement on Facebook during July and August, due to the summer vacation in Europe which encounter the minimum project activities.
3. X Impressions:
    - X impressions fluctuated over the year, peaking in June with 161 impressions.
    - August recorded the lowest X impressions at 15, due to the summer vacation in Europe which encounter the minimum project activities.

In conclusion, the provided figures illustrate the dynamic nature of the FLEXI-cross project's social media reach. Monitoring these impressions helps us understand the trends, identifying successful engagement periods, and highlighting areas for potential improvement in social media strategy.

2.1.3 E-Newsletters and Email campaigns

E-newsletters under the FLEXI-cross project aims to share any news, such as achievement, finding or milestone reached with the audience that showed interest with the project and subscribed to the mailing list.
To manage the project mailing list, we are using the mail chimp platform and till date there are 83 contacts already subscribed.

Through the project website, visitors can register their emails to receive project newsletters, achievements and progress, by this process, users grant transparently their consent for receiving emails from the project.
Users can subscribe to the mailing list directly from the project website through the newsletter tab under the Dissemination and communication drop down list, by registering their First name, last name and their email address.
Figure 9 shows a screen shot of the subscription window.

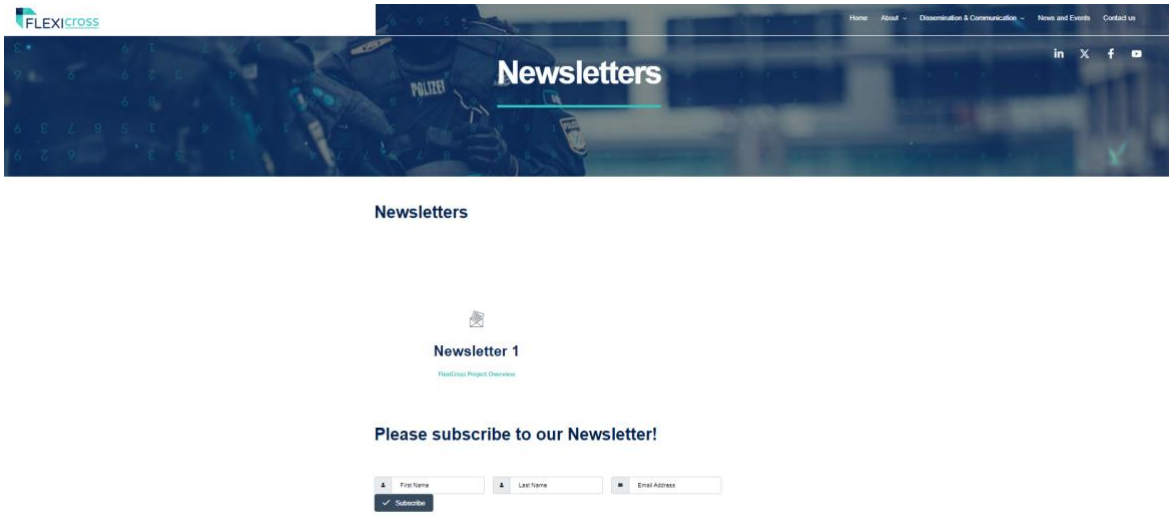

Figure 9: The subscription window to the project mailing list.

There was 1 campaign done so far for the 1st E-newsletter, below Figure 10 shows the report showing what was the penetration rate and the click rate.

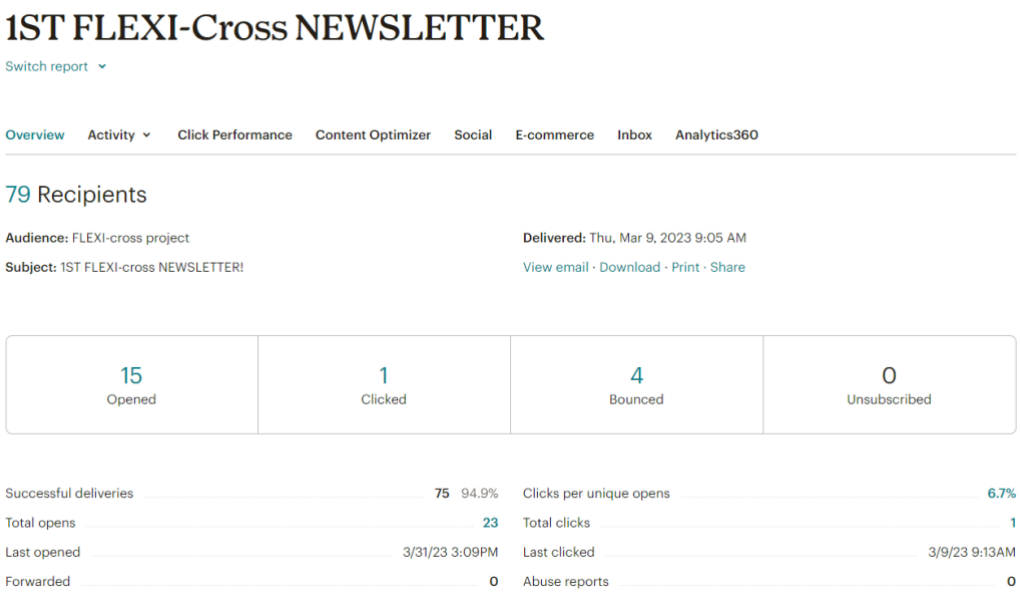

Figure 10: The first email campaign.

From the total of 9 E-newsletters expected to be delivered throughout the course of the project, 1 was already developed and shared through a campaign. The objective of the 1st newsletter was to

raise awareness of the project kick-off and to show its objectives, use cases, and the partners that make up the project consortium.

Figure 11 shows the first page of this newsletter.

WELCOME TO THE 1ST FLEXI-cross NEWSLETTER!

It's time to fill you in on the beginnings and latest updates of the FLEXI-cross project.

THE PROJECT

FLEXI-cross targets the deployment and continuous validation of a toolkit of innovative border-checking solutions in real operational environments. These solutions will deliver increased security and reliability of border checks for people and goods, which can be enabled by innovative technologies [5G and Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning (ML), Big Data and Predictive Analytics, Cloud and Edge Computing and more], aiming at enhancing and improving the border management capabilities.

The resulting flexibility and dynamicity of border check planning will offer novel capabilities, such as the dynamic deployment of checkpoints and support via mobile applications for border personnel while guaranteeing a high level of security, the privacy of personal data, and the protection of people's fundamental rights. The design and architecture of the implemented solutions will be based on the analysis of the technical and service requirements of the EU border authorities (e.g., Frontex) and will offer seamless integration with existing systems and devices currently utilised by them.

Figure 11: The screenshot of the first newsletter.

2.1.4 General Spreading

This part of our communication activities is subdivided into press releases and events co-organized with local authorities. The latter, however, is still not triggered, awaiting significant and mature results and developments within the project before commencement.
As for the press release, project partners led by EBOS, has developed and shared the 1st out of the 10 press releases, its main objective was to announce the project kick off.

2.1.5 Joint activities with relevant actions

To further amplify and maximise the outreach of the project's results and to feed them into related international work streams, FLEXI-cross partners will pursue promotion strategies of various initiatives and clusters, and to contribute and support their actions; Many initiatives and clusters were suggested during the grant agreement phase, such as DAIRO, AIOTI, NESSI, FIWARE, EOS,COSI, EES, FRAN, eu-LISA, EUROXR, EARTO and ECSO.
Since the beginning of the project, all partners participated in many events related to the border security domain, throughout the participation, partners managed to define a new cluster, which was created by one similar project, METICOS, the BES cluster, standing for Border External Security cluster. BES cluster consists of similar and collaborating projects aiming to mutually support each other in identifying solutions for any challenge, and to cooperate within disseminating valuable and potential

finding or achievement. In addition to create a knowledge database that is expected to change the current state in the areas and fields that each project is working upon.
Currently BES cluster counts to 20 members.
FLEXI-cross project joined the cluster and participated in the METICOS final event, which was at the same time the launch of the cluster, on 26 October 2023.
Dissemination and communication manager along with the project coordinator participated in the event and introduced the FLEXI-cross project, Figure 12 shows presentation of the joining session.

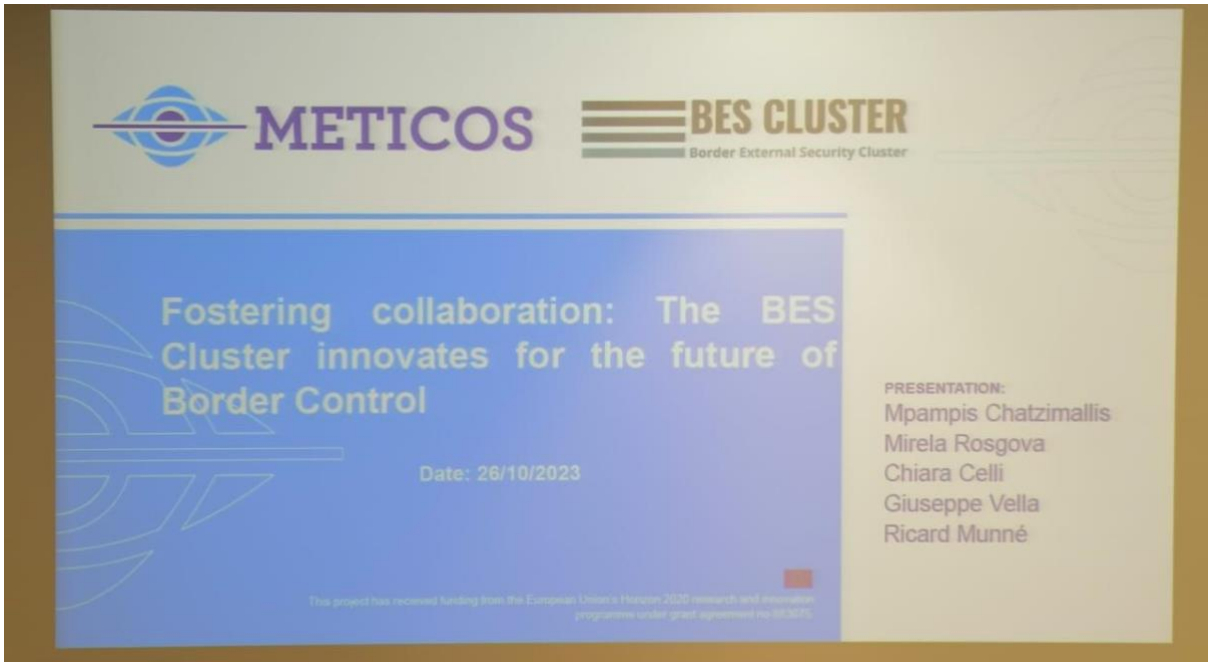

Figure 12: Joining the BES cluster

On the 13 of November 2023, we have followed up on the progress, and scheduled a meeting with METICOS D&C manager to explore more the collaboration and synergy between the different entities.
FLEXI-cross aims for the below through its participation in the cluster:

1. To reach out to broader audience.
2. To scale up to the national administration organizations and cross-border agencies.
3. To exchange information, best practices and methodologies that enable its partners to explore synergies and amplify the potential of pilot activities.
4. To work towards amplifying the influence of sustainability and exploitation plans during the project execution.

As for the co-organized activities, FLEXI-cross partners, took part of several events:

1. On the 27th of October 2023, an event was organized with EU LISA and FRONTEX
2. On the 14th of December 2023, FLEXI-cross took part of a joint workshop to explore the border management domain with both FRONTEX and DG HOME, many other projects participated, such as EURMARS, ISEAMORE, ODYSSEUS and MELCHIOR.
   During the workshop, the head of research and innovation unit from FRONTEX participated along with the policy officer from DG HOME, who gave their feedback and remarks.
3. On the 12th of January 2024, technical manager, project coordinator and D&C manager, participated in a joint workshop with I-SEAMORE, ODYSSEUS, PROMENADE and BAG-INTEL to explore synergy between the project and create an environment for cooperation and collaboration for improved research and discussing findings and achievements.
   During the workshop 3 separate channels, or rooms were created focussing on key aspect for all the projects on the below 3 topics:

1. Technology: focusing on AI, big data Copernicus and other relevant. Aiming to identify crossing points for future synergies that may benefit technical development.
2. Communication & exploitation: aiming to identify and discuss joint communication activities that can be performed between the projects, e.g. joint newsletters, social media campaign & share insights on effective exploitation of our projects' solutions.
3. Ethics: aiming to identify and discuss ethical concerns connected to different technical solutions and specific technologies such as AI, big data, etc.

At the end of the workshop an action plan was discussed between the 3 moderators of the different channels.

Such joint activities are fundamental for FLEXI-cross project for better visibility on the research ongoing under other project within the same domain, in addition to the broadening of the audience that can be reach for engagement reason.

Below Figure 13 shows the cover page for the joint workshop.

Figure 13: The joint workshop cover page.

2.1.6 Printed materials

Reference promotional instruments needed whenever project partners participate in events were designed, developed, and uploaded/shared with all project partners and on the project sharepoint.

EBOS leading this activity, has developed Factsheet, Leaflet and Rollup banner.

For each of the instrument, a print and a web version were created, depending on the use and the application of each.

Below Figures 14, 15 and 16 show the above instruments.

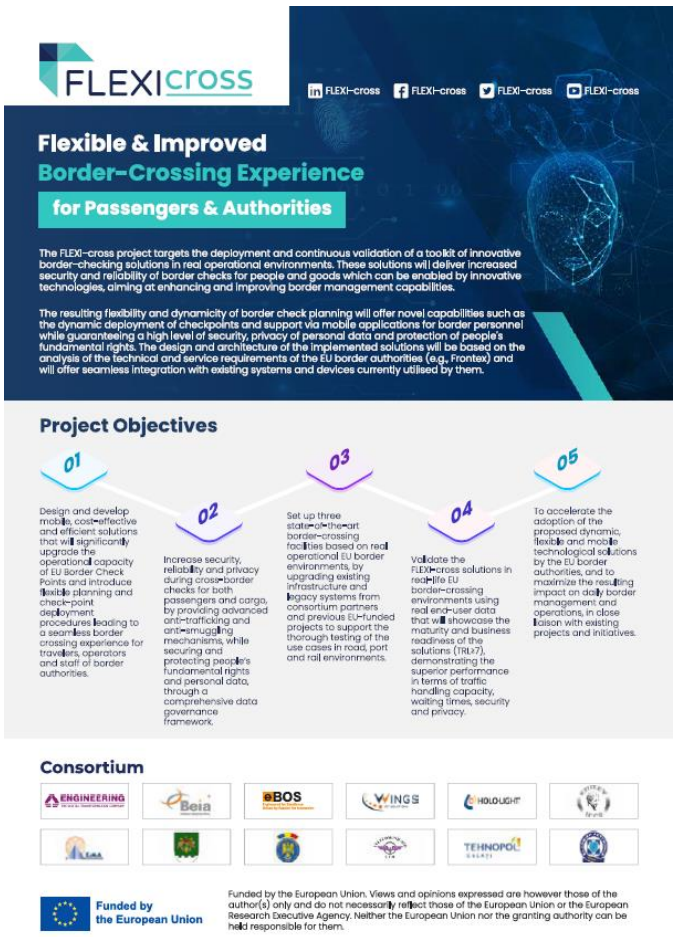

Figure 14: The FLEXI-cross factsheet.

Figure 15: The FLEXI-cross leaflet.

Figure 16: The FLEXI-cross rollup banner.

Throughout the participation of the different partners, especially in RISE SD event and the 87th Thessaloniki trade fair, we have printed around 400 copies of the factsheet and leaflet, in addition to 1 rollup banner.

2.1.7 Multimedia activities

Multimedia activities correspond to the YouTube channel activities, in which we have only 11 subscribers, which makes this channel a bit slow in terms of user activities, but it is worth noting that all the videos and posts on this channel are also shared on LinkedIn, Facebook and X, which could be the reason behind this minimal interaction with the channel.

We have posted till date, 9 videos, the first was an introduction one, the shows graphically the project value proposition, the technologies that will be exploited during the project and aims to make the intended impact, this video was prepared by WINGS.

The other 7 videos are done by different partners from the consortium aiming to give a brief introduction of their corresponding organization and their role within FLEXI-cross project, the 6 partners are: EBOS, WINGS, TCCFR, ATG, IGPF and HPOL.

And the last video was for Mr Guiseppe Vella, FLEXI-cross project coordinator participation in the RISE SD 2023 event, during which Mr Vella introduced the project objectives and goal.

Below Figure 17 below shows the details of the project YouTube channel.

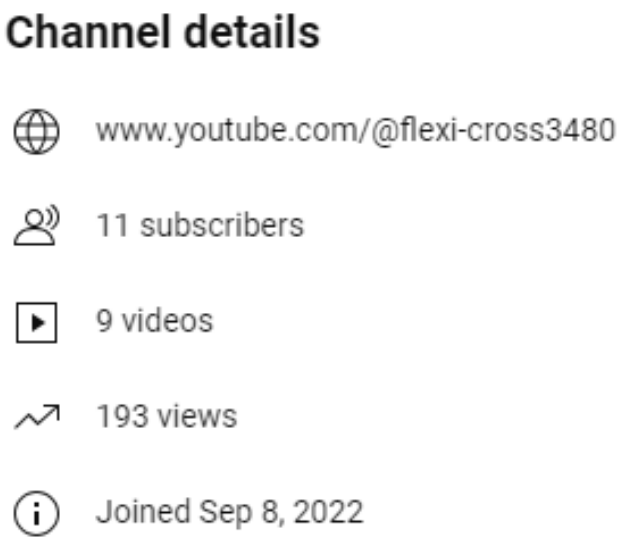

Figure 17: The FLEXI-cross YouTube channel details.

And Figure 18 and 19, show the channel analytics, with 321 views over the whole course of the project, watch time is around 5.8 hours.

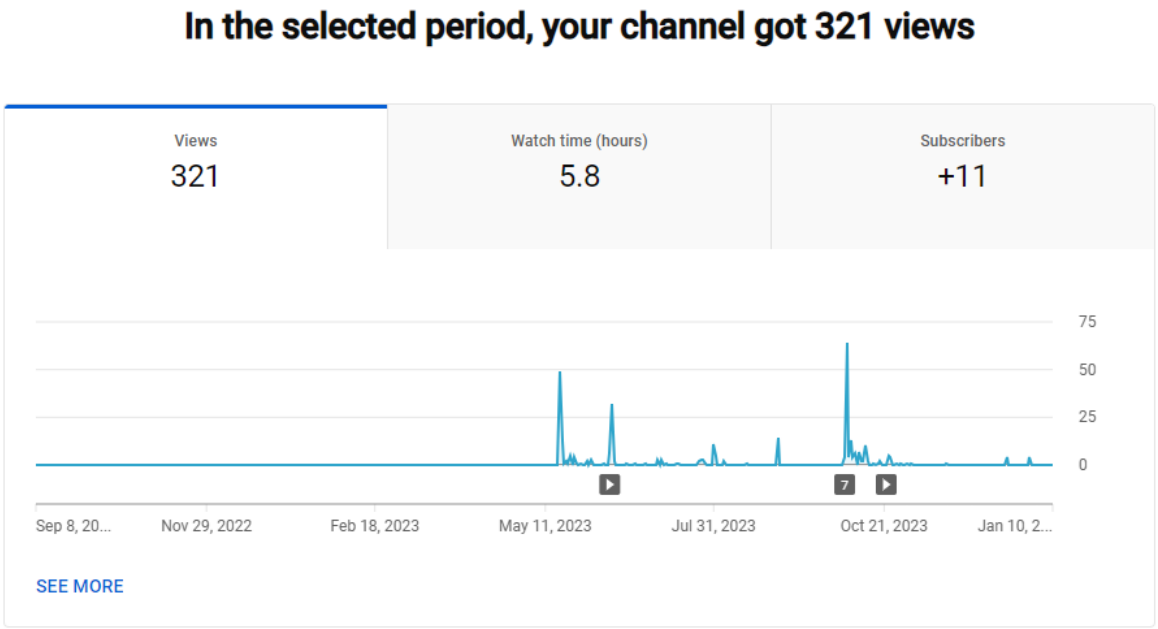

Figure 18: The FLEXI-cross YouTube channel total views.

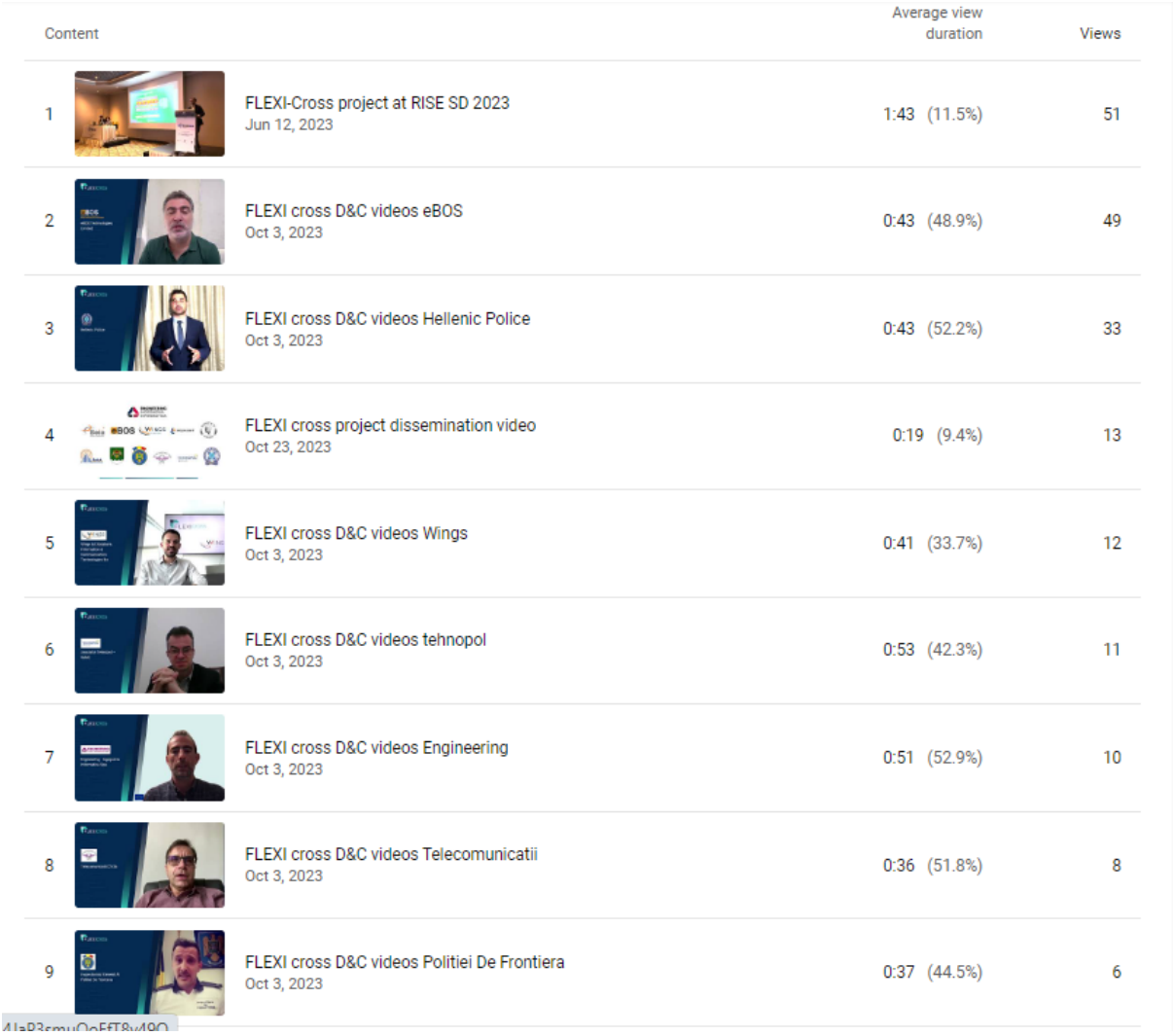

Figure 19: The FLEXI-cross Total views/Video

2.2 Dissemination Activities

Similarly, to Section 2.1, this section provides the FLEXI-cross dissemination activities.
Below Table 11, lists all the dissemination activities that are expected during the whole course of the project, along with the corresponding KPIs that need to be met.

Table 11: The summary of dissemination activities

Dissemination Measures	Description	Target Audience	Target Values
Scientific Publications	Peer-Review Journals: i.e.: Cross Border Journal for International Studies; Global Change, Peace & Security; Big Data Research Journal, Industrial Engineering, etc. Scientific Conferences: Int. Conference on Biometrics for Borders; Int. Border Management Conference; Border Management & Technologies, etc.	Cross-border Authorities, European Border and Coast Guard and its Agency, Personal Data Registries, National Custom Authorities, Academics and Researchers, and Relevant Consortia.	Publishing in Peer-reviewed Journals: > 5 Presenting at Scientific Conferences > 20
Technical Publications	FLEXI-cross will publish and contribute to technical blog posts, articles…, or any other reference from technology providers (bottom-up), as well as references related to the use-case application domains under consideration (top-down). i.e.: Upcoming editions of Frontex Qualifications Framework for	Border Agencies, National Coast Guards, Port Authorities and Private Carriers, IoT and Big Data Communities, Data Spaces, ICT SMEs, Researchers of privacy-preserving solutions.	Publishing Technical Publications: >20 Participation in Industrial Exhibitions with Booths: > 6

Dissemination Measures	Description	Target Audience	Target Values
	Border Guarding, The Data Catalog, etc.		
Source Code Repository	FLEXI-cross will make accessible its software repositories (GitHub and Bitbucket)	Ecosystem of Open-Source Developers, Incubators, Associations and Digital Innovation Hubs, Technical Staff involved in oversight of border management, ICT SMEs, Relevant Consortia.	Number of Publicly Available Deliverables: 7 Source code: publish to 2 different repositories.
Q&A Platform	Conversations about the project repository would be concentrated in reference sites. The selected Q&A platform will be Stack Overflow, the largest, most trusted online community for developers to learn and share knowledge.	Responsible Ministries, Cross-border Operators, Open-source Developers, ICT SMEs.	No. of Scientific Conversations to Participate/Contribute: > 25
Workshops and Trainings	During the project duration, ENG will organise the technical workshops (virtual and physical), BEIA will undertake the training sessions (online training tutorials and physical sessions) & ICCS and KEMEA will co-organise webinars, as a means of knowledge transfer, capacity building, wider outreach and sustainability.	Personnel of Border Institutions, Cross-border Actors and Operators, Data Protection Authorities, Industrial and Public Organisations, IT Experts, Academic and Research Communities.	Technical Workshops: 5 Online and Physical Training Tutorials/Webinars/Training Sessions: >6
Trade Fairs	Participating in symposiums, expo and fairs to interact	All Stakeholders with special focus on staff of border authorities,	Symposiums/Fairs to Participate: >5

Dissemination Measures	Description	Target Audience	Target Values
	with multiple stakeholders. Indicative events: Cross-border Expo, WCO Knowledge Academy for Customs, etc.	agencies and security union.	Brochures to be Distributed: >400
Standards and Policy Contribution	To achieve high-scale and long-lasting impact, FLEXI-cross aims at influencing standards and policy making, thus obtaining the seal of approval for its newly implemented components, and consequently pushing them into production environments. Interaction with SDOs (i.e. ISO/IEC TR 24028:2020), & Contributions to social and policy innovations (T4.4), with the active participation of all partners.	Standards Developing Organisations, Certification Committees, Decision-makers, Data Protection Authorities, Relevant Public Bodies, Border Institutions, Civil Society Organisations.	Standards Contributions to different Organisations: >3 Policy Recommendations: >3

2.2.1 Technical publications

The FLEXI-cross will publish and contribute to technical blog posts, articles, position/white papers, catalogues, books or any other reference from technology providers (bottom-up), as well as references related to the use-case application domains under consideration (top-down), in addition project partners commit to participate in industrial exhibitions, this participation could also come with a booth to foster the project presence in such exhibitions.
So far, several project partners managed to participate in 3 industrial exhibitions:

1. RISE-SD with a stand: ENG, HPOL and KEMEA represented the project to amplify the project impact and highlight the project commitment to revolutionize border security and capabilities for both passengers and authorities.
   To participation was disseminated on the website and all the project social media platforms.

   Below Figures 20, shows how the project coordinator, Dr. Guiseppe Vella took the stage and delivered an insightful presentation on the project revolutionary project toolkit.

And Figure 21, shows the project partners that participated in the event.

Figure 20: The project coordinator presenting the FLEXI-cross project

Figure 21: FLEXI-cross partners participating in the RISE SD event.

The event witnessed a high rate of engagement from the audience, and this was due to the many posts generated and posted on the social media pages.
On LinkedIn, three different posts were shared with the project audience, the first one was posted at the same time of the event, the second was posted after the event to explain the outcome of the participation and the final one was for the video showing the project coordinator presentation.

The first post, “happening now”, received 466 impressions and 72 engagement sessions, with 20.17% engagement rate, below Figure 22 shows the performance of the post.

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Figure 22: Illustration of the post-performance.

The second post, "Exciting announcement" received 388 impressions and 56 engagement sessions, with 23.71 % engagement rate, below Figure 23 shows the performance of the post.

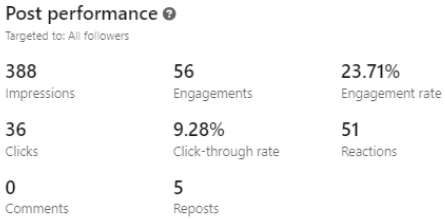

Figure 23: Illustration of the post-performance.

And the final post, received 576 impressions and 35 engagement sessions, with 8.51 % engagement rate, below Figure 24 shows the performance of the post.

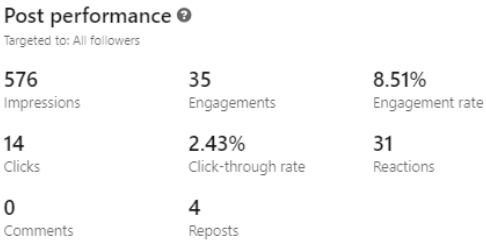

Figure 24: Illustration of the post-performance.

Similarly, this participation was posted on Facebook. Again for 3 posts that generated 10 impressions and 5 reach, 16 impressions and 11 reach and 10 impressions and 4 reach respectively.

On the X (Former Twitter) platform there was 2 posts that generated, the first 110 impressions and 15 engagement and the second 40 impressions and 9 engagements.

In addition, this participation was added to the project website under the news and event tab.

2. 87th international fair of Thessaloniki: KEMEA has represented the FLEXI-cross project during this prestigious trade fair, and showcased the ground-breaking initiative.
   The participation was disseminated on the three project social media pages, and witnessed the engagement shown in the respective figures below.

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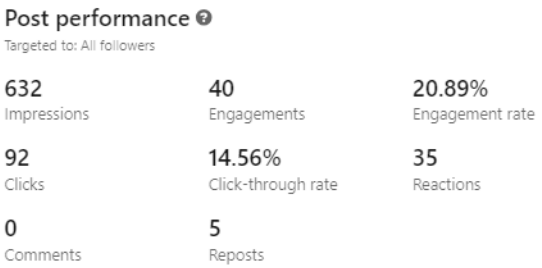

Figure 25: The LinkedIn post performance for Thessaloniki trade fair.

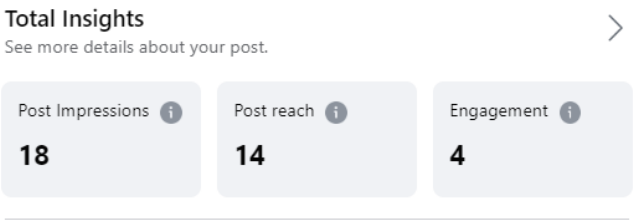

Figure 26: The Facebook post-performance for Thessaloniki trade fair.

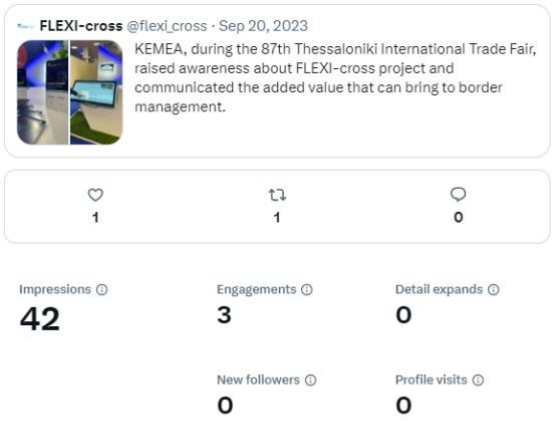

Figure 27: The X-platform post-performance for Thessaloniki trade fair.

In addition, this participation was added to the project website under the news and event tab.

3. Gotech world 2023 event: BEIA has represented the FLEXI-cross project during this prestigious In Bucharest Romania.
   Again, the participation was disseminated on the three project social media pages, and witnessed the engagement shown in the respective figures below

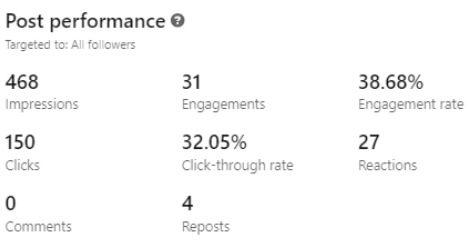

Figure 28: The LinkedIn post performance for GoTech23

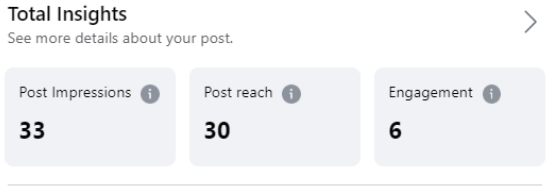

Figure 29: The Facebook post performance for GoTech23.

Figure 30: The X-platform post-performance for GoTech23.

In addition, this participation was added to the project website under the news and event tab.

2.2.2 Workshops and Trainings

During the project duration, project partners will organise technical workshops (virtual and physical), training sessions (online training tutorials and physical sessions) and will co-organise webinars, as a means of knowledge transfer, capacity building, wider outreach and sustainability.

The First technical workshop was done internally, between all the project partners, virtually on 4 December 2023. During the workshop each technical partner showcased the modules that make up the whole toolkit, but as a standalone module, this was considered as the modules 1st drop delivery, and shall be followed by the 2nd drop, the integrated modules, which is expected to be finalized in October 2024.

During the workshop, a virtual round table was set up, moderated by the project coordinator, Mr Giuseppe Vella. On the table an interactive discussion took place between technical partners and the end users represented by ATG, TCCFR, IGPF and GIBP to align expectations from the outcome of the modules and the toolkit as a whole.

This event was disseminated over the project website and the social media, below Figures show some analytics of the post-performance.

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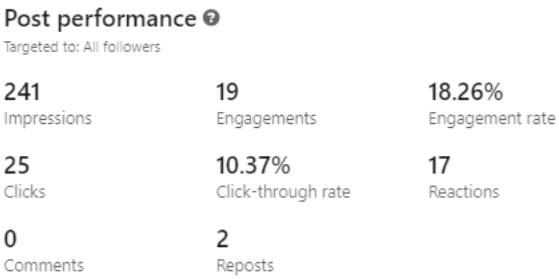

Figure 31: The LinkedIn workshop post performance.

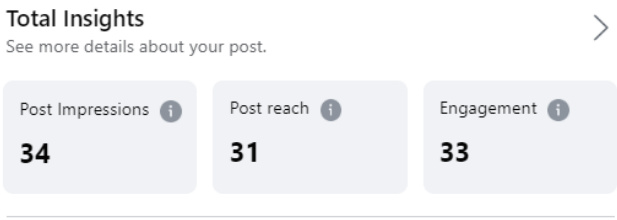

Figure 32: The Facebook workshop post performance.

Figure 33: The social network X (former Twitter) workshop post-performance.

This workshop will be followed during the 1st quarter of 2024 by an external workshop, co-organized with similar project, TENSOR, and other projects that are being contacted, such as METICOS, SAFE travellers and other FCT projects, in addition BES cluster will be invited to join.

2.2.3 Trade Fairs

Strategically, for an active and effective interactions with multiple stakeholders and the public audience, FLEXI-cross project partners committed to participate in different type of events, such as symposium, expo and fairs.
This participation that could be in the form of presentations, demonstration, or just engagement sessions guarantee that project outcomes are disseminated.
Up to February 2024 the consortium has participated in the following events:

1. On 31st of January 2023, EBOS participated along with ENG, as a presenter in a virtual and remote event organized by INGENIOUS project for its final event.

During the event, the project coordinator Mr. Vella reported the challenges and solutions in regard to the deployment and continuous validation of a toolkit of innovative border-checking solutions, in real operational environments. The approach toward the project's impact maximization was also presented, with emphasis on the effects on:

- Information security, while integrating diverse systems
- Economic, environmental and societal aspects
- Border-check points/ports operations

Similar to other events, this participation was disseminated on the project website and all social media pages, and below Figures show the performance of the posts

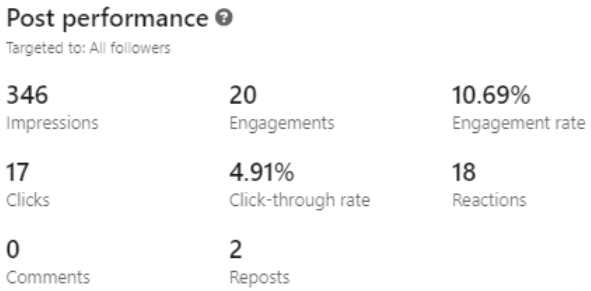

Figure 34: LinkedIn INGENIOUS post performance.

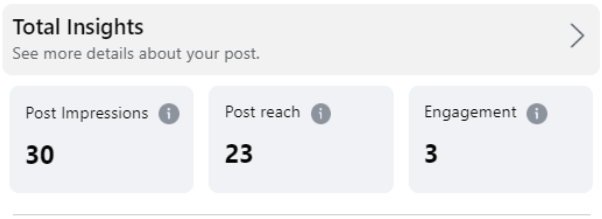

Figure 35: Facebook INGENIOUS post performance.

Figure 36: The X-platfrom (Former Twitter) INGENIOUS post performance.

2. On 13th and 14th of March 2023, EBOS participated in the Promenade external end users webinar, aiming to learn more about the Promenade project, during the webinar, valuable experience and knowledge were gained.
   Similarly, the participation was posted on the website and the social media pages, below are the Figures for the performance

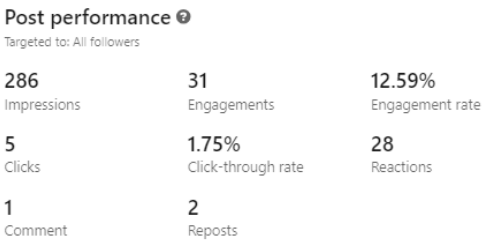

Figure 37: The LinkedIn Promenade post performance.

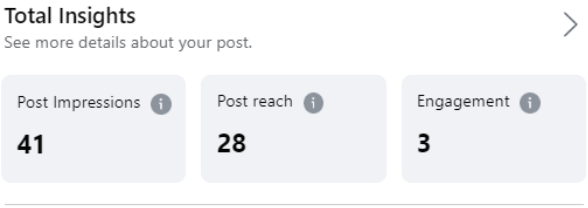

Figure 38: The Facebook Promenade post performance.

Figure 39: The X-platform Promenade post performance.

3. On 24th of April 2023, HPOL, KEMEA and EBOS participated in the NESTOR demo day and final workshop, the workshop was organized by HPOL and done in KEMEA premises.
4. On 29th till 31st of May 2023, ENG, HPOL and KEMEA participated in RISE SD event that was organized by CERTH, BDI and Satways. RISE-SD is an international EU research and innovation event in the field of Disaster and Crisis Management, Critical Infrastructure Protection, Fight Crime and Terrorism, Cybersecurity, Border Security and Defence Research.
   Similarly, the participation was posted on the website and the social media pages, there was 3 posts for this participation, first the announcement, the second for the happening now during the time of the event and the last one was post event showing a video for FLEXI-cross project coordinator presenting the project.
   The Figures below depict the Project's performance on social media.

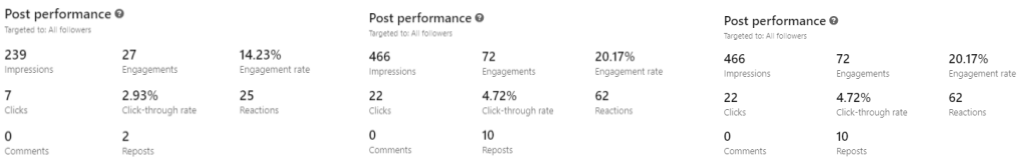

Figure 40: LinkedIn Rise SD post performance

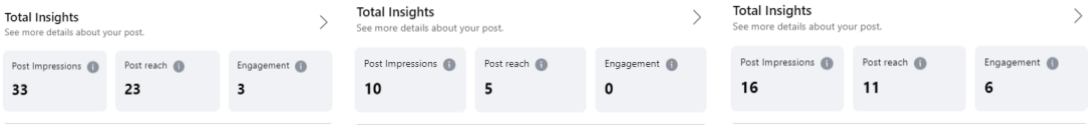

Figure 41: The Facebook Rise SD post performance.

Figure 42: The X-platform Rise SD post performance.

5. On 14th and 15th of Jun 2023, ENG represented by Mr Vella presented the project during the Policy seminar, which was organized by DG Home and REA.
   This seminar serves as a platform for newly launched projects to engage with policy stakeholders. The event was a great opportunity for FLEXI-cross project to show how to increase security and reliability of EU border checks for people and goods, while enhancing and improving the border management capabilities, through the development, deployment and validation of a toolkit of innovative border-checking solutions, in real operational environments, addressing road, rail and port borders.
   Participants were organized into thematic areas such as Fighting crime and terrorism & Infrastructure (FCT/INFRA), Strengthened Security Research and Innovation (SSRI), Disaster-resilient societies (DRS), and Border management (BM).
   During the second day of the seminar, FLEXI-cross has participated in an open session with other projects not strictly related areas such as FCT, therefor ENG came in contact with the project coordinators of TENSOR and TENACITY that manages biometric authentication and algorithms respectively for forensic purposes and for fighting crimes committed during cross borders.
   Similarly, the participation was posted on the website and the social media pages, the Figures below summarize the project's performance.

Figure 43: The LinkedIn Policy seminar post performance

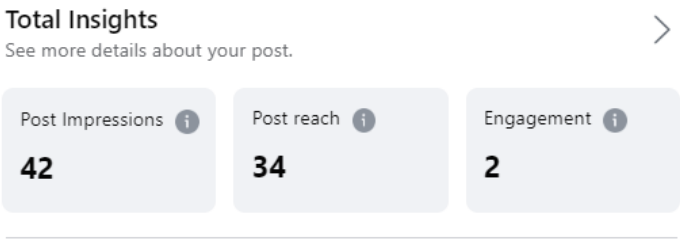

Figure 44: The Facebook Policy seminar post performance.

Figure 45:The X-platform policy seminar post performance.

6. From 18 until 20 of September 2023, EBOS participated in the EAB-RPC event.
7. From 27 till 28 of September 2023, ENG participated in a panel within the MEDEA event.

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3 FLEXI-cross liaison with other projects, clusters and initiatives

3.1 Identifying Relevant EU Projects and Initiatives

Based on research involving partners from WP4 and WP5, several EU projects and initiatives have been identified as relevant for the FLEXI-cross project:

- The European Border and Coast Guard Agency (Frontex), which supports the EU Member States and Schengen Associated Countries in managing their external borders and coordinates the operational cooperation on border security and migration management. Frontex also develops and operates various systems and tools for border management, such as the European Border Surveillance System (EUROSUR), the Entry/Exit System (EES), and the European Travel Information and Authorization System (ETIAS). https://home-affairs.ec.europa.eu/networks/ceris-community-european-research-and-innovation-security/thematic-areas/border-management_en

- The EU Integrated Border Management (IBM) concept, which aims to ensure a high level of security and facilitate legitimate travel across the EU external borders, by applying a coordinated approach among all the actors involved in border management, such as border authorities, customs, police, health, and environmental protection. The IBM concept also promotes the use of state-of-the-art technology, interoperable information systems, and risk analysis for border management. https://commission.europa.eu/topics/borders-and-security_en

- The Horizon 2020 Border Security and External Security (BES) research and innovation program, which funds projects that address the challenges and opportunities of border security and management, such as improving border checks, enhancing border surveillance, detecting and preventing cross-border crime and terrorism, and ensuring data protection and privacy. Some of the projects funded by the BES program are: https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/promoting-our-european-way-life/new-pact-migration-and-asylum/well-managed-schengen-external-borders_en

- iBorderCtrl, which developed an intelligent system for faster and more efficient border crossing, using biometric and deception detection technologies. https://home-affairs.ec.europa.eu/news/visual-glimpse-new-2021-2027-migration-borders-and-internal-security-funds-2021-10-21_en

- SMILE, which created a secure and privacy-respecting platform for cross-border identity verification, using blockchain and mobile devices.

- ROBORDER, which designed and tested a system of autonomous robots for border surveillance, using sensors and artificial intelligence.

- I-SEAMORE is an EU-funded project that aims to develop a holistic and multipurpose platform to support European authorities in maritime surveillance operations, using advanced technologies such as IoT, data fusion, artificial intelligence, and big data analysis. The project involves key European border authorities and end-users, as well as leading technology developers, research organizations, and innovative SMEs. https://inov.pt/en/project/i-seamore/index.html

- ODYSSEUS is an EU-funded project that aims to increase the knowledge on explosive precursors and homemade explosives, and develop effective and efficient prognostic, detection, and forensic tools to improve the capabilities of law enforcement agencies towards the prevention, countering,

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and investigation of terrorist attacks. The project involves a multidisciplinary consortium of experts from academia, industry, and end-users. https://marine.copernicus.eu/services/use-cases/role-copernicus-services-building-i-seamore-ecosystem-0

- BAG-INTEL is an EU-funded project that aims to develop a solution to support the customs teams in tackling the challenge of reidentifying detected suspicious pieces of luggage, for manual inspection. The project will use artificial intelligence, blockchain, and sensor networks to provide real-time data exchange and decision support tools, within the context of advanced detection systems. The project involves a consortium of technology providers and customs agencies. https://cordis.europa.eu/project/id/101073911

- MELCHIOR is an EU-funded project that aims to improve, mature, and demonstrate the novel infrasound interrogation Z-MESMERISE technology in operational environments, including border controls in airports and sea-ports and land borders, as well as other environments where the technology would be useful, such as crowded events and prisons. The project will use infrasound mechanical impedance interrogation, optionally complemented with other harmless and non-contact technologies, to detect drugs, explosives, weapons, and illicit goods concealed on individuals and in critical cavities of the human body. The project involves a consortium of research institutes, universities, and other technology providers. https://www.prd.frontex.europa.eu/innovation/eu-research/horizon-projects/i-seamore-m67pMT

- NESTOR is an EU-funded project that aims to establish a fully functional next generation holistic border surveillance system, providing pre-frontier situational awareness beyond maritime and land border, following the concept of the European Integrated Border Management. The project will use a combination of technologies, such as satellite imagery, radar, lidar, drones, and artificial intelligence, to provide a comprehensive and integrated picture of the border situation. The project involves a consortium of technology providers, research organizations, and end-users. https://www.martel-innovate.com/ec-projects/bag-intel/

- TENSOR, an EU-funded project that aims to develop a platform to support European authorities in border security and management, using biometric and deception detection technologies. https://cordis.europa.eu/project/id/101073920https://tensor-project.eu/

3.2 Collaborative Opportunities and Synergies

The FLEXI-cross project has the opportunity to partner with Frontex in sharing insights and best practices related to border management and security. Additionally, there is potential for exploring the seamless integration of FLEXI-cross solutions with Frontex's established systems and tools, including EUROSUR, EES, and ETIAS. Such collaboration aims to bolster the interoperability and compatibility of FLEXI-cross solutions within the broader EU border management framework, ultimately amplifying their adoption and impact.

- The FLEXI-cross project can align with the EU Integrated Border Management concept, by applying a coordinated and holistic approach to border management and security, involving all the relevant actors and stakeholders, such as border authorities, customs, police, health, and environmental protection. The FLEXI-cross project can also leverage the state-of-the-art technology, interoperable information systems, and risk analysis methods promoted by the IBM concept, to ensure a high level of security and facilitate legitimate travel across the EU external borders.

- The FLEXI-cross project can benefit from the Horizon 2020 Border Security and External Security research and innovation program, by learning from the experiences and outcomes of the projects funded by the BES program, such as iBorderCtrl, SMILE, and ROBORDER. The FLEXI-cross project

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can also seek synergies and complementarities with these projects, by exploring the possibility of combining or integrating their innovative solutions with the FLEXI-cross solutions, to create more effective and efficient border security and management systems.

- The FLEXI-cross project can collaborate with I-SEAMORE to exchange information and best practices on maritime surveillance and border security, and to explore the potential integration of the FLEXI-cross solutions with the I-SEAMORE platform, which uses advanced technologies such as IoT, data fusion, artificial intelligence, and big data analysis. This collaboration can enhance the interoperability and compatibility of the FLEXI-cross solutions with the EU maritime surveillance framework and increase their adoption and impact.

- The FLEXI-cross project can benefit from ODYSSEUS by learning from the experiences and outcomes of the project, which aims to increase the knowledge on explosive precursors and homemade explosives, and develop effective and efficient prognostic, detection, and forensic tools to improve the capabilities of law enforcement agencies towards the prevention, countering, and investigation of terrorist attacks. The FLEXI-cross project can also seek synergies and complementarities with ODYSSEUS, by exploring the possibility of combining or integrating their innovative solutions for border security and management.

- The FLEXI-cross project can collaborate with BAG-INTEL to exchange information and best practices on customs and luggage inspection, and to explore the potential integration of the FLEXI-cross solutions with the BAG-INTEL solution, which uses artificial intelligence, blockchain, and sensor networks to provide real-time data exchange and decision support tools, within the context of advanced detection systems. This collaboration can enhance the efficiency and accuracy of customs and luggage inspection and reduce the risks of smuggling and trafficking.

- The FLEXI-cross project can benefit from MELCHIOR by learning from the experiences and outcomes of the project, which aims to improve, mature, and demonstrate the novel infrasound interrogation Z-MESMERISE technology in operational environments, including border controls in airports and sea-ports and land borders, as well as other environments where the technology would be useful, such as crowded events and prisons. The FLEXI-cross project can also seek synergies and complementarities with MELCHIOR, by exploring the possibility of combining or integrating their innovative solutions for border security and management.

- The FLEXI-cross project can collaborate with NESTOR to exchange information and best practices on border surveillance and situational awareness, and to explore the potential integration of the FLEXI-cross solutions with the NESTOR system, which uses a combination of technologies, such as satellite imagery, radar, lidar, drones, and artificial intelligence, to provide a comprehensive and integrated picture of the border situation. This collaboration can enhance the effectiveness and reliability of border surveillance and situational awareness and improve the border management capabilities.

- The FLEXI-cross project can collaborate with the TENSOR project to exchange information and best practices on border security and management, and to explore the potential integration of the FLEXI-cross solutions with the TENSOR platform, which uses biometric and deception detection technologies. This collaboration can enhance the accuracy and reliability of border checks and identity verification and reduce the risks of fraud and deception. The FLEXI-cross project can benefit from the TENSOR project by learning from the experiences and outcomes of the project, which aims to develop a platform to support European authorities in border security and management, using biometric and deception detection technologies. The FLEXI-cross project can also seek synergies and complementarities with the TENSOR project, by exploring the possibility of combining or integrating their innovative solutions for border security and management.

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3.3 Joint Activities

TENSOR and FLEXI-CROSS are two EU-funded projects that aim to improve border security and management, using biometric and deception detection technologies (TENSOR) and 5G, IoT, AI, ML, and other innovative technologies (FLEXI-cross). Both projects involve large scientific and professional communities and address the challenges and opportunities of border checks for people and goods. The projects can benefit from information exchange and collaboration in the dissemination and exploitation activities.

To this end, FLEXI-cross signed a MoU with the TENSOR project including joint activities, as shown in below Table 12:

Table 12: FLEXI-cross and TENSOR joint activities plan

	Type of event	Description	Dates
1	Workshop	Technical presentation and results (1 day or half day) To Invite external stakeholders, Best Cluster, Meticos and Safe Travelers Project (BM projects)	4-8/3/2024
2	Event + Publication	Technical Conference – Biometric technologies 5TH INTERNATIONAL CONFERENCE IN ELECTRONIC ENGINEERING, INFORMATION TECHNOLOGY & EDUCATION	29-31/5/2024
3	Event	RISE – dates to be released	Probably May 2024
4	White-Paper	Biometric Technologies for Forensic	2024
5	HRB	To participate together. Flexi-Cross to apply for HBR Module A & B	Feb-March 2024
6	Event	European Society for Biometrics	September 2024
7	Workshop		November 2024
8	Event	CERIS 2024	December 2024

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4 FLEXI-cross Capacity Building

The FLEXI-cross project aims to improve the security and efficiency of EU border checks for people and goods, while respecting the privacy and rights of the individuals involved. To achieve this, the project needs to build the capacity of the key European border authorities and end-users, as well as other relevant stakeholders, such as civil society, academia, and industry. The main activities of the capacity building are:

4.1 Identify and Initiate Contact with Authorities

The first step of the capacity building is to identify and initiate contact with the authorities that are responsible for or involved in the border management and security in the EU and its partner countries. These authorities include national and regional border agencies, customs authorities, law enforcement agencies, immigration and asylum authorities, and other relevant bodies. The objectives of this step are:

4.1.1 Identifying Stakeholder Authorities

The project will conduct a stakeholder analysis to identify the authorities that have an interest or influence in the project's objectives and outcomes. The project will use various sources of information, such as official websites, databases, reports, and publications, to map out the stakeholder authorities and their roles, responsibilities, and interests. The project will also consider the geographical, political, and cultural diversity of the EU and its partner countries, and the different types of borders, such as road, rail, and port borders.

4.1.2 Establishing Initial Contact

The project will establish initial contact with the identified stakeholder authorities, using formal and informal channels of communication, such as emails, letters, phone calls, and meetings. The project will introduce the project's objectives, scope, and expected benefits, and invite the authorities to participate in the project's activities, such as co-design, validation, training, and evaluation. The project will also address any questions or concerns that the authorities may have and seek their consent and approval for the project's data collection and processing.

4.1.3 Leveraging Consortium Network and Communication Efforts

The project will leverage the consortium network and communication efforts to facilitate the identification and contact with the authorities. The project consortium consists of several partners from different countries and sectors, such as research institutions, industry, border authorities, and end-users, that have extensive experience and connections in the border security domain. The project will also use the project's website, social media, newsletters, press releases, and publications, to raise awareness and interest among the authorities and the public.

4.2 Establish Efficient Communication Channels

The second step of the capacity building is to establish efficient communication channels with the stakeholders that have agreed to participate in the project's activities. These communication channels will enable the project to share information, provide updates, seek input, and coordinate actions with the stakeholders throughout the project's lifespan. The objectives of this step are:

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4.2.1 Consistent Communication Requirements

The project will establish consistent communication requirements with the stakeholders, such as the frequency, format, content, and purpose of the communication. The project will also agree on the roles and responsibilities of the communication partners, such as the project coordinator, the project manager, the work package leaders, and the contact persons from the stakeholders. The project will document and update these communication requirements in a communication plan, and monitor and evaluate their implementation and effectiveness.

4.2.2 Mediums for Effective Communication

The project will use various mediums for effective communication with the stakeholders, such as emails, phone calls, video conferences, online platforms, and face-to-face meetings. The project will select the most appropriate medium for each communication purpose, depending on the availability, accessibility, and preference of the communication partners, and the nature and urgency of the communication message. The project will also ensure the quality and clarity of the communication, using simple and concise language, and providing visual aids and examples.

4.2.3 Ensuring Secure Data Exchange

The project will ensure secure data exchange with the stakeholders, using encryption, authentication, and authorization techniques, and complying with the data protection and privacy regulations, such as the GDPR. The project will use the FLEXI-cross blockchain technology, which is one of the project's innovative solutions, to enable secure, private, and traceable sensitive and personal data exchange among the project partners and the stakeholders. The project will also inform and educate the stakeholders about the data protection and privacy policies and procedures of the project and obtain their consent and feedback.

4.3 Distribute Project Updates and Seek Input

The third step of the capacity building is to distribute project updates and seek input from the stakeholders throughout the project's lifespan. These updates and input will help the project to monitor and evaluate the project's progress and performance, and to identify and address any issues or challenges that may arise. The objectives of this step are:

4.3.1 Sharing Relevant Project Information

The project will share relevant project information with the stakeholders, such as the project's objectives, scope, methodology, results, outcomes, and impacts. The project will also share the project's innovative solutions, such as the portable biometric based checks, the real-time multi-source cross-referencing, the anti-trafficking and anti-smuggling protection, the advanced Human Machine Interfaces, and the enhanced situational awareness via Augmented Reality. The project will use various communication formats, such as reports, presentations, brochures, flyers, videos, and interviews, to disseminate the project information.

4.3.2 Progress Reports and Benefits

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The project will provide progress reports and benefits to the stakeholders, such as the project's achievements, challenges, and lessons learned, and the project's benefits for the stakeholders and the society. The project will also provide feedback and recognition to the stakeholders for their participation and contribution to the project. The project will use various communication formats, such as newsletters, press releases, publications, and workshops, to communicate the project's progress and benefits.

4.3.3 Seeking Authorities' Input and Feedback

The project will provide progress reports and benefits to the stakeholders, such as the project's achievements, challenges, and lessons learned, and the project's benefits for the stakeholders and the society. The project will also provide feedback and recognition to the stakeholders for their participation and contribution to the project. The project will use various communication formats, such as newsletters, press releases, publications, and workshops, to communicate the project's progress and benefits.

4.3.4 Diverse Communication Formats

The project will use diverse communication formats to distribute project updates and seek input from the stakeholders, such as written, oral, visual, and interactive formats. The project will select the most suitable communication format for each communication purpose, depending on the type and amount of information, the target audience, and the expected outcome. The project will also ensure the accessibility and usability of the communication formats, using plain and understandable language, and providing translations and subtitles. Table 13 below shows the list of tools used to communicate with project stakeholders.

Table 13: The summary of communication tools accompanied by the targeted communication content.

Stakeholders	Engagement & Communication tools	Communication content
EU Border Control Agencies and Law Enforcement	➢ through formal channels such as : ➢ official letters ➢ meetings ➢ workshops	➢ detailed project documentation that outlines how FLEXI-cross enhances security and compliance
Port and Rail Operators	➢ industry-specific conferences ➢ forums ➢ direct engagement with relevant associations.	➢ project's solutions streamline operations and improve security at border crossings
Technology Developers and Innovators	➢ through technology-focused events ➢ forums ➢ consortiums	➢ collaboration, knowledge sharing, and research contributions
Research Organizations	➢ through academic conferences ➢ collaborative research projects ➢ direct communication with research teams	➢ the project's commitment to innovation and potential research collaboration

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Stakeholders	Engagement & Communication tools	Communication content
Innovative SMEs	➢ through business forums ➢ innovation networks ➢ consortiums	➢ the project's potential for business development and partnership opportunities
End-users	Communicate directly with border personnel and authorities via ➢ training sessions ➢ Workshops ➢ User-focused demonstrations	➢ user-friendly guides,mobile applications that make their work more efficient and secure

4.4 Collaborate on Logistics and Regulatory Aspects

The fourth step of the capacity building is to collaborate on logistics and regulatory aspects with the stakeholders that are involved in the project's activities. These aspects include the planning, coordination, and execution of the project's experiments and trials, and the compliance with the legal and ethical requirements of the EU and the partner countries. The objectives of this step are:

4.4.1 Logistics and Administrative Collaboration

The project will collaborate on logistics and administrative aspects with the stakeholders, such as the allocation of resources, the distribution of tasks, the communication channels, the reporting procedures, and the quality assurance. The project will also ensure the compliance with the ethical and legal requirements of the EU and the partner countries, such as obtaining the necessary permits, consents, and approvals for conducting the experiments and trials. The project will use various tools and methods, such as project management software, online platforms, and checklists, to facilitate the logistics and administrative collaboration.

4.4.2 Regulatory Considerations and Compliance

The project will consider and comply with the regulatory aspects of the project, such as the European social and policy regulations that apply to border management and data protection, such as the Schengen Borders Code, the GDPR, the EU Charter of Fundamental Rights, and the EU Strategy and Action Plan for Customs Risk Management. The project will also identify and address the potential gaps and challenges in the current regulations, such as the lack of a common framework for data protection and privacy across the EU and its partner countries, the lack of harmonised standards and procedures for biometric data collection, processing, and sharing at the EU external borders, the lack of a clear and consistent legal framework for the use of new technologies and solutions for border management, and the lack of a comprehensive and coherent strategy for addressing the root causes of migration and asylum flows.

4.4.3 The Role of the FLEXI-cross Toolkit

The FLEXI-cross toolkit is the main output of the project, which consists of a set of innovative solutions for border-checking, such as portable biometric based checks, real-time multi-source cross-referencing, anti-trafficking and anti-smuggling protection, advanced Human Machine Interfaces, and enhanced situational awareness via Augmented Reality. The toolkit aims to enhance the security and efficiency of EU border checks, while respecting the privacy and rights of the individuals involved. The

toolkit also aims to foster innovation and competitiveness in the border security sector, while ensuring a human rights-based approach, ethical guidelines, and impact assessments. The toolkit will be co-designed and validated with key European stakeholders as border authorities and end-users, and will involve other relevant stakeholders, such as civil society, academia, and industry.

4.5 Provide Training on FLEXI-cross Platform

The fifth step of the capacity building is to provide training on the FLEXI-cross platform to the stakeholders that will use the project's innovative solutions.
The FLEXI-cross platform is the integrated system that combines the FLEXI-cross toolkit and the FLEXI-cross blockchain technology. The platform enables the authorities to use the project's innovative solutions for border-checking, such as portable biometric based checks, real-time multi-source cross-referencing, anti-trafficking and anti-smuggling protection, advanced Human Machine Interfaces, and enhanced situational awareness via Augmented Reality. The platform also ensures the secure, private, and traceable data exchange among the project partners, the authorities and other relevant stakeholders, and complies with the data protection and privacy regulations, such as the GDPR. The objectives of this step are:

4.5.1 Training Objectives and Components

The project will provide training on the FLEXI-cross platform to the authorities that will use the project's innovative solutions. The training objectives are:

- To familiarize the authorities with the FLEXI-cross platform and its features and functions.
- To equip the authorities with the necessary knowledge and skills to use the FLEXI-cross platform and its solutions effectively and efficiently.
- To enhance the authorities' confidence and satisfaction with the FLEXI-cross platform and its solutions.
- To address any questions or concerns that the authorities may have regarding the FLEXI-cross platform and its solutions.

The preliminary training components are:

- An overview of the FLEXI-cross project, its objectives, scope, methodology, results, outcomes, and impacts.
- A demonstration of the FLEXI-cross platform and its solutions, showing how they work and what they can do.
- A hands-on practice session, where the authorities can try out the FLEXI-cross platform and its solutions in a simulated or real environment.
- A feedback and evaluation session, where the authorities can share their opinions and suggestions, and assess their learning outcomes and performance.

Table 14: The summary of the training objectives and delivery methods connected with the individual stakeholders.

STAKEHOLDERS	TRAINING OBJECTIVES	DELIVERY METHODS
EU Border Control Agencies	➢ Ensure operational competence for efficient border checks and compliance with data protection regulations	➢ Online training with live webinars and e-learning modules

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STAKEHOLDERS	TRAINING OBJECTIVES	DELIVERY METHODS
Law Enforcement Agencies	➢ Focus on portable biometric checks and multi-source cross-referencing for enhanced security	➢ Online training with live webinars and e-learning modules
Port and Rail Operators	➢ Streamline operations at port and rail borders, emphasizing privacy and data protection	➢ A combination of online and on-site workshops
Technology Developers and SMEs	➢ Enable them to develop and integrate solutions effectively with the FLEXI-cross platform	➢ Online resources and webinars focusing on integration
Research Organizations	➢ Equip them with insights for collaborative research and innovation	➢ Online training sessions for research collaboration
End-users	➢ Improve safety, situational awareness ➢ experience through augmented reality	➢ A mix of online training materials and in-person workshops with a focus on practical tool use

4.5.2 Online and Offline Training Modules

The project will use both online and offline training modules to deliver the training on the FLEXI-cross platform to the stakeholders. The online training modules will consist of live webinars and e-learning modules, which will be accessible via the project's website or online platform. The offline training modules will consist of on-site workshops and face-to-face sessions, which will be conducted at the project's premises or the stakeholders' locations. The online and offline training modules will complement each other and will cover the same topics and objectives. The online and offline training modules will be tailored to the specific needs and preferences of each stakeholder group, and will use various methods and formats, such as presentations, videos, quizzes, games, and exercises.

4.5.3 Technical Support and Supplementary Resources

The project will provide technical support and supplementary resources for the authorities during and after the training on the FLEXI-cross platform. The technical support will include:

- A dedicated support team, which will be available via phone, email, or online chat, to provide quick and effective response to any technical queries or issues that the authorities may encounter while using the FLEXI-cross platform or its solutions.
- A troubleshooting guide, which will provide step-by-step instructions and tips on how to solve common technical problems or errors that may occur while using the FLEXI-cross platform or its solutions.
- A user manual, which will provide detailed information and guidance on how to use the FLEXI-cross platform and its solutions, including their features, functions, and settings.

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The supplementary resources will include:

- An online user community, which will provide a platform for the authorities to interact and collaborate with each other, and with the project partners and experts, to share their experiences, insights, and best practices, and to learn from each other.
- An online portal, which will provide additional resources, such as video tutorials, FAQs, and updated documentation, to enhance the authorities' knowledge and skills on the FLEXI-cross platform and its solutions, and to keep them updated on the latest developments and enhancements.

4.6 Evaluate Capacity Building and Training Efficacy

The sixth step of the capacity building is to evaluate the efficacy and impact of the capacity building and training program, and to gather feedback from the stakeholders. The evaluation and feedback will help the project to measure the success and outcomes of the capacity building and training program, and to identify and address any areas for improvement. The objectives of this step are:

4.6.1 Qualitative and Quantitative Evaluation Methods

The project will use both qualitative and quantitative evaluation methods to assess the efficacy and impact of the capacity building and training program. The qualitative evaluation methods will include:

- Surveys, which will measure the stakeholders' satisfaction, learning outcomes, and behavioural changes, as well as their opinions and suggestions for improvement and sustainability.
- Interviews, which will assess the stakeholders' knowledge and skills, and their challenges and opportunities, as well as their overall experience and feedback.
- Focus groups, which will provide a forum for the stakeholders to discuss and share their views and perspectives on the capacity building and training program, and its benefits and impacts. The quantitative evaluation methods will include:
- Tests, which will measure the stakeholders' performance and competence on using the FLEXI-cross platform and its solutions, and the impact of the training on border security and efficiency.
- Observations, which will monitor and record the stakeholders' behaviour and actions while using the FLEXI-cross platform and its solutions, and the outcomes and results of their work.
- Statistics, which will collect and analyse data on the usage and performance of the FLEXI-cross platform and its solutions, and the indicators and metrics of border security and efficiency.

4.6.2 Surveys to Measure Satisfaction

The project will use surveys to measure the stakeholders' satisfaction with the capacity building and training program, and its components and outcomes. The surveys will consist of questions and statements that will ask the stakeholders to rate their level of satisfaction, agreement, or disagreement, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest. The surveys will cover the following aspects:

- The quality and relevance of the training content and materials.
- The effectiveness and efficiency of the training delivery methods and formats.
- The usefulness and usability of the FLEXI-cross platform and its solutions.
- The improvement and enhancement of the stakeholders' knowledge, skills, and performance.

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- The benefits and impacts of the capacity building and training program for the stakeholders and the society.

The surveys will also include open-ended questions that will allow the stakeholders to provide their opinions and suggestions for improvement and sustainability.

4.6.3 Interviews to Assess Knowledge and Skills

The project will use interviews to assess the stakeholders' knowledge and skills on the FLEXI-cross platform and its solutions, and their application and transfer to their work. The interviews will consist of questions and scenarios that will test the stakeholders' understanding and competence on the following topics:

- The features and functions of the FLEXI-cross platform and its solutions.
- The data management and security protocols of the FLEXI-cross platform and its solutions.
- The operational and technical procedures and guidelines for using the FLEXI-cross platform and its solutions.
- The problem-solving and troubleshooting skills for dealing with technical issues or errors while using the FLEXI-cross platform and its solutions.
- The best practices and tips for optimizing the use and performance of the FLEXI-cross platform and its solutions.

The interviews will also include questions that will elicit the stakeholders' overall experience and feedback on the capacity building and training program, and its benefits and impacts.

4.6.4 Tests and Observations for Performance Evaluation

The project will use tests and observations to evaluate the stakeholders' performance and impact on using the FLEXI-cross platform and its solutions, and their contribution to border security and efficiency. The tests will consist of tasks and exercises that will require the stakeholders to use the FLEXI-cross platform and its solutions in a simulated or real environment, and to demonstrate their ability and proficiency on the following aspects:

- The portable biometric based checks, which will verify the identity and status of the travellers and the vehicles crossing the border, using biometric data, such as fingerprints, iris scans, and facial recognition.
- The real-time multi-source cross-referencing, which will cross-check the biometric data with multiple sources of information, such as databases, watchlists, and social media, to identify and flag any potential risks or threats, such as criminals, terrorists, or smugglers.
- The anti-trafficking and anti-smuggling protection, which will detect and prevent any illegal or suspicious activities or movements of people or goods across the border, using predictive risk assessment and anomaly detection techniques.
- The advanced Human Machine Interfaces, which will provide user-friendly and intuitive interfaces for the stakeholders to interact and communicate with the FLEXI-cross platform and its solutions, using voice, gesture, or touch commands.
- The enhanced situational awareness via Augmented Reality, which will provide the stakeholders with real-time and contextual information and guidance on the border situation and environment, using augmented reality devices, such as glasses, helmets, or smartphones.

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The observations will consist of monitoring and recording the stakeholders' behaviour and actions while using the FLEXI-cross platform and its solutions, and the outcomes and results of their work. The observations will focus on the following aspects:

- The time and accuracy of the border checks and the identification and resolution of any risks or threats.
- The compliance and adherence to the data protection and privacy regulations and the ethical and legal requirements of the EU and the partner countries.
- The satisfaction and confidence of the stakeholders and the travellers with the FLEXI-cross platform and its solutions.
- The improvement and enhancement of the border security and efficiency.

4.6.5 Overall Experience Assessment

The project will conduct an overall experience assessment to capture the stakeholders' opinions and perspectives on the capacity building and training program, and its components and outcomes.
The overall experience assessment will consist of questions and statements that will ask the stakeholders to rate their level of satisfaction, agreement, or disagreement, on a scale of 1 to 5, where 1 is the lowest and 5 is the highest. The overall experience assessment will cover the following aspects:

- The overall quality and usefulness of the capacity building and training program.
- The overall impact and benefits of the capacity building and training program for the stakeholders and the society.
- The overall challenges and difficulties faced during the capacity building and training program.
- The overall suggestions and recommendations for improvement and sustainability of the capacity building and training program.

The overall experience assessment will also include open-ended questions that will allow the stakeholders to provide their opinions and perspectives on the capacity building and training program, and its components and outcomes.

4.7 Next actions

Plan for Stakeholder Engagement: Outline a detailed strategy for communicating with stakeholders, including methods and frequency of interaction, specific contacts, and a calendar for stakeholder meetings.

Develop training materials for specific categories of stakeholders.

Define target audiences, schedule training sessions.

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5 Conclusions

This Deliverable is the second version of the Dissemination, communication and capacity building report and will be followed by the final version, the D4.4, which is due at the end of the project, M36. In this version we showed the progress of the different activities expected within the three domains, dissemination, communication, and capacity building, some of the activities are not yet triggered due to the lack of concrete results which is mandatory for those activities.
Within the final version, we will show the final progress, and how each activity satisfied the corresponding KPI.

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6 Appendix: Supporting Documentation and Resources

6.1 Standardization Guidelines

Creating standardization guidelines for the outcomes of the FLEXI-cross project involves establishing clear, measurable criteria that ensure the project's objectives are met effectively and consistently. Given the project's focus on enhancing EU border security and management through innovative solutions, here are suggested guidelines for standardization:

Compliance with EU Regulations: Ensure all solutions comply with EU laws, particularly regarding privacy, data protection (GDPR), and fundamental rights.

Interoperability Standards: Develop technical standards to ensure interoperability of the toolkit components across different border types (road, rail, port) and among various EU member states.

Risk Assessment Protocols: Standardize risk assessment methodologies for anti-trafficking and anti-smuggling to ensure uniformity and effectiveness across borders.

Biometric Check Standards: Define clear standards for biometric-based checks, including accuracy, speed, and data security to maintain high levels of border security.

Real-time Data Cross-Referencing: Establish protocols for secure and efficient cross-referencing of data from multiple sources in real-time person verification.

Deployment Protocols for BCPs: Create guidelines for the fast, flexible, and cost-effective deployment of ad-hoc Border Check Points, including setup, operation, and dismantling procedures.

Blockchain Implementation: Define standards for the use of blockchain technology in data exchange, focusing on security, privacy, and traceability.

User Interface and AR Standards: Develop guidelines for Human Machine Interfaces and Augmented Reality tools to enhance user experience and situational awareness for border personnel.

Performance Metrics: Establish metrics to evaluate the effectiveness, efficiency, and user satisfaction of the deployed solutions in various operational environments.

Testing and Validation Framework: Create a comprehensive framework for testing and validation of the solutions in the trial facilities, ensuring they meet the set standards in diverse operational environments.

These guidelines should be developed in close collaboration with key stakeholders, including European border authorities, technology developers, and end-users, to ensure they are practical, effective, and aligned with the project's goals.

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