Tailored IoT & BigData Sandboxes and Testbeds for Smart, Autonomous and Personalized Services in the European Finance and Insurance Services Ecosystem

D9.4 – Dissemination and Communication Activities III

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[1] Lead Beneficiary, Contributor, Internal Reviewer, Quality Assurance

[2] Can be left void

Executive Summary

Dissemination and communication activities are critical to maximize the impact of the project through a promotion of its objectives and results. With a target for the consortium to populate the tools, assets which are and will be produced and released for their future exploitation.

All dissemination, communication, educational, scientific, and other activities will be reported and evaluated at the end of each year of the project. This document corresponds to the deliverable D9.4 and is the third annual report of the dissemination and communication activities carried out during the corresponding period of the project. In this case, the period corresponds to M19 to M28 of the project (which represents the following period: beginning May 2021 to end of February 2022).

During this second year of the project, actions were mainly dedicated to promoting a deeper understanding of new assets developed by pilots and new technologies for a number of audiences who will benefit from this and to engage internal and external stakeholders. Moreover, the consortium strongly focused on facilitating the adoption and usage of INFINITECH design assets and tools.

The main channel for information dissemination is the project website. In parallel, social media has proved to be a strong impact for generating traffic and reaching diversified and general public thanks to partners' different ecosystems. Moreover, INFINITECH's results and outcomes were presented in numerous workshops, webinars, conferences at regional and EU (and international) levels.

Overall, most of KPIs have been achieved, most of the targets have evolved during this second year of the project and some of them are beyond the initial objectives.

During the last year of the project, presentation of results and outcomes will be intensified. Specific events such as Hackathons, and training session organization are scheduled to engage even more stakeholders and end users.

It is also important to note that, the current situation (COVID-19 sanitary crises) does not allow the consortium to be fully confident regarding some of the planned actions, such as huge conference attendance in big cities (Paris or Milano).

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Abbreviations

Abbreviation	Definition
AI	Artificial Intelligence
AML	Anti Money Laundering
BDVA	Big Data Value Association
BOUN	BOGAZICI UNIVERSITESI
CTO	Chief Technical Officer
CIO	Chief Information Officer
DoA	Document of Action
DOI	Digital Object Identifier
EU	European Union
FI	Finance Innovation (Infinitech beneficiary)
GDPR	General Data Protection Regulation
GEN	Genillard&Co GmbH
ICT	Information Communication Technologies
IoT	Internet of Things
JSI	Jožef Stefan Institute
KPI	Key Performance Indicator
KYC	Know Your Customer
M19	Month 19
NBG	National Bank of Greece S.A.
N/A	Not Available / Not Applicable
RA	Reference Architecture
RB	Reportbrain Limited
RRD	Roessingh Research and Development
SME	Small and Medium-Sized Entreprises
SQL	Structured Query Language
TBD	To Be Determined
UNIC	University of Nicosia
VDIH	Virtual Digital Innovation Hub
WP	Work Package

1 Introduction

INFINITECH is a joint effort of the European leaders in the ICT and finance / insurance sectors to provide the technological capabilities, experimental facilities (testbeds and sandboxes) and business models needed to enable European financial organizations, businesses insurance and FinTech / Insurance Tech innovators to take full advantage of the benefits of Big Data, IoT and AI technologies.

This document corresponds to the deliverable D9.4 which is a public deliverable produced in the context of WP9: Dissemination, Exploitation and Standardization (Task 9.1 Dissemination and Communication Activities). It provides an overview of the actions implemented and carried out, during the Period M19-M28 in terms of dissemination and communication, the audience targeted, the key messages developed, the tools and channels used (with an indepth analysis of social media analytics).

This third periodic evaluation allows us to verify that all stakeholders are reached and provided with appropriate information. The present report outlines key actions and also reflects what works well, what needs to be intensified, and what needs refinement or change in the strategy.

The deliverable D9.4 is structured as follows:

- Section 2 presents the dissemination and communication strategy.
- Section 3 reports on dissemination and communication activities on website and social media networks that were carried out during M19-M28. Analytics are presented and commented.
- Section 4 focuses on Scientific dissemination activities, with a detailed list of all scientific publications published during the project and reports other diverse actions implemented.
- Section 5 presents dissemination and communication activities during events. This part provides the audience targeted, the marketing campaigns deployed as well as a detailed list of events, workshops and conferences organized, attended and/or participated over the period M19-M28. A list of scheduled events is also available.
- Section 6 provides an update of the marketplace.
- At the end of the deliverable a number of appendixes gives more details on initiatives reported on the report.

1.1 Summary of Achievements in the Reporting Period

The main achievements for the period M19 to M28, since the last deliverable, can be summarized as follows:

- Publication of 11 newsletters editions
- 8 videos have been recorded
- 17 Publications have been published in different specialized magazines (in total)
- Organization of 15 Workshops (additional already scheduled for 2022)
- Participation in 12 European workshops/conferences (it includes 6 presentation papers at conferences)
- Number of participants in each workshop organized in the Period M19-M28 reached on average 45
- Webinars (with demonstration) recorded: 4 (available on the YouTube INFINITECH channel)
- Demonstrators recorded: 19 (available on the YouTube INFINITECH channel)
- Approval of an INFINITECH Open Access Book by Springer Nature – Preparation of the Book (Expected Publication Date is the 2nd quarter 2022)
- 1 successful Hackathon (3 more are planned and expected for 2022)
- Since the beginning of the project a total of 52 Blog Posts have been written and published on the website

Further analysis of the main achievements of the project will be analyzed during this report.

2 Dissemination and Communication Strategy

2.1 Overview of the strategy

Dissemination and communication activities are carried out to ensure that the project research and practical outcomes are widely disseminated to the appropriate target audiences, at appropriate times along the project lifecycle via appropriate methods with the contribution of all partners of the consortium. WP9's main strategy revolves around the following targets:

- Raise awareness of the project's milestone and results communicating and disseminating towards the interested communities and target groups
- To contribute knowledge and insights about the deployment of BigData, IoT and AI to relevant standardization bodies, associations, and clusters
- To develop an ecosystem and a stakeholders' community around the project's multi-side market platform and VDIH for FinTech/InsurTech activities (will be further developed in deliverable D9.10 Community Building Report – II)
- To prepare plans for the commercialization of the project's results

2.2 Objectives

The dissemination and communication activities mainly aim at maximizing the project impacts and visibility in this dynamic and rapidly evolving digital finance and insurance ecosystems, as well as federate BigData/AI/IoT solution providers, financial/insurance organizations and financial/insurance solution providers communities.

More specifically, an additional objective was targeted during this stage (M18-M29): promoting a deeper understanding of new tools for a number of audiences who can benefit from what INFINITECH project can offer and engaging with target groups to facilitate adoption and usage of INFINITECH assets.

In other words, what is important is to take into account local ecosystems and end-users' needs in the development of the INFINITECH tools and services and to reach the future innovators of the financial services ecosystem: i.e. entrepreneurs, potential investors, FinTech/InsuranceTech/RegTech firms, accelerators and incubators, start-ups and SMEs working on novel data-intensive (i.e. BigData/AI) solution.

Such an approach will ensure that each action focuses on the interests/needs of well-defined stakeholders and this is key to success in terms of impact.

2.3 Dissemination materials

According to the Detailed Communication and Dissemination Plan and first actions report (deliverables D9.1 and D9.2), one of the key components of the Dissemination planning and execution, is to create and establish some common material to identify and show an image for the project. All materials are available in the repository to give to all partners the opportunity to pick the marketing materials needed and adapted to the action planned.

Some materials were created and set as "official" by the partners such as INFINITECH official poster, leaflet, logos, slides presentation and press release templates (presented in deliverables D9.1 and D9.2) and are available on the repository.

New INFINITECH pull up banners have been designed to use for the YouTube channel and also for social medias communication.

In addition to the materials presented above, the 2022 plan is to make a video (less than 5 mins), with the help of an external agency, that has both a marketing and dissemination scope thus aiming at demonstrating that the INFINITECH project is already creating important value for the consortium and for third parties.

The scenario of this video is considered with the following steps (draft script):

- Presenting the challenges of BigData and AI in Finance (starting from the fact that Banks and Financial Institutions become digital and use Big Data)
- Explaining how INFINITECH suite will support the user's needs.
- Showing examples of what was achieved so far:
  - INFINITECH lowers the barriers for citizens to access high quality asset management services
  - INFINITECH implements usage-based insurance in vehicle insurance that incentivizes responsible driving
  - INFINITECH implements usage-based insurance in healthcare insurance that incentivizes healthier lifestyles
  - INFINITECH enables banks to creation more personalized products to their customers
  - INFINITECH uses AI to understand hidden signs of fraud which increases citizens' trust on the digital finance ecosystem
- Showing what is coming next.
- Call to action (we would like to see you at our workshops, visit our website/marketplace, subscribe to our newsletter, finally, if you are a Fintech we would love to support you in your innovation journey).

For the format, based on the idea of animations as a powerful means of communication as it is represented in the following video, the format will include both animations, short clips and real people who will be involved as it is the case in Netflix's series "Explained". A solution will be found together with the creative third party that will be hired taking into account the format concept conceived by GFT, INNOV-ACTS and FINANCE-INNOVATION.

Regarding the distribution, the video will be integrated on the project website homepage and it will be shared through community platforms such as LinkedIn, YouTube, Facebook and Instagram. Moreover, this video could be used to introduce the project during workshops, conferences, keynotes etc.

Video engagement and Insights analysis will be performed as well. Moreover, All INFINITECH partners will promote the video on social media, so that dissemination would be wide.

The team who is taking part of the video is composed of GFT, INNOV-ACTS and FINANCE-INNOVATION. The team is planning to get the final version of the video by the middle of March.

Last but not least, Jožef Stefan Institute offered visibility to INFINITECH through VideoLectures.NET (with an Infinitech subpage), that will serve as an additional channel for dissemination. In addition, videos from the Infinitech YouTube channel have been transferred to the VLN platform, to maximise the reach of the project dissemination. VideoLectures.net is an award-winning free and open access educational video lectures repository. The lectures are given by distinguished scholars and scientists at the most important and prominent events like conferences, summer schools, workshops and science promotional events from many fields of Science. The portal is aimed at promoting science, exchanging ideas and fostering knowledge sharing by providing high quality didactic contents not only to the scientific community but also to the general public. All lectures, accompanying documents, information and links are systematically selected and classified through the editorial process taking into account users' comments as well.

Also, JSI with the support of Finance Innovation will prepare promo video(s) or something similar that would be needed for the purpose of dissemination. As in 2022 there will be several hackathons, a teaser/promo to attract possible participants is expected in the coming weeks.

3 Report on dissemination and communication activities

3.1 Website

After the evolution of the INFINITECH website in 2020, no major changes have been made to its structure. However, Finance Innovation made some modifications in order to make the website more user oriented. In particular, two new categories were added: “publications” and “deliverables”:

Figure 1 - INFINITECH website homepage

The category “publications” concerns scientific and technical journals and publications for conferences that were written during the project, while the category “deliverable” concerns all public deliverables produced by project partners (public deliverables validated by the European Commission). These two new categories ensure visibility of the project and its outputs, especially toward scientific communities and European stakeholders. Moreover, especially concerning publications, this can be a way for authors and project partners to gain visibility, appreciation and acknowledgement at an European or even an international level.

Regarding the category “publications”, on the left side of the page it is possible to have detailed information about the authors and publication date, while on the right side it is possible to read the title and to open the articles, if needed:

Figure 2 - Category "publications" on INFINITECH website

Regarding the category “deliverables”, all of the deliverables already produced during the project appear in the website:

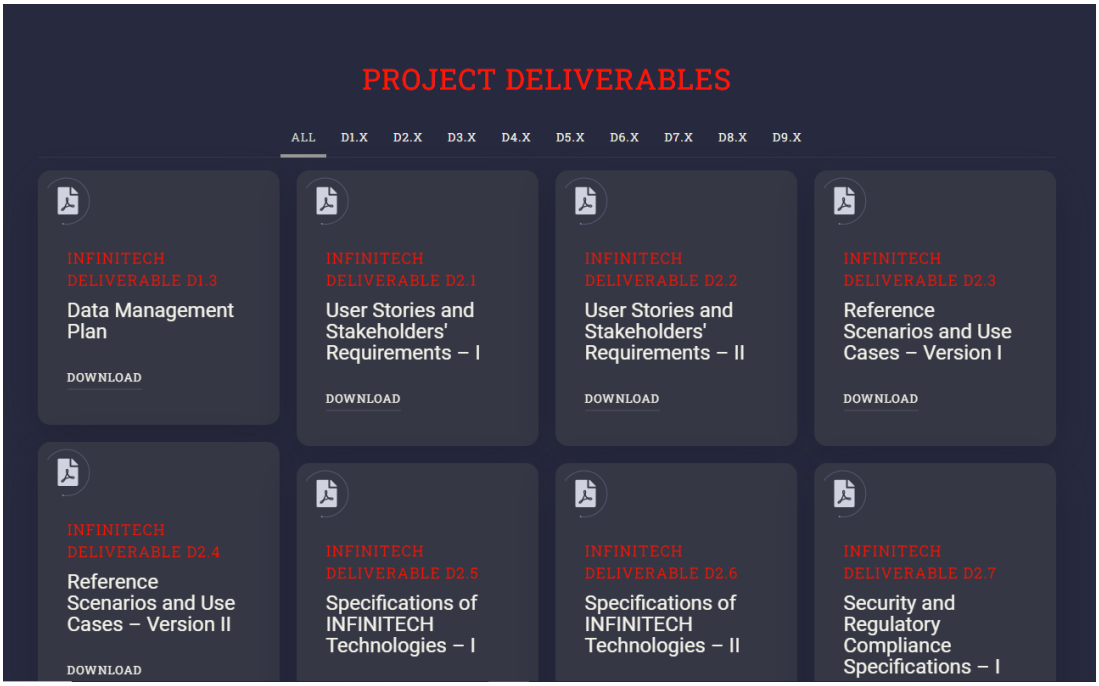


Figure 3 - category "deliverables" on INFINITECH website

Please, note that all the deliverables can be downloaded as a PDF.

Both deliverables and publications are checked and uploaded regularly. In particular, with regard to deliverables, Finance Innovation uploads new documents during the first week of each month, paying particular attention to publish only “public” and “validated” deliverables by the European Commission.

Concerning website analytics, it is worth noting that statistics show an improvement between April 2021 and January 2022: more users seem to be interested in the INFINITECH project and to appreciate its content. In fact, 2,293 users visited the INFINITECH website between April 2021 and January 2022:

Figure 4 - INFINITECH website analytics from April 2021 to January 2022

As a matter of fact, it is possible to see that there was an improvement in all the parameter (number of INFINITECH users, new users, sessions, page views) except for the average session duration:

Table 1 - INFINITECH website KPIs between April 2021 and January 2022

KPIs	April 2021	January 2022
Number of INFINITECH users website	487	2,293 (+1806)
New users	440	2,048 (+1608)
New visitors (%)	81,8%	77.8% (-4%)
Returning visitors (%)	18,2%	22.2% (+4%)
Sessions	701	3,363 (+2662)
Page views	1,508	7,060 (+5552)
Avg. Session Duration	1:43h	1:23h (-20 min)
Bounce rate	63.77%	50% (-13,77%)

Even though the average session duration decreased by 20 minutes, it is worth noting that the bounce rate, i.e. the percentage of website visits that are “single-page” sessions, has decreased by 13,77%, meaning that people appreciate more the content of the website and, therefore, they visit more than one page. Moreover, as it will be shown right after in this section, the share of “returning visitors” has increased by 4%, meaning that we are building a solid audience and engagement.

Regarding website users in particular, we can observe that people visited the website mainly during three months in 2021: May, July and September:

Figure 5 - Overview of the daily users activity between April 2021 and January 2022

The figure below shows the number of "new visitors" (users that have never been on the INFINITECH website) and the number of "returning visitors":

Figure 6 - INFINITECH website new visitors vs returning visitors between April 2021 and January 2022

We can observe that, even though most of our users are new visitors (77%), the share of returning visitors has increased from April 2021 (+4%). Probably, the new category "deliverables" has increased the number of returning visitors by creating more engagement. As a matter of fact, a stronger engagement with our users made them come back to our website several times to check new articles and publications. Therefore, Finance Innovation will try to continue posting new contents, especially publications, blog posts and deliverables, as they can create a greater engagement with users.

Regarding website users, it is worth looking at their country. As a matter of fact, the majority of our users come from the United States, Italy and Spain:

	Country	Users	% Users
1.	United States	186	8.03%
2.	Italy	160	6.91%
3.	Spain	148	6.39%
4.	France	123	5.31%
5.	Greece	122	5.27%
6.	Germany	112	4.84%
7.	India	103	4.45%
8.	United Kingdom	101	4.36%
9.	Turkey	82	3.54%
10.	China	76	3.28%

Figure 7 - INFINITECH website visitors per country

If we look at statistics until April 2021, we can see that users were mainly coming from Europe, in particular from Greece and Spain. As a matter of fact, the top five countries with most visitors were coming from:

- Greece (10.76%)
- Spain (9.2%)
- Turkey (8.02%)
- France (7.44%)

- Germany (6.65%)

This can represent that website users come from countries where partners of the consortium are established, but also that the project is becoming more international and, therefore, users do not only come from consortium partners' countries. This can give more visibility to the project and its outputs that are not only disseminated in Europe, but all over the word.

Blog posts

Finally, in order to give visibility to project partners, Finance Innovation kept uploading blog posts during 2021: 10 new blog posts were published from April 2021 to January 2022:

Table 2 - List of INFINITECH blog Posts in the Period M19-M28

Partner	Title of the blog post
Insomnia Consulting	New fintech/insurtech galaxy 2021: results reveal that ehealth triggers innovation in finance after covid-19.
Innovation Sprint	Real world data for novel health-insurance products pilot: diving into the system.
Gradiant	Data anonymization in big data scenarios: an open challenge to become gdpr compliant.
Insomnia Consulting	Seven fintech companies are selected under the caixabank fintech program by insomnia.
Privé Technologies	Using ai-driven portfolio optimisation to consider ESG preferences in portfolio creation.
University of Nicosia	New report: designing the digital euro.
Wenalyze	The future of open data and its use in the insurance industry.
University of Nicosia	Looks like the eu is finally getting crypto-regulation right.
Gradiant	Securing gps data using geo-indistinguishability.
Bankia	Gender equality becomes a reality in fintech, 66% of the sector are women.

Blog posts and articles are essential to engage our users, but also to gain visibility. That is the reason why Finance Innovation will keep posting new contents each month.

3.2 Social networks

On social media, INFINITECH H2020 have been keeping the focus on Linkedin and Twitter. We have been communicating around 15 times every month on Twitter, and on average 3 posts per month on Linkedin (it does not include shared posts). Besides communicating about our network's events, publications and news, we have been engaging the whole INFINITECH H2020 community by making a watch on our consortium members' news, articles and events and posting about them on Twitter.

Here you can see a short summary of our statistics in 2021 and 2022, allowing you to see how most our figures increased during the reporting period.

Table 3 - Statistics in 2021 and 2022

Social Media	Linkedin		Twitter	
Year	2021	2022	2021	2022
Reach	1207	4542	44,452	50199
Engagement Rate	8,08%	6,56%	1,146%	1,9%
Followers	140	211	188	265

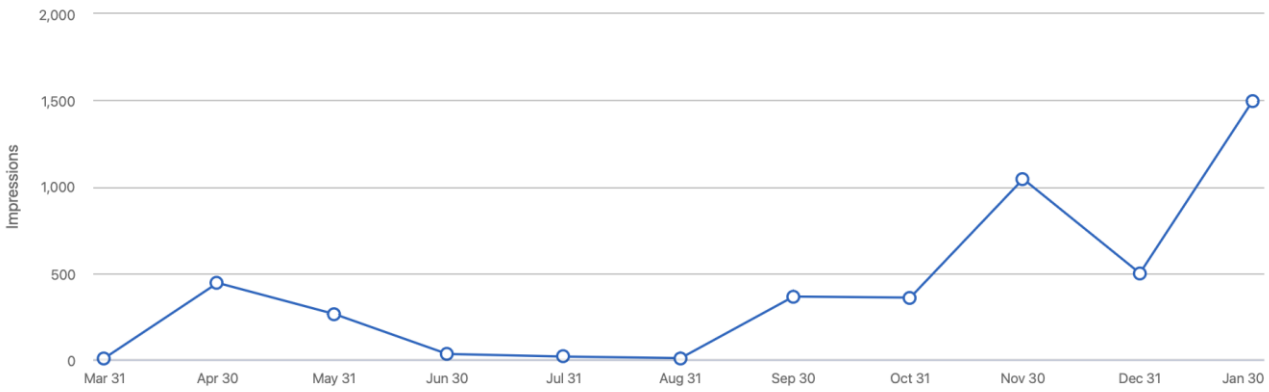
3.2.1 List of activities

3.2.1.1 LinkedIn

Since 2020, the LinkedIn account dedicated to INFINITECH is a steady relay of information to share all the events, articles and latest news about the project. Our main purpose is to generate engagement and visibility, increasing the notoriety of the INFINITECH-H2020 project by putting our partners and realization in the spotlight and encouraging them to interact with our publications.

The content remains administered by WP9 leader, Finance Innovation communication team. LinkedIn professional account offers a comprehensive look at post analytics. The period we covered with these statistics goes from April 2021 to February 2022.

- **Reach**



The total amount of reach this year was 4542 views of our posts, with a progressive increase after summer 2021.

- **Engagement rate**

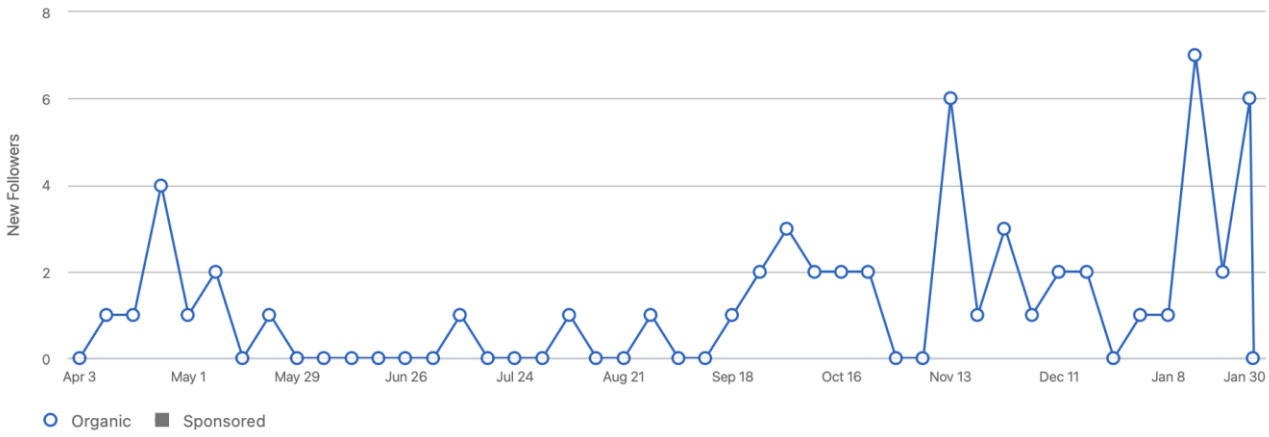
On this period (April 2021- January 2022), the medium engagement rate on the INFINITECH-H2020 account on Linkedin is 6,56%. According to the ContentCal blog, an engagement rate above 2% is generally considered as good on this social network, but it can climb up to 5-6% depending on the shared content (https://www.contentcal.io/blog/what-is-a-good-social-media-engagement-rate/).

- **Best posts**

Here you can see the posts that generated the most engagement on our Linkedin account. All those publications were published at the end of 2021 or at the beginning of 2022, showing a notable growth of notoriety. Posts about new functionalities, events or videos seem to be most successful on this social media.

Update title	Created	Impressions	Views	Clicks	CTR	Reactions	Comments	Shares
We now allow registered users to add their own assets to the INFINITECH-... All followers | Boost	1/26/2022	378	-	10	2.65%	15	1	3
Great news Innov-acts ! New video on INFINITECH YouTube channel, check... All followers | Boost unavailable	1/21/2022	176	-	1	0.57%	12	0	0
INFINITECH Workshop : Personalized Retail and Investment Banking... All followers | Boost	1/20/2022	433	-	15	3.46%	13	1	0
INFINITECH H2020 - YouTube All followers | Boost	1/12/2022	364	-	13	3.57%	14	0	0
[16th of December] Attend our #Workshop "AI and BigData: The... All followers | Boost	12/7/2021	417	-	23	5.52%	18	0	7
#Innovation in Healthcare Insurance: What is the #future of premiums... All followers | Boost unavailable	12/6/2021	114	-	7	6.14%	4	0	0
Infinitech All followers | Boost	11/23/2021	372	-	14	3.76%	13	0	1
Category 2: Personalized Retail and Investment Banking Services... All followers | Boost	11/18/2021	338	-	21	6.21%	9	2	1
🖥️ The #INFINITECH Approach Hack Challenge I The Enhancing #Finance... All followers | Boost	11/8/2021	384	-	13	3.39%	14	0	3
Open Finance Day | The next in open banking? | 5th October 2021 All followers | Boost	10/18/2021	291	-	6	2.06%	12	0	5

- **Followers**



During the current period, the account gained 56 followers, for a total of 211 followers, which represents an increase of 26,5%. Below, you can find further information about our followers' characteristics:

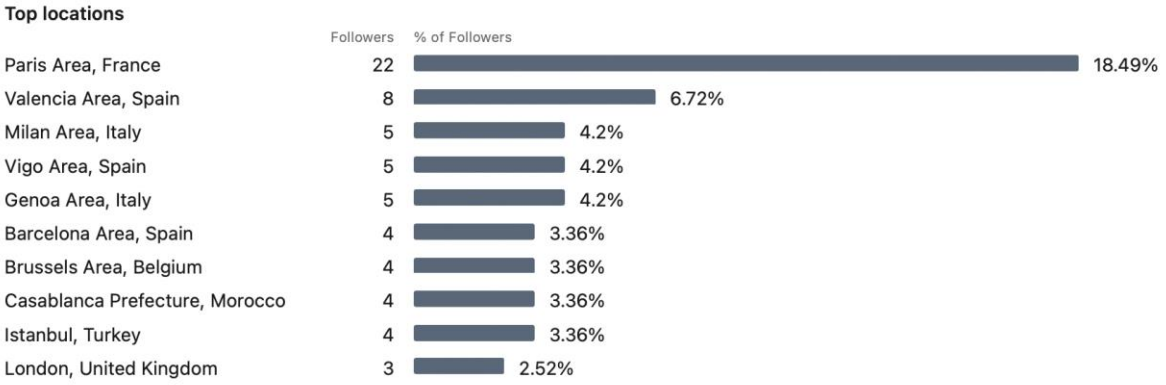


Figure 8 - Followers top locations in the Period April 2021 - January 2022

Most of our Linkedin followers are located in France, Spain and Italy. The majority of them come from Europe, but some of them are also located in closeby countries: Morocco, Turkey.

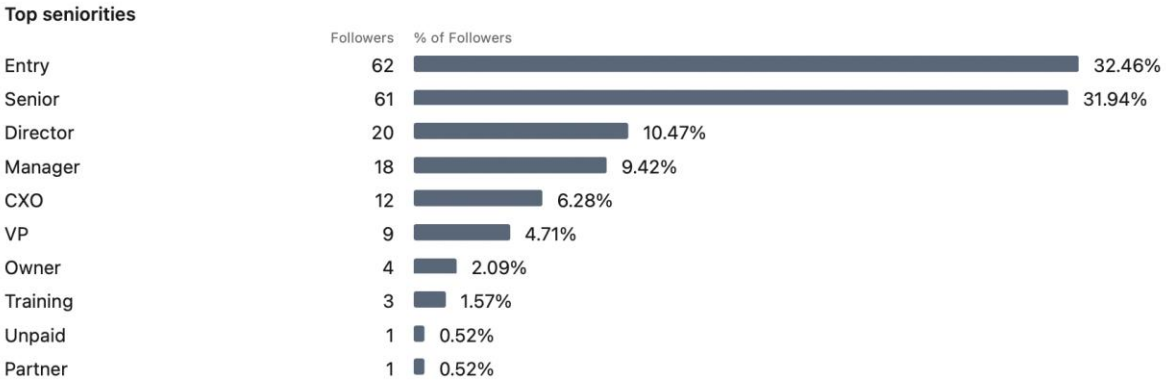


Figure 9 - Followers top seniorities in the Period April 2021 - January 2022

Typically, our followers are either entries or senior in their companies. Then come directors and managers. Therefore, we can see seniorities are diverse in our visitors' background.

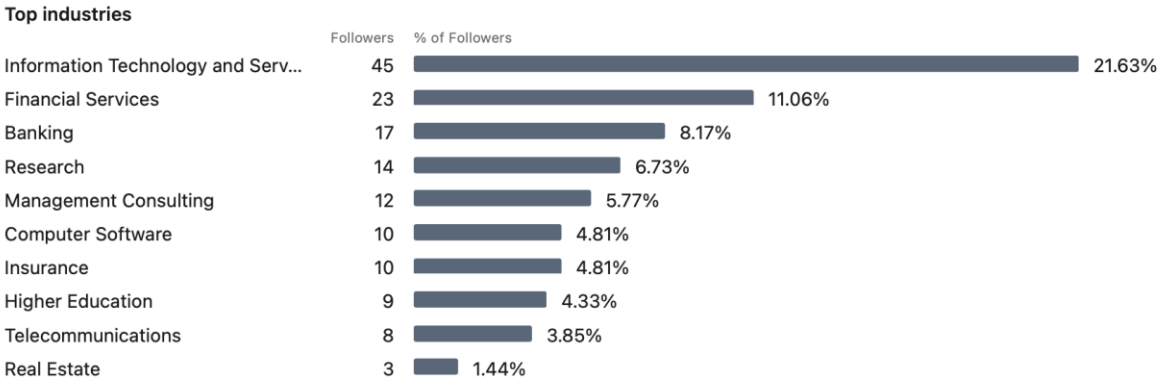


Figure 10 - Followers top industries in the Period April 2021 - January 2022

Our followers mostly work in industries that are concerned by the INFINITECH project: Information, Technology and Services, Financial Services, Banking and Research.

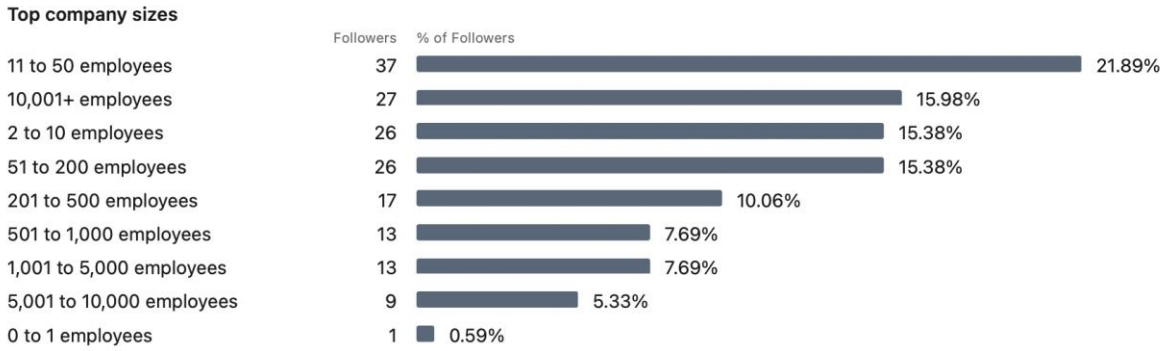


Figure 11 - Followers top company sizes in the Period April 2021 - January 2022

Alike the seniority level, our followers' company sizes are diverse, with a majority of SME, followed by large companies.

- **Followers**

Our visitors' profiles differ slightly from our followers'. It can be interesting to verify how it changed since 2021. Knowing the profiles of the INFINITECH-H2020 account is useful to determine upcoming trends and to know if we target our publications precisely enough.

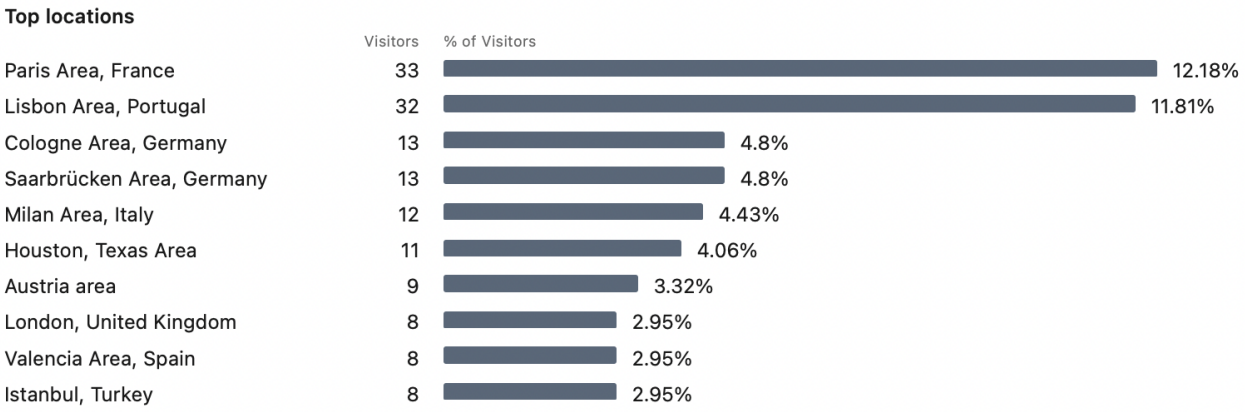


Figure 12 - Visitors top locations in the Period April 2021 - January 2022

Similarly, to our followers, most visitors come from Paris in France. Visitors are concentrated in Europe, with more variated areas, such as Portugal or Germany. However, a more significant number (11) also come from the United States (Houston), showing the project also starts to find a resonance outside Europe. Last year, Madrid and Genoa came first with other European cities, and there were no visitor from outside Europe and its surroundings.

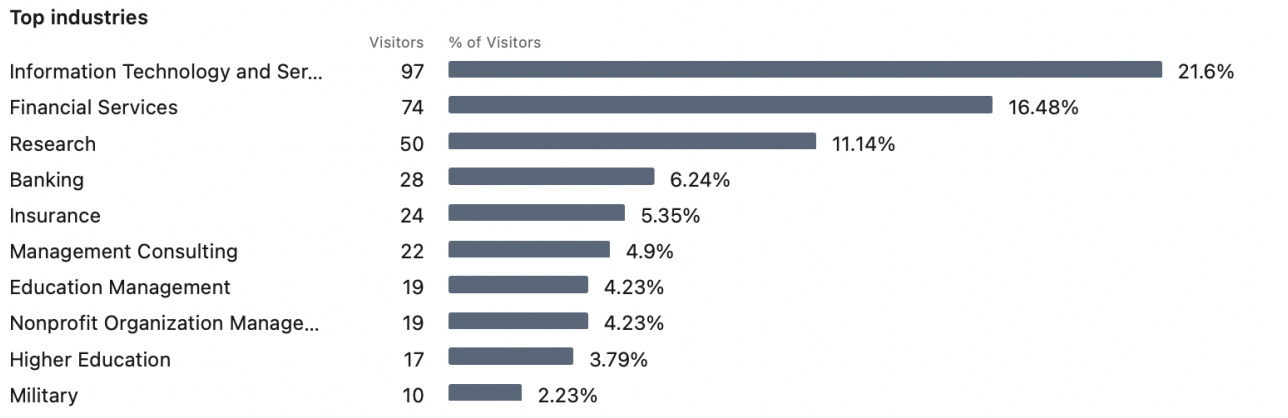


Figure 13 - Visitors top industries in the Period April 2021 - January 2022

Here the results appear to be similar to the ones concerning our followers, except researchers seem more common amongst visitors than amongst followers. Compared to last year, visitors from the Financial Services industry are more common. Still, we can see the profile of our visitors fit the aims of INFINITECH-H2020, with most of them working in Finance, Information Technology Services and Research.

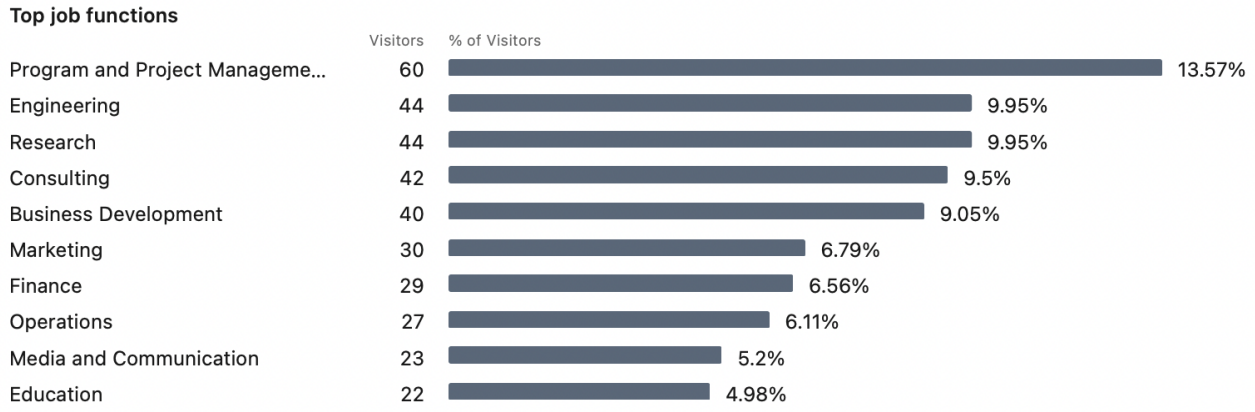


Figure 14 - Visitors top job functions in the Period April 2021 - January 2022

While last year, Business Developers were most numerous amongst the visitors of the INFINITECH Linkedin account, this year Program and Project Managers, Engineers, Researches and Consultants come first. This appears to be a good thing, as these profiles, working on hands with the subjects we tackle, can directly be interested by our contents.

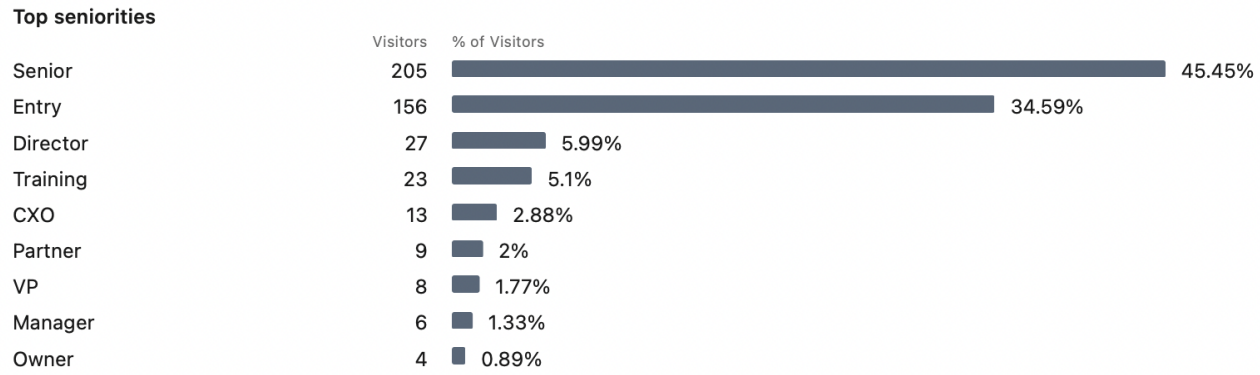


Figure 15 - Visitors top seniorities in the Period April 2021 - January 2022

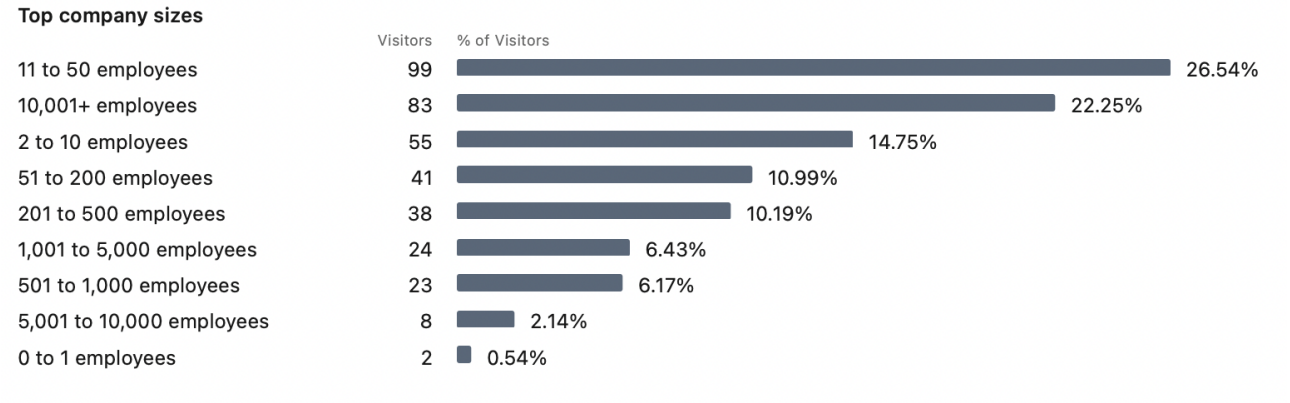


Figure 16 - Visitors top company sizes in the Period April 2021 - January 2022

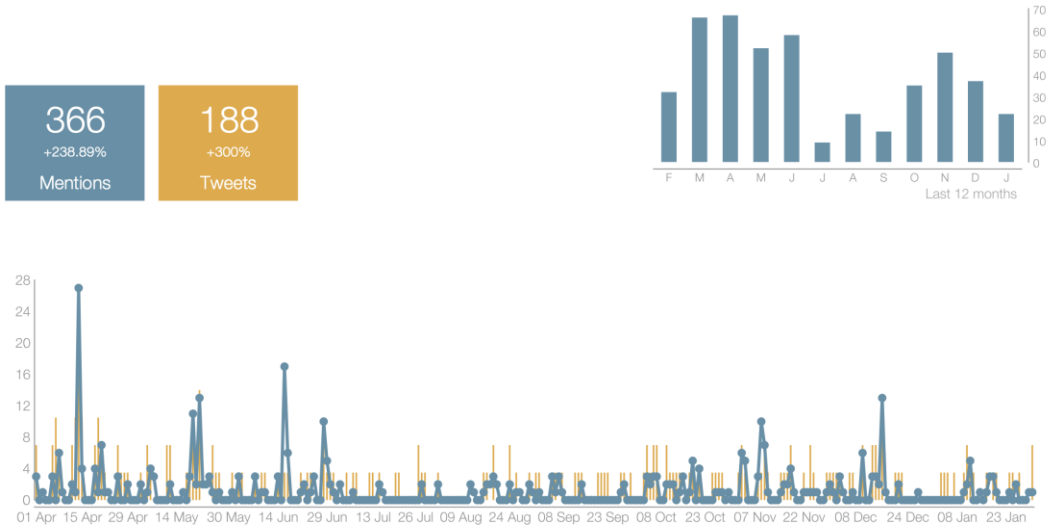
Our visitors' seniorities and company sizes are similar to our visitors', showing a variety of profiles.

3.2.1.2 Twitter

With about 15 tweets per month, the INFINTECH project online presence on social media has considerably been intensified since the beginning of 2021. Twitter allows us to develop a more consistent visibility strategy. Besides informing our community about our upcoming events and actuality, we aim to reinforce our community on Twitter and foster our stakeholders' activity by sharing their own contents and webinars.

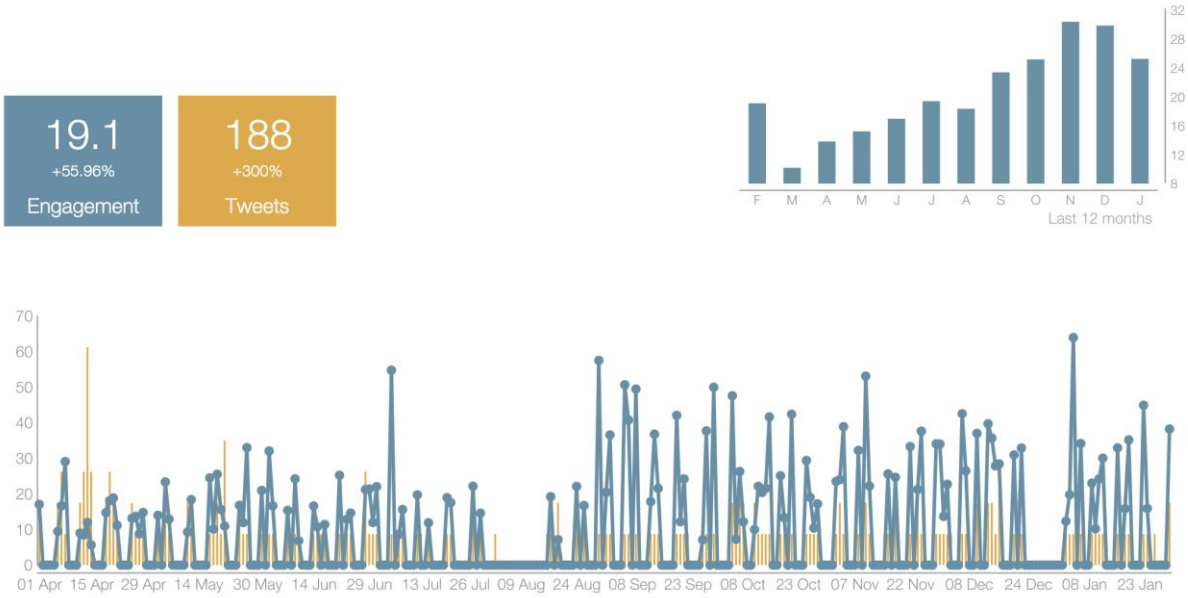
Our increase of activity on Twitter appears on the following charts, showing key insights from April 2021 to January 2022. Today, the Twitter account counts 268 followers. We have tweeted about 15 posts per month (+ retweeted some relevant content) on the INFINITECH account, increasing significantly our presence and engagement. The following figures were generated by Metricool, a social media analytics tool.

- **Mentions**



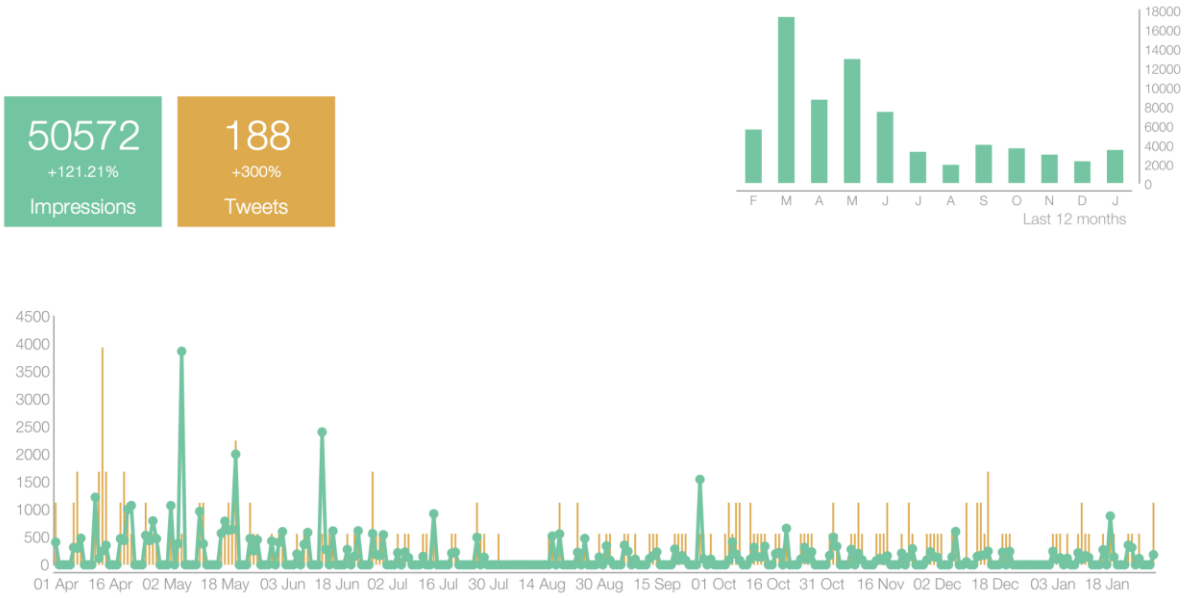
This year, INFINITECH has been mentioned 366 times by other Twitter accounts, which represents twice the amount of 2020 (+238.89%). With more webinars and several new initiatives, our members had many opportunities to mention INFINITECH on social media.

- **Engagement rate**



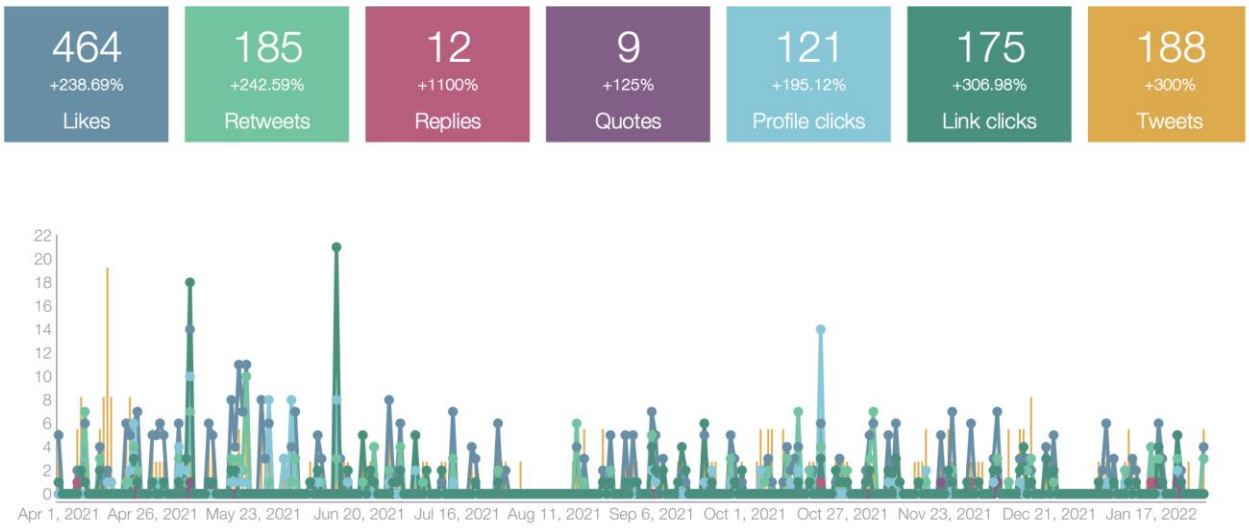
The engagement rate is the rate of people who interact with tweets by clicking on a link, liking the tweet or retweeting it. The engagement rate generally tends to diminish as the reach increases. According to the ContentCal website, a 0.5% engagement rate is considered to be a good engagement rate for Twitter, with anything above 1% viewed as excellent. It is calculated here as follows: Interactions / impressions x 1000. This year, the INFINITECH account obtains a 1,9% engagement rate, which represents an increase of 56% compared to last year.

- **Reach**



The number of impressions is the number of times each tweet has been seen. This criterion does not register if people spend more or less time on each tweet. This year, our tweets have been seen 50199 times, which represent an increase of 12,1% compared to last year.

- **Interaction**



The total of interactions is the number of times users interacted with INFINITECH's tweets and account. This comprehends likes, retweets, quotes and replies, but also profile clicks or link clicks.

This chart shows the total amount of interactions out of 195 tweets: 471 likes, 188 retweets, 12 replies, 10 quotes; 124 profile clicks and 175 link clicks. All in all, most categories, such as likes, retweets, profile clicks or link clicks, have a result at least twice as important as last year.

- **Best tweets**

On next page, you can find the listing of the top 20 tweets last year, ranked by likes. Most of the most successful tweets promote our events. But some also relay INFINITECH or Stakeholders' views or actuality.

Published	Text		Impressions	Likes	Retweets	Replies	Quotes	Link clicks	Profile clicks	Engagement
06 May 15:30	Poste Italiana (@PosteNews) has interviewed @...	Go	3,868	14	7	0	1	18	10	12.93
21 May 09:00	Last minute to register for the Financial S...	Go	2,004	11	10	0	0	-	1	10.98
19 May 14:36	Yesterday during the @NGIoT4eu Workshop, @APn...	Go	626	11	3	0	0	-	2	25.56
28 Jun 10:00	Congrats to @wenalyze, elected as the most su...	Go	565	8	2	1	0	-	1	21.24
14 Jun 14:50	From now on, you can discover the new "Desi...	Go	2,406	8	3	0	0	21	8	16.63
25 May 10:07	From today to thursday, it's @BDVA_PPP 's a...	Go	476	8	0	0	0	0	0	16.81
17 May 11:40	Only 3 days left before our event "Semantic...	Go	571	8	3	0	0	2	1	24.52
07 Dec 14:51	Save the date : on December 16th at 12:30 ...	Go	603	7	3	1	1	2	2	26.53
25 Nov 11:07	4 days left before the beginning of the Eur...	Go	292	7	2	0	0	1	1	37.67
06 Sep 14:47	.@innovSprint and @RRDNL officially announce...	Go	355	7	5	0	0	4	2	50.7
15 Jul 17:08	What really is #anonymization and how to achi...	Go	924	7	3	0	0	0	1	11.9
03 Jun 15:20	In our new video, Carlos Albo Porter, CEO &am...	Go	600	7	3	0	0	0	0	16.67
20 May 10:11	Our Stakeholders' webinar "Semantic-Driven #D...	Go	638	7	2	0	0	-	1	15.67
22 Apr 16:20	Save the Date : our next Stakeholders' Work...	Go	1,074	7	2	0	1	1	1	11.17
19 Jan 11:15	#BigData is so large, varied and fast, it can...	Go	883	6	3	0	1	4	0	15.86
05 Jan 10:18	Our consortium member @Uni_of_Nicosia receive...	Go	125	6	1	0	0	0	1	64
30 Nov 14:08	SAVE THE DATE : @alboportero, CEO of our c...	Go	235	6	1	1	0	0	0	34.04
10 Nov 10:00	.@innovSprint presents an article about the p...	Go	207	6	1	0	0	3	1	53.14
04 Nov 10:45	4 days left before the 2021 Inter-OSS Works...	Go	334	6	7	0	0	0	0	38.92
21 Oct 14:00	Seven #fintech companies are selected under t...	Go	660	6	4	1	0	3	14	42.42

- Followers

On Twitter, INFINITECH-H2020 gathers 268 followers. Here is some information about their profile, collected with Followerwonks.

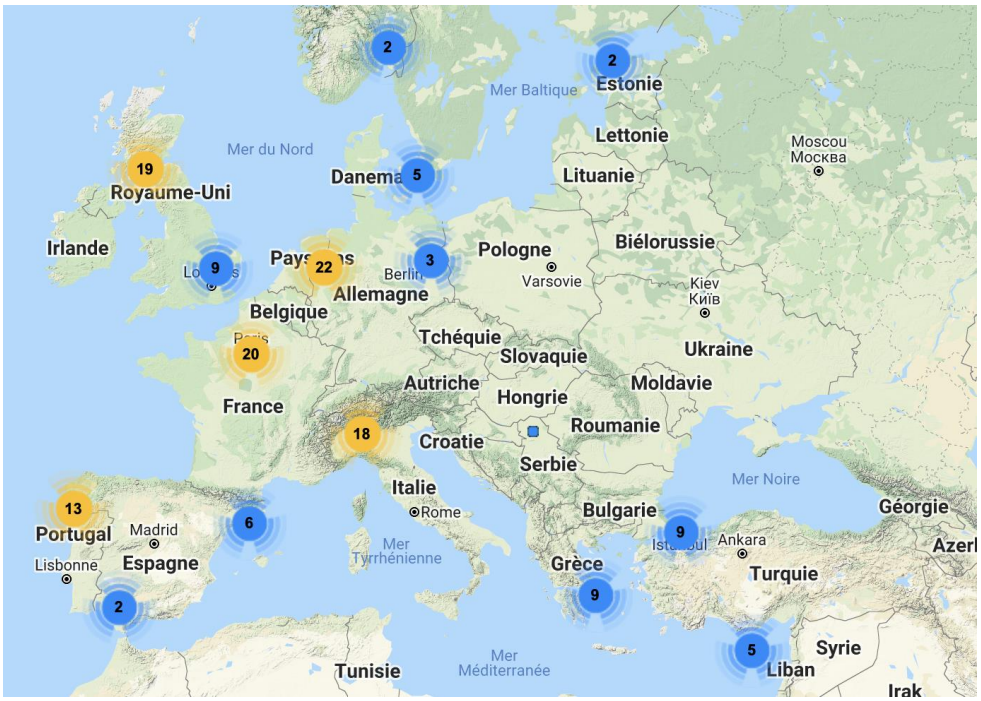


Figure 17 - Followers map

Most users come from Europe. Out of 268, only 15 come from the rest of the world. In Europe, followers are concentrated in France, Netherlands, Italy, Portugal and Scotland.

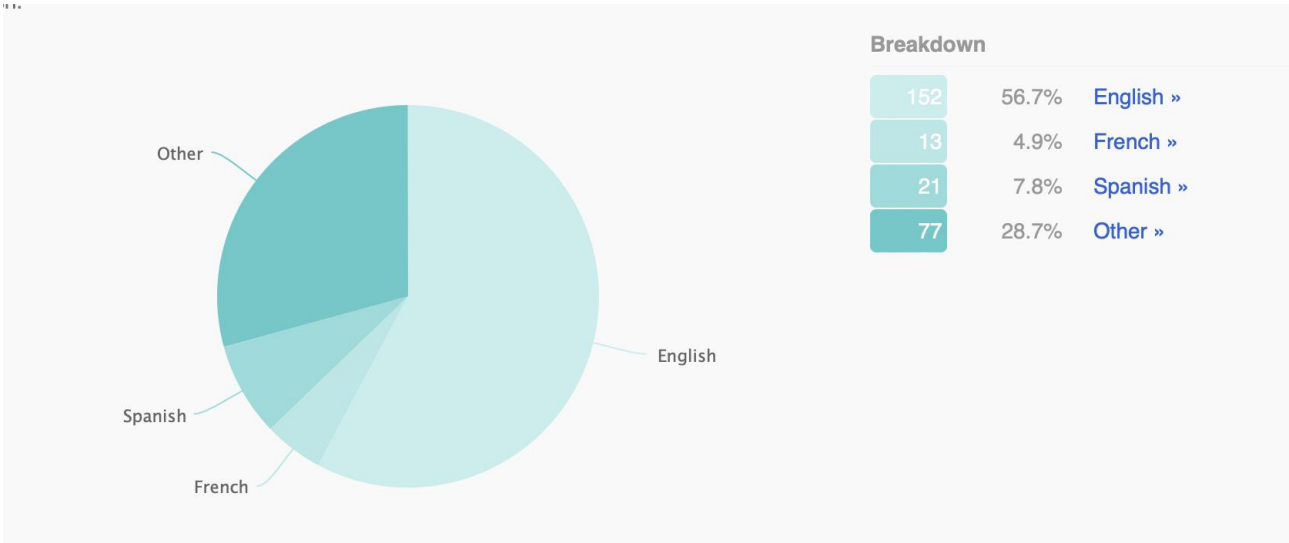


Figure 18 - Follower language in the Period April 2021 - January 2022

More than half of INFINITECH-H2020's followers (56,7%) accounts are in English. Spanish (7,8%) and French (4,9%) come next.

This figure shows the key words our followers' biographies contain:

Figure 19 - Followers key words in the Period April 2021 - January 2022

You can see most of them are relevant with INFINITECH-H2020's activity, tackling the subjects of research, data, European projects or fintech.

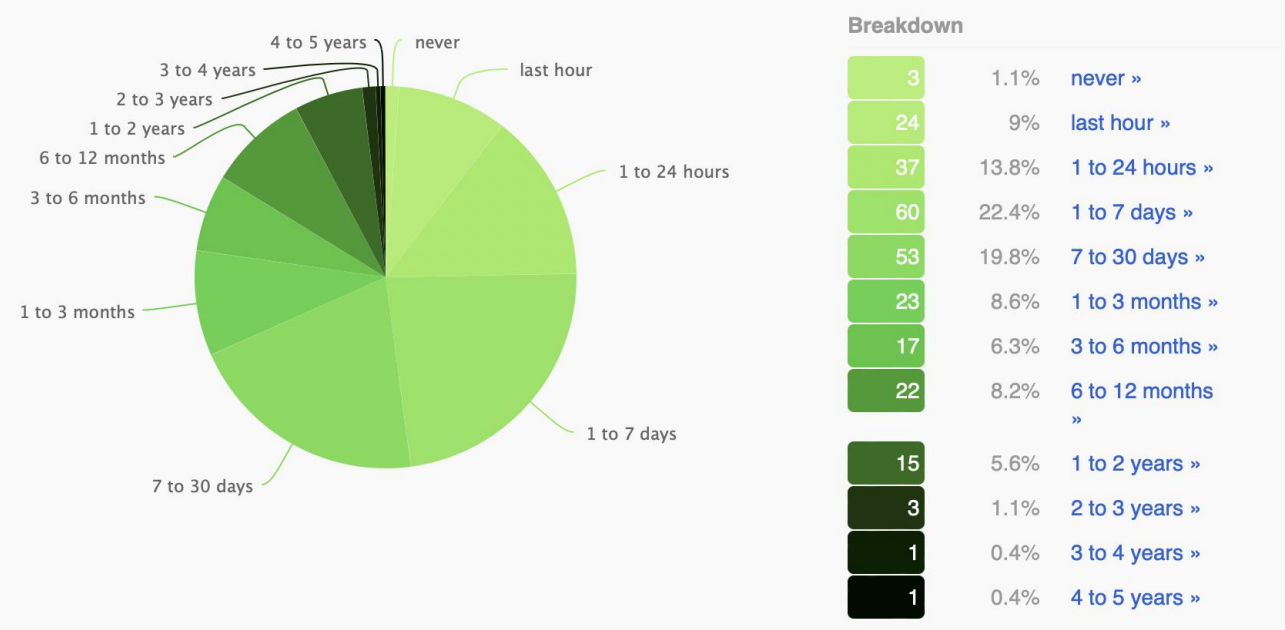


Figure 20 - Recencies of tweets of followers in the Period April 2021 - January 2022

Finally, this figure shows most of our followers are active on Twitter, with 45% having tweeted the last 7 days, and 80% of them having tweeted the last month.

3.2.1.3 Youtube channel

During the INFINITECH project several videos were produced about the project itself, the partners and the events organized by the consortium. However, these videos were always posted on Finance Innovation's YouTube channel until the end of 2021 because the project did not have its own YouTube channel. Although Finance Innovation has always publicized the videos on its own social networks and those of the INFINITECH project, after a careful analysis, we decided, together with the project partners, to create an official INFINITECH YouTube channel to give more visibility to the videos produced since the beginning of the project.

Finance Innovation, after proposing the creation of the YouTube channel to the coordinators, took care of the creation of the channel, the inclusion of the graphics (avatar, banner and playlists cover) and the publication of the videos. The INFINITECH YouTube channel can be viewed at the following link: https://www.youtube.com/channel/UClVeOyQyljdCpL51GSPa7Zg/featured.

Here below, the figure represents how the YouTube channel looks like:

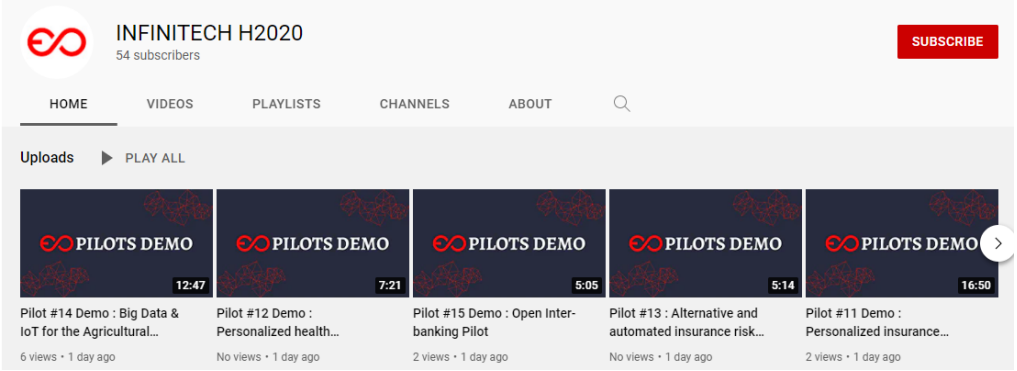


Figure 21 - INFINITECH YouTube channel

Here below are the graphics that were included in the channel (the avatar and the banner):

Figure 22 - Graphics included in the YouTube channel

Here below are the graphics that were produced for playlists

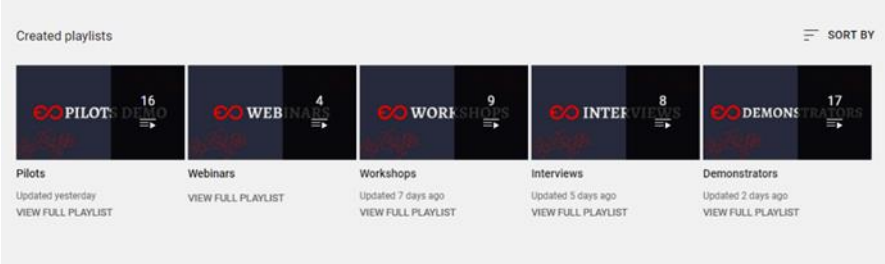


Figure 23 - Graphics produced for YouTube playlists

In order to have an organized YouTube channel and to make it easier for our users to watch the videos, we decided to create 5 playlists:

1. Pilots, where it is possible to watch the demos available (16 videos available at the moment);
2. Webinars (4 videos available at the moment);
3. Workshops, dedicated to the events organized during the project (9 videos available at the moment);
4. Interviews of project partners (8 videos available at the moment);
5. Demonstrations of digital tools (17 videos available at the moment).

Finance Innovation worked on the YouTube channel in December. The INFINITECH YouTube channel was officially launched the first week of January in 2022. In order to increase its visibility, it was promoted through INFINITECH social media and newsletter, as well as Finance Innovation social media and newsletter:

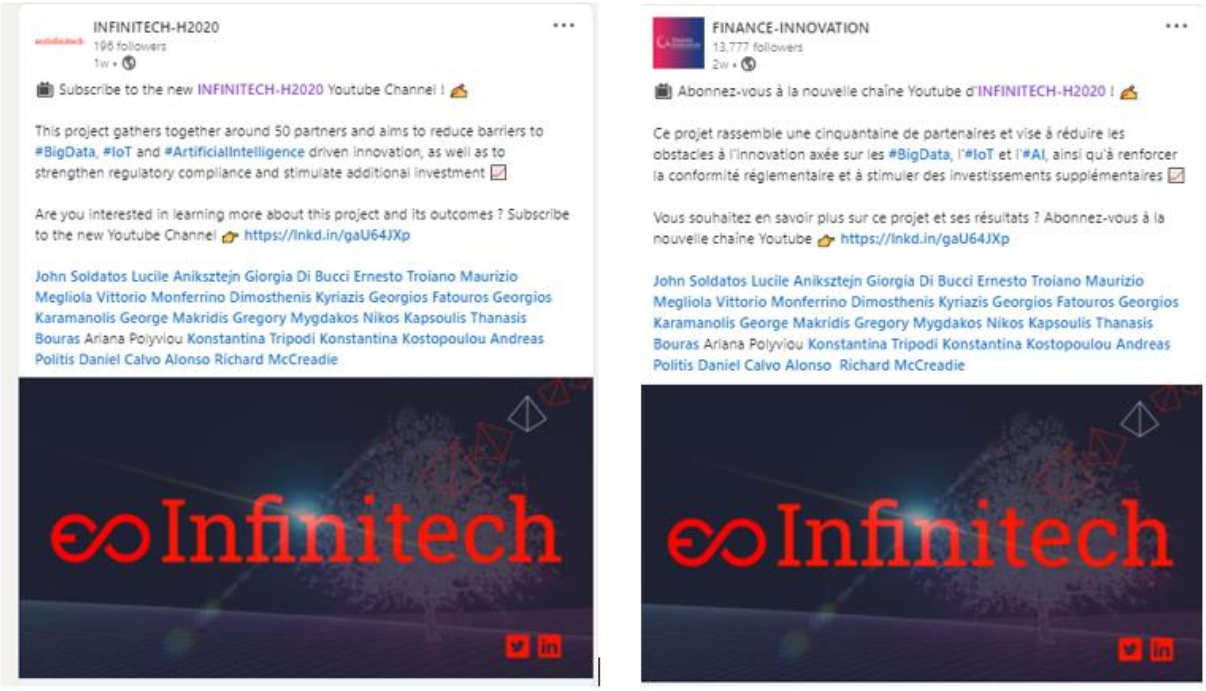


Figure 24 - Promotion of the INFINITECH YouTube channel on social media

Figure 25 - Promotion of the INFINITECH YouTube channel through newsletters

Between 29 December 2021 and 26 January 2022, INFINITECH YouTube channel reached

- 58 subscribers;
- 522 views;
- 9.1 watching time (hours);
- 4,033 impressions.

Figure 26 - INFINITECH YouTube channel views, watch time, subscribers and impressions

It is worth noting that from the promotion of the YouTube channel in our social media (Finance Innovation and INFINITECH), there was a higher number of users watching videos and the channel became more visible.

Impressions are important to gain more visibility. In fact, we can note that they are able to increase both views (40% of our views come from impressions) and watch time (33% of the total watch time come from impressions):

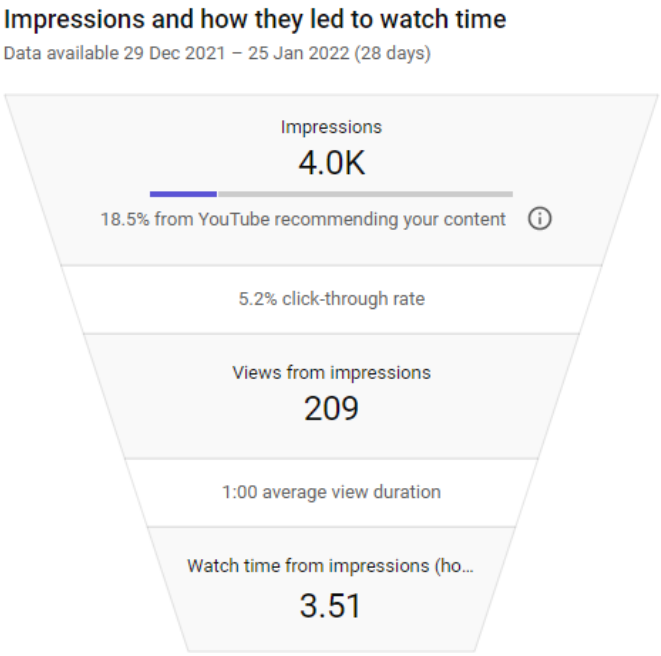


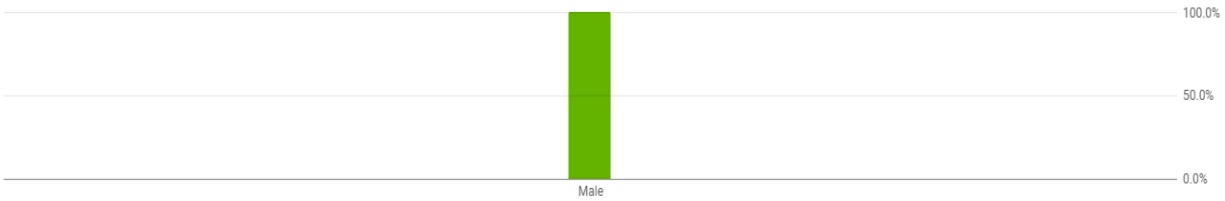
Figure 27 - Impressions and watch time of the INFINITECH YouTube channel

Our main users come from 3 European countries: Greece, Slovenia and France and their age is between 45–54 years old:

Geography	Views	Watch time (hours)	Average view duration
Total	**522**	**9.1**	**1:02**
Greece	215 41.2%	4.0 44.2%	1:07
Slovenia	40 7.7%	0.1 1.5%	0:12
France	21 4.0%	0.0 0.3%	0:04

Figure 28 - INFINITECH YouTube channel users' nationality (top 3)

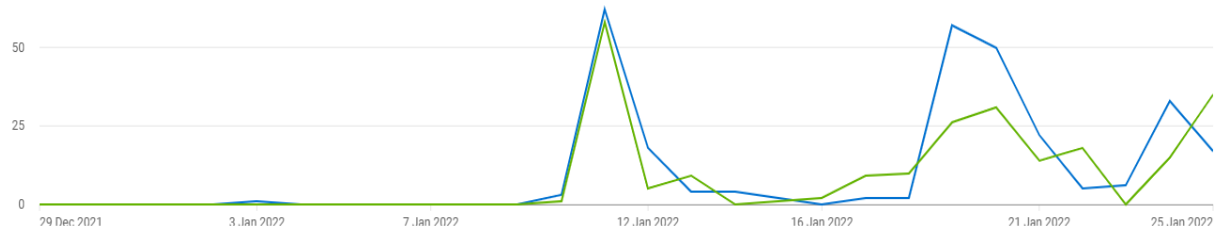
However, a disproportion can be observed in the above picture: in fact, 100% of users are men:



Viewer gender	Views	Average view duration	Average per-centage viewed	Watch time (hours)
Female	–	–	–	–
Male	100%	0:32	6.4%	100%

Figure 29 - INFINITECH YouTube channel users' gender

Another interesting observation that can be done is that 50% of people watching INFINITECH videos are not subscribed to the channel. This can represent that half of the people watching our videos find our YouTube channel on Google and not through our social media:



Subscription status	Views	Watch time (hours)	Average view duration
Total	522	9.1	1:02
Not subscribed	288 55.2%	5.1 55.4%	1:03
Subscribed	234 44.8%	4.1 44.6%	1:02

Figure 30 - Users suscribed and not suscribed (%) to the INFINITECH YouTube channel

According to YouTube statistics, our users come from "external" or "unknown" traffic sources, such as websites or applications, while 30% come from other YouTube channel pages:

Traffic source	Views
Total	522
Channel pages	165 31.6%
External	162 31.0%
Direct or unknown	57 10.9%
YouTube search	44 8.4%
Suggested videos	41 7.9%
Playlists	21 4.0%
Browse features	16 3.1%
Playlist page	7 1.3%
Notifications	6 1.2%
Other YouTube features	3 0.6%

Figure 31 - YouTube traffic sources

These views represent people who were already on YouTube when they found INFINITECH videos.

The 3 most popular videos are pilots and workshops. In detail, these videos are:

- "Pilot #5b Demo: Business Financial Management (BFM) tools delivering a Smart Business Advise" (23 views);
- "Value at Risk estimation with Python: Historical VaR" (17 views);
- "INFINITECH Workshop: Personalized Retail and Investment Banking Services" (11 views).

Even though views of these videos are not very high, it is important to highlight that these videos strengthen audience engagement, which is important to gain visibility and have regular users that watch INFINITECH videos:

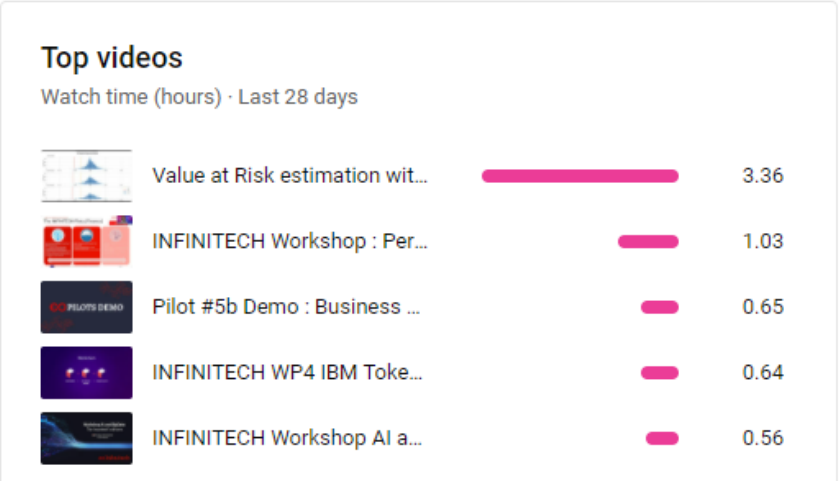


Figure 32 - INFINITECH top videos and their watch time

It is also worth noting that workshops, interviews and demonstrations are the most watched videos. Therefore, the INFINITECH consortium should invest more time in the creation of this kind of content that seems to be appreciated by our audience.

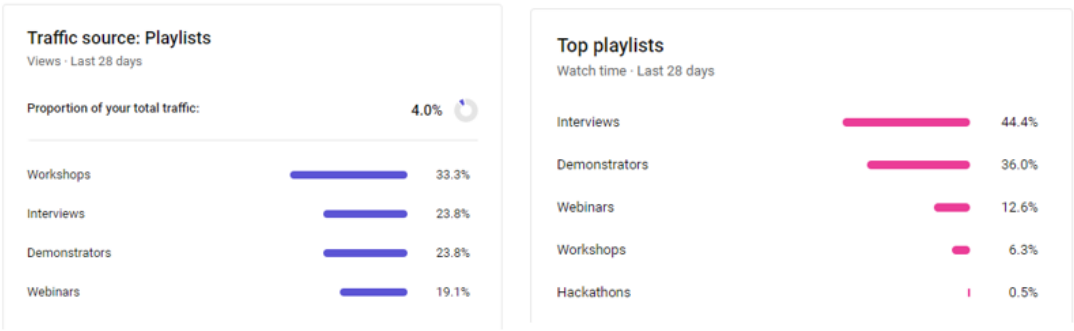


Figure 33 - INFINITECH top playlists: traffic source and watch time

During 2022 and 2023, Finance Innovation will update the INFINITECH YouTube channel regularly in order to attract new stakeholders, evoke curiosity about the project and provide visibility for outputs and events. Moreover, a new playlist is being created to give more visibility to hackathons.

3.2.2 Newsletter

Finance Innovation has concentrated more effort into drafting the monthly newsletter during 2021 and this allowed them to get more subscribers and thus multiply the impact of the project. 11 newsletters were sent out and the number of subscribers reached 652.

As agreed with the project partners, the goal of the INFINITECH newsletter is to strengthen the impact of INFINITECH activities and events, as well as highlighting editorial and scientific content and articles, building audience loyalty and generating recurring traffic to our website.

The organization within the INFINITECH consortium is the following: Finance Innovation contacts project partners one month in advance to ask them if there are upcoming events or news regarding the project. Then, Finance Innovation internal communication team gathers the information together, as well as videos and news regarding INFINITECH and prepares the content. Finally, the newsletter is sent through “Sendinblue”.

From March 2021, Finance Innovation sent 1 newsletter per month (with the exception of August and September, when the audience is less important):

Table 4 - INFINITECH newsletters sent by Finance Innovation in 2021

Newsletter number	Sending date
Newsletter no. 1	4 March 2021
Newsletter no. 2	5 May 2021
Newsletter no. 3	2 June 2021
Newsletter no. 4	8 July 2021
Newsletter no. 5	6 October 2021
Newsletter no. 6	16 November 2021
Newsletter no. 7	21 December 2021

As for the structure of the newsletter, it is divided into 4 different parts:

1. An **introduction** explaining the contents of the newsletter and inviting subscribers to follow INFINITECH social media:

Figure 34 - INFINITECH newsletter: introduction of the email

2. A second part where we usually **present a project partner, or we upload a video** on a topic relevant to the project. During 2021 the following videos were published:

- "Ricardo Jimenez-Peris (CEO & Founder of LeanXcale) describes what is LeanXcale";
- "How blockchain is transforming Fintech ? By IBM";
- "What is Wenalyze? By Carlos Albo Portero (CEO & Co-founder)";
- "John Soldatos, ICT & Business consultant at Innov Acts explains what are the next steps for this major european project in Finance";
- "Here is an interview of Georgios Karamanolis, Co-founder, CTO & CIO at Crowdpolicy, member of the Infinitech Consortium !";
- "Here is an interview of Dimitris Kotios, PHD Candidate at University of Pireaus, member of the Infinitech Consortium!".

Figure 35 - INFINITECH newsletter: example of a video

3. A section introducing the **upcoming or passed events** regarding INFINITECH, such as:
- Big Data and Artificial Intelligence for Potfolio Risk Assessment;
- Semantic-Driven Data Exchange and Graph Data Modelling Toolsfor Cross Domain Interoperability for FinTechs and finance;
- INFINITECH Workshop Series - GRAPH Data Model & Ontology Engineering;
- The Future of Fintech with Infinitech;
- The Enhancing Finance Training.

Figure 36 - INFINITECH newsletter: example of upcoming events

4. And, finally, a section with the latest news concerning INFINITECH and its consortium:

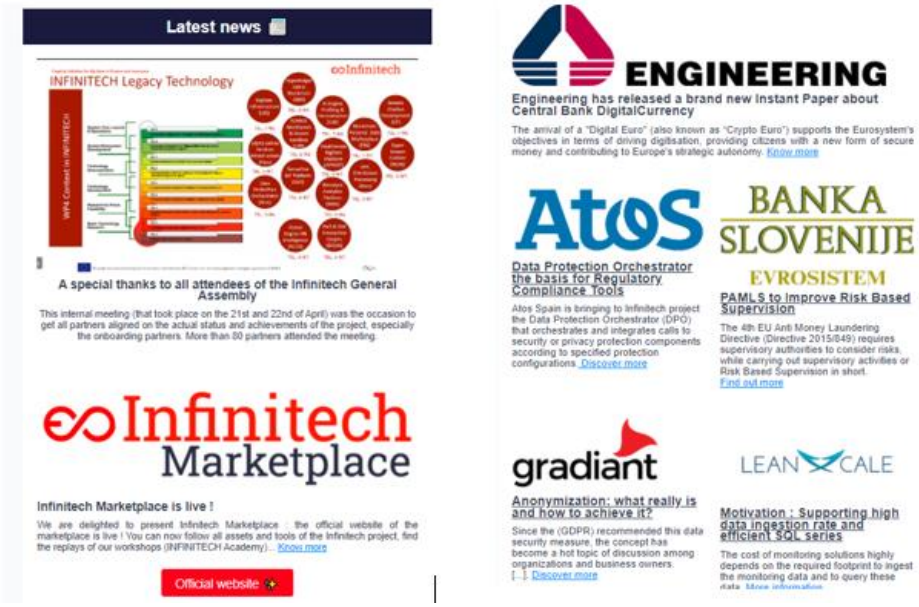


Figure 37 - INFINITECH newsletter: example of the section "latest news"

Concerning 2021 data analysis, INFINITECH newsletter opening rate and clicks are within the European average.

As shown by the above figure, the “opening rate” is between 12% and 31% (the European average is 21%). It is important to highlight that a lower opening rate was registered in July 2021 (12,14%) due to the lack of views during summer. That is the reason why Finance Innovation has decided to send the next newsletter in October 2021. It is also important to highlight that there was an increase in the opening rate from October 2021: as a matter of fact, while between March and July the opening rate was around 15%-16%, in October it was around 17%, in November 31%, and in December 23%.

In terms of “click rate”, the same figure shows that we are around 3% (the European average is 3%), with a lower rate in July 2021 due to the lack of views during summer. Also, in terms of clicks, it is worth noting that there was an increase from October 2021: while the click rate was around 0.20% between March and July, it increased to 0.37% in November.

	Recipients	Opens	Clicks	Unsubscribed
Newsletter Infinitech Mi-décembre 2021 #709 • Envoyées sur 21 déc. 2021 15:42 Rapport • Aperçu • Plus	544 100%	128 23,5% Détails	15 2,91%	1 0,19%
Newsletter Infinitech Mi-novembre 2021 #654 • Envoyées sur 16 nov. 2021 15:20 Rapport • Aperçu • Plus	547 100%	176 31,4% Détails	12 2,24%	2 0,37%
Newsletter Infinitech Septembre 2021 #535 • Envoyées sur 6 oct. 2021 11:01 Rapport • Aperçu • Plus	551 100%	91 16,95% Détails	20 3,77%	0 0%
Newsletter Infinitech Juin 2021 #428 • Envoyées sur 8 juil. 2021 12:09 Rapport • Aperçu • Plus	562 100%	51 12,14% Détails	10 2,38%	1 0,24%
Newsletter Infinitech Mai 2021 #329 • Envoyées sur 2 juin 2021 16:01 Rapport • Aperçu • Plus	565 100%	85 15,71% Détails	5 0,92%	1 0,18%
Newsletter Infinitech Avril 2021 #275 • Envoyées sur 5 mai 2021 16:35 Rapport • Aperçu • Plus	566 100%	90 16,64% Détails	16 2,96%	3 0,55%

Figure 38 - INFINITECH newsletter: analytics from March 2021 to December 2021

In 2021, a new type of newsletter was also introduced: the “flash newsletter”. In fact, in order to give more visibility to some events considered to be of interest to the INFINITECH audience, Finance Innovation decided to send 4 “flash newsletters” focusing only on the events the consortium wanted to highlight. In 2021, “flash newsletters” promoted the following events:

- Infinitech Marketplace is now live! (8 April 2021)
- Workshop infinitech graph data (11 May 2021)
- 4th International Workshop on Interoperability and Open-Source Solutions (5 November 2021)
- Workshop on AI and Big Data: the Insurtech’s drivers (9 December 2021)

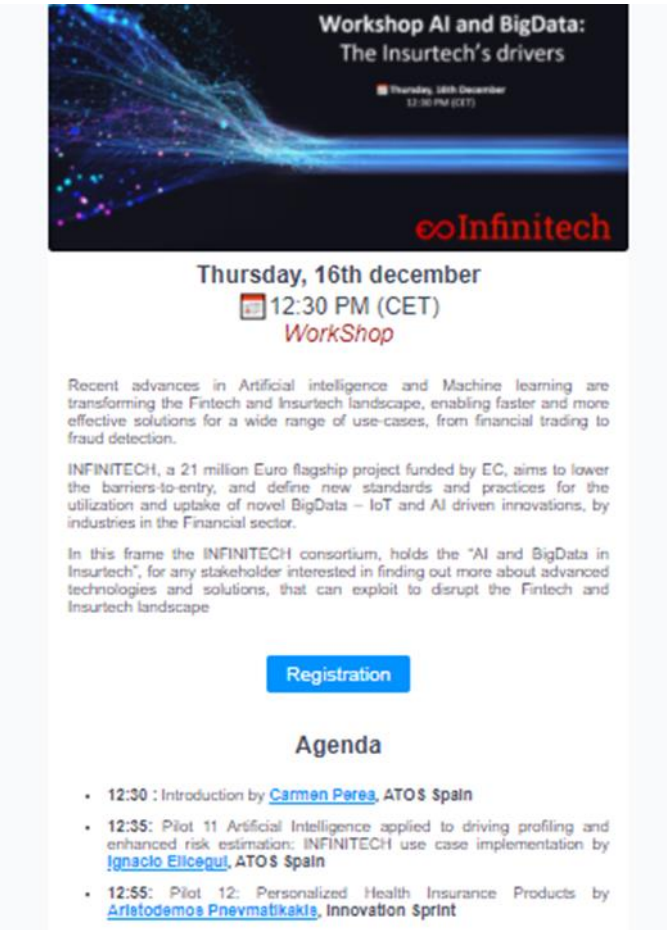
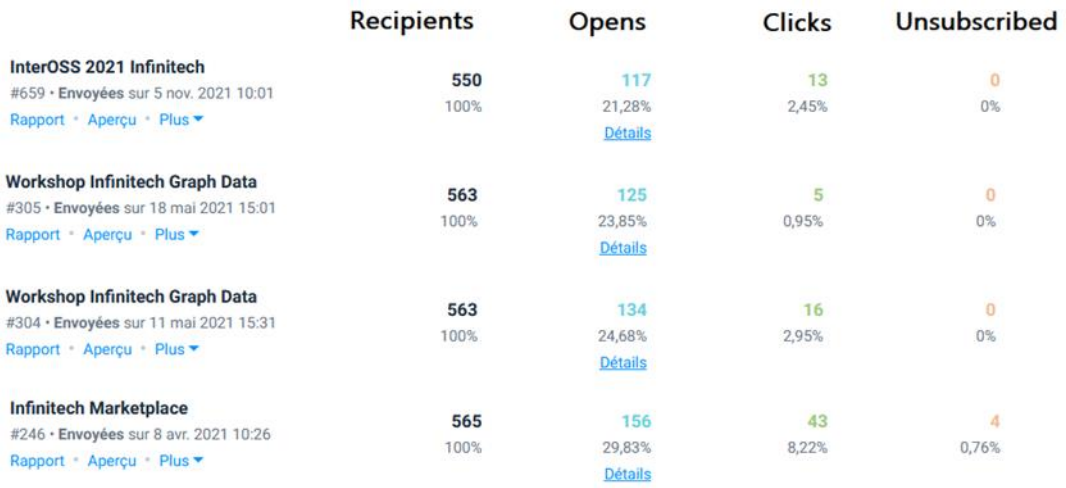


Figure 39 - example of a "flash newsletter"

It is worth noting that a specific mailing (or “flash newsletter”) seems to be more interesting for INFINITECH audience than a regular newsletter because the opening rate is particularly high, as the next figure shows. As a matter of fact, the opening rate is between 21% and 30%, while the click rate is between 1% and 8%.



	Recipients	Opens	Clicks	Unsubscribed
InterOSS 2021 Infinitech #659 · **Envoyées** sur 5 nov. 2021 10:01 Rapport · Aperçu · Plus	**550** 100%	117 21,28% Détails	13 2,45%	0 0%
Workshop Infinitech Graph Data #305 · **Envoyées** sur 18 mai 2021 15:01 Rapport · Aperçu · Plus	**563** 100%	125 23,85% Détails	5 0,95%	0 0%
Workshop Infinitech Graph Data #304 · **Envoyées** sur 11 mai 2021 15:31 Rapport · Aperçu · Plus	**563** 100%	134 24,68% Détails	16 2,95%	0 0%
Infinitech Marketplace #246 · **Envoyées** sur 8 avr. 2021 10:26 Rapport · Aperçu · Plus	**565** 100%	156 29,83% Détails	43 8,22%	4 0,76%

Figure 40 - INFINITECH "flash" newsletters: analytics from March 2021 to December 2021

Finally, it is also worth taking a look at KPIs between 2020 and 2021. As a matter of fact, we can say that as the number of newsletters sent has increased between 2020 and 2021 (+5), the number of subscribers has increased too (+262):

KPIs newsletter	April 2021	January 2022
No. of newsletters	6	11 (+5 compared to April) : ▪ 7 regular newsletters ▪ 4 “flash” newsletters
No. of newsletter subscribers	390	652 (+262 compared to April)

Figure 41 - INFINITECH newsletter KPIs

3.3 Stakeholders Contact Database

The INFINITECH contact database is used for the communication purposes of the project. As presented in D9.3 deliverable, the INFINITECH contact database includes partners’ contacts and it is updated with all additional contacts made by:

- The INFINITECH website, which includes all interested stakeholders who subscribe to the newsletter
- Project communication events, webinars, etc. i.e., all the registrants that consent to receive periodical information about INFINITECH
- The Marketplace website i.e., all interested stakeholders that have subscribed to the newsletter. The website for this section is new and has been operational for few weeks.

We can notice an important evolution in the number of contacts. The database has increased by 51%, surpassing its contacts from 590 to 801 contacts (+36%), since the last deliverable. This can be explained by the communication and dissemination actions that have taken place, the Marketplace which is now accessible to visitors, the workshops and collaboration with other initiatives that have brought strong visibility to the project, and the contribution of the 47 partners involved in the action.

4 Report on Scientific Dissemination activities

4.1 Scientific publications

Scientific dissemination is performed in INFINITECH in order to maximize the visibility of the project in the community and academia. Publishing publications on scientific and technical journals, giving presentations at conferences, and other actions have the following objectives:

- To show INFINIETCH advances to the scientific community
- To enhance INFINITECH visibility among academia and other research agents
- Publications can also be regarded as an asset that enables authors and a project to gain recognition and acknowledgement in a particular field at national and international levels
- To take advantage of networking activities establishing synergies with other projects and scientific groups
- To bring the latest trends to the financial field

During this second Dissemination reporting period, the activity in Scientific Dissemination has been increased and enhanced by the technological advances going on in the project. The task T9.3 aims to coordinate and orchestrate the actions on publications and other scientific dissemination initiatives.

For tracking and planning scientific publications, the consortium is checking regularly calls for papers.

In the following table of the next page, we aim at summarizing the article publication actions that have been conducted during the period M19 to M28 of the project. The structure of this table is the following:

- Some columns represent information of the paper proposal: authors, title of the paper, event associated
- Some columns track the current status: submission status, publishing status, and publication date
- Some columns incorporate information (once it is published) about publication: DOI, URL of access, edition, and publisher.

Globally the number of scientific and technical publications has improved during this second part of the project and is beyond the objectives.

Type	Title	Authors	Title of the journals/Proc./book	Publication date / Status	Is open access?	DOI	Paper link
Conference paper	**"Blockchain Technology: Financial Sector Applications Beyond Cryptocurrencies "**	Ariana Polyviou, Pantelis Velanas, John Soldatos	MDPI and publication presented at the 3rd annual Decentralized Conference, Athens, Greece, 30 October–1 November 2019.	25/10/2019	Yes	https://doi.org/10.3390/proceedings2019028007	https://www.mdpi.com/2504-3900/28/1/7
Journal article	**"Le Pôle Finance Innovation, fer de lance de l'innovation dans la finance digitale en Europe"**	Finance Innovation	Esteval editions online magazine	11/06/2020	Yes	n/a	https://www.esteval.fr/article.23309.le-po-le-finance-innovation-fer-de-lance-de-l-innovation-dans-la-finance-digitale-en-europe
Conference paper (CISIS202)	**"A new approach for dynamic and risk-based data anonymization"**	Pablo Dago CasasMarta SesteloBorja Pintos Castro Gradiant	Springer	28/08/2020	No	https://doi.org/10.1007/978-3-030-57805-3_31	https://link.springer.com/chapter/10.1007/978-3-030-57805-3_31
Conference paper	**"A Cluster Based System for Analyzing Ethereum Blockchain Transaction Data"**	Baran Kılıc, Can Ozturan and Alper Sen	IEEE Xplore and published in 2020 Second International Conference on Blockchain Computing and Applications (BCCA)	Date of Conference: 2-5 Nov. 2020 Date Added to IEEE Xplore: 03 December 2020	Yes	10.1109/BCCA50787.2020.9274081	https://ieeexplore.ieee.org/document/9274081
Journal article	**"Parallel Query Processing in a Polystore". INFINITECH has been added in the acknowledgement section**	Pavlos Kranas, Boyan Kolev, Oleksandra Levchenko, Esther Pacitti, Patrick Valduriez, Ricardo Jiménez-Peris, Marta Patiño-Martinez	HAL	22/02/2021	No	10.1007/s10619-021-07322-5	https://hal-lirmm.ccsd.cnrs.fr/lirmm-03148271/document
Scientific paper	**"Risk Assessment for Personalized Health Insurance Based on Real-World Data"**	A. Pnevmatikakis, S. Kanavos, G. Matikas, K. Kostopoulou, A. Cesario and S. Kyriazakos (INNOVATION SPRINT)	Risks	01/03/2021	Yes	https://doi.org/10.3390/risks9030046	https://www.mdpi.com/2227-9091/9/3/46

Regular article	**"Inferring psychological traits from spending categories and dynamic consumption patterns"**	Natkamon Tovanich, Simone Centellegher, Nacéra Bennacer Seghouani, Joe Gladstone, Sandra Matz & Bruno Lepri	Springer Open	08/05/2021	Yes	https://doi.org/10.1140/epjds/s13688-021-00281-y	https://epjdatascience.springeropen.com/articles/10.1140/epjds/s13688-021-00281-y
Conference workshop report	EU BLOCKCHAIN OBSERVATORY & FORUM: Convergence of Blockchain with AI and IoT (EU Blockchain Week 2021) – ***Details about this event are presented below***	Bruno Lepri, UNIC	EU blockchain observatory & forum	21/09/2021	Yes	n/a	Official workshop report Mention INFINITECH in pages 6 and 7
Post-event publication (event associated is detailed in section 6.3)	Open Finance Day: The Next steps of Open Banking was successfully completed	Depy Douros, CrowdPolicy	Medium	14/10/2021	Yes	n/a	https://bit.ly/3BUw0MZ
Scientific paper	Knowledge-based neural pre-training for Intelligent Document Management,	Daniele Margiotta, Danilo Croce, Marco Rotoloni, Barbara Cacciamani, Roberto Basili	Spriger Verlag	Submitted	n/a	n/a	n/a
Journal paper	**Parallel analysis of Ethereum blockchain transaction data using cluster computing**	Kılıc, B., Ozturan, C., Sen, A	Cluster Comput (2022)	4/01/2022	Yes	https://doi.org/10.1007/s10586-021-03511-0	https://link.springer.com/article/10.1007/s10586-021-03511-0
Thesis (Doctoral)	**Motor Consultas Analíticas Políglota**	Kranas, Pavlos with the contribution of Patiño Martínez, Marta and Jimenez-Péris, Ricardo	Archivo Digital UPM	11/01/2022	Yes	https://doi.org/10.20868/UPM.thesis.69145	https://oa.upm.es/cgi/users/login?target=https%3A%2F%2Foa.upm.es%2F69145%2F1%2FPAVLOS_KRANAS.pdf

White paper for BDVA	Big Data and AI for the Financial Sector: challenges and opportunities	Editors (Marina Cugurra (GFT), Vittorio Monferrino (GFT), Marco Rotoloni (ABI LAB), Barbara Cacciamani (ABI LAB), Tomislav Duricic (Know-Center)) and many contributors e.g Alessandro Mamelli (HPE)	Published on this page	Not yet defined. It is currently under review from the board of BDVA – it should be published in February	Yes	Published on this page	TBD
Book Chapter at the BDVA BOOK 2021-2022	A reference document for INFINITECH Semantic Interoperability: "Data Spaces Design Principles, Best Practices for Data Interoperability and their relevance in FinTechs" (1st page available in Appendix 5)	Authors and co-authors list is as follow: Martín Serrano, Edward Curry, Richard Walsh, Gavin Purtill, Jonh Soldatos, Maurizio Ferraris, and Ernesto Troiano	Ongoing publication	Accepted but not yet published	Yes	Not yet available	Not yet available
Journal article	Not disclosed yet	Pavlos Kranas, Leanxcale	Not disclosed. Article was submitted lately after a major revision and is planned to be published this year.	Accepted but not yet published	Yes	Not yet available	Not yet available
Open access Book (see more detail in section 6.2.1)	Bigdata and Artificial Intelligence in Digital Finance - Disrupting Financial Institutions using Digital Technologies".	John Soldatos and Prof. Dimosthenis Kyriazis	Springer Open	Accepted but not yet published	Yes	Not yet available	https://link.springer.com/book/9783030945893
Conference paper	AI, IoT and BIG Data: Research Problems Unsolved	John Soldatos	Ongoing publication in the context of InterOSS Workshop An event Co-Organised by INFINITECH and i3-MARKET project (further details in events' section)	Coming in Spring 2022	Yes	Not yet available	Not yet available

Conference paper	Towards lowering the barriers for BigData, IoT and AI-driven technologies, boosting regulatory compliance and stimulating FinTechs and InsuranceTechs Innovation	Martin Serrano et al.	Ongoing publication in the context of InterOSS Workshop An event Co-Organised by INFINITECH and i3-MARKET project (further details in events' section)	Coming in Spring 2022	Yes	Not yet available	Not yet available
TARGETED MAGAZINES FOR FUTURE ACTIONS							
Digital magazines related to Insurtech	Interview to schedule with Jake Megeary	TBD	InsurTech magazine : https://insurtechdigital.com/about_us	Not yet available	Yes	N/A	Not yet available
Digital magazines related to Fintech	Interview to schedule with Jake Megeary	TBD	FinTech magazine : https://fintechmagazine.com/about_us	Not yet available	Yes	N/A	Not yet available

Table 5 - List of publications at M29

4.2 Other scientific dissemination actions

4.2.1.1 Open access book: Big Data and Artificial Intelligence in Digital Finance - Increasing Personalization and Trust in Digital Finance using Big Data and AI

This book Introduces advances in Big Data and AI in Digital Finance that enable scalable, real-time analytics. It explains the merits of Blockchain in digital finance, including applications beyond the blockbuster cryptocurrencies. Moreover, it illustrates the regulatory environment of the financial sector, presenting solutions to boost compliance. This book is open access, which means that it will have free and unlimited access. Appendix 1 presents the Open Book Structure, the chapter titles and chapters' abstracts are presented in Appendix 2.

The two editors are: John Soldatos (http://gr.linkedin.com/in/johnsoldatos), from INNOV_ACTS and Prof. Dimosthenis Kyriazis (https://www.linkedin.com/in/dimosthenis-kyriazis-1397919) from UPRC University of Piraeus.

The book cover is already designed (picture below) and can be seen online here: https://www.dropbox.com/s/7f2o6zin2ta1qti/978-3-030-94589-3_Cover_PrintPDF%20%281%29.pdf?dl=0

Again, the link to the Springer's website is the following: https://link.springer.com/book/9783030945893

Figure 42 - Big Data and Artificial Intelligence in Digital Finance Book cover

4.2.2 Hackathons

This section only concerns and reports the communication and dissemination actions related to the organization of Hackathons. The rest will be further explained and developed in future **WP8 deliverables**.

The main objective is to engage third parties with INFINITECH results, but there should be a theme. The prerequisites are Infinitech results as Marketplace assets and datasets. About the engagement, hackathons are led by some Partners.

The Enhancing Finance Training: The INFINITECH Approach Hack Challenge. The first open innovation virtual technological contest of the INFINITECH project took place on Wednesday 24 November 2021. The Hack Challenge was powered by CrowdPolicy and supported by the University of Nicosia, University of Glasgow, and University of Piraeus, aiming at creating an innovation and collaborative culture, as well as supporting youth entrepreneurship.

20 student teams from the three University partners worked with data in digital finance, derived from the assets of the INFINITECH Marketplace that University of Glasgow has developed.

The INFINITHREE, a three-member student team from University of Glasgow that managed to develop a new solution, won.

The INFINITHREE presented their development, while several participants from Fintech and Finance Industry and academic community, by evaluating the ideas/solutions, had the opportunity to give them feedback and discuss potential opportunities and continuous learning development of their solution.

The INFINITHREE team will be awarded with 3 complimentary conference tickets to Decentralized, the world's premier learning conference on blockchain and digital currencies, as well as a free six-month access to amazon's fintech cluster!

The recordings can be found in the links below:

- Kick off meeting HACKATHON Challenge: https://www.youtube.com/watch?v=DVlWqg8saVw&list=PL9suUK-Ys8V0JfVAtSgHzy-IXsaeODjhi
- Pitching HACKATHON Challenge: https://drive.google.com/file/d/1LK0rEL5fHl9KEbM1LPnvwBQsE6aAxaWR/view?usp=sharing

Infinitech

UNIVERSITY of NICOSIA

University of Glasgow

CROWD POLICY

Πανεπιστήμιο Πειραιώς University of Piraeus

Enhancing Finance Training: The INFINITECH Approach Hack Challenge

Agenda | 24th November 2021

Infinitech

Enhancing Finance Training
The INFINITECH Approach

Hack Challenge

24th November 2021 09:00 - 21:00

Wednesday 24th November 2021	
09:00 - 10:00	**Kick Off Meeting | Hack Challenge** Richard Mccreadie, University of Glasgow: Financial Asset Recommender: Profitability Estimation
10:00	Start Coding
11:00 - 12:00	Standard Mentoring Session & Matchmaking Mentors with Teams
12:00	Keep Coding
15:00 - 17:00	Submission of Final Form and Presentation from Contestants
17:30 - 19:30	Pitching to the evaluation committee
19:30 - 20:30	Evaluation Committee Meeting
20:30 - 21:00	Award Virtual Ceremony and Hack Challenge Virtual Party!

More Information: https://crowdhackathon.com/infinitech/

This project has received funding from the European Union's horizon 2020 research and innovation programme under grant agreement no 856632

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Figure 43 - INFINITECH Approach Hack Challenge agenda

Three hackathons are planned for the first semester of 2022.

1. **Infinitech & Copenhagen Fintech Hackathon**

Copenhagen Fintech, the organizer, is on track with the partners that they already worked with to provide data to work with on the day – and they are now working on a date in late February.

The definitive event program has yet to be finalized, but Copenhagen has already worked out a first version.

When: 25th-27th of March

Where: Copenhagen Business School or Copenhagen Fintech Lab (to be confirmed)

Problem statement/Title: Can you help solve global natural resources crimes?

The illicit exploitation of natural resources has become the largest financial driver of conflict globally. Whether it's illegal harvesting of coal and fuel, mining, logging, wildlife crime or human smuggling, the exploitation of natural resources is playing an increasingly large part in destabilizing safety, peace, and development. The Atlas of Illicit Flows by Interpol identifies more than 1.000 global smuggling routes used to funnel money into and resources out of conflict areas across the world. Painfully, an increasing share of this money is coming from Europe and the western world with illegally exploited goods flowing back in.

A major challenge in solving the illicit flow of illegal natural resources is the lack of a global supply chain that can intervene at the point of origin of resources. Due to a lack of data, there is insufficient insight, making it hard to track illicit goods as they are mixed with legally produced, sustainable resources.

In this hackathon we will bring together global banks and tech companies to co-create solutions to combat illegal natural resource exploitation.

Do you have an idea for: Building trustworthy data sources? Tracking the global flow of resources such as using satellite imagery? Establishing a reliable first point in the global supply chain of natural resources? Or just another crazy take on how to stop the financing of illegal exploitation of resources?

It will be a day of working towards solving one of the world's biggest problems.

2. **Crowdpolicy Edition #2** Infinitech Hackathon: Personalized Solutions for supporting tailored banking services and clients' preferences. The agenda is not yet available
3. **Crowdpolicy Edition #3**: TBD

4.2.3 Other diverse actions

The main action regarding Scientific Dissemination consists of attempts of publishing articles in relevant journal and event proceedings, but these are not the only initiatives taken in this period.

Several other works were covered by INFINITECH to ensure a proper scientific dissemination that generate visibility and engagement and contribute to the community, following the project's open publication mentality. For a quick summary, the following has been listed in the table below.

Date	Social network	Link	Type of content
06/04/21	Linkedin	Post	Educational
14/04/21	Linkedin	Content access	Promo
29/04/21	Youtube	Content access	Educational (webinar)
03/05/21	Blog	Post	Educational
06/05/21	Linkedin	Content access	Educational (infography)
02/06/21	Youtube	Content access	Interview
10/06/21	Blog	Post	Interview
26/07/21	Blog	Post	Educational
30/09/21	Youtube	Content access	Educational (webinar)
Non disclose	Newsletter	Pointnext Technology Services Account Services Newsletter (private internal newsletter)	Promo

- **Fintech & Insurtech European Study**

The Galaxy report (an initiative from Insomnia Accelerator presented within infinitech, results are shared with the Infinitech community), that was born in 2020, has established itself as an innovation window with universal access that reflects Spanish innovation reality. With this report, Insomnia tries to facilitate the access to the market for entrepreneurs, thanks also to its particular acceleration path, synergies between the different ideas, professional advisory, and fast market integration.

Together with this report, Insomnia has announced that in 2022 the greatest Fintech/Insurtech call in the world will be launched in an ecosystem integrating more than 1.000 start-ups and scale-ups and more than 30 corporates from 20 different countries, all in a single search & acceleration program with a tech-basis. The full press note about the Galaxy Report (year 2021) is available in Appendix 4 and the link to the Infinitech blog in which the press note was published. Moreover, here is the link to the official website.

- **A pioneering study conducted in the Netherlands**

Roessingh Research and Development (RRD) in collaboration with the INFINITECH-H2020 project conducted a study in the Netherlands for gathering data in Pilot #12. Healthentia (a product of Innovation Sprint) was used in this study to demonstrate how RWD (Real World Data) can be used for the benefits of the insurance market, gratifying active users.

To raise awareness among the Dutch community and engage external participation, a communication campaign has been launched:

- An article on RRD website: https://www.rrd.nl/infinitech/
- LinkedIn announcement : Here on Innovation Sprint LinkedIn and here
- A press release (full text in English and Dutch is in Appendix 3) was written and published in local newspapers to recruit participants for this study. 4 local newspapers published this press release, all on the 3rd of November 2021. The links of the newspapers containing this press release can be found here:
    - Number 1: Website of newspaper organisation: https://www.huisaanhuisenschede.nl/ | Website of the actual newspaper containing press release: https://www.huisaanhuisenschede.nl/reader/24020 (page 9)
    - Number 2: Website of newspaper organisation: https://www.rondhaaksbergen.nl/ | Website of the actual newspaper containing press release: https://issuu.com/rondhaaksbergen/docs/2021roha_wk44 (page 16)
    - Number 3: Website of newspaper organisation: https://www.deweekvantwenterand.nl/ | Website of the actual newspaper containing press release: https://issuu.com/twinsense/docs/tr01wk44_03-11-2021_om_08.57.08 (page 15)
    - Number 4: Website of newspaper organisation: https://www.deweekvanhellendoorn.nl/ | Website of the actual newspaper containing press release: https://issuu.com/twinsense/docs/he01wk44_03-11-2021_om_08.46.14 (page 3)

Roessingh Research and Development published again an advertisement about the pilot 12 study (in Appendix 4) in the Netherlands in four newspapers:

- 1 February 2022: Website of newspaper organisation: https://www.hartvanborne.nl/ | Website of the actual newspaper containing press release: https://www.hartvanborne.nl/reader/25566 (page 5)
- 1 February 2022: Website of newspaper organisation: https://www.hengelosweekblad.nl/ | Website of the actual newspaper containing press release: https://www.hengelosweekblad.nl/reader/24243 (page 10)
- 2 February 2022: Website of newspaper organisation: https://www.huisaanhuisenschede.nl/ | Website of the actual newspaper containing press release: https://www.huisaanhuisenschede.nl/reader/24033 (page 11)
- 4 February 2022: Website of newspaper organisation: https://www.hartvanoldenzaal.nl/ | Website of the actual newspaper containing press release: https://www.hartvanoldenzaal.nl/reader/24660 (page 4).

Having presence in relevant and different medias allows the project to diversify its results and outcomes announcement is another way to penetrate the market.

4.2.4 Scientific Dissemination KPIs results

Indicators were initially defined to assess the impact of dissemination activities related to scientific and technical dissemination activities. The number of online publishing is beyond the objectives. Several actions have been planned so far.

Dissemination Measure	Objectives	Results (M28)
Open access publications (Publication to Journals/Magazine/Scientific)	> 10 publications	11 journals articles, scientific papers etc. 1 Open Access book 6 papers in international conferences
Online publishing (online magazines, blogs etc.)	> 20 publications and four blog post per month	A total of 52
Organization of Hackathons	4 to 5 Hackathons	1 already organized (and was a success) 3 more are planned
Press releases (produce press releases targeting different media channels and audiences)	Several Press releases were published during this period M19 to M28. This needs to be intensified, during the following period	

5 Dissemination and communication activities during events

Industrial dissemination is conducted by the consortium through raising awareness also beyond the affected use case communities. The specific objectives are:

- To show the INFINITECH solutions as standard, customizable: we develop technologies to simply use data, which is trusted, secured and users' friendly/transparency.
- To advertise INFINTECH technical achievements: fundamental knowledge, methodologies. Infinitech makes data more accessible to financial institutions and makes more trust for users. How financial institutions gain efficiency.
- To provide adequate web visibility.
- To accompany those dissemination actions with presence in international context. We interact frequently with the European Digital Finance community, promoting and exhibiting INFINITECH advances and benefits.

5.1 Target audience

Activities are matched with the target audience in order to collect feedback, develop an ecosystem, a stakeholders' community, attract innovation capital and onboarding new members in the project's market platform as well as on the project's testbeds.

The target audience is wide and encompasses different profiles:

- European Digital Finance community
- European banks & financial institutions
- FinTech/InsuranceTech firms
- End-user organizations
- H2020 related projects
- European Commission: any related personal staff should have a fast way to access project information, deliverables and other material.
- General audience: public in general, with a special interest in research projects

Who is interacting with INFINITECH ? Most of the channels used are specific to the type of activities and reached a specific community, a specific group of Stakeholders.

Activities types	Channels	Community / Stakeholders group reached
Communication and dissemination	Stakeholders' workshops Conferences and Panels Paper presentation during conferences Scientific & technical publishing Demonstrations Website Social media YouTube Channel	European Digital Finance Community Banks and financial institutions Fintech and Insurtech End-user organizations Big Data/IoT solutions integrators European Commission Standardization bodies and policy makers External (General audience) Other H2020 related projects INFINITECH partners
Education and training	Hackathons Studies Training sessions / Tutorials	Researchers & Academics Big Data/IoT solutions integrators Technology providers

	Demonstrations Online webinars Events (technical workshops) Website YouTube Channel	European Digital Finance Community European Commission

5.2 The marketing campaigns

The marketing campaign is managed by the partners who organized or participated under the supervision of the WP9 leader, Finance Innovation. Once relevant information (agenda, speakers, event's date, registration link etc.) has been transferred by the partners involved to the WP9 leader, a marketing plan will be prepared and will be based on:

- The publication of attendance to the event at website and social media
- The publication of a blog post about a related topic to the event
- The invitation over social media and sometimes over a newsletter to participate in the event (with registration links)
- The publication in twitter, while event is happening

5.3 List of events, workshops & conferences

During the period M19 to M28 the consortium has conducted all dissemination and communication activities that are reported in this document

INFINITECHs' results and outcomes were presented through presentations at European Conferences. Also, partners presented the project through oral communications during workshops, seminars, and courses. The details of activities carried out are presented below.

The main achievement related to events activities over the period M19-M28 can be summarized as follows:

- Number of stakeholders' workshops: 15
- Number of conferences or workshops with presentation: 6 (+6 conferences with paper presentation, further detailed in section 6.1)
- Number of recorded presentations: 4 (available on the YouTube channel)
- Number of organized Hackathons: 1
- Number of online interviews: 8

Table 6 - List of events tracking M18 - M29

Date	Event	Type of Event	Agenda / Context	Involved partners	INFINITECH Participation	Online recordings	Estimated number of participants and Type of Audience
Events that took place before March 16th are presented in Deliverable D9.3							
March 16th, 2021	INFINITECH Stakeholders' Workshops Series, Episode #2: BigData and Artificial Intelligence for Portfolio Risk Assessment	Stakeholders' workshop	How AI and BigData Enables Novel Approaches to Portfolio Risk Assessment and Asset Management?	Innov-ACTS, UBITECH, IBM, BOUN	Organizer	Session 1 & Session 2	67 participants
March 24th 2021	INFINITECH Stakeholders Workshops Series, Episode #3	Stakeholders' workshop	"Artificial Intelligence and Big Data analytics applied to Personalised, Usage Based and Configurable Insurance Products"	GFT, ATOS, iSprint, Wenalyze, Agroapp, GEN	Organizer	Part I & Part II	69 participants for the first part and 33 participants during the second part
April 20th 2021	Personalized Portfolio Management: Why #PrivateBanking isn't for everyone?	Stakeholders' workshop	"Risk Profiling and Portfolio Optimization for broader Use Cases" Key updates regarding the Pilot 4 current status	ATOS Privé Technologie	Organizer	Here	Both to our partners and external stakeholders Total number of 20 participants.
May 18th 2021	Next Generation IoT	Conference: EU H2020 initiative	This workshop on Health and Care is part of a thematic workshop series on IoT and Edge computing, organised by NGIoT, the EU IoT roadmap Horizon 2020 Coordination and Support Action in collaboration with the European Commission, DG Connect and relevant associations, networks, and projects.	Innovation Sprint	Participation Presentation of the INFINITECH Healthcare Insurance pilot: "Patient behavior as	n/a	Not available

					part of the intervention: Real-World Data in Healthcare"		
May 20th 2021	INFINITECH Workshop Series - GRAPH Data Model & Ontology Engineering	Stakeholders' workshop	5th episode of the H2020 INFINITECH Stakeholders' Workshop Series: "Semantic-Driven Data Exchange and Graph Data Modelling Tools for Cross Domain Interoperability for FinTechs and finance" **Session 1:** Data Modelling Applications: Presentations and Demonstrators **Session 2:** Open Discussion and Stakeholders Feedback	NUIGalway, Uninova Insight Centre Unparallel	Organizer	n/a	30 participants
May 21st, 2021	FINSEC project webinar: "Financial Sector Cybersecurity Collaboration and Engagement of Stakeholders	Stakeholders' workshop	INFINITECH introduction, to describe Pilot #10 "*Real-time cybersecurity analytics on financial transactions' data*" activity's results and to show a video demonstrating pilot's active functionalities.	Poste Italiane and Engeneering	Participation Presentation	Workshop video	See details in footnote 1 above[3]
Sept 21st, 2021	EU Blockchain Summit: Blockchain & AI for European Green Deal (EUBOF)	Stakeholders' workshop	Convergence of Blockchain with AI and IoT The workshop report is available in section 6.1 Scientific publications	FBK and INNOV-ACTS	Participation Presentation	Here	Not available
October 5th, 2021	Open Finance Day	Conference (presentations panel)	Highlighted the trends for new open banking services and products emerging in the era of data sharing.	GFT	Participation Presentation	Here (01:10:21 - keynote from M. Troiano, GFT) Podcast available on Spotify	200 participants

[3] European Blockchain Week 2021(EBCW 2021) was one of the soundest events in the framework of Slovenian Presidency of the Council of EU. Co-organized by the Ministry of Economic Development and Technology, in collaboration with Digital Innovation Hub Blockchain for Trusted Data Ecosystems, Digital Innovation Hub Slovenia, Slovenian Digital Centre, BTC City, together with European Commission, EU Blockchain Observatory and Forum, INATBA - International Association of Trusted Blockchain Applications, Blockchain Alliance Europe, Blockchain for Europe and many other partners, it achieved great success, backed by more than 100 panelists, more than 25 panels, workshops and roundtables and more than 1200 participants from 86 countries worldwide.

October 12th, 2021	Scottish Fintech Festival	Stakeholders'Workshop	"The Future of Fintech with Infinitech": an online workshop as part of the Scottish Fintech Festival Find the full agenda for the workshop here	University of Glasgow, GFT, CrowdPolicy, ATOS, Wenalyze	Participation Presentation	Not available	58 people registered Attendees: Scottish-based fintech companies and students
October 20th, 2021	Digital Around the World 2021	Conference	**Session:** Digital Transformation by Means of Big Data, Marketplaces and Data Economy Panel is here	NUI Galway, GFT	Participation Presentation of the marketplace	Not available	Not available
October, 2021	Presentation to the Slovenian Financial Intelligence Unit	Stakeholders' private meeting	Face-to-face meeting with Slovenian Financial Intelligence Unit with video transfer from a remote computer for presenting PAMLS tools	Bank of Slovenia and JSI	Organizer	Replay is not available, but meeting minutes yes	12 persons Participants were AML experts, IT and legal experts
October, 2021	Presentation to the Slovenian Securities Market Agency	Stakeholders' private meeting	Face-to-face with Slovenian Securities Market Agency with video transfer from a remote computer for presenting PAMLS tools	Bank of Slovenia and JSI	Organizer	Replay is not available, but meeting minutes yes	7 persons Participants were AML experts, IT and legal experts
November 8th, 2021	The InterOSS-IoT	International workshop/conference	The workshop is organized by H2020 ICT projects, i3-MARKET and INIFINITECH, as part of the Big Data EC CNECT unit and in collaboration with the BDVA-DAIRO and IDSA. Program InterOSS workshop is a biennial event, and this is the 4th Edition since 2014. Two ongoing publications in the context of this InterOSS workshop are presented in section 6.1	INNOV-ACTS and NUI	Participation Presentation: 1 Expert Keynote talk and 1 paper presentation	Not available	Not available
November 18th, 2021	Personalized Retail and Investment Banking Services. Cluster #2 Pilots	Stakeholders' workshop	Agenda: **1) Personalized Portfolio Management** - Q/A Feedback	CrowdPolicy, GFT, Privé, RB, NGB, Greek	Organizer	Here	Not available

			2) BFM tools delivering a Smart Business Advise -Q/A Feedback **3) Personalized Closed-loop investment Portfolio Management for Retail customers** -Q/A Feedback	Fintech Cluster			
December 3rd, 2021	20th International conference of the Italian association for artificial intelligence (AIxIA)	Conference	Program is available here (keynote at 3pm: "Detection Accuracy for Evaluating Compositional Explanations of Units")	ABILAB	Participation Presentation of the pilot		Not available
December 3rd, 2021	Valorisation policies: Making research results work for society	Stakeholders' Workshop	Scoping study for supporting the development of a Code of Practice for researchers on standardisation. Prepared by EFIS Centre; IMC Krems and Ecorys	ATOS	Participation		80 participants
December 16th, 2021	AI and bigdata: the Insurtech's drivers	Stakeholders' workshop	INFINITECH consortium, holds the "AI and BigData in Insurtech", for any stakeholder interested in finding out more about advanced technologies and solutions, that can exploit to disrupt the Fintech and Insurtech landscape (presentation of Pilot 11, 12, 13, and 14). Detailed agenda is here	ATOS, ISprint, Wenalyze and Agro Apps	Organizer	Here	60 participants
December 16th, 2021	Artificial Intelligence: is it possible to govern a revolution?	Stakeholders' workshop	**1) Opening remarks**: *Marco Rotoloni, Coordinator IT & Operations and Artificial Intelligence ABI Lab* **2) EU regulatory developments on AI & their impact on the banking sector** *Dimos Karalis, Policy Adviser EBF* **3) Infinitech Project a context of collaboration and innovation AI driven**	ABILAB, EBF, GFT & Tor Vergata University	Organizer	Here	100 participants [4]

[4] Players Involved:

- Early adopters (representatives from the banks that are currently involved in the Pilot 15 experimental environment)
- Other Italian Banks (employees of banks that are part of the ABI Lab Consortium community)
- ICT Partner (ICT Companies, Fintech, AI experts from many firms that are currently collaborating with banks on AI)
- Italian Association for Artificial Intelligence
- Representatives from Universities and Academia
- European Banking Federation

			Ernesto Troiano, Senior Project Manager GFT Italy **4)Pilot 15, DEcoDE, experimenting NLP for the automated metadata of banking documents** *Dr Roberto Basili, Faculty of Engineering - Tor Vergata University* **5) Closing session:** feedbacks collection and open discussion				
Quarterly (1 event per quarter in HPE fiscal year) in 2021	Company Internal strategic dissemination events: sharing of INFINITECH acknowledgments and added value vs potential customers opportunities (especially within the financial industry)	Internal stakeholders' workshop	n/a	HPE	Organizer	n/a	30 participants HPE Pointnext business unit key stakeholders: management; security specialists; financial industry sales/presales community
Weekly (1 event per week) in 2021	Company Internal strategic dissemination events: sharing of INFINITECH acknowledgments and added value vs Collaborative projects Governance team	Internal stakeholders' workshop	n/a	HPE	Organizer	n/a	4 participants HPE Pointnext business unit key stakeholders: Collaborative projects Governance team
January 25-27th, 2022	ConnectAI Global 2022: Digital Masterclass	Online conference	ConnectAI Global: WHERE THE AI WOLRD MEETS. A single platform for all AI lovers to come together to educate, inspire, and innovate. ConnectAI Global 2022 brought together 1350 people across it's masterclasses, and	Jožef Stefan Institute (JSI) With the Center of	Participation Presentation	Not available - participation upon registration	☑ 1350 Attendees across the sessions

			the companies redefining the tech and AI industry. The aim: Connect, learn from and work with the world's top researchers and practitioners during the ConnectAI 2022 Digital Masterclass. Harnessing the power of artificial intelligence and get hands-on advice on adopting the technology and driving long-lasting business impact. [Different domains covered, also financial technologies]. 4 sessions, click here	Business Excellence of the School of Economics and Business at the University of Ljubljana (CBE SEB LU)		fee, not an open event	☑ 64 Countries ☑ 51 Speakers ☑ 43 Masterclasses ☑ 3 Keynotes More info here

5.4 Scheduled events

Several actions have been planned so far, it has, however, to be mentioned, that the current situation in Europe and worldwide linked to the COVID-19 crisis does not allow us to be fully confident that these projects would be attended or organized physically.

For planning and following the organization and participation of future event, an Excel sheet has been created on the repository, in which all the information associated to each initiative planned is gathered.

It has been decided to add "internal" events such as INFINITECH GA and Review as we would like to avoid other events happening on those dates. Thematic and huge conferences such as IoT Week (Dublin) (https://iotweek.org/) (June 20-23), and if possible, Data Week & BDVA Forum (https://www.bdva.eu/) and other initiatives have been included as suggestion. This table is presented below (non-exhaustive list and simplified compared to the common and shared excel file).

The main objective for this 3rd phase of the project is to give the consortium the opportunity to achieve the overall goals of the project and maximise the project's impact through a strategic approach. What is key is to gather feedbacks from stakeholders and assess all inputs received. How feedbacks really improve the features and how partners are getting back to the pilots' development and direction. The consortium is developing and adjusting thanks to feedbacks and comments from stakeholders, end users, and the market in general. The effort will be concentrated on 5 types of events:

1. **Hackathon**
2. **Training events / How To tutorials:**
   - 2.1. Education video with Practical aspects
   - 2.2. How to build something based on INFINITECH results.
   - 2.3. On assets and marketplace
   - 2.4. A notebook
3. **Stakeholders' Workshops:**
   - 3.1. Collect feedback from Pilots etc. (form required)
   - 3.2. Usually organized by Clusters of Pilots
   - 3.3. Webinar style with Presentation & QA
4. **Other Dissemination Events:**
   - 4.1. Conferences
   - 4.2. Presentations & Panels

Last but not least, one of INFINITECH's priorities is networking with other H2020 projects with relevant objectives. Consequently, during the period, INFINITECH has been involved in several actions according to the plan, but it will be intensified during the last period of the project. A common joint dissemination strategy is planned to maximize impact and visibility.

Table 7 - List of scheduled events

INFINITECH Partner (organizer)	TYPE OF EVENT	TITLE	THEME	MONTH	ACTION
ALL	**General Assembly**	INFINITECH GA	N/A	FEBRUARY	
INNOV-ACTS	**Stakeholders' workshop**	H2020 INFINITECH Stakeholders' Workshops Series	Blockchain	FEBRUARY	INFINITECH WP4 workshop (agenda is HERE
BOS, JSI	**Other Dissemination event**	AI methods used for Pilot 8 solution	AI	FEBRUARY	External workshop - presentation to Slovenian Government Office for Digital Transformation: presentation
BOS, JSI	**Collaboration**	Cooperation between BOS and the Slovenian FIU (data exchange)	Other	FEBRUARY	Presentation of Pseudonymisation tool and development status of other tools and further discuss on data exchange
BOS, JSI	**Stakeholders' workshop**	Workshop with end user: BOS AML supervisors	Other	FEBRUARY	Validation of Screening tool scenarios and Screening tool functionalities testing
BOS, JSI	**Stakeholders' workshop**	Workshop with BOS departments: Supervisory department, Payment Operations Department, Data Management department, financial statistics department	Other	FEBRUARY	Workshop on development of Screening tool
COPENHAGEN FINTECH	**Hackathon**	Can you help solve global natural resources crimes?	Innovation	MARCH	
ABI LAB	**Other Dissemination event**	Forum ABI LAB 2022	Banking	MARCH	External event
CROWDPOLICY	**Stakeholders' workshop**			MARCH	2nd Cluster# 2 Workshop (Cluster#2 Pilots progress and feedback from participants)
CROWDPOLICY	**Webinar**	Blockchain for Digital Finance	Blockchain	MARCH	External webinar with invited key-note speakers and invited stakeholders
INNOV-ACTS/ CROWDPOLICY	**Collaboration**	Joint stakeholders' workshops on Risk Assessment / Risk Analytics for digital finance	Risk Assessment	APRIL	Collaboration between our 2 projects INFINITECH and Triple-A project

ALL	**Review**	INFINITECH Review Consortium rehearsal and w/PO	N/A	MAY	
CROWDPOLICY	**Hackathon**	Infinitech Hackathon: Personalized Solutions for supporting tailored banking services and clients' preferences	Innovation	JUNE	
CROWDPOLICY	**Webinar**	TBD		JULY	
BOS, JSI	**Other dissemination event**	PALMS tools presentation as possibility of dissemination and to get feedback form institution with similarly supervisor function, but to other obligated entity	N/A	JULY	Workshop on development of Screening tool
CROWDPOLICY	**Stakeholders' workshop**	TBD		SEPTEMBER	3rd Cluster# 2 Workshop (Cluster#2 Pilots progress and feedback from participants)
SUGGESTION 1	**Other dissemination event**	Big Data & AI	Big Data AI	SEPTEMBER	
SUGGESTION 2	**Other dissemination event**	Milano Fintech Summit		OCTOBER	
SUGGESTION 3	**Other dissemination event**	Paris Fintech Forum		JUNE	
ATOS	**Collaboration**	Joint event and webinars with StandICT project		TBD	Collaboration between our 2 projects INFINITECH and StandICT
GFT	**Collaboration**	Data Week & BDVA Forum	Big Data	TBD	

6 Marketplace

As mentioned in the previous deliverable D9.3, one of the objectives of WP8, led by University of Piraeus Research Center (UPRC), is to design and specify the architecture of the multi-sided market platform of the project and to develop marketplaces for BigData, AI and IoT solutions as part of the multi-sided market platform. The Marketplace components and further technological information had been presented in D8.1 and D8.2 and will be developed in future **WP8 deliverables**. For the purpose of efficiency, only the communication and dissemination actions will be reported.

The Marketplace is now accessible to visitors, and a communication campaign has been developed following the "opening" that happened a few weeks ago, e.g. mailing, social media posts, in order to ensure that maximum efficiency and exposure is achieved.

Thanks to partners' contributions WP8 leader has gradually populated the Assets of the marketplace. Currently it has 149 registration users, 200 visitors, 55 accelerators' programs, 24 assets accessible here: https://marketplace.infinitech-h2020.eu/assets.

Moreover, the marketplace has already attracted assets from third parties outside of our project like:

- Other projects e.g., 2 assets from H2020 Triple-A are already uploaded. We are in contact with more digital finance projects.
- Fintech/BigData companies e.g., pending 1-2 assets from https://etiq.ai/ and more assets from startups are yet to come.
- Hackathons e.g., 1-2 solutions from November's 2021 hackathon. More hackathons are planned in 2022.

The Marketplace new tab is available on INFINITECH official website that links it directly to the Marketplace website. And on the other side, a tab called "About", which goes back to the Marketplace website from the official website, has also been created. The Marketplace also centralizes the project's courses, webinars and workshops' replays under the "VDIH" tab and "training session", which is already accessible. Finally, like the INFINITECH website, the Marketplace also has a subscribe space for the newsletter section. This allows visitors to subscribe to the INFINITECH newsletter.

7 Conclusions

During this second full year of the project (period M19-M28), actions were exclusively dedicated to promoting a deeper understanding of new tools and assets for a number of audiences who can benefit (mainly described in target audience section) from what INFINITECH can offer and to engaging target groups to facilitate adoption and usage of designed assets.

Each of these activities are associated with a target result in terms of ecosystem and community building, which are and will be used to track the effectiveness of the various activities and to revise accordingly the community building plan, as well as pilots' development and direction. What is key is to gather feedbacks from stakeholders and assess all inputs received. How feedbacks really improve the features and how partners are getting back to the pilots' development and direction.

Project website works as the main channel for information and dissemination, and social appears to be a strong channel in reaching the potential users. A significant number of articles about INFINITECH results were published in online magazines and journals dedicated to Digital Finance. Scientific communication is on the rise with a first Open Access book that will be published soon as well as many presentations during international conferences. Also, the promotion of the project through events remains intense.

Globally, most of the target have improved during this second year of the project and some of them are well beyond the initial objectives.

However, it is important to mention, that the current sanitary situation in Europe and worldwide remains complicated and does not allow the consortium to be fully confident regarding some of the planned physical events such as big conference attendance and physical hackathon organisation.

Finally, it becomes fundamental for the next period, to increase direct engagement with major stakeholders of digital finance and FinTech/InsuranceTech area as part of the market platform of the project, which requires sufficient traction on both demand and supply sides as a multi-sided platform. Specific actions will bear in mind the different business and operational needs of the various stakeholders targeted with tangible benefits. In this respect, marketing campaigns will play an increasingly important role and will showcase the project's tools, using suitable formats to drive the benefits of INFINITECH.

A summary of Dissemination and Communication KPIs versus the DoA (Document of Action) is presented in the table below.

Table 8 - Aggregate KPIs since M1 of the project confronting with DoA

Dissemination Measure	Actions or KPIs (DoA)	Total KPIs since M1 of the project
Organized and/or attendance to conferences and exhibitions	10 conferences	Workshops organized: 27 Participation in workshops/conferences: 30
Organization of Hackathons	10 hackathons	1 (+3 more are already planned for 2022)
Synergies at national/international levels for sharing knowledge / standardization	>5 projects	3 collaborations
On-site demonstrations and Presentation	10 demonstrations 10 presentations	19 demonstrations 4 presentations

Open access publications (Publication to Journals/Magazine/Scientific)	> 10 publications	11 journals articles, scientific papers etc. 1 Open Access book 6 papers in international conferences
Online publishing (online magazines, blogs etc.)	> 20 publications and four blog post per month	A total of 52
Communication Measure	**Actions or KPIs (DoA)**	**Total KPIs since M1 of the project**
In-house newsletters	YR1: min 6 YR2: min 8	YR1: 12 YR2: 11
Promotional material, including video content	YR2: min 8	Videos interviews: 8
Social media content twitter	YR1: min 8/ month YR2: min 24/month	YR1: avg 8/month YR2: 15/month (KPI for YR2 considered as too high and not efficient)
Social media content LinkedIn	YR1: min 1 post/month YR2: min 4 posts/month	YR1: 2 posts/months (does not include shared posts) YR2: 3 posts/months (does not include shared posts)
Stakeholder database	200 profiled & engaged stakeholders by M12 >600 by M24 >1000 by M36	801 at M28

8 Appendix A: Open book structure – Chapter Titles

Parts (consist of a short title)	Chapters' title	Chapter author names
Part I: Big data and AI Technologies for Digital Finance	**Chapter 1:** A Reference Architecture Model for Big data Systems in the Finance Sector	John Soldatos, Ernesto Troiano, Pavlos Kranas, Alessandro Mamelli
	Chapter 2: Simplifying and Accelerating Data Pipelines in Digital Finance & Insurance Applications	Pavlos Kranas, Diego Burgos, Ricardo Jimenez-Peris, Patrick Valduriez, Juan Mahíllo
	Chapter 3: Architectural Patterns for Data Pipelines in Digital Finance & Insurance Applications	iego Burgos, Pavlos Kranas, Ricardo Jimenez-Peris, Patrick Valduriez, Juan Mahíllo
	Chapter 4: Semantic Interoperability Framework for Digital Finance Applications	Giovanni Di Orio, Guilherme Brito, Pedro Maló
Part II: Blockchain Technologies and Digital Currencies for Digital Finance	**Chapter 5:** Towards Optimal Technological Solutions for Central Bank Digital Currencies	Lambis Dionysopoulos, George Giaglis
	Chapter 6: Historic Overview & Future Outlook of Blockchain Interoperability	Lambis Dionysopoulos
	Chapter 7: Efficient and Accelerated KYC Using Blockchain Technologies	Nikolaos Kapsoulis, Antonis Litke and John Soldatos
	Chapter 8: Leveraging management of customers' consent exploiting the benefits of Blockchain technology towards secure data sharing	Dimitris Miltiadou, Stamatis Pitsios, Spyros Kasdaglis, Dimitrios Spyropoulos, Georgios Misiakoulis, Fotis Kossiaras, Inna Skarbovsky, Fabiana Fournier, Nikolaos Kapsoulis, John Soldatos and Konstantinos Perakis
Part III: Applications of Big data and AI in Digital Finance	**Chapter 9:** Addressing Risk Assessments in Real Time for Forex Trading	Georgios Fatouros, Georgios Makridis, John Soldatos and Petra Ristau

	Chapter 10: Next-Generation Personalized Investment Recommendations	Richard McCreadie, Konstantinos Perakis, Maanasa Srikrishna, Nikolaos Droukas, Stamatis Pitsios, Georgia Prokopaki, Eleni Perdikouri, Craig Macdonald and Iadh Ounis
	Chapter 11: Personalized portfolio optimization using genetic (AI) algorithms	Roland Meier, René Danzinger
	Chapter 12: Personalized Finance Management for SMEs	Dimitrios Kotios , Georgios Makridis, Silvio Walser and Dimosthenis Kyriazi
	Chapter 13: Screening tool for anti-money laundering supervision	Filip Koprivec, Gregor Kržmanc, Maja Škrjanc, Klemen Kenda, Erik Novak
	Chapter 14: Analyzing Large Scale Blockchain Transaction Graphs for Fraudulent Activities	Baran Kılıç and Can Özturan and Alper Şen
	Chapter 15: Cybersecurity and Fraud Detection in Financial Transactions	Massimiliano Aschi, Susanna Bonura, Nicola Masi, Domenico Messina, Davide Profeta
Part IV: Applications of Big Data and AI in Insurance	**Chapter 16:** Risk assessment for personalized health insurance products	Aristodemos Pnevmatikakis, Stathis Kanavos, Alexandros Perikleous, and Sofoklis Kyriazakos
	Chapter 17: Usage Based Automotive Insurance	Ignacio Elicegui, Juan Carrasco, Carmen Perea Escribano, Jose Gato, Andrea Becerra, Andreas Politis
	Chapter 18: Alternative data for configurable and personalized commercial insurance products	Carlos Albo Portero
Part V: Technologies for Regulatory Compliance in the Finance Sector	**Chapter 19:** Large Scale Data Anonymization for GDPR Compliance	Ines Ortega-Fernandez, Sara El Kortbi Martinez, Lilian Adkinson Orellana

	Chapter 20: Overview of Applicable Regulations in Digital Finance and Supporting Technologies	Ilesh Dattani, Nuria Ituarte Aranda

9 Appendix B: Open book structure – Chapters' keywords and abstracts

Chapters	Keywords	Abstracts
Chapter 1 A Reference Architecture Model for Big data Systems in the Finance Sector	Big Data, Machine Learning, Architecture, Artificial Intelligence, Finance, Insurance	In recent years there is a surge in the amount of digital data that are generated by financial organizations, which is driving the development and deployment of novel Big Data and Artificial Intelligence (AI) applications in the finance sector. Nevertheless, there is still no easy and standardized way for developing, deploying and operating data-intensive systems for digital finance. This chapter introduces a standards-based reference architecture model for architecting, implementing and deploying big data and AI systems in digital finance. The model introduces the main building blocks that comprise machine learning and data science pipelines for digital finance applications, while providing structuring principles for their integration in applications. Complementary viewpoints of the model are presented, including a logical view and considerations for developing and deploying applications compliant to the reference architecture. The chapter ends-up presenting few practical examples of the use of the reference model for developing data science pipelines for digital finance.
Chapter 2 Simplifying and Accelerating Data Pipelines in Digital Finance & Insurance Applications	Big Data, Data Pipelines, Databases, LeanXcale, Data Management, Data Aggregation	To process their ever-increasing massive data financial and insurance organizations are developing and deploying data pipelines. However, state of the art data management platforms has limitations in handling many and complex pipelines that that blend different kinds of data stores. This chapter introduces a novel Big Data database, namely the LeanXcale database, which enables the development and management of complex pipelines in a scalable fashion. Specifically, the presented database reduces data access time independently of data size and allows for efficient process parallelization. This combination of capabilities helps to reduce the data pipeline complexity and the total cost of ownership of the pipelines management. Moreover, it unveils new ways of generating value with new use cases that were previously not possible.
Chapter 3 Architectural Patterns for Data Pipelines in Digital Finance & Insurance Applications	Architecture Patterns, Data Pipelines, Big Data, Databases, Storage Systems	This chapter presents a holistic solution to the issue of data pipelining that ingest data as fast as needed, works with current and historic data, handles efficiently aggregates, and can handle them at any scale. This holistic solution minimizes the Total Cost of Ownership (TCO) of the storage systems needed to develop a data pipeline and minimizes the execution time of the data pipeline. In this direction, the chapter presents a range of architectural patterns for data pipelining and illustrates how the presented solution boosts their simplification and optimization.

Chapter 4 Semantic Interoperability in Digital Finance Applications	Semantic Interoperability, Ontologies, FIBO, FIGI, Finance Applications	This chapter outlines the theoretical foundation for the design and implementation of the Semantic Interoperability Framework of the INFINITECH project. It is detailing a methodology for semantic models and ontologies engineering and prototyping that defines the overall strategy used to design and specify semantic models for digital finance applications. The semantic models are organised hierarchically according to the domain and the specific application and linked to reference ontologies such as Financial Industry Business Ontology (FIBO), Financial Industry Global Instrument Identifier (FIGI), Legal Knowledge Interchange Format (Lkif), etc. The provided models will establish the cornerstone for semantic interoperability within INFINITECH, while enabling the distributed processing of semantically linked streams.
Chapter 5 Towards Optimal Technological Solutions for Central Bank Digital Currencies	Digital Currencies, Monetary Policy, Blockchain, Distributed Ledger Technologies, Central Banks	In this chapter we provide a historic overview of the origin and definitions of Central Bank Digital Currencies (CBDCs), by examining relevant research da-ting back to the 90's. We find that digital versions of sovereign money accessible by the private sector, were motivated by advancements and challenges emerging from the private sector itself. We present the factors that necessitate their issuance, and especially focus on financial stability, monetary policy, and the increased competition in payments leading to threats in financial and monetary sovereignty. Finally, we assess the appeal of the various technical options for CBDCs against what have emerged as their universally desirable features
Chapter 6 Historic Overview & Future Outlook of Blockchain Interoperability	Blockchain, Interoperability, Distributed Ledger Technology, Bitcoin, Polkadot	For three decades the Bitcoin network processes transactions collectively worth billions in a fully decentralized and trustless way. Its introduction as a way for disintermediating financial institutions came at a time of rising dis-may against the establishment due to the financial collapse of 2008. Bitcoin's rising popularity gave birth to the realization that its underlying technologies could be utilized for other use-cases besides money. This gave rise imitators, iterators and ultimately a diverse ecosystem of protocols and applications. In most cases, those aforementioned protocols employed technologically proprietary approaches even when aiming to solve similar problems. Today, those separate networks, stand as monolithic structures, with no knowledge of information that might exist on another. As such they are hostages to their non-interoperable nature and bound to hardcoded decisions. Their attempts at change often result in divided communities and further balkanization. This dissolution threatens the integrity of the decentralized space, as desolate systems are susceptible to manipulation. Some believe that the future of the wid-er decentralised ecosystem will rely on a Web 3.0 internet-like infrastructure, that will allow for seamless integration and the free exchange of information between systems. In this paper, we will explore the source of the limitations of blockchain systems, provide a historical overview of current and past interoperable approaches, and discuss present and future solution design.

Chapter 7 Efficient and Accelerated KYC Using Blockchain Technologies	KYC, Blockchain, Hyperledger Fabric, KYB, Customers, Banks	Despite the rapid digital transformation of banks and financial institutions, state of the art Know Your Customer (KYC) processes still require customers to provide multiple artifacts to the different banks they collaborate with. In an era where data sharing is facilitated from a technological and a regulatory point of view, there is huge potential for improving the efficiency of KYC processes. However, this requires a trustful environment for exchanging data across the various stakeholders, including customers, banks, and other financial organizations. This chapter illustrates how blockchain technology can be used to foster such a trusted environment. It also presents the implementation of a decentralized KYC solution over the Hyperledger Fabric permissioned blockchain infrastructure.
Chapter 8 Leveraging management of customers' consent exploiting the benefits of Blockchain technology towards secure data sharing	Consent Management, GDPR, PSD2, Inform Consent, Data Sharing, Bank	Open banking holds the potential of expanding traditional banking data flows, placing the customer at its core and in control of their banking data, including their personal information. Consent Management enables the tracking, monitoring and management of the personal data lifecycle in a GDPR compliant manner, and improves customers' control over their data, empowering them to manage their consent throughout its lifecycle. How-ever, traditional technologies have failed to become a key enabler of trust, due to multiple security / data tampering incidents. The aim of the specific book chapter is to introduce a blockchain-empowered Consent Management System (CMS). It aims at presenting the design and implementation of a robust CMS, enabling the sharing of customers' consent, thus facilitating the exchange and the utilization of customer data, across different banking institutions. The proposed CMS implementation will enable the financial institutions to effectively manage and share their customers' consents in a transparent and unambiguous manner, ensuring compliance to PSD2 & GDRP, while lowering the barriers of secure data sharing.
Chapter 9 Addressing Risk Assessments in Real Time for Forex Trading	Risk Assessment, Real-Time, Forex, Trading, Value-at-Risk, Expected Shortfall	Risk assessment is of high importance when it comes to trading, investments, and other financial activities, as poor risk monitoring could lead to inefficient investments, loss of capital and penalties by regulatory authorities. Thus, robust risk models, capable of yielding real-time results, are valuable assets for investment banking. This Chapter introduces a financial tool which is able to provide risk assessment on Forex portfolios in (near) real-time. Financial risk is measured in terms of both Value-at-Risk and the Expected Shortfall, with the respective models utilizing not only statistical but also deep learning techniques that achieve accurate results. Moreover, the proposed application, based on State-of-the-Art data management technologies, provides real-time risk assessments, utilizing the latest market data. These features along with the provided pre-trade analysis make this solution a valuable tool for practitioners in high frequency trading and investment banking in general.

Chapter 10 Next-Generation Personalized Investment Recommendations	Robo-advisors, AI, Big Data, Personalized Investments, MiFID II	Recent advances in Big Data and Artificial Intelligence has created new opportunities for AI-based agents, referred to as Robo-Advisors, to provide financial advice and recommendations to investors. In this chapter we will introduce the concept of investment recommendation and describe how automated services for this task can be developed and tested. In particular, this chapter will cover the following core topics: 1) the legal landscape for investment recommendation systems; 2) what financial asset recommendation is and what data it needs to function; 3) how to clean and curate that data; 4) approaches to build/train asset recommendation models; and 5) how to evaluate such systems prior to putting them into production.
Chapter 11 Personalised portfolio optimization using genetic (AI) algorithms	Robo-advisors, Genetic Algorithms, Portfolio Construction, Sustainable Finance	This chapter presents a FinTech-as-a-Service (FaaS) solution, which enables financial advisors and wealth and asset managers to provide a "private banking-like service" to the general public. The chapter illustrates all the steps needed to structure this process as an online journey. The solution contains a full end-to-end process which advisors can use to support client advisory meetings, and which can potentially also be used directly by the B2C user. To support the advisor accordingly and provide online advisory to the end customer, it is required that highly individual needs are taken into account and that truly individual and personalized portfolio proposals are generated. Traditional portfolio construction methods do not have the actual ability to take a wide range of individual preferences into account. Therefore, a new portfolio construction and optimization methodology based on "genetic algorithms" is being developed and presented in this chapter. The optimization process is built using artificial intelligence approaches. This allows optimization results to be explained based on the selected customer's preferences. The solution is designed as an open framework, which enables additional fitness factors that represent user preferences in various dimensions to be added on a customized basis.

Chapter 12 Personalized Finance Management for SMEs	SMEs, Personalization, Business Finance Management, Transaction Categorization, Deep Learning, Explainable AI	This chapter presents Business Financial Management (BFM) tools for Small Medium Enterprises (SMEs). The presented tools represent a game changer as they shift away from a one-size-fits-all approach to banking services and put emphasis on delivering a personalized SME experience and an improved bank client's digital experience. An SME customer centric approach, which ensures that the particularities of the SME are taken care of as much as possible is presented. Through a comprehensive view of SMEs finances and operations, paired with state-of-the-art ML/DL models, the presented BFM tools act as a 24/7 concierge. They also operate as a virtual smart advisor that delivers in a simple, efficient and engaging way business insights to the SME at the right time, i.e., when needed most. Deeper and better insights that empower SMEs, contribute towards SMEs financial health and business growth, ultimately resulting in High Performance SMEs.
Chapter 13 Screening tool for anti-money laundering supervision	Anti-Money Laundering, Automation, Machine Learning, Supervision, Anomaly Detection, Counter Terrorist Finance	Efficient screening of transactions provides an empowering tool for anti-money laundering procedures and actions. Automatic classification and detection of anomalous behaviours and transaction structures enable faster and more effective action on the side of the supervisory authority. This chapter introduces research achievements and tools developed to streamline transaction monitoring and ease domain experts with automatic and semi-automatic filtering of risky transaction typologies. Presented tools are integrated as part of PAMLS (Platform for Anti-Money Laundering Supervision) to streamline and automate the discovery of risky behaviours in bank transaction data enriched with relevant company information. Enriched transactional data is pseudo-anatomized with respect to the legal and regulatory framework. Screening tool as part of PAMLS platform automatically detects and marks specific predefined scenarios using newly developed state of the art AI method tailored specifically to time-evolving transaction graphs in transaction data. Easy to use tools, early warning system and subsequent parameterized queries with additional white-listed scenarios provide domain experts with additional data to easily explore suggested dangerous transactions groups and make more informed decisions and further action, be it at a level of a specific financial institution or a cluster of them.
Chapter 14 Analyzing Large Scale Blockchain Transaction Graphs for Fraudulent Activities	Blockchain, Transaction Graphs, Fraud Detection, ERC Token, Bitcoin, Ethereum	Early public blockchains provided low transaction throughputs in the range of 7-30 transactions per second. With the emergence of permissioned and proof-of-stake based blockchains, transaction throughputs are expected to rise drastically to thousands per seconds. Blockchain transactions form directed graph. With high transaction throughputs and growing blockchain adoption by banks, businesses and customers in general, number of edges in transaction graphs will dynamically grow to billions. Analysis of large scale transaction graphs is needed for tracing fraudulent activities on blockchains. This chapter will cover topics such as distributed graph data structures, use of message passing libraries and parallel graph algorithms in order to build a scalable transaction graph analysis system. Results from the analysis

		of the real Ethereum and Bitcoin public blockchain data involving crypto-currency and ERC20 token transactions will be presented.
Chapter 15 Cybersecurity and Fraud Detection in Financial Transactions	Fraud Detection, Real-Time Analysis, Machine Learning, Micro-services, Automation	Frauds on financial services are a ever-increasing phenomena and cybercrime generates multi-million revenues, therefore even a small improvement in fraud detection rates would generate significant savings. This chapter arises from the need to overcome the limitations of the rule-based systems to block potentially fraudulent transactions. After mentioning the limitations of rule-based approach, this chapter explains how machine learning is able to address many of these limitations, and more effectively identify risky transactions. A novel AI-based fraud detection system - built over a Data Science and Machine Learning – is presented for the preprocessing of transaction data and model training in a batch layer (to periodically retrain the predictive model with new data) while in a stream layer, the real time fraud detection is handled based on new input transaction data. The architecture presented makes this solution a valuable tool for supporting fraud-analysts and for automating the fraud detection processes.
Chapter 16 Risk assessment for personalized health insurance products	Healthcare Insurance, Explainable AI, Personalized Healthcare, RealWorld Data, IoT, Big Data	The way people lead their lives is considered an important factor in health. In this chapter we describe a system to provide risk assessment based on behavior for the health insurance sector. The system processes Real-World Data (RWD) of individuals from their daily life that enumerate different aspects of behavior collection. The data have been captured using the Healthentia platform and a simulator that augments the actual dataset with synthetic data. Classifiers are built to predict variations of peoples' well-being short-term outlook. Risk assessment services are provided to health insurance professionals by processing the classifier predictions in the longterm, while ex-plaining the classifiers themselves provides insights on the coaching of the users of the service.
Chapter 17 Usage Based Automotive Insurance	Automotive Insurance, Machine Learning, Usage Based Insurance, Big Data, IoT, Pay as You Drive	Nowadays, pricing strategies for insured clients are supported on general statistics and driver personnel conditions (historic driver activity, age, gender, and address). Cutting-edge technologies such as IoT, AI and Big Data have converted current vehicles on a plethora of available real world and real time data, leading to novel alternatives of car insurance policies and services such as: personalized enhanced products based on their driving profile; and evolved services related to the insured context, driver profile, environment, etc. like fraud detection and accident resolution.

Chapter 18 Alternative data for configurable and personalized commercial insurance products	Insurance Products, Big Data, Recommendations, Alternative Data, Credit Risk Scoring	The insurance sector has a very low degree of products' personalization. This is because insurance companies are not adequately using the vast amounts of information that are available online. This chapter presents the under-explored avenue of using alternative or non-traditional sources of information to obtain data for the configuration of personalized insurance offers. Specifically, it illustrates how big data, synthetic data, and machine learning models can be used to draw up the risk map of companies in an individualized way. It also presents methods for constructing and offering insurance programmes that are personalised to each business reality.
Chapter 19 Large Scale Data Anonymisation for GDPR Compliance	GDPR, Compliance, Anonymization, Data Protection, Regulations, Finance	General Data Protection Regulation (GDPR) is in place since May 2018 to give EU citizens more control over their personal data, applying principles like security and privacy by design. One of the most powerful tools to allow data processing while being compliant with data protection regulations is anonymisation, a procedure that consists of transforming data in such a way that makes no longer possible the reidentification of the data subjects. This chapter describes how anonymization can be performed at a large scale, addressing common challenges to become GDPR compliant.
Chapter 20 Overview of Applicable Regulations in Digital Finance and Supporting Technologies	Regulations, Finance, MiFID II, PSD2, GDPR, AMLD	Financial regulation has changed significantly in the ten years since the global financial crisis. Tougher, more detailed and more complex standards now ap-ply to all aspects of regulation. In more recent times that regulation has been increasingly influenced by the widespread deployment of fintech introducing new services and applications whilst transforming how consumers interact with the more traditional existing banking services. This chapter introduces the context and focus of this most recent regulatory and supervisory focus and highlights some of the key regulatory initiatives, existing and ongoing, designed to manage the key risks posed by the disruptive nature of the rapid digital transformation occurring in the sector. Technologies designed to sup-port aspects of these regulations are highlighted as part of practical guidance to support innovators in the sector and for those in the sector considering de-veloping or deploying the increasing plethora of new applications utilising emerging technologies like AI or Distributed Ledger Technologies.

10 Appendix C: Roessingh Research and Development (RRD) press releases

ENGLISH VERSION / Press release: Seeking for adults to try out new health app

Monitoring your health is the first step towards living a healthy life. One way of doing this is by collecting your own health data. The Healthentia app makes this possible by giving you a clear overview of your health data. The Healthentia app has recently become available to all adults in the Netherlands. We would like to know how this app is being used. A study was recently launched to investigate this. To this end, Roessingh Research and Development is looking for adults who would like to take part in this study. If you participate, you will be given access to the Healthentia app. Are you 18 years or older, and do you have a smartphone? Then you are eligible for this study. For more information, or to register, please visit the following website: https://www.rrd.en/infinitech/

DUTCH VERSION / Gezocht: Twentse volwassen die nieuwe gezondheidsapp willen uitproberen.

Het monitoren van uw gezondheid is de eerste stap naar een gezond leven. Eén van de manieren om dit te doen is door uw eigen gezondheidsdata te verzamelen. De Healthentia app maakt dit mogelijk door u een duidelijk overzicht van uw gezondheidsgegevens te geven. Sinds kort is de Healthentia app beschikbaar voor alle volwassenen in Nederland. Graag willen we weten hoe deze app wordt gebruikt. Onlangs is hier een onderzoek naar gestart. Hiervoor zoekt Roessingh Research and Development volwassenen die mee willen doen aan dit onderzoek. Bij deelname zult u toegang krijgen tot de Healthentia app. Bent u 18 jaar of ouder, en heeft u een smartphone? Dan komt u in aanmerking voor dit onderzoek. Voor meer informatie, of om u aan te melden, kunt u de volgende website bezoeken: https://www.rrd.nl/infinitech/

11 Appendix D: Roessigh Research and Development - Pilot 12 study Dutch advertisement

Roessingh Research and Development zoekt volwassen die nieuwe gezondheidsapp willen uitproberen

Sinds kort is de Nederlandse versie van de Healthentia app beschikbaar voor volwassenen. Deze app geeft u een duidelijk overzicht van uw gezondheidsgegevens. Hiermee kunt u uw gezondheid monitoren.

Graag willen we weten hoe deze app wordt gebruikt. Hier is een onderzoek naar gestart. Voor dit onderzoek zoekt Roessingh Research and Development deelnemers. Bij deelname aan het onderzoek krijgt u gratis toegang krijgen tot de Healthentia app.

Bent u 18 jaar of ouder, en heeft u een smartphone?

Dan komt u in aanmerking voor dit onderzoek. Voor meer informatie, of om u aan te melden, kunt u de volgende website bezoeken: https://www.rrd.nl/infinitech/

Roessingh
Research and Development

12 Appendix E: Press note Galaxy Report 2021 by Insomnia Consulting

New Fintech/Insurtech Galaxy 2021: results reveal that eHealth triggers innovation in finance after Covid-19

The crisis caused by Covid-19 has boosted the development of eHealth solutions covering a wide range of sectors, but, specially in the Fintech and Insurtech sectors.

Innovation for big companies and public institutions in a global scenario

The Galaxy report, that was born in 2020, has established itself as an innovation window with universal access that reflects Spanish innovation reality. With this report, Insomnia tries to facilitate the access to the market to entrepreneurs, thanks also to its particular acceleration path, synergies between the different ideas, professional advisory and fast market integration.

Together with this report, Insomnia has announced that in 2022 the greatest Fintech/Insurtech call in the world will be launched in an ecosystem integrated by more than 1.000 start-ups and scale-ups and more than 30 corporates from 20 different countries, all in a single search & acceleration program with a tech-basis.

More than 1.000 international start-ups, more than 50 interviews to emerging companies' CEOs

All along 2021, Insomnia, partner in Infinitech H2020 project, has worked in the development of the Fintech/Insurtech Galaxy report, the biggest radar for financial and insurance start-ups in Spain. In 2021 edition, the main trends that had arisen due to Covid-19 crisis have been collected, together with the emerging trends that will lead future developments.

The main conclusions of this report show that eHealth has established itself as a cross-cutting technology in the Fintech and Insurtech sectors, spurred by the health crisis. In that sense, the Covid-19 has caused that the reinforcement of collaboration models in the insurance sector with start-ups and SMEs in order to develop HealthTech solutions to give a better-quality service to its customers. Thanks to that, the solutions accelerated by Insomnia in the last year have grown reaching a 20 % of the pilot projects.

And these solutions are not only found in specific health projects, but also in other companies, such as financial entities that are including that kind of solutions among its services portfolio for banks and self-employed. At the same time and thanks to the European funds, more B2B models have arisen for start-ups that give services to other companies. Focusing on Spain, it can be seen that Fintech and Insurtech sectors work together, and it means that B2B initiatives are growing among neobanks and new insurance products, representing a 17 % of the solutions given by the start-ups ecosystem.

And the keys for start-ups to grow?

Internationalisation. How? Easy, digitisation has no geographical limits and it has been reflected in a 60 % of the analysed solutions come from international start-ups. Where are these companies from? It has been seen that Israel and Singapore are two countries that have presented more and more PoC together with Spanish and Latin-American banks. Furthermore, the preferred technologies are AI and Blockchain.

Growth, investment and resilience. Start-ups have shown a reinforcement, agility and easiness in their change adaptation, rethinking their business models, products and services in order to answer new innovation needs. Furthermore, digitisation and innovation have experienced an extraordinary development during 2021 and it has reflected a positive impact both economically and socially.

However, start-ups and scale-ups are facing a new growth and internationalisation challenges in order to increase their investment and funding opportunities.

Link to the official website

13 Appendix F: Reference document for INFINITECH Semantic Interoperability (draft)

Data Spaces Design Principles, Best Practices for Data Interoperability and their relevance in FinTechs

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Abstract.

This chapter focuses on data interoperability best practices, which are related to the use of semantic technologies and data management systems, and introduces a particular view on how relevant data interoperability is achieved and its effects in the development of technologies for the financial and insurance sectors. Financial Technology (FinTech) and Insurance Technology (InsuranceTech) are rapidly developing and in last few years have creating new business models and transforming the financial and insurance services industry. The transformation is ongoing and alike in many other domains, the vast amount of information available today known as big data, the data generated by IoT and AI applications and also the technologies for data interoperability, which allows today that data can be re-used, shared and exchange will have a strong influence. It is evident the entire financial sector is in a momentum of new opportunities with a new vision for a tangible growth. This book chapter analyses the basis of Data Spaces Design, discuss the Best Practices for Data Interoperability alike introduces concepts and illustrates the way to understand how to enable interoperability of the information using a methodological approach to formalize and represent financial data by using semantic technologies and information models (knowledge engineering). This chapter provides an state of the art offer called INFINITECH Way using the discussed best practices and explaining how semantics for data interoperability are introduced as part of the FinTechs and InsuranceTech.

Keywords. FinTechs, InsuranceTech, Interoperability, Data Spaces, Semantics, Knowledge Graph, Linked Data, Ontologies and Services, IoT, AI, Big Data.