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D5.1 MONITORING AND IMPACT ASSESSMENT PLAN, GUIDELINES AND RECOMMENDATIONS

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Abstract	The objective of the TETRA project is to develop and implement a series of business-support activities targeted at 'R&I Actions' and their third parties funded under the topic H2020-ICT-24-2018-2019 to help turn their research results into marketable products and services and prepare them for success in the market place. TETRA's Advisory Board members will play an important role in monitoring and adjusting the project activities in order to keep TETRA's activities aligned with the overall NGI approach. With the help of the Advisory Board, TETRA will identify the specific challenges and needs of the sub-grantees funded under "R&I Actions". The meeting minutes of the 1 st Advisory Board workshop will give an overview about the topics discussed during the workshop and the next important steps for TETRA to achieve the goals of the project.
Keywords	Next Generation Internet, TETRA, Impact assessment plan, key performance indicators

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DEM: Demonstrator, pilot, prototype, plan designs

DEC: Websites, patents filing, press & media actions, videos, etc.

OTHER: Software, technical diagram, etc.



1 EXECUTIVE SUMMARY

1.1 TETRA PROJECT

The objective of the TETRA project is to develop and implement a series of business-support activities targeted at 'R&I Actions' and their third parties funded under the topic H2020-ICT-24-2018-2019 to help turn their research results into marketable products and services and prepare them for success in the market place. TETRA will identify and provide instruments and resources to assist ICT innovators to:

- Ensure the best use of their outcomes through specific exploitation strategies;
- Support their uptake at local, regional, national and international level;
- Assess the impacts at the level of the 'Next Generation Internet – An Open Internet Initiative' topic.

Long-term strategic objective is to assist the NGI initiative to develop a more human-centric Internet supporting values of openness, cooperation across borders, decentralisation, inclusiveness and protection of privacy; giving the control back to the users in order to increase trust in the Internet. The central role of Europe in reshaping NGI in a holistic way and driving this technology revolution will be central in the TETRA concept and activities.

Just as citizens are members of a civil society, they are also members of a digital society through their interactions over the Internet. These interactions have and will continue to evolve over time, and the current trends are towards continuous connection to the Internet, interconnectedness, ease of communication and collaboration. Many of these interactions have beneficial societal implications, but clearly there are also emerging dangers to citizens when they use the Internet.

In this context, the goals of the TETRA project are to:

- Shape a more human-centric evolution of the Internet.
- Create a European leading ecosystem of top researchers, hi-tech start-ups and SMEs with the capacity to set and/or disrupt the course of Internet evolution.
- Generate new business opportunities and new Internet companies with maximum growth and impact chances.
- Enable new internet applications / services, business models and innovation processes strengthening the position of European ICT industry in the Internet market.

The objectives to be implemented during the 36-month period of this project are:



- To identify and engage relevant R&I Actions' and their third parties funded under open internet initiative;
- To assist the third parties funded under the R&I actions in acquiring the competences needed to bring their innovation to the market exploitation of innovations through a capacity building programme;
- To develop vital ecosystem enabling these projects in scaling their activities;
- To assess the impacts of the supporting activities provided and their contribution towards the accomplishment of NGI-Open Internet's objectives.

1.2 MONITORING AND IMPACT ASSESSMENT PLAN

In the context of the topic ICT-24-2018-2019, the European Commission and its “NGI – An Open Internet Initiative” explicitly asked the funded projects to assess the impacts of their mentoring and supporting activities in the medium-to-long-term time frame.

TETRA project is answering this request by:

1. Producing the Impact Assessment Strategy at the level of the NGI.
2. Measuring the performance of agreed indicators and suggesting corrective measures, whenever needed.

In order to increase impact and maximize the opportunities, this task will have to be coordinated and aligned with the activities foreseen by the RIAs and CSAs funded under ICT-24-2018-2019 call. For this reason, a strong collaboration, knowledge sharing and coordination is planned to take place, involving in an open and mutual collaboration with the other funded projects.

The present monitoring and assessment plan of the TETRA project has been developed as part of task 5.1 (Impact assessment strategy at the level of the NGI – An OII topic).

The plan includes:

- Objectives to be achieved by impact monitoring and assessment
- A list of impacts to be monitored
- Identification and selection of relevant indicators
- Methodologies to measure the progress
- Monitoring time-plan
- Input mechanisms to feed into the TETRA Communication and Dissemination plan



The monitoring and impact assessment plan will serve as a basis for implementing the monitoring of the indicators and assessment of the impacts of the RIA and CSAs funded under ICT-24-2018-2019 (from now on “Relevant Projects”) in task 5.2 “*Monitoring and adjusting plan and activities*”.

The results of the monitoring will be integrated into two Monitoring and impact assessment reports (M18; M30) that will include recommendations for adapting NGI priorities, activities and outputs and the communication of key messages for the communication programme. The reports will be presented to the Relevant Projects, and discussions will follow leading to decisions on the adaptations to be implemented during the projects.

The objective of the Monitoring and Impact Assessment plan is to create a reference document for monitoring the progress of the Relevant Projects towards the expected objectives and impacts at the level of the NGI.

Thanks to this document, we will be able to evaluate how - and to what extent - TETRA and ICT-24-2018-2019 funded projects’ activities contributed to achieving the objectives of the NGI initiative. Consequently, depending on the results of the monitoring, we will be able to take corrective measures.

The Monitoring and Impact Assessment plan will consist of two parts:

- Context of monitoring and assessment activities
- Monitoring and assessment methodology and plan

The first part will provide an overview of activities that are subject to monitoring and assessment. The second part will provide an overview of the methodology of the monitoring and assessment and present a detailed plan of:

- The impacts to be monitored
- Indicators to be used
- Methodologies to be applied (to measure the progress)
- Time-plan

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ABBREVIATIONS

AI – Artificial Intelligence

NGI – Next Generation Internet

RIA – Research and Innovation action

CSA – Coordination and Support action

EC – European Commission

MVP – Minimum Viable Product



2 CONTEXT

The objective of the Monitoring and Impact Assessment plan is to create a source-document for monitoring the progress of the Relevant Projects towards the expected objectives and impacts at the level of the NGI. In the following paragraphs a brief overview of those objectives and impacts, as well as specific activities, is provided to explain the context of the monitoring and assessment activities.

2.1 OBJECTIVES AND EXPECTED IMPACTS

Building on the methodology¹ developed by the NGI Forward² project, we have picked ten key challenges that we believe should be addressed in parallel as part of our mission to build a more human-centric Internet.

These ten topics can be divided in **three categories**: four topics covering key aspects contributing to the **resilience of the internet**, three that are key to make the internet **more inclusive**, and lastly three aspects central to creating a net that is more **democratic**. Each of the topics below cover a wide range of different sub-issues, relevant to different stakeholder communities, and are generally technology agnostic (with the exception of ethical AI, which we believe to be so potentially transformative as a technology, it merits individual attention).

In order to make the Internet more resilient and trustworthy we need to:

1. Ensure the Internet is **sustainable** and limits harm to the planet, and input materials are sourced in a **fair and ethical** way.
2. Build an Internet that is **resilient** and **cyber secure**.
3. Create the infrastructures necessary for secure **online interactions** and trustworthy **online identities**.
4. Sustain a healthy and pluriform **information and media ecosystem**.

In order to make the Internet more **democratic** we need to:

1. Promote new **business models** and **decentralise power**, away from a handful of dominant players.

¹ <https://www.nesta.org.uk/blog/ten-challenges-internet/>

² <https://www.ngi.eu/about/ngi-forward/>



2. Give all Internet users the right and ability to provide **meaningful consent**, **opt out**, and **self-govern** their interactions with internet services.
3. Give Internet users back control over their own data, so regaining **data sovereignty**.

In order to make the internet more **inclusive** we need to:

1. Prevent technologies underpinning the Internet, notably **AI and Machine Learning** tools, from **perpetuating existing inequalities**.
2. Ensure the internet is **safe** for all the use, and promotes **diversity**.
3. Create an internet that is **accessible** and **open**, providing everyone with the ability to shape and harness its power.

2.2 NGI PROJECTS ACTIVITIES TO REACH THE OBJECTIVES

Project	Introduction
LEDGER	<p>LEDGER, an EU funded project, empowers people to solve problems using decentralised technologies such as blockchain, peer to peer or distributed ledger technologies.</p> <p>With €5.6 million, LEDGER, a venture builder, provides mentorship, guidance and direct grants to projects willing to build human centric solutions where citizens retain control over their data.</p>
Think NEXUS	<p>Think NEXUS aims to reinforce EU-US collaboration, through its dedicated Think Tank, involving major stakeholders (researchers, entrepreneurs, policy makers) from both sides of the Atlantic on NGI-related thematics in three Focus Areas: Science and Technology, Innovation and Entrepreneurship and Policy.</p>
NGI Forward	<p>NGI Forward's work focuses on four key areas of activity, which together will form the "engine" of the project: the identification of key topics, consultation, policy and research, and stakeholder engagement.</p>
NGIO	<p>NGI Zero is an idea-driven coalition of not-for-profit organisations from across Europe. It was set up to provide the Next Generation Internet initiative with an agile, effective and low-threshold funding mechanism. With funding from the European Commission, NGIO provides grants to individual</p>

	<p>researchers and developers as well as small teams to work on important new ideas and technologies that contribute to the establishment of the Next Generation Internet.</p> <p>In order to be effective at internet scale, the results of these efforts are made available as free/libre/open source software. A significant amount of effort is spent to live up to high standards in terms of security, privacy, accessibility, open source licensing, documentation, etc.</p>
NGI TRUST	<p>NGI TRUST will support the development of a human-centric Internet by developing a stronger European ecosystem of researchers, innovators and technology developers in the field of privacy and trust enhancing technologies.</p>
NGI Explorers	<p>The NGI Explorers Program sponsors immersive missions to the United States for Top European Internet researchers and innovators, providing them with the skills, the network and the resources to accelerate their ambitious ideas. The program seeks to empower these change-makers to position Europe into the powerhouse of the Next Generation Internet.</p>
FED4FIRE+	<p>The project provides a federation of testbeds in Europe with links to testbeds globally. This is accessible to projects that want to do experiments in the NGI area. Access to the testbeds is for free for everyone (SMEs, industry, researchers).</p> <p>The project also runs open calls, where people can apply for funding to do the tests (smaller calls 50-55K; also larger calls up to 200K).</p>
TETRA	<p>Develop and implement a series of business-support activities targeted at 'R&I Actions' and their third parties funded under the topic H2020-ICT-24-2018-2019 to help turn their research results into marketable products and services and prepare them for success in the market place.</p>

TABLE 1 RELEVANT PROJECTS AND THEIR ACTIVITIES TO REACH NGI OBJECTIVES



3 STRUCTURE OF MONITORING AND ASSESSMENT ACTIVITIES

The structure of the monitoring and assessment activities is based on the main stages of evaluation (collection, processing and analysis of data). The stages are presented below:

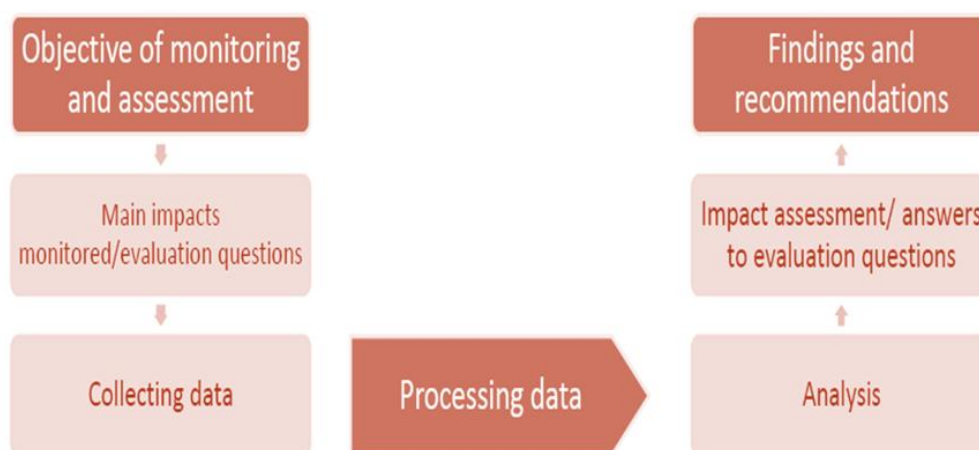


FIGURE 1: THE MAIN STAGES OF THE MONITORING AND ASSESSMENT ACTIVITIES

The stages will be described in more detail in the next paragraphs.

3.1 OBJECTIVES OF MONITORING AND ASSESSMENT

The objective of the TETRA monitoring and impact assessment activities is to evaluate the quantitative and qualitative effect of the Relevant Projects on the expected objectives and impacts at the level of the NGI initiative.

When preparing the monitoring and impact assessment plan, a set of evaluation questions was formulated based on:

- The main outcomes to be monitored
- Interpretation of the impacts and the measurable outcomes;
 - Number of jobs created
 - Number of operating startups
 - Amounts of funds raised

- Evaluation of information available/needed to carry out the monitoring and assessment.

The following broad evaluation question was formulated:

- Based on the data collected (see 4.2), to what extent the Internet became more inclusive, democratic and resilient?

This question can be broken into more detailed questions, as outlined in Section 4.1.

As a next step, specific indicators, detailed evaluation questions and methods for collecting the necessary data have been formulated.

3.2 DATA COLLECTION

Following, different types of data will be collected to perform a quantitative and qualitative analysis, utilizing various methods of collection:

- **Communication statistics** – Flow of communication materials will be collected either manually by the partners of Relevant Projects handling them (leaflets, banner exposition, directly mailed links and materials to stakeholders), or automatically using analytical tools (emailing services, social media analytics) by the responsible partners. Partners will be reporting the numbers to the partner responsible for impact assessment monitoring on a regular basis.
- **Website statistics** – TETRA website statistics are collected by online analytical tools (Google analytics). These will be processed by the partner responsible for the website and reported.
- **Event registration lists** – each partner of a Relevant Project will report data based on their collection of event registration lists.
- **Short qualitative surveys** – These will be collected at each boot-camp organised by TETRA in WP3-WP4. Furthermore, these surveys will be collected from the third-parties funded by the Relevant Projects.
- **Online market research and media analysis** – this method will be used to collect examples of cooperation between stakeholders and best practices take-up. This will be done by all TETRA project partners.
- **Face to face meetings** – The degree of behavioural change of the target groups (users, providers and policymakers) will be assessed both formally (surveys) and informally (moderated and unmoderated interviews and discussions during the project events).

More information about why we decided to use these specific data collection methods is available in Section 4.2.



3.3 PROCESSING DATA

The collected data will be regularly compared against the respective KPIs and the time plan. In the processing of data stage, the data gathered will be synthesised, analysed and evaluated in light of the main indicators and evaluation questions. This will be done in the framework of Task 5.2 lead by LOBA.

The results of the analysis will be interpreted and assessed basing on NGI third parties' answers to the questions outlined in section 4.1. The context in which each NGI third party is operating will be considered as well.

3.4 PRESENTING FINDINGS AND RECOMMENDATIONS

In this stage, the most important findings will be constructed based on the evaluation. The findings have to be clearly defined, impartial, precise, logical and based on facts.

For every main indicator/evaluation question there has to be at least one finding. If it is not feasible to make such generalizations based on the evaluation, then the answer to this evaluation question has to be - "it is not possible to give relevant answer" and a reason given for this position.

The final step is providing recommendations for adapting TETRA priorities, activities and outputs to better contribute to the development of a more resilient, inclusive and democratic internet.

Here it is vital to observe that for each finding of the impact assessment exercise, there is at least one recommendation and each recommendation is based on at least one such finding. The recommendations have to be concrete actions that can be put into practice.



4 DETAILED PLAN

4.1 WHAT TO MONITOR: ASKING THE RIGHT QUESTIONS

Main indicators monitored	Research questions ³ (Important Note: It is NOT in the scope of the TETRA project to answer these questions. The reason for listing these questions is to provide more concrete examples of what is actually meant by the indicators monitored ⁴)	Evaluation questions
OUTCOME 1: Making Internet more resilient and trustworthy		
Increased sustainability of Internet in terms of limiting harm to the planet and ensuring that input materials are sourced in a fair and ethical way.	<ol style="list-style-type: none"> 1. How can we ensure the internet and its underlying infrastructures reduce humanity's environmental footprint, rather than increase it? 2. How can we bring more transparency to the supply chains underlying our internet consumption and the devices supporting it? 3. How can we become less reliant on toxic and harmful mining processes, and move to a model where we can 	How many capabilities / solutions / concepts addressing these issues were/are planned to be developed by the grantees of the Relevant Projects? Why are they relevant ⁵ ?

³ <https://www.nesta.org.uk/blog/ten-challenges-internet/>

⁴ These research questions are for long-term impact assessment for the NGI initiative, as the initiative will not end once TETRA project is over.

⁵ In other words, which of the 'research questions' is your capability / solution / concept related to?



	<p>better reduce and recycle the resources we do use?</p> <p>4. Can we reduce the geopolitical risks associated with our over-reliance on resources mined in often politically volatile countries, and increasingly the subject of a global arms race for minerals?</p>	<p>How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?</p>
Increased level of resilience and cyber security	<p>1. How can we increase awareness among the general public and in the private sector about the risks associated with cybercrime and attacks?</p> <p>2. Similarly, can we promote more adoption of responsible practices in the development of tools and devices as well spark public demand for safer solutions?</p> <p>3. What are the kind of (cyber)-physical infrastructures we need to ensure resilience not just in the short run, but also into the future?</p> <p>4. As the international community, what can we do to reduce the risk of escalating cyber conflict and internet-enabled hybrid warfare methods? How can we put the necessary treaties and processes-still very much lacking!- in place?</p>	<p>How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?</p>
		<p>How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?</p>
Increased number and quality of available infrastructures necessary for secure online interactions and	<p>1. How can we promote more secure and trustworthy transactions and interactions online?</p> <p>2. How can we reduce the security and privacy risks associated with centralised identity management systems?</p> <p>3. Many emerging online identity systems (and associated reputation</p>	<p>How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the</p>



trustworthy online identities.	systems) are managed by the private sector and part of walled gardens. How can we democratise control and promote portability across applications?	Relevant Projects? Why are they relevant?
	4. Good e-ID systems would be very valuable, but could also easily be turned into a powerful weapon for oppression and surveillance. What role could and should governments play in restoring trust on the internet? Should a secure online identity be as much a citizen's right as holding a passport, or are the risks too substantial?	How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?
Increased sustainability and health of the information and media ecosystem.	1. How can we make online quality journalism profitable? Which business models actually work, and how can we support them?	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?
	2. We heralded the internet as the great democratiser, giving everyone a stage- also those who we might have preferred not to (extreme political views, trolls, harassment). How do we strike the right balance between freedom of expression and addressing threats to the resilience of our societies and individual safety? 3. 'Fake news' has already proven very hard to counter- certainly technological fixes such as AI-detection, appear to be only limited in their effectiveness. How will we deal with the next-generation of manipulation tools, such as deepfake technologies?	How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?
OUTCOME 2: Making Internet more democratic		

Increased number of new business models leading towards decentralising power, away from a handful of dominant players.	<ol style="list-style-type: none"> 1. There is a lot of talk about Europe needing to create its own tech giants. But rather than trying to build the next Google, shouldn't we focus on building the kinds of infrastructures that would prevent the next Google instead? 2. What kind of alternative, more inclusive business models will actually work? Can these models realistically compete, and under which circumstances? 3. Power over the internet today mostly comes in the form of access to data, and will only become more important in the age of AI. How can we democratise access (while protecting data subjects' sovereignty and privacy) and ensure existing power structures don't get further calcified? 4. There is a lot of talk about regulating Big Tech: breaking them up, turning them into public utilities, making them pay for our data... But not enough concrete, realistic proposals for what exactly this regulation should entail, and assessments of their effectiveness. How can we best use policy levers to curtail monopoly power? 	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?
		How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?
Increased ability for internet users to provide meaningful consent, opt out, and self-govern their interactions	<ol style="list-style-type: none"> 1. Realistically, there is currently no such thing as informed consent when it comes to the tracking of our personal data off- and online. Can we move beyond the meaningless checkboxes and endless user agreements and rethink how users can give actual permission? 2. We are usually given a binary choice when asked to give consent: either we agree with Facebook's terms and conditions, or we do not get to 	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?



with internet services.	<p>use the service altogether. Can we design pathways to reduced consent that do not lead to complete exclusion from a service?</p> <p>3. Vulnerable groups are more likely to be wary of or unable to share their data. If more and more services have data-driven analysis underpinning them, from where we place streetlights to mental health services provisions, how can we ensure the needs of those who aren't part of the data set are still represented?</p> <p>4. Can we invent new models for community consent- not just consent on the level of the individual? How can we let communities decide their own "rules of engagement" with, for example, smart city systems or sharing economy platforms?</p>	
		<p>How many successful approaches and case studies were /are planned to be communicated to and considered by the target groups? What was their response to this?</p>
Increased control of internet users over their own data, so regaining data sovereignty .	<p>1. How can we give citizens back control over what happens to their personal data?</p> <p>2. We want to protect our sovereignty and privacy when it comes to our personal data, but at the same time need to recognise that having access to substantial amounts of data is also critical in the global AI arms race, and thus retaining our technological sovereignty more broadly. How do we strike the right balance?</p> <p>3. Personal data stores, data commons, data trusts... We see a lot of alternative models mushrooming up that could help make the relationships between those data owners and data subjects more equal. Which (combination) of these</p>	<p>How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?</p>
		<p>How many successful approaches and case studies were communicated to and considered by the target groups?</p>



	do we need?	What was their response to this?
OUTCOME 3: Making Internet more inclusive		
Decreased degree of perpetuating existing inequalities caused by AI and Machine Learning tools	<ol style="list-style-type: none"> 1. How can we ensure AI systems are ethical, fair and accountable across all layers of the decision-making process? 2. How can we democratise who gets to build AI systems? AI development is now dominated by the private sector and often not particularly benevolent governments. How can we support the creation of AI-for-good? 3. When we talk about ethical AI, what “ethics” are we talking about? Which values should these systems embody, and how can we embed them in systems? 4. How can we ensure AI systems are resilient to malicious attacks (such as gaming of deep learning algorithms) and conversely aren’t used for malicious purposes (think of emerging applications, such as deepfake technology and cyber- and autonomous weapons). 	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?
		How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?
Increased level of internet safety for all users, ensuring the promotion of diversity	<ol style="list-style-type: none"> 1. Technology is not neutral, but reflects the needs and context of its creators. How can we make the teams leading on developing the next wave of technologies more diverse? 2. The internet, in particular social media, has unfortunately made it much easier to target and harass people with different views and ideas than our own. How can we keep the internet a safe space for all? 	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?



	<ol style="list-style-type: none"> 3. We also need to put thought in children's experiences on the internet. Children are particularly vulnerable when it comes to harmful content, cyber bullying, targeted advertising and even more nefarious ends. How do we provide them with a safe internet without imposing too much control? 4. Openness and diversity go hand in hand: how can we make sure the internet remains a place where fringe communities and different ideas can continue to prosper? 	<p>How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?</p>
<p>Increased accessibility of internet providing everyone with the ability to shape and harness its power.</p>	<ol style="list-style-type: none"> 1. How can we move discussions about internet access beyond conversations about broadband deployment, and do more about the also important social and economic dynamics preventing people from using the internet? 2. How can we make the internet more accessible to users who are less tech-savvy, have disabilities, or don't speak major languages like English? 3. We see more and more governments and companies cordoning off bits of the internet. How can we counter the trend of the internet getting less open? What role should Europe play as one of the last "safeguards" of the open internet? 	<p>How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?</p>
		<p>How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?</p>

TABLE 2: IMPACTS AND EVALUATION QUESTIONS

4.2 HOW TO MONITOR: THE PROCESS

The statistics collected⁶ and the results of short surveys will feed into the first monitoring report in M18. It will be compiled based on the monitoring and assessment of activities in period M1- M18. The report will be presented to the TETRA consortium and other Relevant Projects for discussion and serve as a basis for changes and adaptations in the strategy to be implemented in period M18- M30.

Further statistics collected in period M18-M30 will feed into the second monitoring report in M30. To assess the progress towards the main vision of the project – contributing to the more human-centric internet – there are also non-quantitative KPIs followed. The degree of behavioural change of the target groups (users, providers and policymakers) will be assessed both formally (surveys) and informally (moderated and unmoderated interviews and discussions during the project events). Behavioural change is notoriously a long-term objective of a programme since it consists of modifying existing well-set behaviours and/or introducing new practices within a system which is already functioning.

In line with the evaluation framework, the activities planned and the organisational and institutional buy-in will be considered the input of the capacity building actions (trainings). In the more immediate timeframe described above, we implement our evaluation activities around KPIs describing output indicators (how many people/third parties attended the events, organisations and individual responses to the objective of the events, website hits, material downloads, video viewings, queries etc.) and outcome indicators such as new capabilities, solutions, concepts, new collaborations, economic impact (jobs, revenues)⁷. All these activities may contribute to behavioural change of the stakeholders involved and mature towards a more long-term systemic impact. Any measure of Impact (i.e. the longer terms systemic effects of our capacity building actions) will not be immediately assessed at the end of the event since activities require time to settle, being digested, and follow up-activities may be dependent on occurrences not directly attributable to the activities of the Relevant Projects. Dissemination activities by multipliers may depend on complementary scheduled activities, creation of new job positions may be dependent on the time necessary to set the venture operational, changes in the regulatory framework may follow asynchronous cycles in the legislative process. All these may be used to initiate the impact assessment exercise.

⁶ For the methods of collecting the data, please refer to Section 3.2

⁷ See Section 4.2.1 and 4.2.2 for more information.

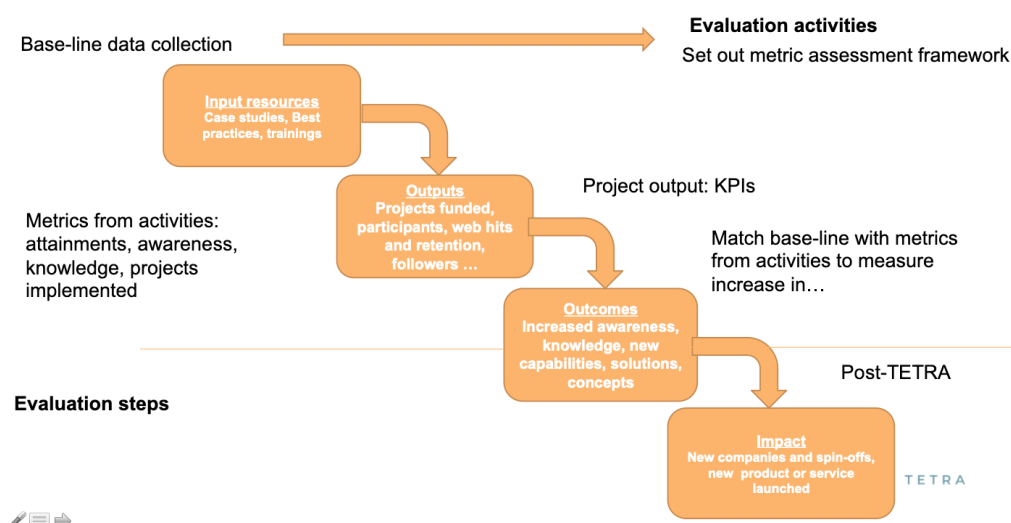


FIGURE 2: A REPRESENTATION OF THE LOGIC MODEL OF THE VALUATION

4.2.1 Quantitative perspective

The following table presents a plan of outcomes to be monitored, indicators to be employed, methodology for collecting data, expected target and time plan.

Main outcome monitored	Indicator	Methodology for collecting data	Determining output Evaluation question	Expected target ⁸	State of play (Month 18) and corrective measures	State of play (Month 30)
Making Internet more resilient and trustworthy	Increased sustainability of Internet in terms of limiting harm to the planet and ensuring that input materials are sourced in a	Feedback from the grantees of the Relevant Projects	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?	Solution/ Concept/ Project from NGI open calls' grantees addressing sustainability of Internet		

⁸ We acknowledge the fact that the Relevant Projects do not have their own social media accounts and there is only one 'centralised' NGI's social media account.



	fair and ethical way.	Relevant Projects' communication statistics	How many successful approaches and case studies were communicated ⁹ to and considered by the target groups? What was their response to this?	Web:		
		Event registration lists		Social network:		
				Events:		
	Increased level of resilience and cyber security	Feedback from the grantees of the Relevant Projects collected through the Task Force	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?	Solution/ Concept/ Project from NGI open calls' grantee(s) addressing resilience and cyber security of Internet		
		Relevant Projects' communication statistics		Web:		
		Event registration lists		Social network:		
				Events:		

⁹ Communicated by TETRA and Relevant Projects

	Increased number and quality of available infrastructures necessary for secure online interactions and trustworthy online identities.	Feedback from the grantees of the Relevant Projects collected through the Task Force	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?	Solution/ Concept/ Project from NGI open calls' grantee(s) addressing infrastructures for secure online interactions and trustworthy online identities		
		Relevant Projects' communication statistics	How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?	Web:		
		Event registration lists		Social network:		
				Events:		
	Increased sustainability and health of the information and media ecosystem.	Feedback from the grantees of the Relevant Projects collected through the Task Force	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?	Solution/ Concept/ Project from NGI open calls' grantee(s) addressing sustainability and health of		

				the information and media ecosystem		
		Relevant Projects' communication statistics	How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?	Web:		
		Event registration lists		Social network:		
				Events:		
Making Internet more democratic	Increased number of new business models leading towards decentralising power, away from a handful of dominant players.	Feedback from the grantees of the Relevant Projects collected through the Task Force	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?	Solution/ Concept/ Project from NGI open calls' grantee(s) addressing sustainability and health of the information and media ecosystem		
		Relevant Projects' communication statistics	How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?	Web:		
		Event registration lists		Social network:		
				Events:		

	Increased ability for internet users to provide meaningful consent, opt out, and self-govern their interactions with internet services.	Feedback from the grantees of the Relevant Projects collected through the Task Force	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?	Solution/ Concept/ Project from NGI open calls' grantee(s) addressing the provision of meaningful consent, opt-out and self-govern of interactions with internet services		
		Relevant Projects' communication statistics	How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?	Web:		
		Event registration lists		Social network:		
				Events:		
	Increased control of internet users over their own data, so regaining data sovereignty.	Feedback from the grantees of the Relevant Projects collected through the Task Force	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?	Solution/ Concept/ Project from NGI open calls' grantee(s) addressing		

				data sovereignty		
		Relevant Projects' communication statistics	How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?	Web:		
		Event registration lists		Social network:		
				Events:		
Making Internet more inclusive	Decreased degree of perpetuating existing inequalities caused by AI and Machine Learning tools	Feedback from the grantees of the Relevant Projects collected through the Task Force	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?	Solution/ Concept/ Project from NGI open calls' grantee(s) addressing inequalities provoked by AI and Machine Learning tools		
		Relevant Projects' communication statistics	How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?	Web:		
		Event registration lists		Social network:		
				Events:		
	Increased level of internet safety for	Feedback from the grantees of the	How many capabilities / solutions / concepts addressing these issues	Solution/ Concept/		



	all users, ensuring the promotion of diversity	Relevant Projects collected through the Task Force	were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?	Project from NGI open calls' grantee(s) addressing internet safety and the promotion of diversity		
		Relevant Projects' communication statistics Event registration lists	How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?	Web:		
				Social network:		
				Events:		
	Increased accessibility of internet providing everyone with the ability to shape and harness its power.	Feedback from the grantees of the Relevant Projects collected through the Task Force	How many capabilities / solutions / concepts addressing these issues were / are planned to be developed by the grantees of the Relevant Projects? Why are they relevant?	Solution/ Concept/ Project from NGI open calls' grantee(s) addressing accessibility of Internet		
		Relevant Projects' communication statistics Event registration	How many successful approaches and case studies were communicated to and considered by the target groups? What was their response to this?	Web:		
				Social network:		
				Events:		



		lists				
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FIGURE 3: QUANTITATIVE ASSESSMENT FRAMEWORK

The process of monitoring the progress of NGI projects working towards a more trustworthy, inclusive and democratic internet started in July 2019 during the first TETRA Advisory Board workshop, where all invited NGI projects updated TETRA Consortium on the status of current and future NGI open calls, including the expected number of future beneficiaries.

Basing on such information, which at this stage does not provide yet an exhaustive overview of all future NGI-open-call-funded projects, we estimate the total number of third parties' projects to amount to 161 by October 2020, namely:

- 99 projects funded for "Making Internet more resilient and trustworthy";
- 30 projects funded for "Making internet more democratic"
- 32 projects funded for "Making internet more inclusive"

Note: such estimate is based on the information provided by the projects: NGI_Trust; NGIO_PET; LEDGER; NGIO-Discovery as reported in D2.1. The estimate is therefore not considering the impact of the projects: NGI Forward, Explorers and NEXUS.

4.2.2 Qualitative perspective

Questionnaires' will be used to assess (mainly) the qualitative outcomes of the project. Furthermore, individual partner reporting after each event (especially the boot-camp) as well as the reporting of any development in the field of NGI on the respective national market (media monitoring, market analysis, direct involvement of a partner) will be used to add qualitative information to the outcome measuring.

A) Which of the following outcome(s) is your project contributing to?

- Increased sustainability of Internet in terms of limiting harm to the planet and ensuring that input materials are sourced in a fair and ethical way.
- Increased level of resilience and cyber security
- Increased number and quality of available infrastructures necessary for secure online interactions and trustworthy online identities.
- Increased sustainability and health of the information and media ecosystem.
- Increased number of new business models leading towards decentralising power, away from a handful of dominant players.
- Increased ability for internet users to provide meaningful consent, opt out, and self-govern their interactions with internet services.
- Increased control of internet users over their own data, so regaining data sovereignty.
- Decreased degree of perpetuating existing inequalities caused by AI and Machine Learning tools
- Increased level of internet safety for all users, ensuring the promotion of diversity
- Increased accessibility of internet providing everyone with the ability to shape and harness its power.

B) Please describe in 1-2 sentences how is your project addressing the selected outcome(s) above? What was (will be) achieved thanks to the NGI support?

C) Have you been involved in a debate with your national policymakers or EU policymakers about issues related to the outcome(s) selected above?

- Yes, with national policymaker. Which topic did you discuss?
- Yes, with European policymaker
- Yes, on both levels
- No



D) What is in your opinion the chance that intended target groups will adopt the outcome of your project within the 5 year time frame?

- 0%
- 1-25%
- 25-50%
- More than 50%

Please explain your assumption above.

E) How many new jobs could be created thanks to the outcome of your project?

F) Were there any start-ups created thanks to the outcome of your project? If yes, can you please provide any details?

G) Did you manage to raise any additional funds? If yes, how much and through which funding scheme?

H) On the scale from 1 to 5 (where 1 means 'no impact' and 5 means 'very high impact'), how does the (intended) outcome of your project score in the following categories? (Please put cross where applicable).

Category	1-No impact	2- Minor impact	3- Medium impact	4- High impact	5-Very high impact	Short comment: why?
Contribution to the uptake of "NGI culture"						
Involving relevant stakeholders						
Creating new collaborations						
Creating new knowledge						
Economic impact						

5 GUIDELINES

The process of data collection will follow two different methodologies and procedures, basing on the target audience to be monitored, respectively:

1. Data collection from TETRA partners
2. Data collection from Relevant Projects and their third parties

5.1 DATA COLLECTION FROM TETRA PARTNERS

The monitoring of TETRA activities supporting a more resilient, inclusive and democratic internet will be performed on a monthly basis, starting with M7. The internal procedures and tools to collect data will be jointly agreed by TETRA Consortium within M6.

It is foreseen the use of an online spreadsheet (based on Figure 3) hosted in TETRA Google Drive cloud storage and monthly updates on the status distributed via email through consortium mailing list and/or bilaterally. LOBA will lead this process.

5.2 DATA COLLECTION FROM RELEVANT PROJECTS AND THEIR THIRD PARTIES

A different approach shall be reserved when monitoring the activities supporting a more resilient, inclusive and democratic internet performed by Relevant Projects and their third parties.

LEDGER, Think NEXUS, NGI Forward, NGI0, NGI TRUST, NGI Explorers, FED4FIRE+ have different target groups, objectives, NGI open calls to be issued, timing of the NGI open calls, approaches towards the NGI principles, as well budget, resources, etc.

For this reason, it is of core importance to centralize the procedures concerning their data collection process. To do so, the main channel identified at this stage are the “NGI Communication Task Force” teleconferences. Such teleconferences, managed by NGI, bring together twice a month through GoToMeeting the majority of the Relevant Projects



to receive updates by each of the attendees on recent activities and NGI open calls about to be issued.

LOBA regularly attends the NGI Communication Task Force teleconferences.

The envisioned procedure is to create an online spreadsheet (based on Figure 3) hosted in NGI cloud storage available at: <https://drive.ngi.eu>.

All Relevant Projects have access to NGI cloud storage and through the abovementioned teleconferences, LOBA will be able to keep the monitoring activities on a regular basis.

However, it is important to highlight how TETRA shouldn't be relying solely on NGI teleconferences to perform T5.2 activities. Basing on the timing of NGI open calls, identified during the 1st TETRA Advisory Board Workshop and available in D2.1, it will be fundamental to bilaterally reach those Relevant Projects whose data was not possible to collect during NGI teleconferences.

To support this process and facilitate the communication between TETRA and all NGI projects, LOBA set up a mailing list ad-hoc including all coordinators of currently running NGI projects and all TETRA Work Package leaders: taskforce@tetraproject.eu.

All recipients of the abovementioned mailing list have been advised about this initiative and expressively gave their consent during TETRA first Advisory Board workshop.

Additional data collection procedures and methods will be empirically identified until M18 and explained in D5.2.

6 CONCLUSIONS

TETRA project is brought to life to develop and implement a series of business-support activities targeted at 'R&I Actions' and their third parties funded under the topic H2020-ICT-24-2018-2019 to help turn their research results into marketable products and services and prepare them for success in the market place. One of its key missions is to assess the impacts made at the level of the 'Next Generation Internet – An Open Internet Initiative' topic.

To effectively measure these impacts, a monitoring and impact assessment plan for the project is needed. The plan presented in this document outlines the expected impacts of the projects and sets the KPIs to be followed.

