NEXT GENERATION INTERNET

NGI 4ALL

D3.5 NGI COMMUNITY DEMOGRAPHICS AND EVOLUTION

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Abstract	This deliverable describes and analyses the size, structure and distribution of the NGI population across Europe, and possibly beyond, also with inputs from other NGI projects. This document also analyses inputs provided by the Advisory Board. The findings of the NGI demographics' analysis provides key inputs and direction to the marketing and communication activities to be carried out by the NGI Outreach Office in Y2.
Keywords	NGI, community, demographics, engagement and participation, behavioural pattern

Document Revision History

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* R: Document, report (excluding the periodic and final reports)

DEM: Demonstrator, pilot, prototype, plan designs

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

OTHER: Software, technical diagram, etc.

EXECUTIVE SUMMARY

This deliverable is the first report describing the NGI community (NGI audience) demographics and evolution since the inception of the NGI Outreach Office. This analysis aims at highlighting the results (both qualitative and quantitative) achieved in Year 1 (2019) by the NGI Outreach Office (NGIO) in extending the NGI audience, broadening its share of voice within the ICT debate in Europe and beyond and engaging fresh players into the active ecosystem (e.g. participation to NGI events and expressed interest into ICT calls and cascade funding opportunities).

The analysis is articulated as follows:

- A brief description of the NGI's stakeholders along with the NGI marketing objectives linked to the growth of the NGI audience (section 1)

- A description of the NGI audience: a community of communities represented by the publishers (active NGI players), by the amplifiers and by the communication's receivers across a variety of media online and offline (section 2)

- The quantitative and demographic analysis of each audience, for the online media (section 2.1) and offline media (section 2.2)

- The assessment of the results achieved and the foreseen evolution in Year 2 (see section 3)

- The document concludes with the NGI4ALL KPIs relevant to this analysis (see section 4) and the conclusions (see section 5).

Here the key achievements marked in Year 1 (sources and methodology of analysis are presented in the document):

- Estimated total gross online audience online (through owned media): 55,000 individuals (with an additional 25% amplifier effect generated by the outer circles represented by EC, NGI projects, media etc).
- Estimated online audience through paid media (advertising): 450,000
- Estimated total gross audience offline: 5,000 individuals
- Estimated 30% total audience growth
    o   + 43% gross online audience
    o   + 20% estimated audience growth offline

The NGI Outreach Office has managed:

- A more systematic track and collection of the data across media which enabled this analysis
- An integrated approach linking the audience growth to the NGI marketing objectives

This deliverable focuses on the audience data analysis, and it is clearly complementary to the deliverables describing the communication and community building activities run in Year One, such as the Deliverable *D3.2 Growth Hacking Activities and NGI Ambassadors Programme Report,* Deliverable *D2.3 NGI Charisma Activities Report*, and the Deliverable *D4.3 Annual Media Press Coverage Report.*

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ABBREVIATIONS

4YFN	Four Years from Now
CPC	Cost per Click
CPM	Cost per Mille
CTR	Click Through Rate
CSA	Coordination and Support Action
DAU	Daily Average Us
EC	European Commission
FSTP	Financial Support for Third Parties
GDPR	General Data Protection Regulation
ICT	Information and Communication Technology
IGF	Internet Governance Forum
IP	Internet Protocol
MWC	Mobile World Congress
NGI	Next Generation Internet
NGIO	NGI Outreach Office
RIA	Research and Innovation Action
TCP	Transmission Control Protocol
WP	Work Package

1 NGI COMMUNITY

The NGI community includes all the actors in the stakeholders' ecosystem, as described in the Deliverable *D1.1.1 NGI Marketing Strategy and Plan*. A community highly diversified which we have detailed in the Table 1 below and which also represents the target of the NGI Outreach Office communication activities (as described in the *Deliverable D2.3 NGI Charisma Activities Report*).

STAKEHOLDERS	SUB-GROUPS
Researchers and education	• Students / Post-docs / Early-career researchers • Research leaders / Top-notch academics • Open source • National Associations • GÉANT/NRENS
Industry	• Start-ups and SMEs • Entrepreneurs • Incubators / Accelerators • Big companies • Clusters and associations • Market analyst • Open Source
Civil society players	• Public / citizens • NGOs / Communities groups Activists / Hackers /Artists /Citizens including children, young people, as well as elderly people, those at risk of losing out to the 'digital divide'
Public bodies Policy makers	• National research bodies • National Contact Points • Future Internet Forum • Legislators • Regulators • Standardisation Groups
Media	• Web sites • Social networks • Radio / TV • Press • Journalists • Journalist associations

TABLE 1 : NGI STAKEHOLDERS

The NGI Outreach Office has estimated, at the beginning of the project, that the potential enlarged NGI target audience (composed by the key stakeholders in Table 1 and including therefore citizens at large) comprises **2,200,000 contacts, which shall be stretched up to 3,300,000 contacts by the end of the project, including SMEs, Start-ups and innovators**

at large. These "heads" are reachable by the NGI Outreach Office through a series of media, events and geographical "nodes" (e.g. NGI Contact Points, Digital Innovation Hubs etc). The Figure 1 below represents the geographical distribution across Europe and beyond, highlighting a few key nodes, such as Germany, France, Spain and UK, where there is the highest concentration of the NGI target audience, but extending to the smallest but still relevant nodes, all interconnected, such as Luxemburg, Bulgaria etc.

FIGURE 1: NGI OUTREACH OFFICE – OUTREACH NODES

Moreover, in order to effectively reach these various stakeholders, the NGIO has analysed them across different axis, as shown by Table 2 below, in order to map them in terms of Influence (high-low) and Interest (high-low). This mapping guided the NGIO communication activities for each target group:

For stakeholders with High Influence and Low Interest (see Media, Market Analysts and Big Companies), the NGIO has engaged them in high profile events providing articulated information and arguments to raise their interest around the NGI initiative. Towards this, Martin Wezowski Chief Designer & Futurist for SAP's Technology & Innovation strategy team, was the guest speaker at the NGI Forum 2019.

For Stakeholders with high influence and high Interest (see Academics, Legislators and activists) the NGIO has maintained a high level of interaction, making sure they have been included them in the NGI activities, discussion and future plans. In order to engage this target groups, the NGIO has a significant presence at the IGF 2019 in Berlin and will be promoted at the FOSDEM 2020.

Stakeholders such as start-ups, SMEs, which have a high interest (e.g. in the funding opportunities) but still low influence on the NGI development have been increasingly important for the NGIO marketing activities, as they have been not only targeted in the communication, but brought up as NGI Innovators presenting their own success stories (see the presentation of Nadim Kobeissi at the NGI Forum 2019 and the dedicated Innovators' Blog series on the NGI portal).

NGI STAKEHOLDERS NEEDS' AND INFLUENCE ANALYSIS

INFLUENCE					
HIGH	**KEEP SATISFIED**	Media	**MANAGE CLOSELY**	National Research bodies	
		Big Companies		National Contact Points	
		Market Analysts		Activists, Hackers	
		Standardization Groups		Incubators	
				Researchers	
				Academics	
				Open Source	
				Future Internet Forum	
				Legislators	
LOW	**MONITOR**	Citizens	**KEEP INFORMED**	Start-ups	
				SMEs	
				Incubators	
	LOW		**HIGH**		
INTEREST					

TABLE 2 : NGI STAKEHOLDERS NEEDS AND INFLUENCE

The development and growth of the NGI Community is essential to make the NGI initiative **relevant** at European and international level, bringing forward the Internet for Humans values it represents and champions (trust, reliability, resiliency, openness etc.). Nevertheless, and not less importantly, **it is also functional to support the NGI specific marketing objectives** such as:

- Maximise the number and profile of participants to the NGI ICT Calls (Horizon 2020 program and since 2021 Horizon Europe programme)

- Maximise the number of participants (and the quality level of the applications), to the equity free cascaded funding mechanism (Open Calls).

- Raise the bar of the technological, political and ethical debate around the Next Generation Internet.

- Support the research market orientation given by the Commission to the NGI program in its maturity phase.

- Maximise the dissemination reach of the technological (and economical results) obtained by the NGI projects and third parties funded.

2 NGI A COMMUNITY OF COMMUNITIES

The NGI Outreach Office targets to **reach 3,200,000 individuals** by the end of 2021 with the concept, values and opportunities offered by the NGI initiative. This audience should be engaged (at different levels) to create the Internet of Humans. It's an ambitious goal which requires to get "as close as possible" to our audience, leveraging on all the media owned (NGI media channels see Figure 2 below) and earned (paid advertising) online and offline. This is an effort led by the NGI Outreach Office, in coordination with the European Commission, but also carried out thanks to the other actors active in the NGI ecosystem, such as the NGI projects, other EC units working on relevant technologies, the NGI Innovators etc. The different touch/entry points to the NGI universe can be effectively represented by the image of a dice where each dot is actually a hole to jump into the NGI world (see Figure 2). Each dot offers different information, a different level of interactivity, different opportunities to engage other players. It is also a permeable surface, the NGI contacts can enter from one hole (media) to another, explore, remain, becoming active or exit (if they do not find anything relevant). The media directly managed by the NGI Outreach Office are listed here below, while the sections 2.1 and 2.2 provide the details regarding the growth trend and the demographics details (where available for each of them).

- NGI Online media (which in some cases represent sub communities on their own)
    - NGI.eu web portal website https://ngi.eu/
    - NGI Map:
    - Newsletter
    - Social media (managed by NGI4ALL)
    - NGI projects' social media
    - NGI Community
    - NGI Exchange Platform
- Events
    - NGI Events (e.g. NGI Forum)
    - Events attended by NGI (e.g. Web Summit, IGF, FOSDEM, 4YFN)
- Press & Influencers
    - Media online and offline
    - Bloggers

FIGURE 2 NGI MEDIA

These media are included in the Circle 1 in the Figure 3 below, which represents the radius of the NGI Communication publishers (actors talking about NGI through their media) as "concentric circles" which irradiate from the central one represented by the NGI Outreach Office. The outer Circles (NGI projects, third party innovators, EC channels, media) are not directly controlled by the NGIO but they're influenced and, where possible, guided. It is worth noticing that it is difficult to track and quantify the audience reached by the outer circles. It is possible to estimate an average **amplifier effect of 25%,** where the press or EC channels might be playing a major quantitative role, but where some NGI projects can be more effective geographically (e.g. reaching US innovators) and financially supported third-party projects or

the NGI community ambassadors may reach specific niches (e.g. blockchain or eID researchers).
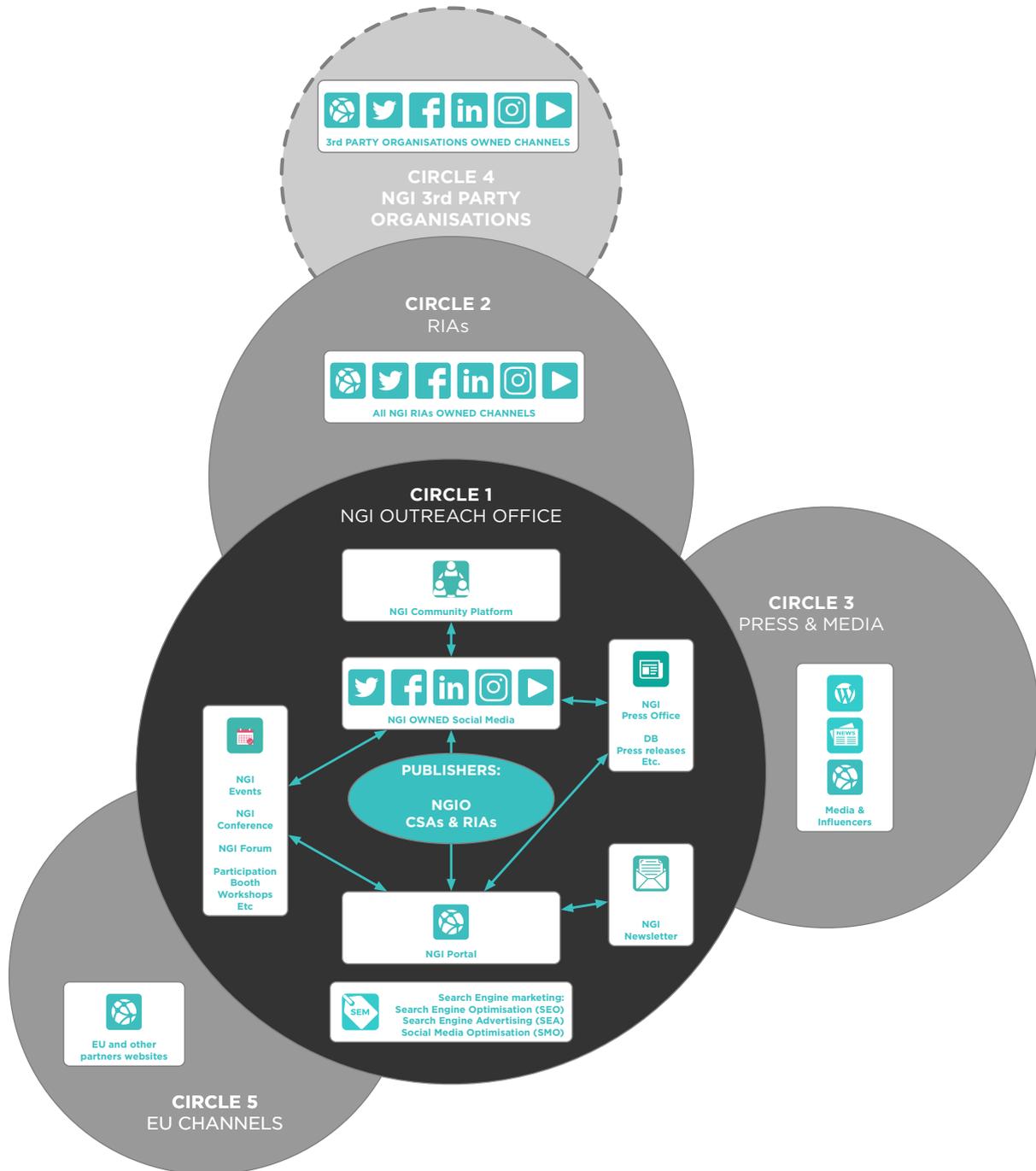

FIGURE 3: THE NGI COMMUNICATION ECOSYSTEM

2.1   THE NGI ONLINE AUDIENCE

In **2019 we reached 55,000 gross contacts** through the online owned media, directly managed by the NGIO, with a 43% on 2018.
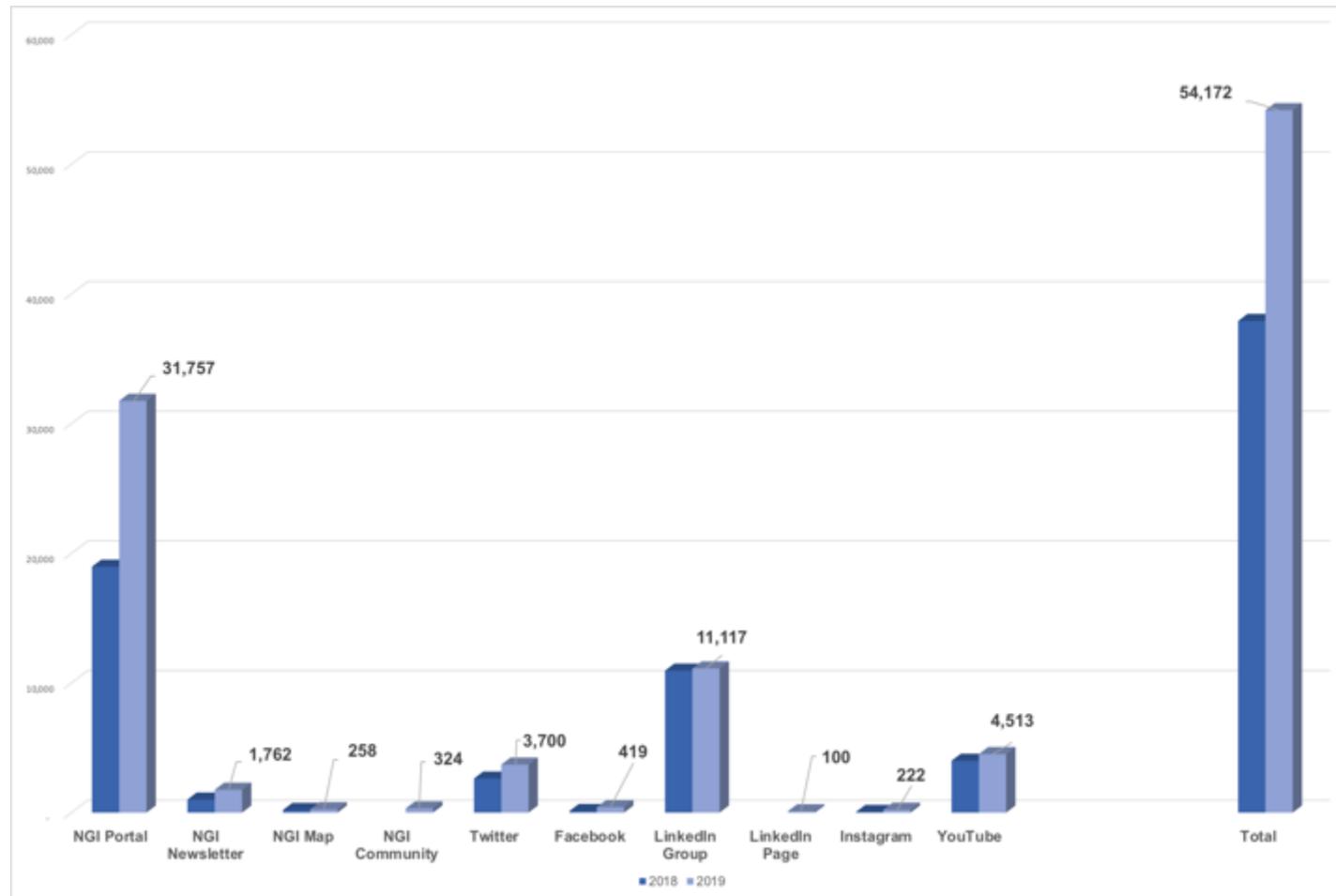

FIGURE 4: NGI ONLINE AUDIENCE GROWTH

First of all, the 60,000 online contacts must be considered "gross" as it is clear that there is an overlap of individuals using and or following 1 or more NGI touch points. It is rather difficult (as of today) to **verify the exact percentage of overlap between the different online media**, but we may reasonably estimate it below 20 percent (considering therefore a 40,000 total net reach online for the year 1).

The audience growth is led by the increase of unique visitors to **the NGI portal (www.ngi.eu) which jumped from 19,000 to 32,000 unique visitors in 2019 (67 percent increase)**. The portal growth surely benefits of all the other media synergic push activities, which mainly drive the readers to visit the NGI website for specific news, funding opportunities and actions (e.g. subscription to the NGI Map or communities). It is also interesting to notice the **growth of the NGI newsletter, from 1,000 subscribers to almost 1,800 subscribers (75 percent increase).** It is noticeable because the Newsletter (and Newsflashes) is the only "pure push" tool available that allows a periodic re-engagement of the audience. Other media audiences grew as well: with the YouTube video views raised of 13 percent, Facebook with 241 percent more followers and the NGI Map with 28 percent more organizations registered. The Table 3 below presents the breakdown, tracking also the results of two media activated in 2019: the NGI Community (managed by Funding Box and described in *D3.2 Growth Hacking Activities and NGI Ambassadors Program Report*) and the NGI LinkedIn page.

NGI Online Media	2018	2019	% Growth
NGI Portal (unique visitors)	18,963	31,757	67%
NGI Newsletter (subscribers)	1,005	1,762	75%
NGI Map (organizations registered)	201	258	28%
NGI Community members		324	
Twitter	2,626	3,700	41%
Facebook	123	419	241%
LinkedIn Group (members)	10,948	11,117	2%
LinkedIn Page (followers)		100	0%
Instagram	50	222	344%
YouTube (video views)	4,000	4,513	13%
Total	**37,916**	**54,172**	**43%**

TABLE 3 : NGI ONLINE OWNED MEDIA GROWTH 2019 VS 2018

The Figure 5 below highlights the weight of each media in terms of audience reach. It is clear the leadership of the NGI Portal (54 percent of the audience), followed by the LinkedIn Group (19 percent) and the YouTube channel (15 percent). Among the other social media, the only relevant one seems to be the Twitter channel with a 6 percent. The NGI portal is naturally and intentionally the entry point to the NGI ecosystem, widely promoted also offline as it offers the most comprehensive offer of information regarding the NGI activities, projects, events and funding opportunities. The growth and the relevance of the YouTube channel instead gives us an interesting hint regarding the content development for the upcoming months (more details on this are provided by the Deliverable *D2.3 NGI Charisma Activities Report*).
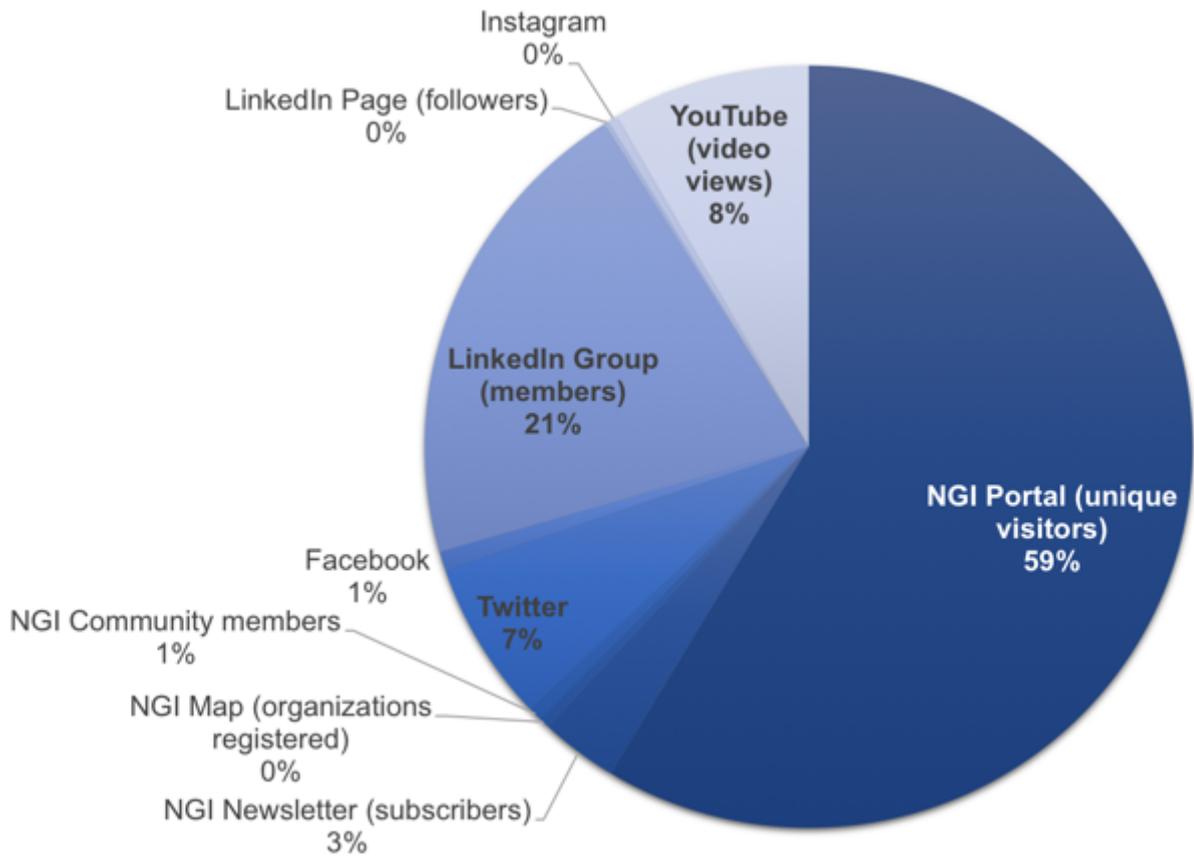
FIGURE 5: NGI ONLINE AUDIENCE DISTRIBUTION

2.1.1 NGI Portal

A deep dive into the profile and behaviour of the NGI portal visitors provided by the analysis of the data offered by Google Analytics, allows to highlight the following:

WHO are they?

- As of now, the data available through Google Analytics to identify, for each session: the country of origin, the city and the language preference. This provides a limited resource of information, as it lacks online preferences (e.g. website visited) other indicators, such as age bracket, sex or stakeholders' group (e.g. SMEs, universities, policy makers etc). The Cookie policy implemented by the NGI portal is protecting the users' privacy (being therefore consistent with the NGI values), but it implies a limited amount of information collected for the community's analysis.
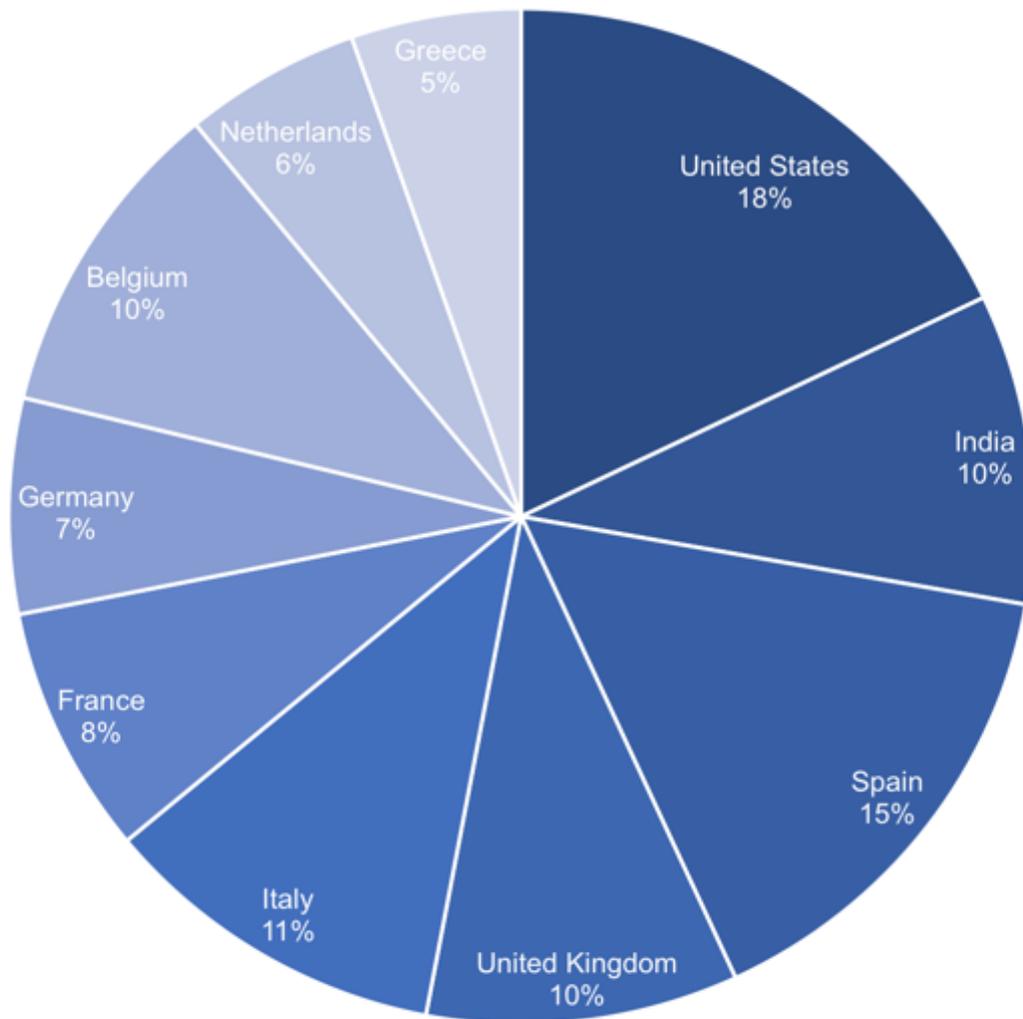
FIGURE 6: NGI PORTAL, VISITORS' GEOGRAPHIC DISTRIBUTION

- As per the geographic origin of the visitors of the NGI portal there is over representation (vs European population distribution) among some countries (France, Belgium, UK, Spain, Germany, Italy, Netherlands, Greece). However, in lower percentages all the EC countries generate traffic to the NGI website, their relevance though can be further promoted in Year 2 with specific actions (with a specific focus on: Ireland, Portugal, eastern and northern countries)

- To be noted that the traffic originated from "USA" and "India", represent 28 percent of the total and this can also be explained by the users' IP. The analysis of the city of origin helps to have a better understanding, even if it's obviously fragmented and still underdefined:

    o   10% not identified (it's a relevant value, IP not disclosed)

    o   3%: London, Brussels, New York, Ashburn (Virginia, USA)

    o   2% Madrid, Paris, Barcelona

    o   1% Helsinki and Amsterdam

It is possible to infer that around 80% of the traffic is generated outside the big nodes, big cities, and distributed in peripheral towns and areas in the continent.

- 17 percent of the visitors are returning visitors, coming back for another visit, another positive metric, showing a discreet retention rate of the NGI contents

HOW do they behave on the portal?

- Too many leave after visiting the homepage (bounce rate 63%). This means they did not find any link interesting enough to continue the visit.

- The average number of pages visited is 1.83 (it's an average result, but for the NGI purpose is still too low)

- The **average session duration is of 1:55"** which corresponds to the number of pages visited and it's an average result for websites, but considering the density of information given by the portal surely it's surely not sufficient to get though the key relevant opportunities offered by NGI.

- For the ones that remain on the NGI website beyond the homepage, what do they see?

  o **20 percent of our visitors check the pages related to the funding opportunities** (being ICT calls, open calls generic page, specific project's open calls, dedicated news)

  o The funding contenders are the About page, the NGI videos page, the NGI Map and some specific news

FROM Where do they arrive?

Most of the visitors to the NGI portal arrive directly (46 percent) or through an organic search (40 percent).

The traffic classified as "direct" means that the user landed on the NGI website either by typing the URL into a browser or through browser bookmarks. This data pairs well with the number of returning visitors (17 percent), which is pretty high. This is

The traffic generated by organic search stands for traffic generated by a search engine result for keywords indicated by the users. It reflects a good SEO management of the website.
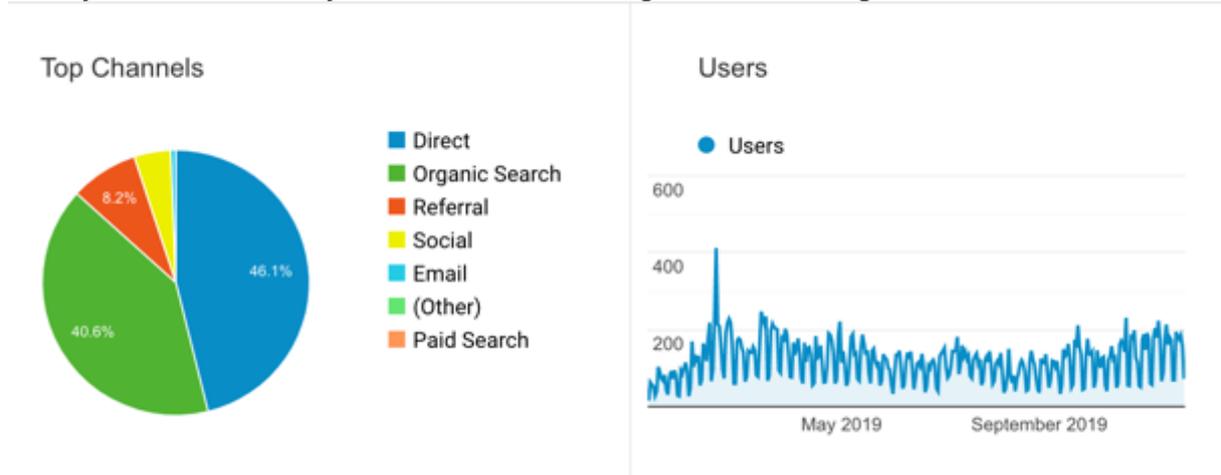
FIGURE 7: NGI ONLINE AUDIENCE DISTRIBUTION

The referral visits rank only third with 8 percent. This is the traffic generated by links in third websites, and her the top contributors are:
- Ec.europa.eu (12%)
- Nlnet.nl (9%)
- Ngiforum.eu (5%)

- Nesta.org.uk (2%)
- Edgeryders.eu (2%)

Social media represent 4 percent of the traffic generated to the NGI portal, a modest percentage which shows that the consumption of NGI social media content is quick and superficial, due to several factors including the frequency of the posts' update, the density and cacophony of news generated by the competitors' publishers etc.

2.1.2 NGI Forum website

The NGI Forum website is a "seasonal" website as clearly shown by the Figure 8 below, which attracts most of the traffic right before and during the NGI flagship event. It is also to be noticed, that a dedicated advertising paid campaign was run in 2019 to generate traffic to the event's website with the clear goal to promote the registrations to the event. **Around 2,400 unique visitors** checked in the website, spending around 2':05" on it, more time than on the NGI portal (most likely because the visitors explore the agenda and speakers' profile and then once convinced they also need to fill in their data for the registration).

FIGURE 8: NGI FORUM WEBSITE ANALYTICS OVERVIEW

2.1.3 NGI Newsletters and Newsflashes

As mentioned before, the readership base of the NGI newsletter saw a significant growth in 2019 (over 60 percent) reaching around **1,700 subscribers**. [1]

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[1]The data referred to the NGI Newsletters and Newsflashes are extracted from the Mailchimp Analytics
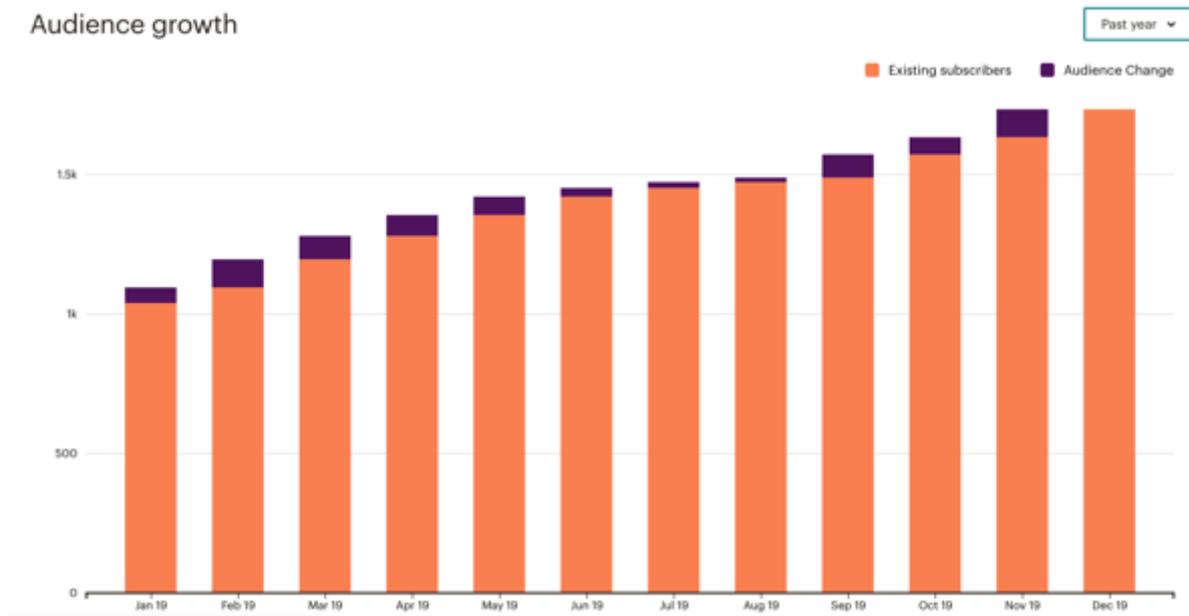
FIGURE 9: NGI NEWSLETTER SUBSCRIBERS' GROWTH 2019

The Figure 9 above depicts the growth trend in 2019 and it highlights the impact of events to the growth of the subscription base (pick of new users in Feb/March and then Sept/Nov), which corresponds to the participation to the 4YFN (late Feb 2019, Barcelona), the NGI Forum (end of September) and the participation to the IGF (November, Berlin). The events' participants and/or visitors to the NGI booth are positively triggered to subscribe to the NGI newsletter.

As of now, the subscription process (double opt-in) requires exclusively the email address, therefore it is extremely difficult to profile the NGI newsletter audience from a socio-demographic and/or interest group point of view. A partial data, in terms of geographic distribution, is given by the tracking of the geolocation of the newsletters' opening (monitored by the newsletter's application, https://mailchimp.com). It shows that the "usual suspects" countries are the ones most represented (Spain, Netherlands, Belgium, Italy, UK). There's clearly the need to improve the penetration of NGI media reach into the northern / east part of Europe.
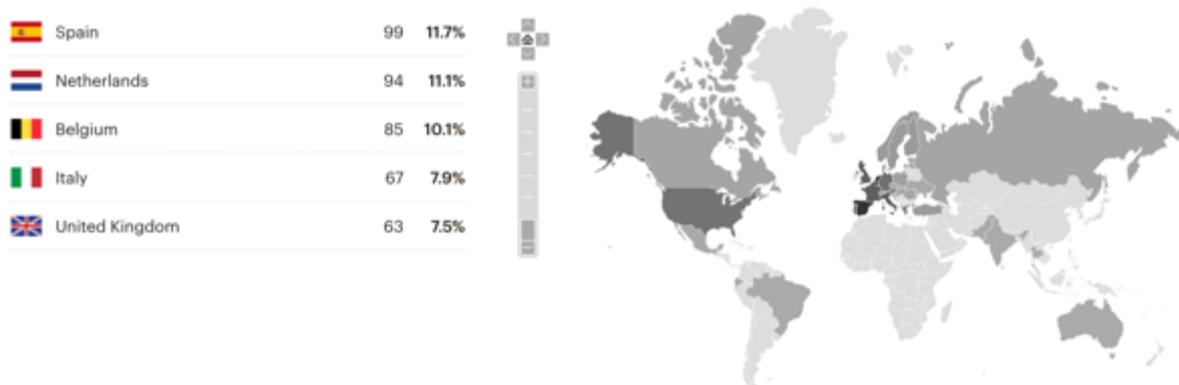
FIGURE 10: NGI NEWSLETTER TOP LOCATIONS BY OPENS

It can be considered, for the future, whether it would be relevant to add a few fields for a better understanding of the audience (e.g. group age, sex, technologies of interest, organization type). The light subscription process clearly is functional to minimize the data requested (maintaining a high level of privacy) and maximise the speed of the subscription process. The

trade-off between the subscription growth and the profile details of the audience is obviously thin and to be discussed among the projects' partners.

Twelve issues of the NGI newsletter/newsflashes have been distributed in 2019, therefore with a monthly frequency (to be considered though that the editorial team avoids pushing contents during the holiday breaks, such as Easter, summer and Christmas). It is interesting to observe that the **open rate has been stable around 28 percent** with a peak of 33 percent for the issue "NGI Open Calls: Fund your Idea!" distributed on February 7th, 2019. The lowest open rate has been registered with the latest issue of the year "Latest News from NGI #7" distributed on 18th December, 2019. It is possible to assume that the generic title of the latest newsletter and the date of distribution (too closed to the Christmas break) penalized the open rate. What is instead interesting to notice is the appeal of funding opportunities, both EC calls and projects' Open Calls" as titles triggering the audience to open the newsletter. This data is confirmed by the **average click through rate (CTR) of around 10 percent**. It is worth noticing that 70 percent of the clicks are registered to the links bringing to the news related to funding opportunities. NGI events (both webinars and international events) and the NGI Map follow as points of interest. The rest of the news, related to innovators experience and to more institutional background information (e.g. whitepapers, brochures, position papers) are less appealing to the NGI newsletters' audience.

2.1.4 NGI Map

The NGI Map, launched in 2018 and revamped in 2019 (see D2.3 NGI Charisma Activities Report for the details), **saw a growth of around 28 percent** in terms of organizations registered (see Table 3 above). The promotion of the NGI map has been across board (newsletter, website top menu, promotional materials etc) and the results of **258 organizations** currently registered is significant, but it could be read as below expectations (in terms of efforts vs results). Noteworthy, though it's the fact that organizations registered represent a valuable database, rich of details and a valuable self-promotion tool for the organizations engaged, not only within the NGI ecosystem but a broader level in terms of Research & Innovation relevant players. The effort has been (and continues to be) to enrich the functionalities of the Map and integrate it further with the NGI Community Platform and the NGI social media.

Traffic to the NGI Map
The NGI Map definitively attracts the interest of the NGI portal visitors (and the NGI newsletters' readers), as it represents **the 10th most visited page of the NGI portal** (Source Google Analytics), with 2,567 views. Moreover, to have a more detailed traffic data analysis, since 1st October, 2019, we have also activated the Google Analytics for the NGI map domain (https://www.ngi.eu/ngi-map/) and the data collected show 376 unique visitors, in the last 45 days of the year, well distributed among the European countries: Switzerland (15%), Spain (11%), Netherlands (9%), Italy (6%), France (6%), Germany (6%), UK, Belgium, Portugal (4%) and the rest pulverised among USA and other countries.

Profile of the NGI Map registered organization
The Figures 11 and 12 below detail the profile and the country of the registered organizations. The geographical distribution is well balanced, as the NGI Map attracts organizations from 23 different European countries, with a predominance of Spain, Germany, France, Portugal, Sweden, UK and Italy (as per the other NGI media) but still with a wide representation of countries. This is the final aim for all the NGI media reach, with obviously a weighted representation based on each country's population and density of SMEs, Start-up and Research Centres. And here again it's interesting that the NGI Map attracted so far, SMEs (24%), Start-ups (17%), Research Centres (15%) and Universities (12%). The organizations' break down reflects exactly the purpose of the NGI Map. Now the challenge is to grow the numerosity of organizations registered on the Map.
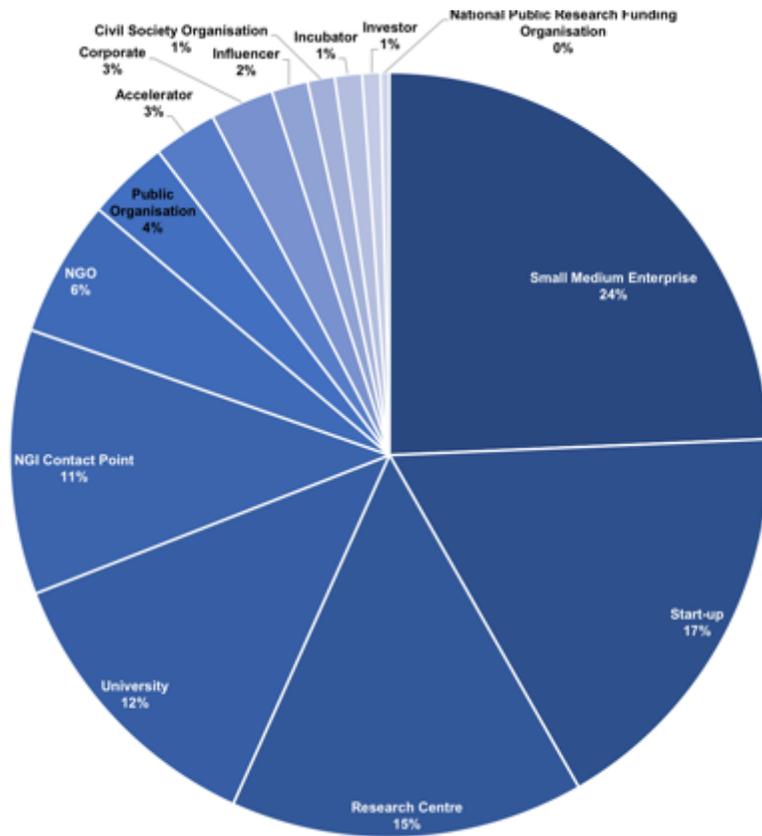
FIGURE 11: NGI MAP, TYPE OF ORGANIZATIONS
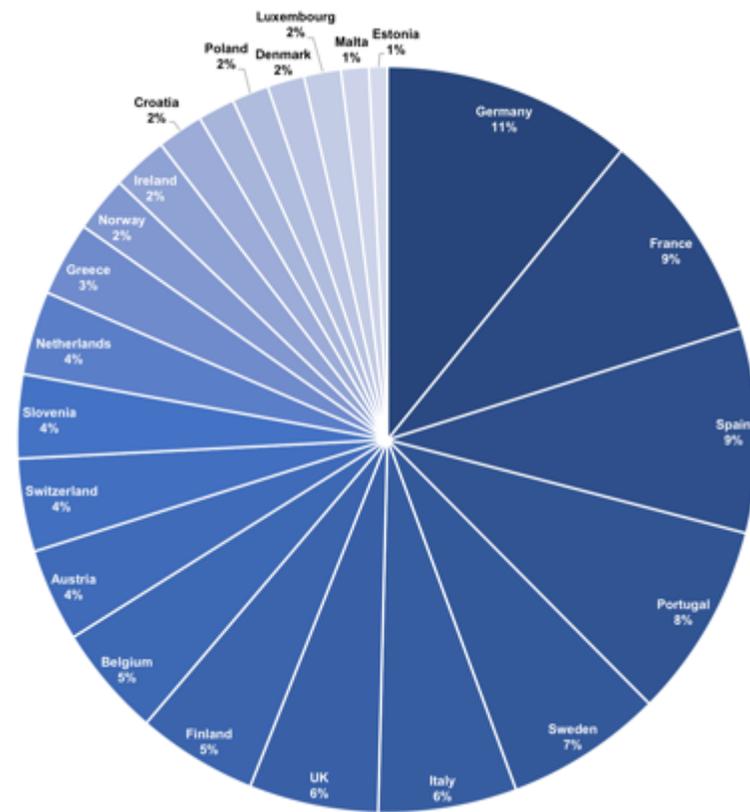
FIGURE 12: NGI MAP, ORGANIZATIONS' COUNTRIE

2.1.5   NGI Community platform

The NGI Community Platform was launched in mid-2019 by the NGI Outreach Office (Funding Box as the task leader). The goal of the platform is to attract and engage the players of the NGI ecosystem, all the "doers", the start-ups, the researchers, the innovators. The objective is to create a dynamic community where synergies are found and where content and crucial information is gathered. At the end of 2019 it attracted **323 members**, [2] with a 21 percent of daily active users. It is interesting to notice for NGI Community Platform (as per the NGI Map described in section 2.1.4) that the SMEs and Start-ups represent the 43 percent of the user base, followed by Research Organizations with 18 percent and Entrepreneurs with 17 percent. The NGI Community Platform (as of today) user base is mainly built upon the NGI portal, the NGI Map and the NGI newsletter and social media audience, which has been engaged through cross-promotional activities. Nevertheless, a paid advertising campaign and the engagement of the NGI Community Ambassadors shall extend the reach outside the usual suspects in the course of Year 2 (2020). More details on the growth plan for the NGI Community Platform are provided in the Deliverable *D3.2 Growth Hacking Activities and NGI Ambassadors Programme*.
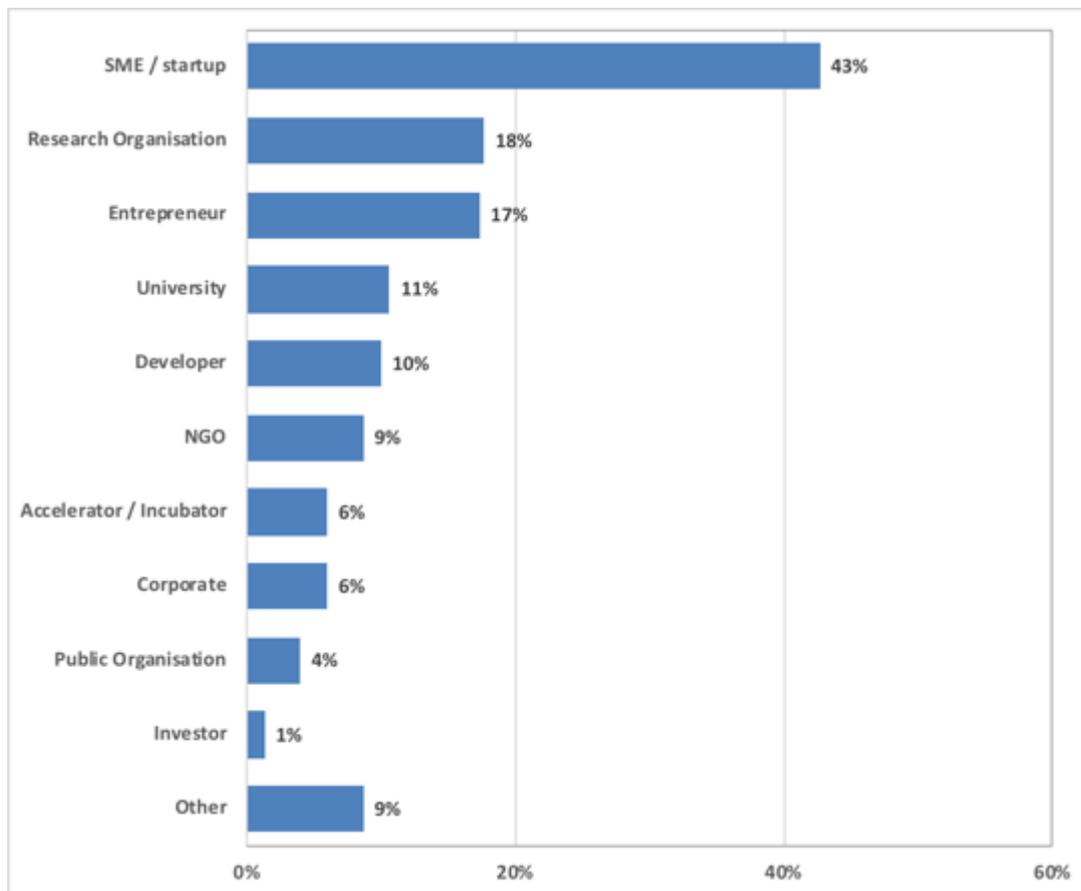
FIGURE 13: NGI COMMUNITY TYPE OF ORGANIZATIONS

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[2] The data related to the NGI Community Platform are extracted from the Funding Box analytics tool
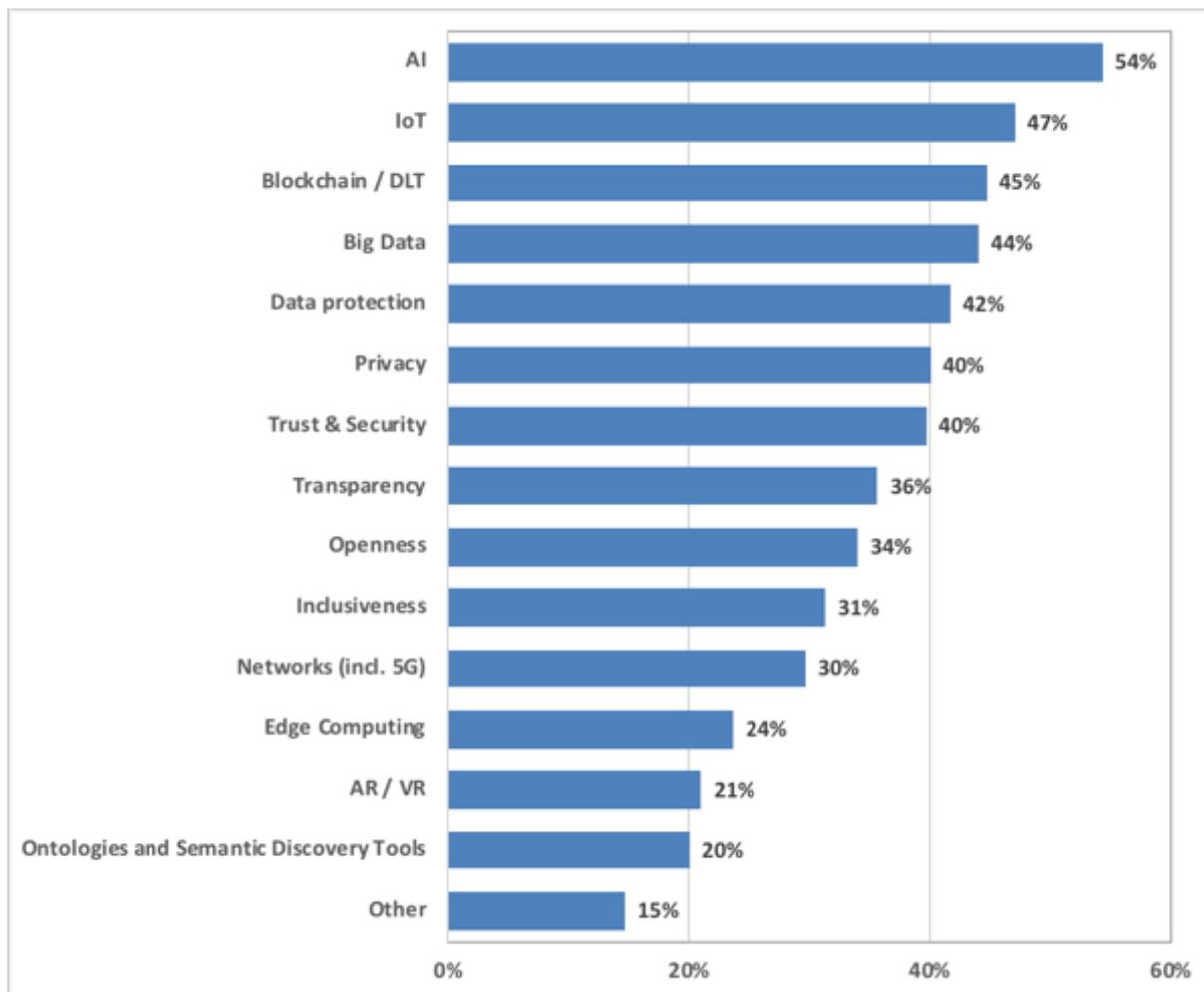
FIGURE 14: NGI COMMUNITY TECHNOLOGIES' INTEREST

Another interesting information (see Figure 14), is the technology interest expressed by the NGI Community members. The interests are quite wide and cover the entire spectrum of the NGI areas of innovation, including: Artificial Intelligence (AI), Internet of Things (IoT), Blockchain, Big Data, Data Protection, Privacy etc.

2.1.6 NGI Exchange Platform

The NGI Exchange Platform (https://exchange.ngi.eu/#participate) was launched by the NGI Forward project (CSA) in April 2019. The NGIO does not have direct access to the Google analytics of this domain, but it is possible, visiting the front end of the Exchange Platform Community to calculate the **views for each topic's thread to around 50,000**.

2.1.7 NGI Social media

NGI "occupies" all the mainstream social media: Twitter, Facebook, LinkedIn, YouTube and Instagram. Each of them not only responds to different contents needs distribution (e.g. YouTube video), but it also allows to reach different target profiles: LinkedIn is definitively a professional social media, where NGI can reach out to universities, entrepreneurs, SMEs; Instagram is clearly a visual media, mainstream but with a higher concentration of young profiles, Facebook has an older audience (over 30) but offers the widest reach and it hosts also numerous technology oriented Facebook group pages, which are relevant to the NGI discussion. As per Twitter, it allows continuous and fast communication opportunities with an audience made of policy makers, media, projects' partners, start-uppers.

2.1.7.1 NGI Twitter

The NGI Twitter account followers' growth of around 30 percent in 2019, meant that currently the **NGI account reaches around 3,700 people**[3]. This is an interesting result, achieved thanks to a well-designed editorial plan, a high frequency of contents, but also thanks to the contribution of the new NGI projects and a smart use of hashtags (#) and handles (@) which allows the NGI account to establish connections with new audiences almost every day. Here below Figure 15 and Figure 16 show some details on the demographic of the NGI Twitter followers, which are aligned with the other media analysed. There's a slight predominance of male followers and the geographical distribution sees UK at the top position (12%), followed by Spain, Belgium, Italy, Germany. The presence in the top ranking of the USA (6%) is due to the two projects connecting the NGI community to the American researchers and innovation centres (Think Nexus and NGI Explorers), they are both active on Twitter channels.

Male	Female
54%	46%
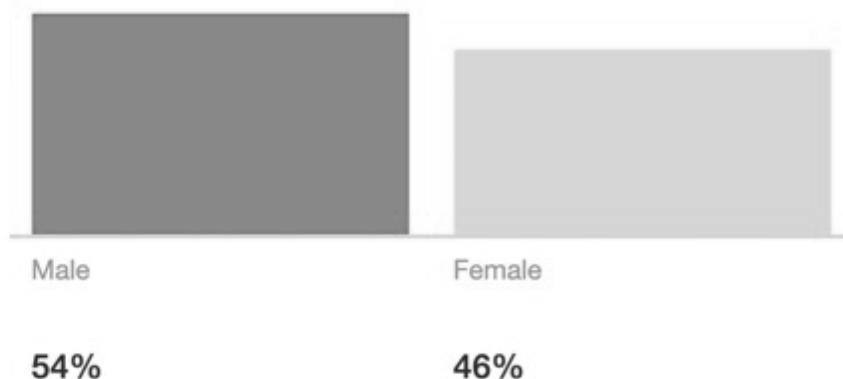
FIGURE 15: NGI TWITTER ACCOUNT, GENDER DISTRIBUTION

Country name	% of audience	
United Kingdom	12%	
Spain	11%	
Belgium	9%	
Italy	8%	
Germany	6%	
United States	6%	
France	6%	
Netherlands	5%	
Greece	4%	
Ireland	3%	

FIGURE 16: NGI TWITTER FOLLOWEERS, COUNTRIES' DISTRIBUTION

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[3] Data related to the NGI Twitter account are extracted from the Twitter Analytics tool

The Figure 17 below shows the trend, in 2019, of three metrics: Tweets published (total 701), Impressions (total 1,5 million), and engagements (around 15,000). The average engagement rate is of **0.9 percent** which is relatively high compared to other industries' corporate twitter accounts (according to online sources, such as Digital Marketing Community Social Media Benchmark Report)[4]. The results are undulatory and if some of the peaks (e.g. September Impressions up to 200,000 certainly linked to the NGI Forum event) the results achieved in June seems more fortuitous and generated by the post welcoming one of the innovators, Origin Trail, funded by the NGI Open Calls See here the post details https://twitter.com/NGI4eu/status/1136926373300379648.

FIGURE 17: NGI TWEETS PUBLISHED, IMPRESSIONS, ENGAGEMENTS JAN-DEC 2019

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[4] https://www.digitalmarketingcommunity.com/researches/2019-social-media-industry-benchmark-report-rival-iq/

2.1.7.2   NGI Facebook

As mentioned before, the NGI Facebook page saw a followers' growth of around 70 percent[5], but the overall number of followers is still modest (± 400). Followers' growth in 2019 increased in second half of the year (sustained also by the advertising campaign online aimed at promoting the NGI Forum event, for more details see Section 2.1.8). The profile of NGI audience on Facebook is aligned with the rest of the NGI user base (see Figure 19), with a slightly predominance of men (57 percent) and a concentration among the age break of 35-44 and 45-54, therefore the NGI page (appropriately) engages mid and senior professionals.

FIGURE 18: NGI FACEBOOK PAGE, FOLLOWERS GROWTH PATTERN
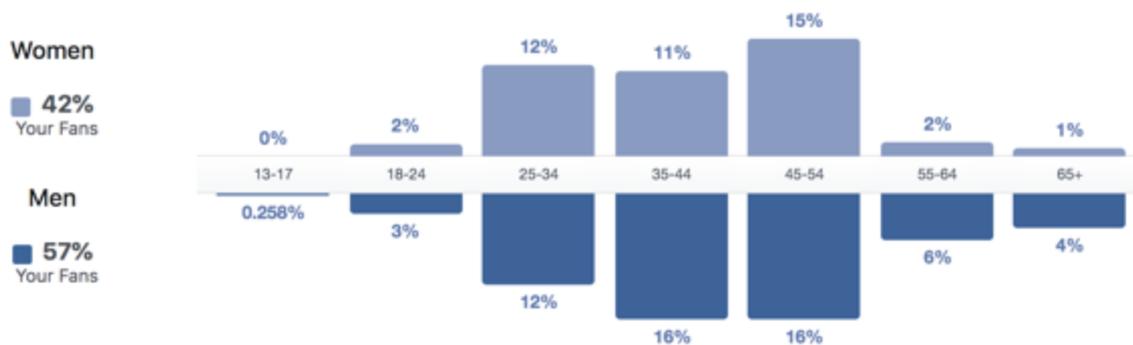
FIGURE 19: NGI FACEBOOK PAGE, FOLLOWERS' DEMOGRAPHICS

Total Reach

The NGI Facebook page reached almost **300,000 users** in 2019 (299,737) with a steep increase since mid-June, when the advertising campaign started (6,062 users reached between Jan and mid-June vs 294,000 users between second half of June and December). This metric provides "The number of people who have seen **any content associated with our Page.** Total reach is an indication of virality of the NGI Facebook page. The more people reached, the more exposure the NGI brand receives." The Figure 18 below shows us that in the first half of the year an average of 18 people saw our posts vs 57 people in the second half. It's worth noting that 2018 marked a change in Facebook's algorithm that promised to display more content from friends and family and less from brands in the News Feed, this is clearly impacting the reach of pages such as the NGI (e.g. NGI posts are not always screened on the followers' feed. The engagement rate (see below) plays an important role in increasing

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[5] The data referred to the NGI Facebook page are extracted from the Facebook Insights Tool

the reach (the more a follower/fan interacts with the NGI contents, most likely he will see in his/her feed future posts).
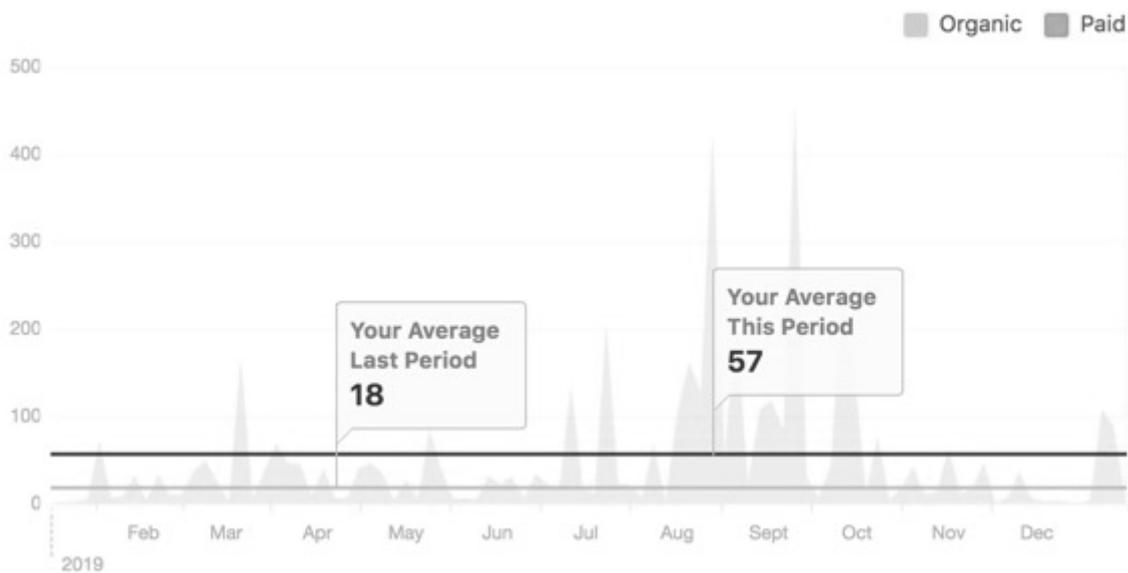
FIGURE 20: NGI FACEBOOK PAGE: POSTS' REACH

Another interesting metric is the **"viral reach"** which consists of the people who see the NGI Facebook content because someone else created a story about it. For example, if a fan likes, comments or shares an NGI post, their friends will see it even if they aren't fans of the NGI page. For the NGI page this metric is still low, **as it represents only 2 percent** of the total reach, and it is directly connected to the modest engagement of NGI followers with the Facebook page.

Engagement
The NGI Facebook saw the around 8,500 engagements, defined as measurable interactions on the social media posts: likes, comments, shares, reactions, clicks. **The engagement rate is around 2 percent (total engagements divided by the total reach).** The metric is aligned (and well above the average industry's brands engagement rate), but it could be clearly enhanced proposing "call to actions" and participation rather than mostly announcing news or events. It worthy to be noticed that the most "successful" post in 2019 was published on 25th September, at the NGI Forum, clearly the "post" was felt as a "community" news, to which the events' participants could relate to, explore through, share and express feelings about. The Figure 21 below shows the content of the post along with the breakdown of the actions taken by the users.
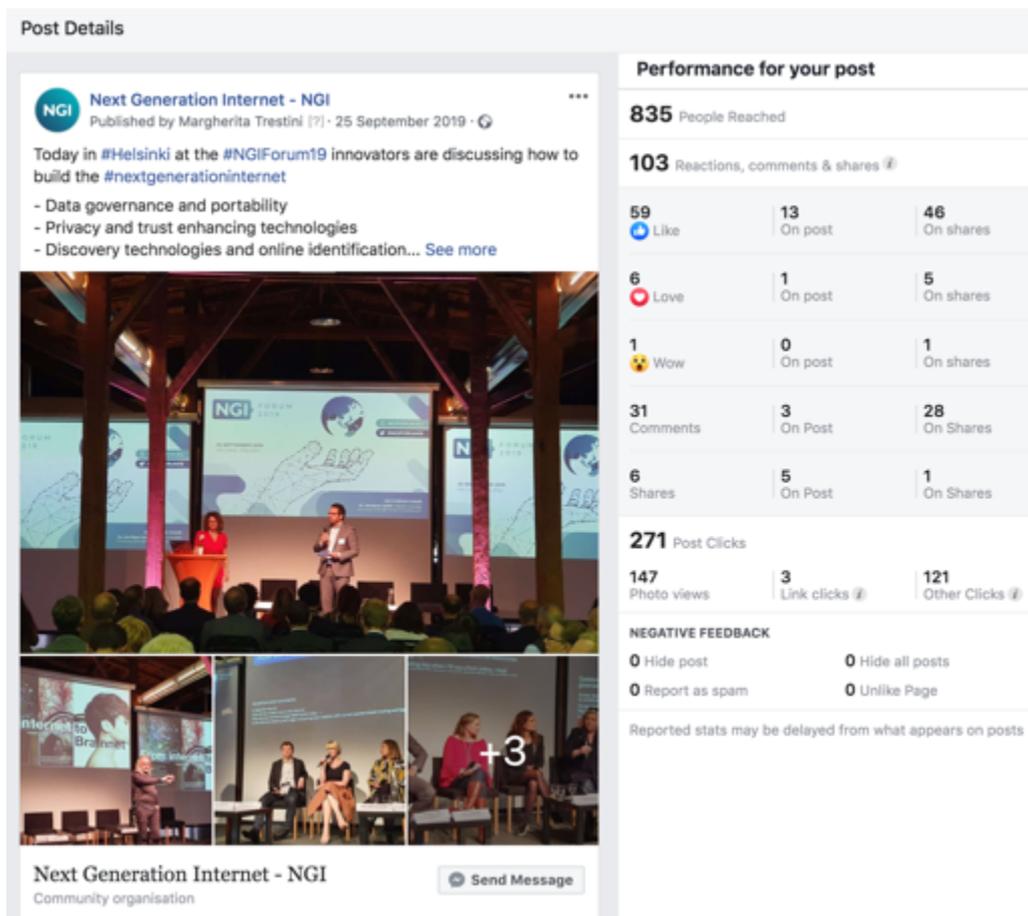
FIGURE 21: NGI FACEBOOK POST WITH THE HIGHEST ENGAGEMENT RATE

2.1.7.3 NGI LinkedIn

The **NGI LinkedIn Group represented 20% of our online gross audience in 2019, with 11,117 members.** Unfortunately, the analytics provided by LinkedIn for the Group pages are very limited. It is only possible to manually screen the members, and given the figure above it risks to be ineffective. But a helicopter overview may allow us to say that this group (given its reach) is the one with the lower overlapping with other online audiences, the members are highly professional (e.g. over 30 members are Google's employees) and the geographical reach goes well beyond Europe (2,000 members are from the United States). The LinkedIn group growth is steady and each member must be approved before joining, we see an average of 3-4 requests per week. The members also have the liberty to post their news on the group's page. This requires a daily monitoring to avoid spamming, commercial invasive posting. On the other hand, allows the members to find news related to the NGI technologies but delivered by different sources. Since June 2019, NGI also has a LinkedIn page which currently has **100 followers.**

2.1.7.4 NGI YouTube

The NGI YouTube channel video views in 2019 were 4,513, with an improvement compare to the 2018 (± 4,000 views). Looking at the best performing videos the Table 4 below highlights the top 10 most views videos (over 100 views). It is in interesting to notice that the top 2 performers are videos published in 2018, showing that contents in this channel do not deteriorate. The average time spent watching the NGI videos is around 02':00", which indicates a good interest generated by the content and at the same time the length of attention span of the NGI audience on such material (therefore, a good indicator for the media production and creative team).

NGI funding opportunities	**451**
Isabella De Michelis, CEO and founder of ErnieApp, on the Next Generation Internet	**395**
The Next Generation Internet Initiative	**248**
Privacy by design for the next generation internet - Manuel Noya Marino	161
NGI Open Calls	NGI Trust 2nd call webinar (04.11.2019)	152
NGI FORUM 2019 - teaser	148
The Future of the Next Generation Internet	121
The new NGI Consultation Platform - Join the Community	109
Artificial intelligence and the internet of humans - Professor Virginia Dignum	104
[NGI Forum 2019] SOLUTIONS FOR THE FUTURE. Martin Wezowski	104

TABLE 4 : YOUTUBE CHANNEL TOP TEN VIDEOS

The views to the NGI YouTube channel are generated for the 55% by external urls: here it is possible to assume that this traffic is generated by the links published on the NGI social media channels and the NGI portal, with a clear overlap of the audience. On the other hand, **11% of the traffic is generated by organic search within the YouTube social media**. This is an interesting finding: it shows a potential growth leveraging on the users' personal interests around Internet and technologies, that can be better served through the tagging and descriptions provided for each video.

2.1.7.5 NGI Instagram

The NGI Instagram account grew in 2019 but, with only 222 followers is the weakest NGI social media, mostly due to the incoherence between the visual approach of the media based on images not on texts or links and the user profiles which tends to be younger than the NGI focus professional target (mostly between 35 and 55 years old). This is reflected also on the NGI account which has followers among young adults 18-24 not usually represented in other NGI social media (see Figure 22 below). It is a social media relevant for "entertainment" purposes rather than professional ones. Last but not least, even if the NGI editorial and creative team strives to produce engaging visual infographics and impactful graphic, the NGI ecosystem is not tangible or visually (photographically) engaging, by nature.
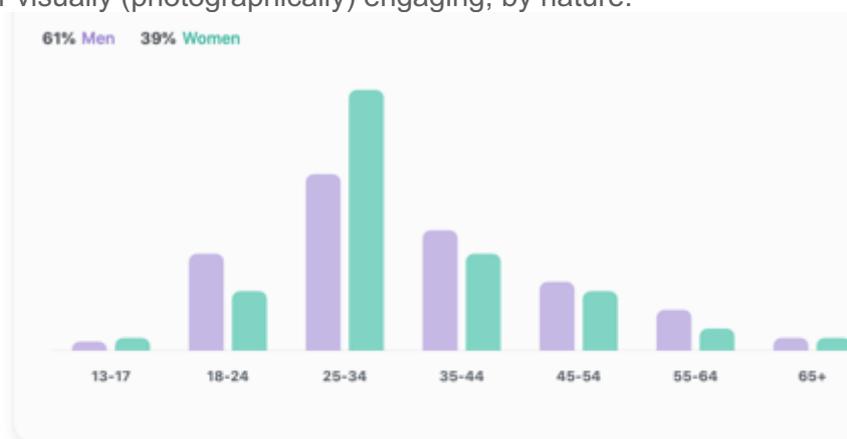
FIGURE 22: NGI INSTAGRAM ACCOUNT, AGE AND GENDER DISTRIBUTION

2.1.8 NGI paid social media campaign

The objective of the paid social media campaign was to drive traffic towards the NGI forum website (ngiforum.eu) and ultimately increase the number of registrations to the event. The **total investment has been of 3,700 euro, with over 400,000 impressions delivered and around 2,000 clicks to the links.** The campaign was been deployed in two phases:

- Phase 1 late June, early July 2019
- Phase 2 late August early September

For both phases the NGI Outreach Office tested different media and different sets of creativities (both videos, as proved the most engaging format) in order to maximise the results and optimize the budget.

Phase 1 Results (June/July 2019)

- Due to the high-price (cost per contact of over 10 Euro) and unconvincing results click through rate (CTR) of 0.2%, decision was made to stop the LinkedIn campaign and focus on the other platforms.
- As per the Twitter Campaign 1 the best results were achieved in Estonia (cheaper Cost per Click 0.83 Euro and higher CTR 0.35%) but the campaign was mostly delivered in the Netherlands (most clicks). Moreover, it has been noticed that the most effective placement (conversations, hashtags) was through the Blockchain and the Cybersecurity topics.
- The Twitter Campaign 2 was target to Nordic countries and delivered in local language in Finland. The Cost per Click (CPC) raised (because of the focus target) but we had more geographically relevant link clicks and registrations.
- The Facebook Campaign similarly was split in two phases, with two different videos (the second one with less text achieved better results in terms of CTR and cost per mille CPM). As per Twitter, the adv campaign was run predominantly in the Nordic countries (Denmark, Estonia, Finland, Netherlands, Norway, Sweden) and once again the most effective results were achieved with the Estonian audience.
- Most Link Clicks and cheapest CPC occurred with the Facebook campaign 2 were the target audience was better profiled and the video had less text
- Cheapest CPM (awareness) and most impressions happened during the first phase of the campaign on Twitter.

Campaign	Spent (Euro)	Link Clicks	CPC (Euro)	CTR	Impressions	CPM (Euro)
LinkedIn	358.18	35	10.23	0.2%	17,905	20
Twitter 1	482.72	357	1.35	0.19%	191,999	2.51
Twitter 2	400	208	1.92	0.19%	112,266	3.56
Facebook 1	581.86	469	1.24	0.71%	88,954	6.54
Facebook 2	399.94	552	0.72	0.96%	78,765	5.08
Total	**2,222.7**	**1,621**	**1.37**	**0.7%**	**229,117**	**9.70**

TABLE 5 : NGI PAID SOCIAL MEDIA CAMPAIGN, PHASE 1 RESULTS

Phase 2 Results (August, September 2019)
The objectives of the campaign remained unchanged:

- Marketing objective: increase the number of participants to the NGI Forum 2019
- Social Media campaign objectives: increase traffic to the NGI forum website and, where the tracking was possible, increase the registrations, within a reasonable CPC for this campaign.

Based on the insights collected during the Phase 1 of the promotion campaign and through the NGI Forum Google Analytics, the following actions were taken:

- Target main share of the budget to Helsinki and surrounding area
- Restrict the campaign to Facebook which had the best results when it came to CPC
- In order to optimise the campaign results the NGIO tested different options (different videos, different landing pages) and with different combinations with a small budget and with a quick turnaround.
    - Three alternative landing pages
        - https://www.ngiforum.eu/about/ - possibility to register in 1 step
        - https://www.eventbrite.co.uk/e/ngi-forum-2019-helsinki-tickets-61414836429 - same as above - not directly on NGI website
        - newly created FB event - possibility to order tickets without leaving FB
    - Different versions of the video:
        - a more generic one with white background
        - an updated version with a more dynamic background
- The copy was made available in Finnish and English (based on FB users' preference) and was slightly modified, putting emphasis on the timing "Hurry up! Register now for the NGI Forum / Don't miss your chance".

In total 5 different versions (maximum allowed for the testing phase on FB) of the ads have been tested, the most performing combination has then been scaled up for the full-scale Phase 2 campaign. The best results were given by the Combination of visual B + the landing page of combination D and it's been the solution scaled up for the rest of the campaign.

Ad version	Spent (Euro)	Link Clicks	CPC (Euro)	CTR	Impressions	CPM (Euro)
A	83.73	64	1.29	0.95%	9,051	9.25
B	84.00	76	1.05	1.09%	11,279	7.45
C	82.87	75	1.08	1.18%	10,195	8.13
D	83.16	65	1.24	1.41%	6,367	13.06
E	82.45	67	1.15	1.16%	8,657	9.52

TABLE 6 : NGI PAID SOCIAL MEDIA CAMPAIGN, TESTING THE BEST COMBINATION

The phase 2 campaign was less expensive: focusing only on the best performing social media and in a well-defined geographical area. The insights of phase 1 and testing of phase 2 allowed

an optimization of the cost per click (1.22 Euro vs 1.37 Euro) and a better CTR (0.88% vs 0.7%).

Spent (Euro)	Link Clicks	CPC (Euro)	CTR	Impressions	CPM (Euro)
1,111.88	909	1.22	0.88%	163,250	6.81

TABLE 7 : NGI PAID SOCIAL MEDIA CAMPAIGN, PHASE 2 RESULTS

2.1.9 NGI single projects' websites, webinars and social media

Most of the NGI projects website reside under the ngi.eu domain, therefore the analytics provided in section 2.1.1 are inclusive. Nevertheless, the projects: Ledger, NGI Trust and NGI Zero host their web pages under their own domains, therefore are not included in the statics provided in this document. In Year 2 the NGI Outreach Office shall collect the data from each of these projects for a better monitoring of the overall results. It still possible to estimate the unique visitors to each project's website in around 3,000 unique visitors (average traffic generated by RIAs projects), **cumulating an additional 12,000 unique visitors to relevant NGI websites' contents**.

Some of the NGI projects opened their own social media channels, which are constantly monitored from a content point of view by the NGI Outreach Office to guarantee the sharing and reach optimization. The LinkedIn pages are "affiliated" to the NGI LinkedIn company page to guarantee consistency and information aggregation and to stimulate the cross-fertilization of each channel. As detailed in Table 8 below, the projects social media channels all together aggregate around 2,500 followers/members, with some champions such as Ledger Twitter channels which has over 700 followers. We can surely presume that there is an overlapping between the NGI Social media channels audience and each single project, but we would reasonably estimate it around 20%. Reason being that each project targets and attracts specific audiences in terms of geographic distribution (e.g. Think Nexus, NGI Explorers and the recently started NGI Atlantic are bridging communities between EU and US) and in terms of technology interests (e.g. Ledger is mostly followed by blockchain interested players)

Project	Twitter	Followers	LinkedIn	Members	FB	Followers
Think Nexus	@ThinkNEXUS_NGI	297	https://www.linkedin.com/groups/8764633/	17		
NGI Explorers	@NGI_Explorers	317	https://www.linkedin.com/showcase/14832785/admin/	39		
NGI Forward	@NGIForward	239	NA	NA		
NGI DAPSI	@NGI_DAPSI	140	https://www.linkedin.com/showcase/ngi-dapsi/?	62	@NGI.DAPSI	32

NGI Atlantic	@NGIatlantic	14	https://www.linkedin.com/company/ngi-atlantic/about/	NA	NA	NA
Ledger	@LedgerEu	722	https://www.linkedin.com/company/ledger-project/	62	NA	NA
NGI Trust	@NgiTrust	303	NA	NA	NA	NA
NGI Zero	@NgiZero	149	NA	NA	NA	NA
Total		**2,181**		**180**		**32**

TABLE 8 : NGI PROJECTS' SOCIAL MEDIA REACH

Several webinars (17 webinars announcements posted and promoted on the NGI portal) have been organized by the projects and by the EC to promote and provide details regarding the single ICT NGI related Calls and the Open Calls. The NGI Outreach Office has been involved in the promotion of such webinars, but it does have evidence of the attendees. On an average base (based on experience and track records) **each webinar sees the participation of around 50 attendees: therefore, the audience here can be estimated to be of around 850 people**.

2.2 NGI OFFLINE MEDIA AUDIENCE

Even if by nature the NGI brand is mostly communicating with its audience through the online touchpoints described in Section 2.1, there are also several opportunities and actors involved in the NGI communication offline. The offline touchpoints offer the opportunity to create a relationship with the audience, to engage people into meaningful talks and exchanges. Events provide the best opportunity to encourage networking, experiences' exchange, projects' partnerships and ultimately the foundation of a community of multidisciplinary experts interested in creating the Internet of Humans.

2.2.1 NGI Audience reached at event organized and attended

The Table 9 below breaks down the estimated reach at different events attended or organized by the NGI Outreach Office. To be noticed that NGI Outreach office supports the other NGI projects in the promotion of events they attend and/or organize, but it does not have evidence of the reach. Therefore, the total NGI offline media audience indicated in the Table below is surely underestimating the real total reach. At each of these events, different activities have been conducted (from presentations to workshops, from materials distributions to networking). All these activities are conducive to enrich also the online dialogue (as described in Section 1), as they often represent the first touch point for newcomers, which then visit the NGI website, subscribe to the NGI newsletter and start following the NGI social media.

Event	Location, Time	Activity	Reach (estimated)
4YFN 2019	Barcelona, February	Booth, Workshop, Flyers distribution	500
NGI Salon at the European Parliament	Brussels, March	Dedicated conference	200
MWC	Barcelona, February	Flyers distribution	300
FEC FED4FIRE Engineering Conference	København Denmark, May	Flyers Distribution	50
EuCNC 2019	Valencia, June	Flyers Distribution	200
IoT Week 2019	Aarhaus, June	NGI Workshop "NGI Research Priorities and Funding Opportunities"	500
Future Internet Conference	Brussel, June	Flyers Distribution	120
ICT Proposers' Day 2019	Helsinki, September	Presentation of NGI ICT Calls, Booth, flyers distribution	350
NGI Forum 2019	Helsinki, September	All day conference and parallel workshops, merchandise distribution	400
Learning Data Ethics, European Big Data Community Forum	Brussels, October	Flyers distribution	80
NGI at Web Summit 2019	Lisbon, October	Workshop and flyers distribution at EC booth	450
NGI at IGF Forum	Berlin, November	NGI Booth and flyers distribution	250
Total Reach			**4,150**

TABLE 9: NGIO REACH AT EVENTS

2.2.2 NGI Advisory board

The NGI Outreach Office, in accordance with the Project Officer, has decided not to engage a dedicated Advisory board, but rather invest the resources into further dissemination and

communication activities, with a focus on the offline outreach through the participation to innovators, technological dedicated events in Year 2 and Year 3.

2.2.3   NGI Contact Points Future FIF

The European Commission (since 2017) has engaged the Future Internet Forum (FIF)[6] as an essential partner of the Next Generation Internet initiative. The FIF members have been asked to appoint an "NGI Contact Point" for each member state and so far, 23 countries are represented. **The NGI Contact Points play an essential role in supporting the development of the NGI initiative, providing feedback and guidance to the EC and supporting the promotion and dissemination of the NGI events and funding opportunities in their own countries**. The NGIO is supporting the European Commission attending the yearly FIF meetings, providing updated results and share findings and next actions. The NGIO also takes care of the meetings' minutes (which are made available online on the NGI Drive repository, as confidential and protected documents). The last meeting took place in Helsinki on 26th September 2019, co-located with the NGI Forum. It was extremely interesting receiving not only a positive feedback regarding the Forum itself, but the suggestions and advices provided, among the others:

- Need for data regarding the geographic distribution of participants and grantees of the Open Calls (cascading funding)
- Interest in knowing more about the NGI innovators' success stories (bottom-up approach) to be able to promote them in each country and solicit further participation to the programme.

The next FIF meeting is scheduled for the 4th February 2020 and the reiterative knowledge, networking and data sharing process will be further reinforced.

2.3   NGI INNOVATORS

The NGI Innovators, participating and being granted NGI funding, represent one of the key stakeholders of the whole initiative. Moreover, it's the NGIO ambition is to engage 4,000 entities by 2021, innovators applying for some funding opportunity related to the NGI initiative. Here below a synopsis of the results obtained in Year 1. It must be considered though, that this is a double-faced factor: the engaged innovators (especially the winning NGI projects and the NGI funded third parties) become NGI active publishers through their own online media, word of mouth, events participation. Therefore, they enter into the NGI online and offline continuous and reiterative communication process and extending the NGI audience each or its penetration in specific interests, geographic areas and technologies community.

2.3.1   NGI ICT Calls

In 2019 several NGI related calls were launched by the European Commission and the NGIO has supported the dissemination and promotion to participation at events, online and promoting the related webinars organized by the EC commission. The data available through the EC Funding & Tender Opportunities portal[7] show that **26 proposals were submitted in March 2019**.

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[6] https://ec.europa.eu/digital-single-market/en/future-internet-forum

[7] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/ict-24-2018-2019;freeTextSearchKeyword=NGI;typeCodes=1;statusCodes=31094503;programCode=H2020;programDivisionCode=null;focusAreaCode=null;crossCuttingPriorityCode=null;callCode=Default;sortQuery=openingDate;orderBy=asc;onlyTenders=false;topicListKey=topicSearchTablePageState

- ICT-24 - Research and Innovation Actions (RIA) - 10 proposals
  - i-b) Strengthening internet trustworthiness with electronic identities:
  - ii-b) Service and data portability
  - iii-b) Open Internet architecture renovation
- ICT-30 - An empowering, inclusive Next Generation Internet, Coordination and Support Actions. Coordination and support action in the area of Digital Learning (CSA) - 4 proposals
- ICT-30 - Digital Learning Incubator (IA) - 7 proposals
- ICT-31 - EU-US collaboration on NGI (RIA) - 5 proposals

The NGIO Outreach Office will be able to evaluate the impact of the work carried out in the 2nd half of 2019 to support the launch of the following calls only at the end of 2020, when the proposals will be all received, and results published.
- ICT-44-2020 Next Generation Media
- ICT-54-2020 Blockchain for the Next Generation Internet
- ICT-55-2020 Interactive Technologies
- ICT-56-2020 Next Generation Internet of Things
- ICT-57-2020 An empowering, inclusive Next Generation Internet

2.3.2 NGI Projects, cascade funding for NGI Innovators

The Financial Support for Third Parties (FSTP), also known as cascade funding, is a mechanism introduced by the EC to distribute public funding to beneficiaries, such as start-ups, scale-ups, SME and/or mid-caps, in the uptake or development of digital innovation. This funding method aims at simplifying the administrative procedures, creating a light, SME and start-up friendly application scheme with equity free funding made available in a short time. The NGI RIA projects invest a substantial share of their budget to mobilize and fund innovators through the "cascading funding" process. They organize several open calls along their lifetime to engage innovators on specific subset of technologies relevant to the NGI. Each project defines the topic of the call, the duration, the budget available for each "open call" and the funding for each winning innovator. **A total of 1,062 proposals** were received in 2019 for all the open calls launched by the five ongoing RIAs. It is overall a good result, in line with the NGIO KPIs of engaging 4,000 entities by 2021 (in 2020 and 2021 more RIAs will join launching their own open calls, therefore increasing the funding opportunities available). Moreover, thanks to the NGI projects' cooperation we have been able to aggregate the most significant data related to the Open Calls engagement: number of proposals received, geographical distribution, type of engaged organizations and gender balance. These parameters are significant to verify the effectiveness of the NGI communication activities and identify the weak spots.

Project	Technology Domain	Received proposals in 2019
Ledger	Blockchain, peer to peer, dlt, decentralised technologies	291
NGI Explorers	AI, 5G, Big data, Blockchain, cybersecurity, IoT	130
NGI Zero Pet	Domain Name System (DNSSEC, DoH DoT) hardware, firmware, browsers, cryptography,	256

	videoconferencing, operating systems, instant messaging, (onion) routing, protocols	
NGI Zero Discovery	Search engine, peer-to-peer, distributed ledger, browser, routing, multicast, social media, web scraping, protocols (IPv4/6, ActivityPub)	198
NGI Trust	SSI, user centric, trust, privacy, data protection	187
Total		**1,062**

<div align="center">TABLE 10: NGI PROJECTS: RECEIVED PROPOSALS FOR CASCADING FUNDING</div>

GEOGRAPHIC DISTRIBUTION

The proposals were received from **35 different countries** (including several extra-EU: Ghana, Tunisia, Turkey, Serbia, Switzerland, Ukraine, Montenegro, North Macedonia, Argentina, Singapore, Hong Kong). From the data collected the only three EU member states not yet represented are: Czechia, Slovakia and Malta. These results show us that the promotion has reached almost every corner of the continent and beyond. There is tough a **clear over representation of some countries, with a higher percentage of submissions: Spain, Germany, France, Netherlands, UK, Italy**. This somehow reflects the NGI online media penetration in the different countries, it also reflects the location where the NGI RIAs projects are located (and where their networks are stronger and with more proximity) and the location of the events attended by NGI. Nevertheless, it must be considered that cities like Berlin, Paris, London, Barcelona, Amsterdam and Milan represent innovation hubs with a high concentration of innovators and start-ups which clearly reflect the countries representation in the open calls.

TYPE OF ORGANIZATION

Not all the projects track this information but based on the data available the breakdown shows: 45% SMEs and start-ups, 20% individuals, 30% Research Centres and Universities, 5% not for profit organizations.

GENDER GAP

Unfortunately, only some of the projects collected the information regarding the gender of the applicants, but from the sample available we see an overwhelming 80% of males. To better monitor this parameter, it would be necessary to include this field in the application process.

2.3.3 NGI Early Adopters & NGI Awards

The NGI Early Adopters has been discontinued in the first quarter of 2019, but it represents another audience engaged in the NGI initiative, therefore worth of being mentioned. The NGI Early Adopters are innovators that championed NGI values, at the national or local policy level, including civil society groups. It is a group of around **80 selected individuals** developing best practices that help European businesses, citizens and civil society benefit from disruptive technologies based on NGI values. Their profiles are available online https://consultation.ngi.eu/early-adopters-club-list. The NGI Awards were announced at the 4YFN 2019 in Barcelona: the winners represented universities, start-ups and organizations developing innovative solutions in the areas of: data protection, End-to-end-encrypted real-time collaborative editing tool, Decentralised data governance. More details are available here https://www.ngi.eu/download/ngi-4yfn-ngi-awards/ These individuals and organizations represent another circle of amplifiers of the NGI brand and values.

3 NGI COMMUNITY ASSESSMENT AND NEXT STEPS

Here below, Tables 11 and 12 assess the results of the analysis conducted in section 2 providing the envisioned evolution for the second year of work. Table 11 takes in consideration the key parameters useful to monitor the NGI community evolution while Table 12 focus on more qualitative aspects of the NGI media and audience's management.

Metric		Result in 2019 (Y1)	Objectives 2020 (Y2)
Audience size		• + 30% vs 2018 Total reach online/offline estimated in 60,000 heads count (focus target) • To be considered, in addition, the adv online impressions 450,000 and the media reach estimated around 150,000 (enlarged audience) • The data aggregated are not always homogeneous, an effort (to a certain extent) can be made to better collect and present data	We shall break the **100,000 contacts in target engaged** in 2020. • Increase searchability of the NGI portal (SEO + engines adv for NGI portal Map, NGI YouTube channel) • Increase the cross-linking to the NGI portal from major news/bloggers websites • Increase mentions of @NGI4EU across social media • Increase cross-posting on Facebook and LinkedIn relevant groups
Audience online vs Audience offline		• The NGI audience by nature is online, the online communication is cheaper and faster, but still the unbalance of the NGI online (90%) vs the offline (10%) reach shall be monitored and eventually corrected. • One-to-one meetings allows to create synergies, projects' partnerships and experience sharing which are at the core of the NGI innovations ambitions.	• The offline audience shall growth to reach 7,500 contacts in 2020 (25% increase). • Here the cooperation with all the NGI projects and the EC units is essential to guarantee the visibility of the NGI brand and the availability of NGI "experts" to talk with at events.
Geographic penetration		• Seeds were planted across the continent and beyond (the participation of 35 countries in the open calls is a positive sign), but clearly a few countries (UK, Germany, Spain, France, Italy, Netherlands and Belgium) are over represented. This is noticeable by the analysis of each media audience profile.	• The geographical distribution of the NGI opportunities and ambitions must cross borders towards Northern and East/Balkan Europe. (keeping obviously in consideration the population distribution, innovation hubs concentration etc).

		• Moreover, the location of most of the events attended by NGI (even if with an international audience) is in the same countries. Last but not least, the advertising campaign to support the NGI Forum, translated in Finnish showed a sharp performance growth.	• The Digital Innovation Hubs can play a central role here, if properly engaged. Moreover, the NPC shall be further engaged, though the FIF members etc. Some key events in Eastern Europe shall be targeted.
Innovators' engagement		• The 2019 marked a clear turnaround in the innovators' engagement, which are now are well represented in the NGI Map, the NGI Community Platform and among the participants/targets of events. • The data related to the SMEs and Start-ups (45%) participation to the open calls confirms the good work done so far.	• The 2019 marked a clear turnaround in the innovators' engagement, which are now are well represented in the NGI Map, the NGI Community Platform and among the participants/targets of events.
Gender Balance		The audience analysis shows, across media, a slight prevalence of male in the NGI ecosystem (60 vs 40), but is the most worrying is the participation to the NGI funding opportunities, where (based on the data available), only 20% of participants are women, meaning they are not competing for funding.	• Even though these results reflect wider social/educational/professional indicators, it's NGI duty to be inclusive. • Therefore, the communication activity shall portray more women innovators (some took the stage at events, videos, blogs, more to be done in 2020). Moreover, dedicated women's technology-oriented groups and associations should enter into the radar of media activities (hashtags, cross posting etc)
Audience Return/Engagement Rate		• The Audience return and engagement rate is fairly good across media, and in some cases even above market's average (see 2% Facebook and 0.9 Twitter).	• Therefore, the communication activity shall portray more women innovators (some took the stage at events, videos, blogs
Churn Rate		• The churn rate remains low across media, and the sentiment analysis is positive (analysis of the positive comments and interactions on social media).	• Keep a close eye on the churn rate indicators to spot potential "crisis" before they take a relevant dimension
Users' behaviour		• There is a lack of information regarding the behaviour of the NGI audience between media. The NGIO is not able to	• Evaluate how (and if consistent with NGI statuary values) to tag the NGI media visitors

across NGI media		follow users across different platforms, belonging to different actors. There are some indications (e.g. traffic to the website, clicks from FB to the website etc), but they are fragmented and partial.	for better profiling, predictive analysis and more effective marketing actions • It would in fact be interesting to move towards customized and tailored communications to audiences' subgroups based on specific geographical, technologies and "clicking behaviours"

TABLE 11: NGI COMMUNITY DEMOGRAHPICS EVOLUTION IN Y2

Issues		Evidences 2019 (Y1)	Corrective actions 2020 (Y2)
Data Tracking, Aggregation and Analysis		• Lack of demographic and geographic data collection. Several touch points do not monitor the gender, age, geographic residence and market segment (e.g. SMEs, University etc) • Difficulty to analyse the audience overlap between media • Difficulty to analyse the behaviour of users across media • A specialised data analysist would further improve the audience's analysis • Need to monitor key parameters in a timely (e.g. quarterly)	• Stimulate all the NGI players to collect relevant data • Increase frequency of data aggregation and analysis (e.g. quarterly) • Increase data analysis capabilities
Deadwoods		• There is an overlapping of functionalities between some media (e.g. NGI Communities) and some areas of the NGI portal seem to be deadwoods beyond possible editorial and content optimization. These deadwoods run the risk to dilute the NGI efforts and confuse the audience rather than enriching its experience.	• Periodic housekeeping to ensure deadwoods are analysed and when needed discontinued
Right Full Rudder		• Because of the extended NGI ecosystem is not always easy to maintain consistency, alignment and synchronization of all media and contents. • There are push-pull forces corresponding to different needs and objectives of the internal stakeholders. Unfortunately, if not properly managed (and sometimes contained) this can impact negatively on the efforts invested and ultimately on the audience reach	• The management of the NGI Outreach Office, in coordination with the EC needs to keep a straight bar, focusing on the medium and long term NGI objectives

TABLE 12: NGI COMMUNITY, CORRECTIVE ACTIONS Y2

4 NGI COMMUNITY KPIS METRICS

The Table below reports the KPIs relevant to the NGI's audience growth and the impact results achieved at M12. Please also note that at the time of this document (Jan 2020), the partners are about to submit an amendment reviewing several KPIs.

	KPI	Target per Year	Target at Y3	Achievement (M12)
Social media and professional networking strategy	Members of NGI LinkedIn Group (baseline 10,948 at 31.12.2018)	2% increase	6% increase	11,117 members (+2%)
	Number of new Twitter followers (baseline 2,625 at 31.12.2018)	>500	>1,500	3,700 followers (+1,074, 41%)
	Number of new views in total in YouTube channel	>200	>600	4,513 views (+13%)
	Number of new Facebook followers (baseline 123 at 31.12.2018)	>200	>600	419 followers (+296)
	Number of new Instagram followers	>200	>600	222 followers (+344%)
Portal (web site)	Number of visits / unique visitors	>3,000	>9,000	31,757 unique visitors (+67%)
	Number of pages visited	>5,000	>15,000	90,312
	Average duration of visit	>1'30"	>1'30"	>1'55"
	Number of news published	>30	>90	53 (+ Who's who NGI Blog + events)
	Number of file's downloads	>1,500	>4,500	14,464
E-Newsletter / Newsflashes	Number of newsletters published	4	12	4
	Number of newsflashes	12+	>36	9 (+ 3 dedicated to the NGI Forum)
	Size of the target audience (baseline 1,005 at 31.12.18)	>500	>1,500	1,762 subscribers (+757, 75%)

Attending external events	Number of attended events - with workshops, exhibition, booth, presentations	7-8	min 21, max 24	11
	Number of key events attended by EACH partner	3	min 9, max 12	4
(Impact 1) Shape a more human-centric evolution of the Internet	Promotion to third party organizations via Open Calls of ICT-24 RIAs		~210	In 2019 171 third parties were funded (see NGI Charisma D2.3 for details on the Communication engagement of 3rd parties funded)
	Research and innovation players across Europe to reach through all Open Calls		~400	1,062 applicants to Open Calls in 2019
	Populated database of relevant initiatives		150	The relevant initiatives' DB currently profiles 50 initiatives and it is complemented by the relevant events' database (available on NGI drive) and it shows 34 events attended by NGI projects + 97 relevant events to be evaluated
(Impact 2) Create a European ecosystem of top researchers, hi-tech start-ups and SMEs with the capacity to set the course of Internet evolution	The KPIs related to the NGI Community Platform are detailed in the Deliverable *D3.2 Growth Hacking Activities and NGI Ambassadors Programme Report*			

(Impact 3) Generate new business opportunities and new Internet companies with maximum growth and impact chances	Number of entities reached by the project with some of the NGI related funding opportunities offered that could accelerate their businesses		10,000	Estimated 4,150 contacts at events + online contacts
	Number of entities applying to some funding opportunity related to the NGI initiative		4,000	1,062 applicants in 2019
	Number of contacts done using the NGI map as a point of departure		1,000	N.A.
	Number of connections generated through the NGI Community Platform (at least 10% of NGI Community members)		2,000	N.A.
(Impact 4) Global visibility in the media of the debate on a human-centric Internet; citizens' priorities influencing the evolution of the Internet	Close liaisons with the DSI community (digitalsocial.eu)		1	Cross posting with CAPSSI community
	Clicks via advert campaigns		15,000	2,500 (Phase 1 and Phase 2 NGI Forum paid social media campaign)
	Visibility to citizens		>2,000,000	> 400,000 (Online & offline reach, Media coverage: See D4.3 Annual Media and Press Coverage)

TABLE 13 : RELEVANT NGI OUTREACH OFFICE KPIS

5 CONCLUSIONS

The current analysis allowed the NGI Outreach Office to unlock useful evidences regarding the current NGI audience distribution, the positive trends and the weaknesses points. Actionable insights have been highlighted and they should be further discussed not only by the NGI Outreach Office team but also shared with the NGI internal stakeholders to provide a holistic analysis, encourage the collection and share of current missing data and pave the way to a more comprehensive a meaningful analysis over Year 2.

The NGI is a moving target, with reiterative processes always in place and with new players introduced in the inner circle of the internal stakeholders all the time. This massively contributes to the audience growth, but it is a complexity which shall be closely managed, emphasizing the medium-long term objectives of each communication action and the value of orchestrated and synchronized activities.

Finally, 2020 will mark the end of the Horizon 2020 framework programme and the launch of Horizon Europe. The NGI Outreach Office efforts to grow the NGI audience (and the systematic and detailed analysis of the results achieved) can surely contribute to the further development of the NGI programme. Critical analysis of the NGI audience can contribute to an informed decision process and guide future investments and policy making activities.