Food Nutrition Security Cloud

Deliverable 6.6

Portfolio of communications resources

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Food Nutrition Security Cloud (FNS-Cloud) has received funding from the European Union's Horizon 2020 Research and Innovation programme (H2020-EU.3.2.2.3. – A sustainable and competitive agri-food industry) under Grant Agreement No. 863059 – www.fns-cloud.eu

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2022-11-28	*Final versions with all comments incorporated*

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1 Publishable Summary

Existing food including agriculture, nutrition, and security (FNS) data including knowledge and tools for health and agri-food sciences are fragmented, lack critical mass, and access by user communities is 'unevenly' distributed, meaning data are not readily re-used and existing services focus on clinical, molecular, or biological sciences not FNS resources. Thus, the purpose of FNS-Cloud is to launch a first-generation food cloud, federating existing and emerging datasets, making FNS resources FAIRer, developing new tools and services to support user communities, and building confidence and skills.

Priorities for Period 2 included revision of the website and creation of a Zenodo Community, based on Period 1 activities and outputs, capture and publication of event materials, and increased FNS-Cloud-specific social media content as well as continued collaboration with Blue-Cloud, which has brought about important results in a relatively short period of time (e.g., FAO uFish dataset).

More specifically, beneficiaries' logos have been updated on all outputs, social media accounts have been added to Office templates, the project website has been reviewed with the consortium and navigation for the community of practice (myFNSCloud) revised following feedback from new user communities, more and more audience-specific social media content has been generated, and posters, roll-ups, etc. updated or newly published. FNS-Cloud has also been presented to a range of user communities, largely through opportunities identified by multiplier organisations (EFFoST - NL, ILSI - BE, and IFA - AT) or the coordinator (RTDS – AT) with EuroFIR (BE) and/or QIB (UK), UCD (IE), PMT (CH), UWTDS (UK), NUTRIS (SI), and IMDEA (ES) delivering presentations about project aims/activities in general, or -more specifically- work done around the demonstrators to FNS researchers, IT specialists, and project consortia with common goals.

The updated Dissemination and Community Engagement Plan (DCEP2022) covers the final Period (October 2022-September 2023). The primary aim of dissemination, communication, and exploitation activities remain building relationships, creating goodwill, persuading user communities to engage with FNS-Cloud and overcoming reluctance around FAIRification as well as asking for help. However, whilst activities during Period 3 focus on key exploitable results, there will also be an emphasis on sustainability, specifically what can be maintained after funding, whilst not imposing a burden on beneficiaries.

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2 Introduction: Communications Resources

D6.5 Dissemination and Community Engagement Plan (DCEP2022) updated messages, tools and channels for FNS-Cloud dissemination, communication, and stakeholder engagement for Period 3. This Deliverable, D6.6 Portfolio of communications resources, focuses on the tools generated to date (30.11.2022) for use by the Beneficiaries, generally, and WP6 specifically.

Whilst there are four FNS-Cloud scientific and technical objectives, the objectives of WP6 generally and D6.5 DCEP and supporting materials described in this Deliverable specifically are to:

- **Build relationships**: Create goodwill and awareness by being inclusive, informative and interesting
- **Inform**: Provide information for stakeholders to facilitate decision-making (e.g., how to access data)
- **Persuade**: Encourage user communities to engage with FNS-Cloud and overcome any reluctance especially around FAIRification of FNS datasets
- **Request**: Ask for action by or response from recipients (e.g., provide feedback)

Generic tools, such as corporate identity (logo, branding), were developed during M1-6 and were extended to the Community of Practice (myFNSCloud) and FNS Cloud (cloud solution) during M7-M18.

Similarly, the FNS-Cloud website was launched (M3), but planning, revising, and delivery are ongoing.

D6.3 DCEP and D6.4 Portfolio were reviewed in M36-37 in anticipation of the deadline for D6.5 and D6.6 (M38), considering communication-related strengths and the development and progress of FNS-Cloud.

Although Work Package (6) is led by EuroFIR, all Beneficiaries are involved in the activities, sharing information with networks and/ or participating in events. Also, agreed during Period 1, FNS-Cloud aims to collaborate with Blue-Cloud and EOSC or other Horizon 2020 and Horizon Europe projects and initiatives whenever possible, whether related to data sharing or dissemination. To this end, during Period 2, FNS-Cloud has been presented to user communities, largely through opportunities identified by multiplier organisations (EFFoST - NL, ILSI - BE, and IFA - AT) or the coordinator (RTDS – AT) and, subsequently, delivered by EuroFIR (BE) and/or QIB (UK), UCD (IE), PMT (CH), UWTDS (UK), NUTRIS (SI), and IMDEA (ES). The good working relationship established with Blue-Cloud led to development of the new FAO uFish dataset, a widely used and cited reference table of food composition values of aquatic products, and participation in a Horizon Results Booster, culminated in an online event (M30) and a video.

Period 3 will focus on key exploitable results and sustainability.

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3. Portfolio

3.1 Project branding

A project logo was developed as part of the wider branding of FNS-Cloud and is available in a variety of formats and file types and will be included in all project materials (M1-M6).

The logo font is Nexa and this font family has also been used for the website and project materials.

The Nexa family includes 16 unique font styles and weights - eight uprights with eight italics - and is characterised by legibility in both web and print design (sans serif), well-finished geometric designs, and optimised kerning etc. Nexa is suitable for most headlines of all sizes as well as for text blocks that come in both maximum and minimum variations. The font styles are applicable for any type of graphic design. However, this font is not available to most Beneficiaries, so the default font for Office documents is Calibri, also a sans-serif typeface family, which is available free in most software, e.g., Office 365.

The default colour for FNS-Cloud is Pantone 3272C (#00A19A) and three contrasting colours have been identified to ensure variety and interest (#1F2837 – navy; #ECECEC – grey; #EC6D64 – coral).

The fonts and style guide can be downloaded by Beneficiaries from the FNS-Cloud intranet.

	Main logo	Horizontal logo
Main logo	FNS - Cloud Food Nutrition Security	FNS - Cloud Food Nutrition Security
Logo on a coloured background	FNS - Cloud Food Nutrition Security	FNS - Cloud Food Nutrition Security
Black and white logo	FNS - Cloud Food Nutrition Security	FNS - Cloud Food Nutrition Security

Subsequently, branding was developed for the WP7 Community of Practice (myFNSCloud) including a dedicated family of logos, which are also available for download (M6-M18).

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	Main logo	Horizontal logo
Main logo	myFNS – Cloud Food Nutrition Security	myFNS – Cloud Food Nutrition Security
Logo on a coloured background	myFNS – Cloud Food Nutrition Security	myFNS – Cloud Food Nutrition Security
Black and white logo	myFNS – Cloud Food Nutrition Security	myFNS – Cloud Food Nutrition Security

3.2 Beneficiaries branding

Beneficiaries' logos (below) can be downloaded by Beneficiaries from the FNS-Cloud intranet.

These logos have been collected to ensure fair representation of the Beneficiaries on FNS-Cloud resources and to facilitate access by other Beneficiaries, particularly those in WP6. However, Beneficiaries should respect other Parties' copyright and reputation in their use, meaning logos should be used correctly and not without notification. Copies must be sent to Beneficiaries' representatives prior to publication.

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3.2 Templates

Office templates have been developed for use internally and externally, specifically PowerPoint (simple and design), Word document, notification of dissemination and communication activities, and Deliverables. Beneficiaries should use any additional branding (e.g., logo) in accordance with local rules.

These templates can be downloaded by Beneficiaries from the FNS-Cloud intranet.

<table>
<tr>
<td> 

PowerPoint template (design with social media added)</td>
<td> 
Document template (Word)</td>
</tr>
<tr>
<td> 

PowerPoint template (simple with social media added)</td>
<td> 

Deliverable template (Word)</td>
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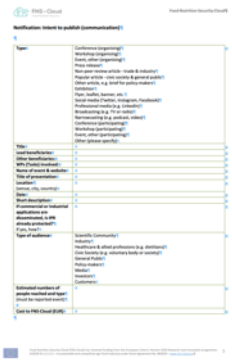
<td> 
Notification to publish (communication)</td>
<td> 
Notification to publish (peer-review article)</td>
</tr>
</table>

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3.3 Websites

3.3.1 FNS-Cloud, Project website

FNS-Cloud project website – www.fns-cloud.eu – was launched on 31st December 2019 (M3) and includes a Homepage, Overview (including Consortium and Executive Board), Outputs (including Publications, [Public] Deliverables, Education [including Workshops, Work-based Learning, Community of Practice], Media, News, Events and Contact (M1-M6). Subsequently, pages have been added for the External Expert Advisory Board Members and the Twitter feed added to News as well as items to Overview (one-page summary), Events, and News (M6-M18). Pages describing the cookies policy, copyright, disclaimers, privacy, and terms and conditions were also updated. The project website was moved to a new server (M19) to improve performance, which revealed technical and security issues that have now been resolved (M27). In parallel, some pages (Publications [led by IFA], Media, and Events] were also updated. During the M33 consortium meeting, the project website was reviewed with the consortium using a focus group approach [led by IFA]. The objective was to collect feedback/suggestions for improvement, but also how movement between this site, the community of practice (CoP, www.myfnscloud.eu) and cloud solution (www.fnscloud.eu) might be optimised for the future. Recommendations were generated for each section plus the homepage and are being implemented.

During P2 (M19-M36), the website had 4693 sessions (↑ 368% compared with P1) averaging 2 minutes (↑ 50%). Importantly, the bounce rate (single page visits) was down by more than 60% compared with P1. There were 23310 pageviews during P2 (↑ 847%) with two-thirds of visitors new to the site (67%). Most visitors used a desktop computer (87%), but there was a 13% increase in mobile use during this Period. The top 10 countries were US, UK, IT, NL, ES, DE, SI, CN, BE, and AT. Whilst most of these countries are represented in the consortium, US and CN are not and further exploration of visitors' locations demonstrated access is more widespread than just Beneficiaries. The top 10 referrals were LinkedIn, Twitter, ILSI-EU, preventomics.eu, iseki-food.net, fnhri.eu, frontiersin.org, environment.si, nutris.org, and ibba.cnr.it. LinkedIn and Twitter are two of the project social media channels whilst ILSI-EU and iseki-food.net are multiplier organisations in the consortium; NUTRIS (SI) and CNR (IT) are Beneficiaries. Preventomics (Grant Agreement ID: 818318) is a H2020 project and a partner in the Horizon Results Booster (see below) whilst environment.si is the coordinator of a new Horizon Europe project generating food data (FISHEUTRUST Grant Agreement ID: 101060712). Members of FNH-RI were invited to join the FNS-Cloud CoP in M32, and FNS-Cloud has published five open access articles in frontiersin.org journals (Frontiers in Microbiology and Frontiers in Nutrition).

Together, these demonstrate benefits of the various approaches used to increase awareness and promote engagement with user communities. Pages of primary interest were Work Packages, Activities, Overview, Consortium, Publications and Media, Events, News, Outputs, and Deliverables.

The priority during Period 3 will be to update navigation, page contents, and links to the other websites for a seamless experience once the navigation has been optimised on the catalogues and myFNSCloud.

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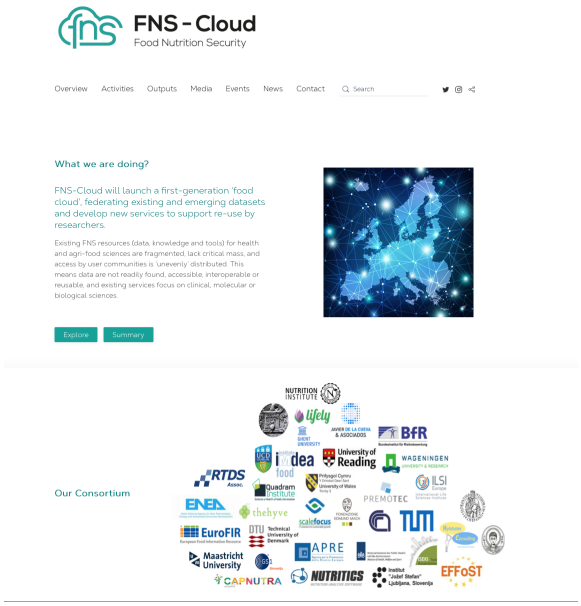

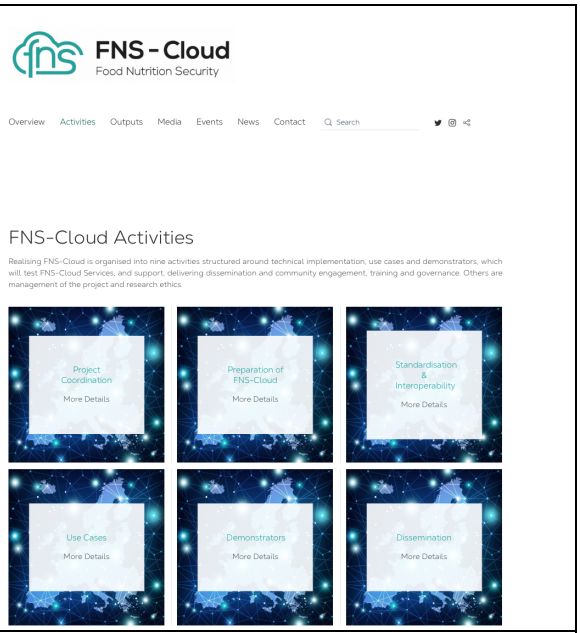

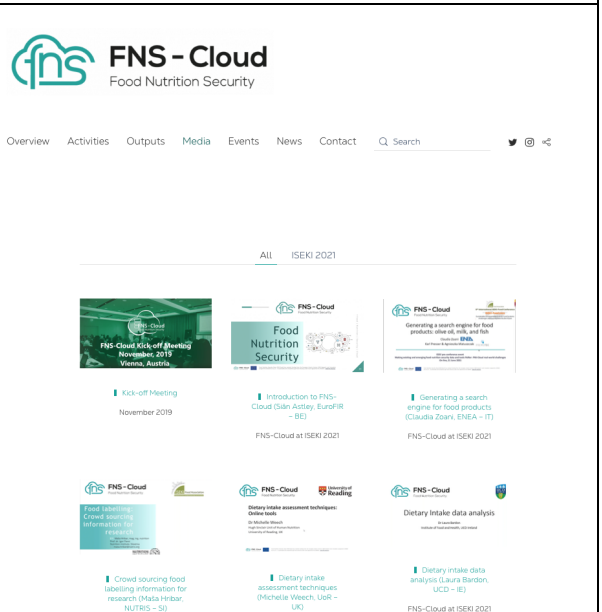

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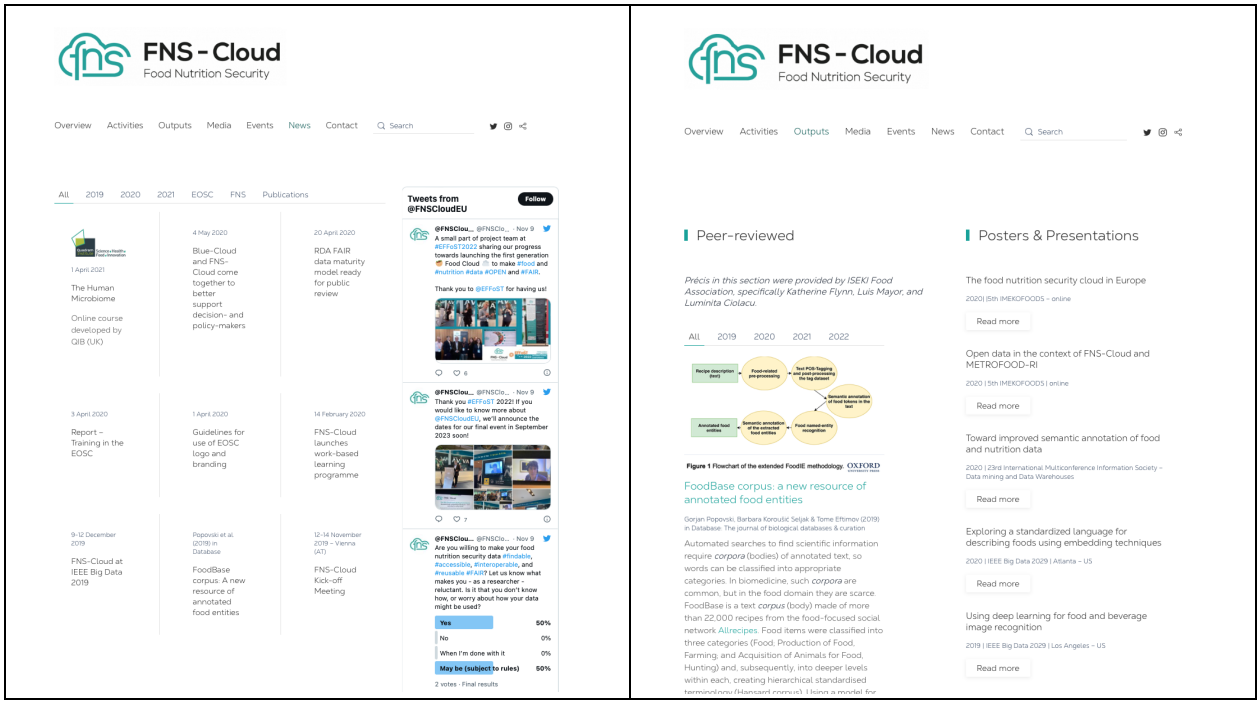

3.3.2 myFNSCloud, Community of Practice website

The WP7 Community of Practice (myFNSCloud) website – www.myfnscloud.eu – was launched on 30th June 2020 (M9) and included a landing page, Members (address book, map, rooms), Events (list, calendar, MyEvents), Forum, Blogs, Opportunities, Repository, and Partners (linked to the project website, Beneficiaries). There were -and still are- technical difficulties in implementing Google Analytics, which EuroFIR (host) and UWTDS (WP7) are trying to resolve with the subcontractor (VeryConnect, UK).

During Period 2, organisation of myFNSCloud was further developed in line with feedback from the consortium, including addition of a toolbox drop-down menu (M26) and learning tab (M27) incorporating publications and access to FNS-Cloud elearning courses. In parallel, opening of the myFNSCloud to user communities was planned and executed (UWTSD and EuroFIR), starting with FNH-RI (M28), followed by the METROFOOD-PP, Elixir Food and Nutrition Community, and COMFOCUS (M30-36). In parallel with engaging these user communities, the aim was also to exploit their feedback to further develop the platform. Consequently, a navigation page has been added that details the content of each page (M36).

During Period 3, myFNSCloud will be opened to all user communities, as the home of FNS-Cloud education, training, and support including elearning and resources (underpinning concepts, using FNS Cloud, using tools, and exploring the Demonstrators, policy blogs, videos on emerging professional practice [e.g., data curation], animation [e.g., eNutriApp]). These resources will be expanded as demonstrators are optimised.

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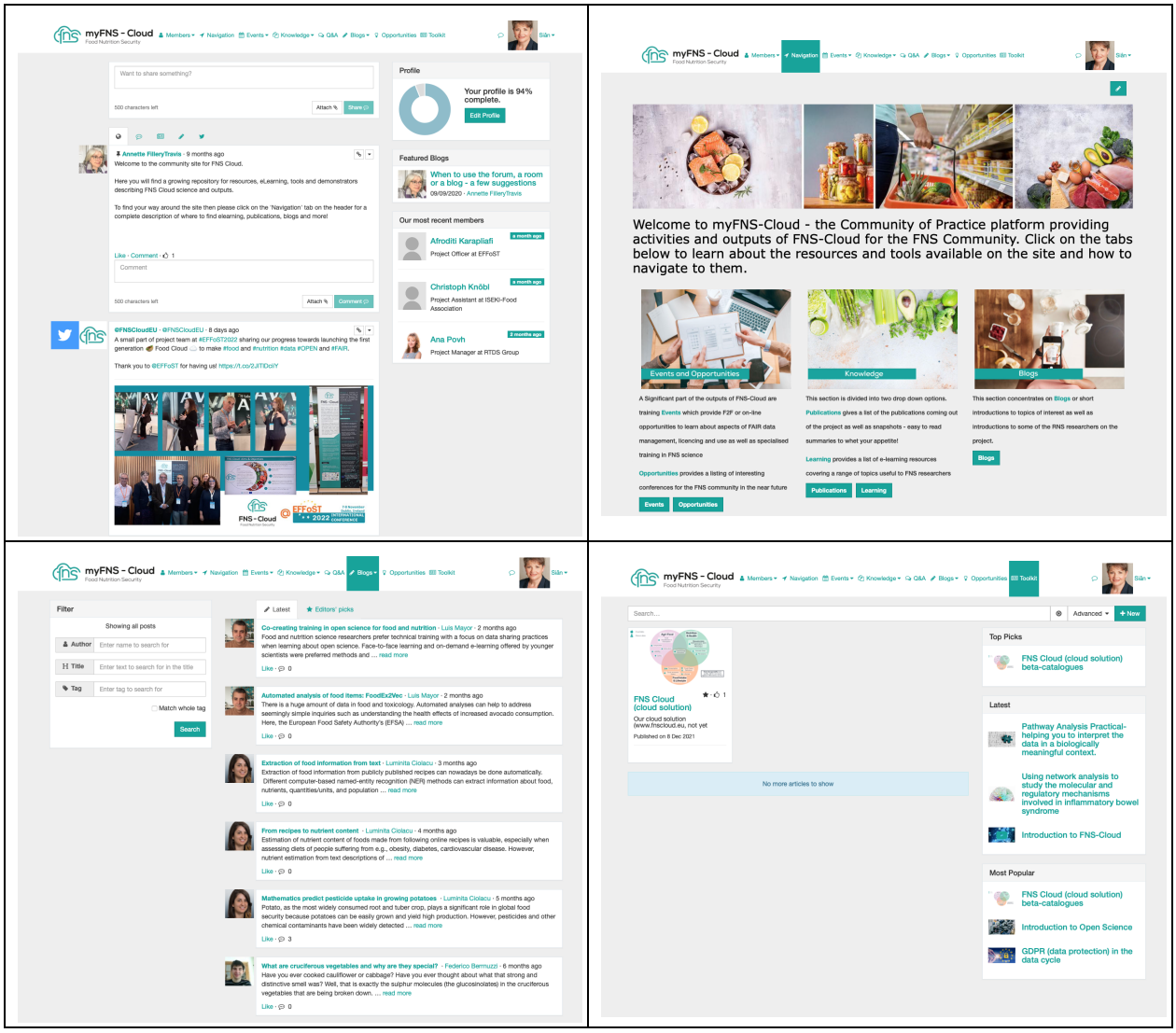

3.3.3 FNS Cloud, Cloud solution landing page and catalogues

Currently, FNS Cloud – www.fnscloud.eu – is only available on a test platform via a direct link or myFNSCloud, but includes searchable lists of datasets, tools and services, as well as a food map and links to the project website and myFNSCloud. FNS Cloud has been branded to match the project and myFNSCloud websites, supporting the potential for a seamless experience for user communities, whilst still allowing the sites to develop independently. During the Period 2, FNS Cloud was further developed based on feedback from the first round of usability testing (M15-M18), before going live for testing within the consortium, particularly the Demonstrators. During P3, the branding and navigation will be optimised.

PMT is set up the FNS Cloud (www.fnscloud.eu) and is responsible for updates and security.

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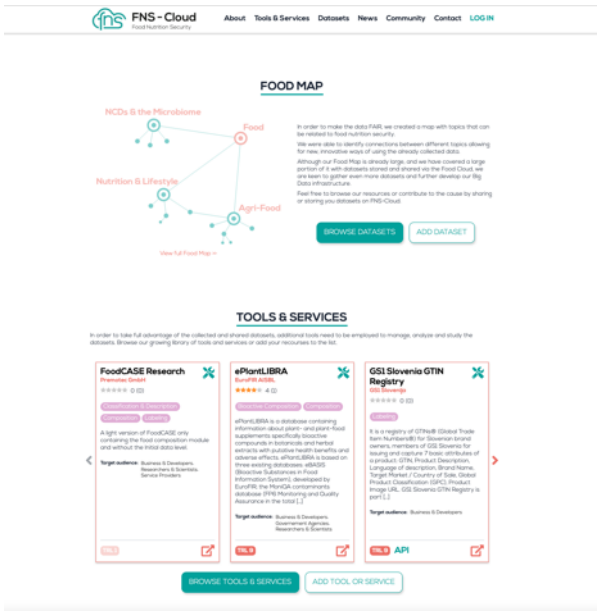
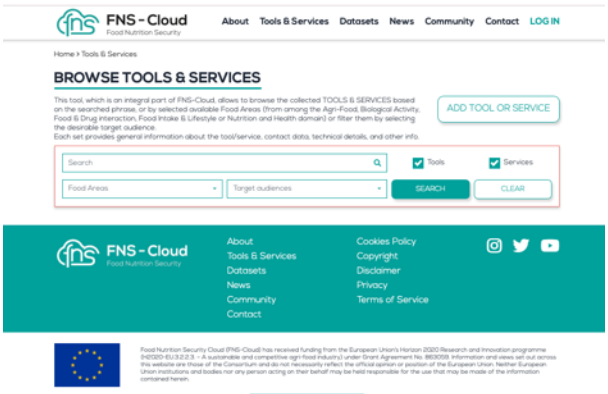
FNS Cloud Landing Page	FNS Cloud Tools & Services Search Page
	

3.4 Social media

Social media is a major focus of dissemination, communication, and stakeholder engagement, largely because it cost effective for dissemination and can stimulate dialogue leading to engagement. However, social media is not all-inclusive: many individual key and primary stakeholders for FNS-Cloud do not participate or only contribute at the organisational level, meaning social media activities need to be part of a wider effort. Social media can inform, make request of, build relationships with, and persuade stakeholders, but only if accounts are followed and content is authentic, responsive, and high quality.

In M30, a dedicated social media team (led by ILSI-Europe, including EFFoST, ISEKI-Food Association, EuroFIR, and APRE) was created to increase the presence of FNS-Cloud on social media channels (Twitter, Instagram, Facebook, and LinkedIn) with particular attention given to graphic/visual content. During M33-M34, #WhyFNSCloud explained reasons behind the project with an emphasis on data sharing and interoperability across all platforms with content tailored to the channel. The first post was translated into languages of the consortium (11), and Beneficiaries tagged and invited to share with their audiences. Similarly, a campaign focusing on Open and FAIR campaign was run during M35 with posts raising awareness about open science and FAIR principles, achieving up to 211 impressions per post (Twitter).

In M36, #FacesofFNSCloud introduced the WP leaders and WP activities. In parallel, posts have promoted events, reported FNS-Cloud presence, and called for help with usability testing. To further raise awareness, social media links have been added to the scientific PowerPoint templates and Beneficiaries reminded to engage with project social media accounts and invite audiences to follow the project. An effort has also been made to reach out to EU- and otherwise-funded projects and open science initiatives by following accounts and reacting/sharing their content. Consequently, numbers of followers at the end of P2 (M36) have increased, specifically LinkedIn: 182 (↑ 182 compared with P1), Twitter: 270 (↑ 89), Instagram: 65 (↑ 38), and Facebook: 23 (↑ 17); plans for P3 will be finalised at the M37 consortium meeting.

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In M33, it was agreed that accounts created to work in parallel with myFNSCloud would not be used to avoid confusing FNS-Cloud audiences as well as diluting efforts to engage with followers.

3.4.1 Twitter

As a micro-blogging platform (396.5 million users), Twitter can be used quickly and easily to send 280-character updates linked to images, videos or online content and promote or reply to other accounts. It is ideal for engaging with users in real time and keeping a consistent stream of content.

Twitter (@FNSCloudEU) was launched in October 2019, and has now has 286 followers (cf. 186 M18) (e.g., individuals, Beneficiaries, projects [e.g., Nutrishield, DEEP Hybrid-Cloud, FAIRCHAIN], and others [e.g., EOSC-Pillar]; we are following 209 accounts (cf. 162 M18) including individuals in the consortium, those who have followed us, and organisations (consortium, projects [e.g., AVANT], ESFRI Research Infrastructures [e.g., ENVRI Community], Horizon Europe and Horizon 2020 projects with common interests (e.g., TITAN, RAINBOW) and others [e.g., GÉASNT News, RADON, EOSC].

We have posted 277 times (av. 1.8 times per week). Average daily impressions (tweets seen) range over a 30-day period from 11 (May 2022) to 174 (July 2022) whilst daily clicks from two-28 (daily), likes one-70 (daily), and retweets one-17 (daily). Whilst there has been some modest increase in followers, impressions, clicks and likes during Period 2, engagement remains a priority for Period 3.

3.4.2 Instagram

Instagram is an online, mobile, image and video-sharing service, which has the capacity cross-post to Twitter and other social media networks. Unlike Twitter, user numbers (ca. 1 billion) are still growing, and the majority are outside the US (ca. 90%). Just over half of users are female and ca. 60% of online users have an Instagram account. Around 30% of global users are aged 18-24 and 35% are 25-34 years; ca. 75% of teenagers use Instagram, meaning this is an effective route to access the education sector. One of the advantages of Instagram over Twitter, besides a less aggressive reputation, is that posts can be accompanied by more supporting text, which can be edited and updated.

No effort was extended to @FNSCloudEU2019 during Period 1, but 120 posts were added during Period 2, attracting 75 followers. Instagram does not provide statistics for routine monitoring.

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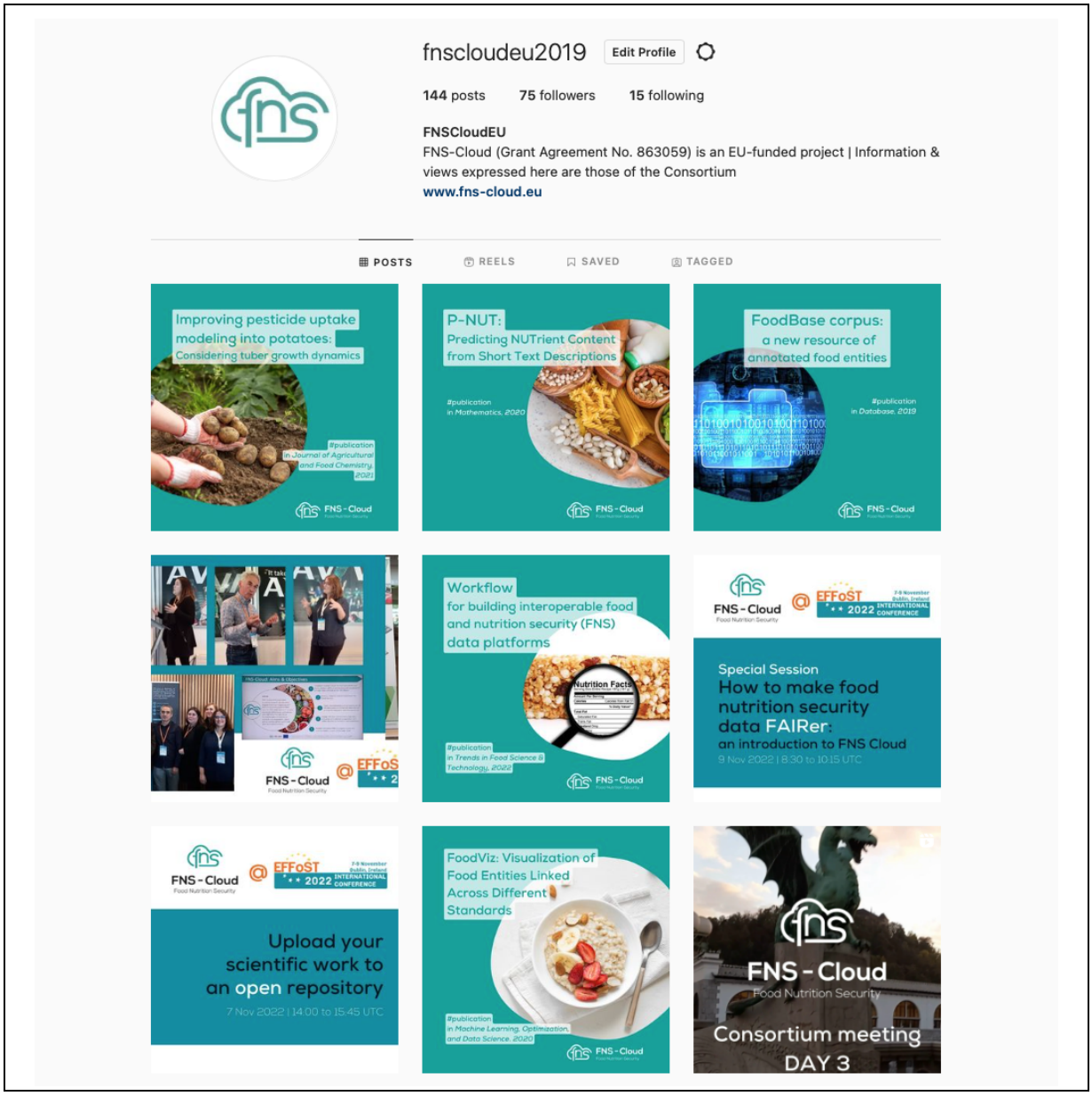

3.4.3 YouTube

The FNS-Cloud YouTube channel is being used solely as a video hosting site to promote outputs, e.g., kick-off meeting (13-14th November 2019) and the ISEKI Conference (21st June 2021).

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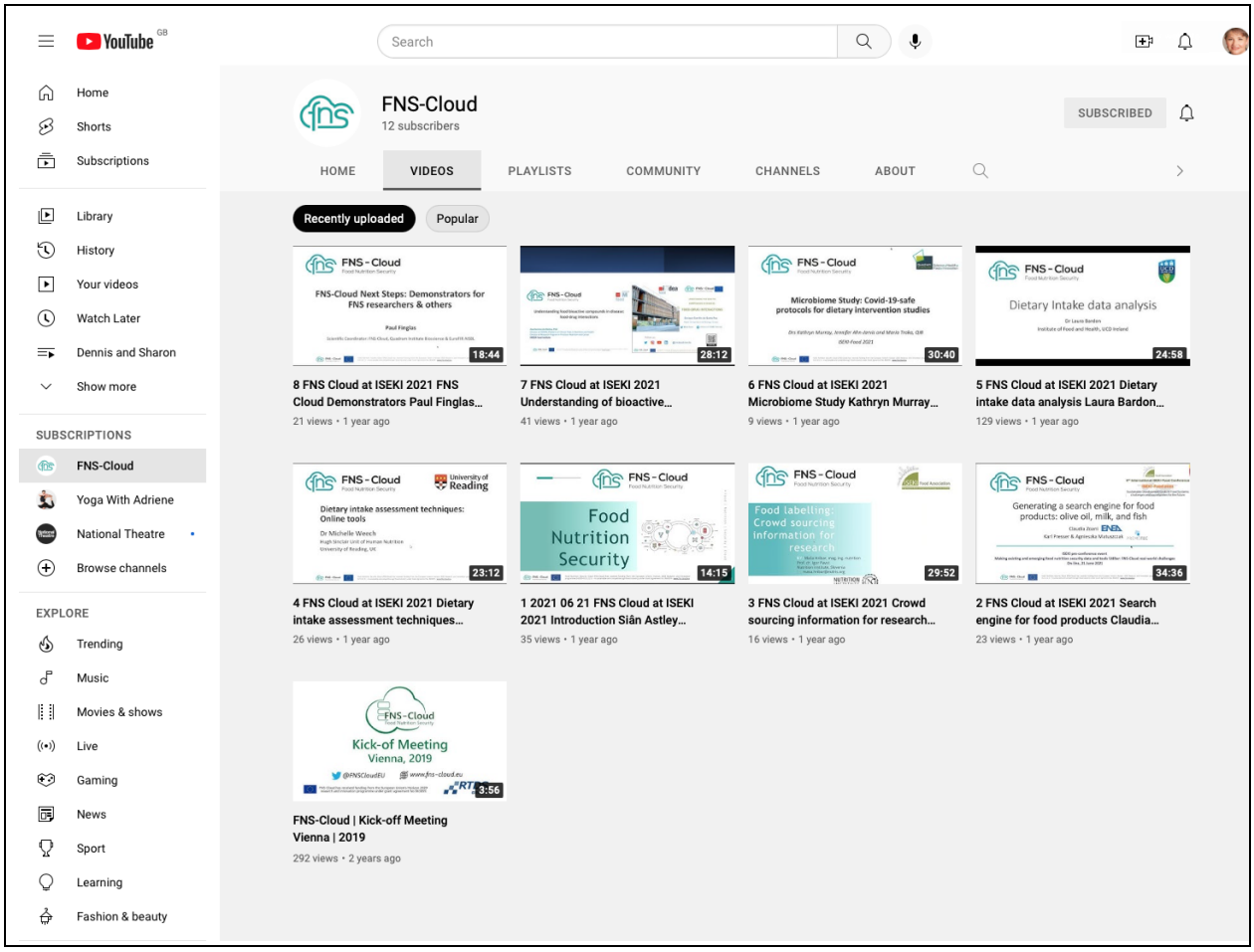
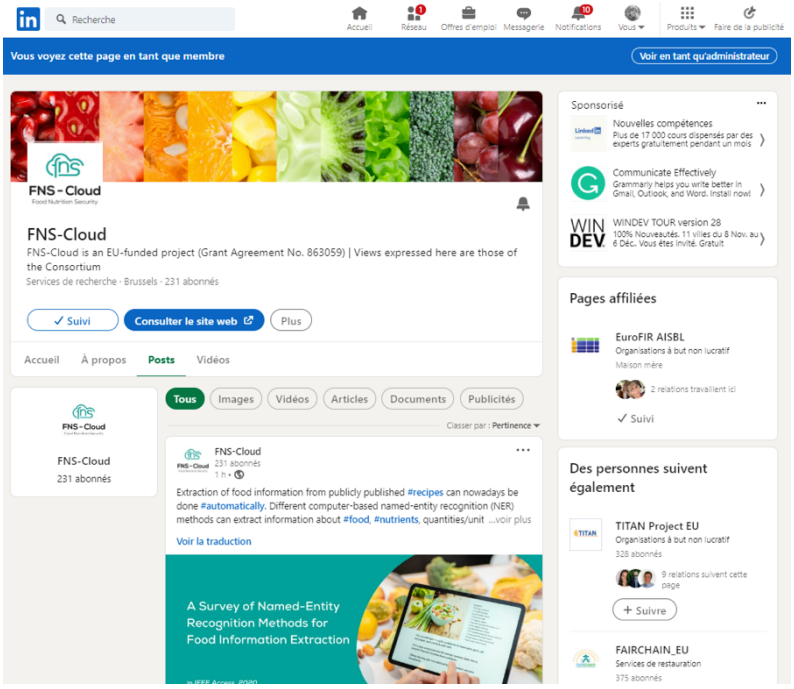


3.4.4 LinkedIn



LinkedIn is a social networking site for business professionals with an estimated 875 million self-reported users. Available in more than 200 countries, LinkedIn focuses on business connections and industry contacts for employers and professionals, allowing companies and individuals to present themselves online and users to find job listings or enhance links in their area of expertise and related sectors. In M30, EuroFIR's shared project space was rebranded for FNS-Cloud to increase engagement. With ca. 70 posts, followers have increased to 186 and page visits to 221 (ca. 256% cf. Period

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1) with 102 unique visits; peaks in interest coincide with posts associated with project meetings. Most visitors are from research, but some are from healthcare (12%), education (10%), community and social services (10%), engineering, administration, information technology, programme and project management, media and communication, and business development. LinkedIn will be a focus for Period 3, because this social media channel has been identified as a priority for sustainability of FNS Cloud.

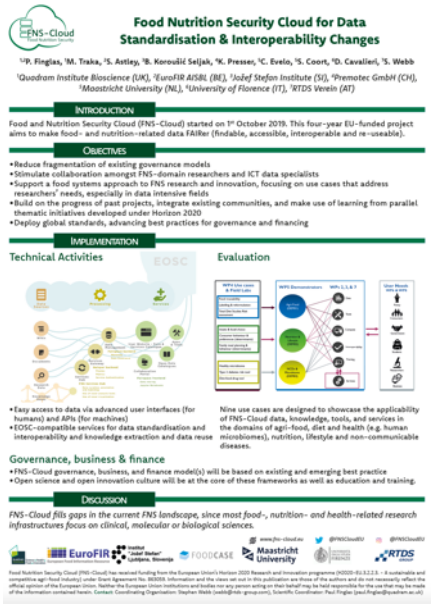
3.4.5 ResearchGate

Late in March 2021 (M18), a ResearchGate page was launched (FNS-Cloud | Food Nutrition Security Cloud) to explore whether this platform would be helpful to reach FNS user communities by, for example, posting articles and peer-reviewed papers published by the consortium. Currently, however, with only 17 followers – individuals must ask the moderator to add them – there is little evidence to suggest this approach is effective without more effort to engage user communities directly.

3.4 Factsheet, leaflets, posters, banners, etc.

A poster summarising FNS-Cloud was created for IEEE Big Data 2019 (9-12th December 2019 - Los Angeles, US) and a (draft) leaflet for the WP7 train-the-trainer programme was created for the EuroFIR Food Forum (7-9th April 2020 - Brussels, BE) and the M8 Consortium Meeting (3-5th June 2020 - Norwich, UK).

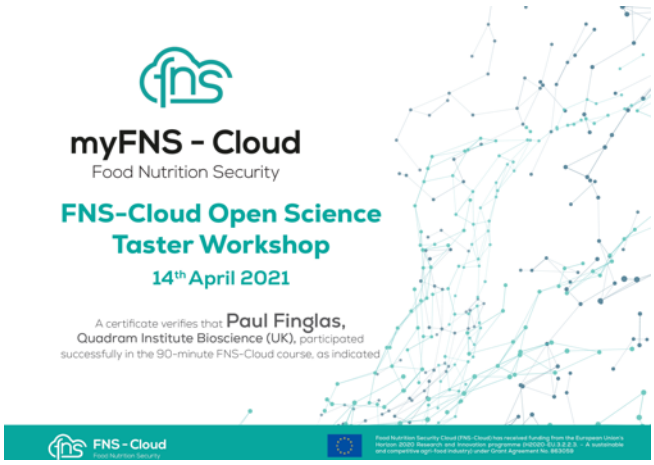
Certificates for participation were generated (M18) and templates shared with WP7. These are presented to workshop participants, particularly Task 7.1 Train-the-trainer activities. Also, during Period 2, a poster published for display the METROFOOD-PP final event (Grant Agreement ID: 871083, 19.05.2022).



IEEE Big Data 2019

WP7 train-the-trainer programme

Food Nutrition Security Cloud (FNS-Cloud) has received funding from the European Union's Horizon 2020 Research and Innovation programme (H2020-EU.3.2.2.3. – A sustainable and competitive agri-food industry) under Grant Agreement No. 863059 – www.fns-cloud.eu



Certificates for participation (WP7)

METROFOOD-PP final event - Poster

A0 and A4 PowerPoint templates have been generated, which the Beneficiaries can use independently, to create materials as well as a PowerPoint (scientific) presentation (finalised M9, updated M18), summarising the project, which can be adapted by Beneficiaries or incorporated into other presentations.

A0 and A4 PowerPoint templates

FNS-Cloud Scientific.pptx (M37 update)

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Based on the FNS-Cloud scientific presentation, a one-page summary was published in September 2020 (M12). Subsequently, it was revised (branding) and published online in M15 and updated in M33.

One-page summary (P1)	One-page summary (P2 updated)
	

A roll-up banner was published for EFFoST 2021 (1st-4th November 2021 [M26], Lausanne – CH) as well as a poster, deployed at METROFOOD-PP final consortium meeting (19th May 2022 [M32], Bucharest – RO).

The summary of potential benefits associated with joining the FNS-Cloud community of practice (CoP) was sent to FNH-RI participants in M28 and, subsequently, Elixir Food and Nutrition Community, METROFOOD-PP, and COMFOCUS (Grant Agreement ID: 101005259) in M30-36. In parallel, 1500 agri-food Horizon 2020 projects (2014-2020) were reviewed to identify those likely to have generated potential FNS resources (data, knowledge, tools, or services, 300) that might be included in FNS-Cloud catalogues. These were prioritised (M28, 130) and FNS-Cloud is engaging these projects/consortia in further discussions, exchange of information, joining the FNS-Cloud CoP, cooperation through social media, etc. (M30-M36).

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FNS – Cloud
Food Nutrition Security

Existing food nutrition security data, knowledge, and tools for health and agri-food sciences, although widespread in Europe, are fragmented, lack critical mass, and access is 'unevenly' distributed for users. FNS data are not readily found, accessible, interoperable, or reusable (FAIR), and current services focus on clinical, molecular, and biological sciences.

FNS-Cloud is helping overcome fragmentation by integrating and federating existing food nutrition security data, tools and services, to provide added value FAIR data that can reduce knowledge gaps, facilitate better research and exploitation, inform policy, and help deliver sustainable diets to European citizens.

FNS-Cloud objectives are to:

- Implement and test cloud solution via use cases, field labs, and demonstrators to share existing and emerging data
- Develop, integrate, and test innovative tools and services to help user communities
- Enable harmonisation and standardisation of FNS data (sources, formats, languages) and external services (e.g. apps) to facilitate integration and interoperability
- Engage user communities (especially FNS researchers and IT specialists) to improve co-operation and reduce barriers to innovation and exploitation
- Develop sustainable governance and business models, in parallel with the wider EOSC user community

Contacts

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RTDS Group (AT)
Project Coordinator (office@fns-cloud.eu)

FNS-Cloud is developing the first-generation 'food cloud' by federating existing and emerging datasets and developing and integrating services to support re-use through the European Open Science Cloud (EOSC).

www.fns-cloud.eu
@FNSCloudEu
FNSCloudEu
https://bit.ly/2PNJRhz

FNS-Cloud is:

Using existing data, use cases to develop:

- Food traceability & metrology search engine (milk, olive oil, fish) (ENEA, IT)
- Food labelling data and reformulation tools (branded foods db) (NUTRIS, SI)
- Total diet studies risk assessment (consumers, professionals) (RIVM, NL)
- Food intake, consumer behaviour & lifestyle (mapping tool, merging strategies, data quality and usability assessment) (UCD, IE)
- Lifestyle and NCDs cohort data (type 2 diabetes risk) (HUA, GR)

Using field labs to fill gaps where there are no, limited or emerging data:

- Novel dietary intake and behaviour tools 1. 24 h recall ethnic groups (UCD, IE 2. eNutri FFQ, elderly (UoR, UK)
- Family meal planning (Lifely, IT)
- Healthy diets for healthy microbiome (QIB, UK)
- Alert classification system for food-diet-drug interactions (IMDEA, ES)

Bringing use cases and field lab data, knowledge, tools, and services together in three demonstrators to answer food nutrition security research questions ...

- Agri-food data and tools (DEMO1) – traceability, metrology, labelling, (re)formulation, and benefit:risk
- Nutrition & Lifestyle (DEMO2) – intake, behaviour, purchase, preparation, consumption, and composition
- Non-communicable diseases and microbiome (DEMO3) – healthy diets, healthy microbiome, risk for T2D, food-drug interactions

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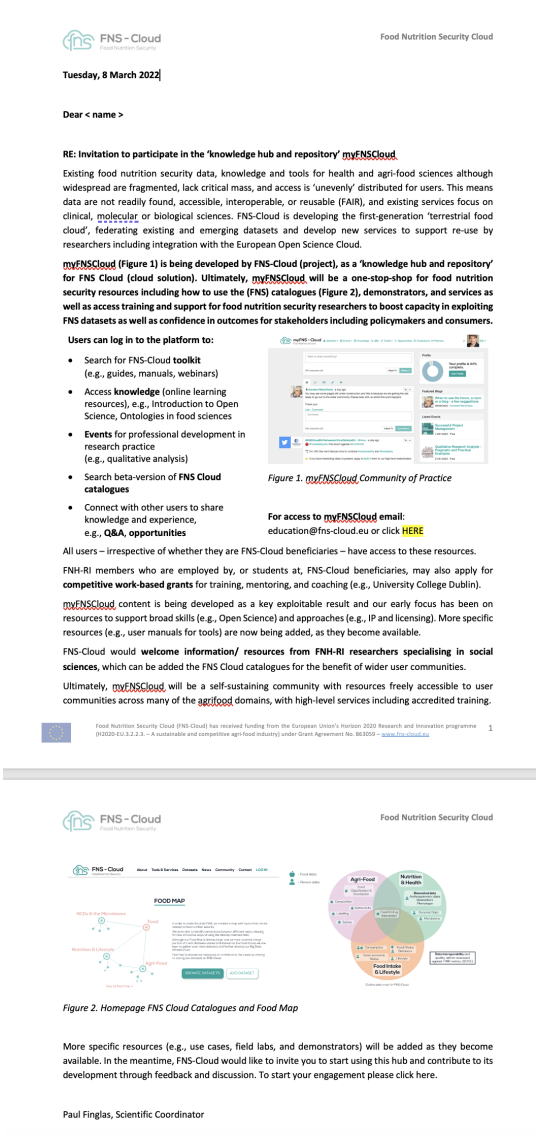
Roll-up 2021



FNS – Cloud
Food Nutrition Security Cloud

Tuesday, 8 March 2022

Dear < name >

RE: Invitation to participate in the 'knowledge hub and repository' myFNSCloud

Existing food nutrition security data, knowledge and tools for health and agri-food sciences although widespread are fragmented, lack critical mass, and access is 'unevenly' distributed for users. This means data are not readily found, accessible, interoperable, or reusable (FAIR), and existing services focus on clinical, molecular or biological sciences. FNS-Cloud is developing the first-generation 'terrestrial food cloud', federating existing and emerging datasets and develop new services to support re-use by researchers including integration with the European Open Science Cloud.

myFNSCloud (Figure 1) is being developed by FNS-Cloud (project), as a 'knowledge hub and repository' for FNS Cloud (cloud solution). Ultimately, myFNSCloud will be a one-stop-shop for food nutrition security resources including how to use the (FNS) catalogues (Figure 2), demonstrators, and services as well as access training and support for food nutrition security researchers to boost capacity in exploiting FNS datasets as well as confidence in outcomes for stakeholders including policymakers and consumers.

Users can log in to the platform to:

- Search for FNS-Cloud **toolkit** (e.g., guides, manuals, webinars)
- Access **knowledge** (online learning resources), e.g., Introduction to Open Science, Ontologies in food sciences
- **Events** for professional development in research practice (e.g., qualitative analysis)
- Search beta-version of **FNS Cloud catalogues**
- Connect with other users to share knowledge and experience, e.g., **Q&A, opportunities**

Figure 1. myFNSCloud Community of Practice

For access to myFNSCloud email:
education@fns-cloud.eu or click HERE

All users – irrespective of whether they are FNS-Cloud beneficiaries – have access to these resources.

FNH-RI members who are employed by, or students at, FNS-Cloud beneficiaries, may also apply for **competitive work-based grants** for training, mentoring, and coaching (e.g., University College Dublin).

myFNSCloud content is being developed as a key exploitable result and our early focus has been on resources to support broad skills (e.g., Open Science) and approaches (e.g., IP and licensing). More specific resources (e.g., user manuals for tools) are now being added, as they become available.

FNS-Cloud would **welcome information/ resources from FNH-RI researchers specialising in social sciences**, which can be added the FNS Cloud catalogues for the benefit of wider user communities.

Ultimately, myFNSCloud will be a self-sustaining community with resources freely accessible to user communities across many of the agrifood domains, with high-level services including accredited training.

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Figure 2. Homepage FNS Cloud Catalogues and Food Map

More specific resources (e.g., use cases, field labs, and demonstrators) will be added as they become available. In the meantime, FNS-Cloud would like to invite you to start using this hub and contribute to its development through feedback and discussion. To start your engagement please click here.

Paul Finglas, Scientific Coordinator

Benefits of FNS-Cloud for user communities

These resources can be downloaded by Beneficiaries from the FNS-Cloud intranet.

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3.5 Newsletters and press releases

FNS-Cloud has not published regular newsletters but has focused on social media or targeted information.

News about FNS-Cloud will only be published as a press release when it is genuinely newsworthy and during 2020-2022 there has been little space for non-Covid or economic news or news about Ukraine.

If the EB agrees a press release is appropriate (e.g., final event September 2023), EuroFIR (WPL) will take the lead, based on inputs from the Beneficiaries. In each case, as well as translating the press release, one paragraph will describe contributions of local Beneficiaries (e.g., in Belgium, EuroFIR and Ghent University; in Austria, RTDS), which will attract the interest of national and local journalists and broadcasters.

Where activities are local, Beneficiaries are expected to take the lead, with support from EuroFIR. Once agreed, press releases will be disseminated using a range of channels including websites, social media, and resources for the media, such as AlphaGalileo and DG Communications. Press releases will also be uploaded to the intranet for all Beneficiaries to translate and distribute at national or regional levels.

3.6 Peer-reviewed and other articles

FNS-Cloud Beneficiaries have been encouraged to publish results in high-impact, scientific (peer-reviewed) journals and comply with publication guidelines (2.9.1 FNS-Cloud Dissemination & Publication Guidelines and Appendix 9.3.1) as well as the Grant Agreement with respect to open access publications. Use of the dissemination notifications (See 3.2 Templates) is compulsory and contributes to compliance with the Open Access mandate for all Horizon 2020 projects, particularly deposition of research data to validate results presented in scientific publications according to the Grant Agreement Art. 29.2. Lay articles follow the same guidelines and are reported by the lead Beneficiary.

All publications (final articles) are being made available via FNS-Cloud (Zenodo Community – see below) and the project website (Publications), subject to embargoes. In addition, IFA (AT) has précised most Period 1 and some Period 2 publications, and these lay summaries have been added to the FNS-Cloud project website and/or the Community of Practice (myFNSCloud). These summaries are important not only for non-scientific audiences, but also IT specialist in the consortium to help them understand the FNS science and, in turn, FNS researchers to understand better the IT tools and services that have been developed; this is part of efforts to boost skills and confidence.

These essential resources have been re-used by multiplier organisations (EFFoST -NL, ILSI - BE, and IFA - AT) to populate newsletters and social media, raising awareness amongst their networks.

Beneficiaries generating research data must also comply with FNS-Cloud Dissemination & Publication Guidelines as well as obligations established in the Grant Agreement Art. 29.3 (Open Research Data Pilot). Datasets will be assessed as part of T1.6 Open Data Management with support from the Data Management

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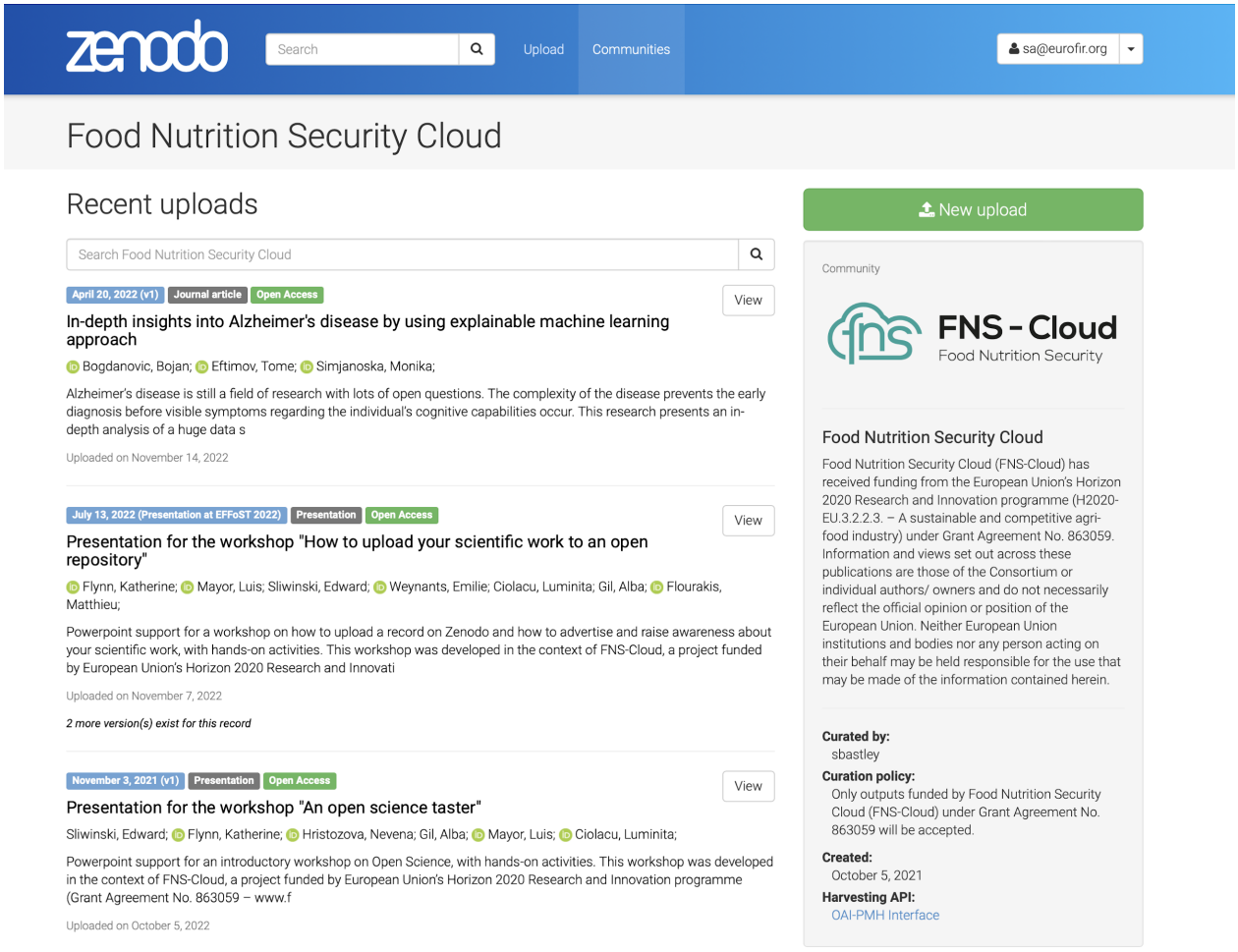
Committee (See D1.6 Data Management Plan - Draft). Strategies for dissemination and communication around datasets, tools, and services are being elaborated together with the provider(s) in WPs6-8.

Standard operating procedures for publications have been presented at all Consortium Meetings, and explained to individuals following direct enquiries, as well as the requirement for peer-review publications to be green or gold open access. Most publications are now compliant (Period 2), and individuals require only confirmation/support around the EU funding declaration. During Period 2, as outputs and dissemination activities increased, more effort was expended on reminding beneficiaries about their obligations (e.g., flow chart, checklist, short video). WP6 will continue to present information at Consortium Meetings and provide advice to support compliance during Period 3. Also, the social media team is working with providers and authors to exploit opportunities around new publications or datasets.

An [FNS-Cloud Zenodo Community] was created (M25) and P1 publications including public Deliverables and some communications activities have been indexed to support FAIRification of key FNS-Cloud outputs; Period 2 outputs and other communications activities will be added during Period 3.



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3.8 Conferences and large meetings

It was expected that FNS-Cloud activities and outputs would be presented as oral and poster presentations at major international and national meetings, symposia, and conferences. However, Covid-19 public health restrictions in Europe had a significant impact on dissemination and communication activities during Periods 1 and 2. In the short-term (M6-M9, March-June 2020), events were cancelled or postponed. As public health restrictions spread globally, countries imposed local rules (e.g., regional lockdowns with EU MS), and travel conditions were applied (e.g., essential travel only, PCR testing, country-specific exclusions), which were subject to change at short notice, meaning organisations and individuals were unable and/ or unwilling to attend face-to-face events (M10-M12, July-September), and events that had been postponed were cancelled. In late 2020 (M13-M15, Oct-Dec 2020), events gradually moved online, and this trend has continued M15-M20 (January-May 2021), although some organisations are considering hybrid or limited face-to-face events, depending on vaccination rates and cases.

During Period 2, in addition to events that Beneficiaries have attended online/hybrid/face-to-face, FNS-Cloud has also been presented to user communities, largely through opportunities identified by multiplier organisations (EFFoST - NL, ILSI - BE, and IFA - AT) or the coordinator (RTDS – AT). Subsequently, EuroFIR (BE) and/or QIB (UK), UCD (IE), PMT (CH), UWTDS (UK), NUTRIS (SI), and IMDEA (ES) have presented either project aims/activities in general, or -more specifically- work done around the demonstrators to FNS researchers, IT specialists, and project consortia with common goals.

The first of these was an online event linked to ISEKI-Food 2021 | Sustainable development goals in foods systems: Challenges and opportunities for the future (i.e., Making existing and emerging food nutrition security data and tools findable, accessible, interoperable, and reusable, 21.06.2021, 13:00-17:30 CEST, 56 people). Subsequently, dissemination events have included AskFood (Alliance for Skills and Knowledge to Widen Food Sector-related Open Innovation, Optimization and Development, Project No. 588375-EPP-1-2017-1-IT-EPPKA2-KA – online, 156 attendees), and EuroFIR Food Forum 2021 (online, 146 attendees) and 2022 (hybrid, 36 in-person, 25 online), 35th EFFoST International Conference 2021 (Healthy Individuals, Resilient Communities, and Global Food Security), which was the first face-to-face event (Lausanne, CH 1st-4th November 2021, 9 attendees) since the kick-off meeting in November 2019, Horizon Results Booster (CHaNce) webinar 'Digital-based tools to empower sustained lifestyle changes' (07.04.2022, 144 attendees), NextFood (Grant Agreement ID: 771738, final consortium meeting, 07.04.2022), METROFOOD-PP (Grant Agreement ID: 871083, final consortium meeting, 18.05.2022), EGI2022 (Prague – CZ, 12), and Blue-Cloud (Grant Agreement ID: 862409, 24.05.2022).

These activities will continue in Period 3.

3.9 Cooperation with other initiatives

During the lifetime of FNS-Cloud, WP6 specifically, and the consortium more generally, have endeavoured to establish links with other projects and initiatives to promote complementarity and avoid overlap.

To that end, a good working relationship has been established with Blue-Cloud, which brought about important results in a relatively short period of time. For example, Blue-Cloud and FNS-Cloud supported development of the new FAO uFish dataset, a widely used and cited reference table of food composition values of aquatic products.

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- **FAO/INFOODS Global food composition database for fish and shellfish – version 1.0 (uFiSh1.0) - 2016**
  User Guide (**PDF**) / uFiSh database (**Excel**)

  This global user database (uFiSh) provides nutrient values for fish, crustaceans and molluscs in raw, cooked, and processed form, covering data on proximates, minerals, vitamins, amino acids and fatty acids. The majority of data are analytical data complemented with data from other published sources. The data compilation process followed standards and guidelines outlined by FAO/INFOODS and includes comprehensive documentation.

FNS-Cloud also participated in a Horizon Results Booster, specialised services to maximise the impact and add value, with NUTRISHIELD (Grant agreement ID: 818110), PREVENTOMICS (ID: 818318), Stance4Health (ID: 816303), PhasmaFOOD (ID: 732541), amongst others. The aim was to exploit benefits offered through joint dissemination activities, especially as related to Europe societal and industrial challenges, by pooling knowledge and expertise, create new synergies, reinforce existing collaborations, build capacity and influence, publish recommendations and priorities for policymakers, an otherwise hard-to-reach group, cover a wider range of disciplines in R&I landscape, and focus on human issues. By joining this initiative at an early stage, FNS-Cloud has capitalised on stakeholder targeting and audience mapping, others' experiences, and leverage critical mass that would not be possible alone. These activities culminated in an online event (M30), dissemination plan and a video. This activity ended in Period 2.

4. Conclusions

Although Work Package (6) is led by EuroFIR, all FNS-Cloud Beneficiaries are involved, both in terms of achieving consensus (e.g., content for outputs) as well as demand-led creation of materials.

Whilst activities during Period 3 will focus on key exploitable results, there will also be an emphasis on sustainability. The project website will be updated and linked to both myFNSCloud (community of practice) and FNS Cloud (cloud solution) for the first time, creating a seamless experience for user communities. Key messages have been extended to include more details about key exploitable results, and these will be further elaborated as the Demonstrators are optimised.

In addition, consideration will be given to what can be maintained after funding, whilst not imposing a burden on beneficiaries that are willing to support unfunded activities.

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