



FNS – Cloud

Food Nutrition Security

Food Nutrition Security Cloud

Deliverable 7.1

eLearning

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1 Publishable summary

The overarching purpose of FNS-Cloud is to contribute to defragmentation of European food-related research, so research data, tools, and services can be accessed and re-used by user communities. Fragmentation of the research infrastructure is reflected in the lack of provision of training, education and support for user communities and disparity in access to these resources.

This Deliverable described development of eLearning and accreditation of course/ modules to meet a variety of user communities' needs including

1. Training (eLearning) on data management and exploitation
2. Bespoke eLearning on FNS-Cloud tools and services
3. Introductions to user FNS-Cloud cases, field labs, and demonstrators
4. eLearning on project management and reporting (internal only)
5. Professional development of user communities

Some of these (Introduction to Open Science, GDPR in research, Licencing for re-use) have been initiated during Period 1 and modules/ courses are available on the FNS-Cloud Community of Practice (CofP), myFNSCloud. Others will be addressed as outputs from Tasks and WPs become available during Periods 2 and 3. myFNSCloud is currently restricted to beneficiaries but will be open to user communities beyond FNS-Cloud in a phased approach from late 2021. The Deliverable also describes the accreditation protocols that have been developed to enable learning achieved through these courses to be acknowledged and ECTS points awarded within the academic framework used by Universities throughout Europe.



2 Introduction

2.1 Objectives of WP7 and how they relate to FNS-Cloud objectives

The overarching purpose of FNS-Cloud is to contribute to surmounting food-related European research fragmentation, so FNS data, tools, and services can be exploited by user communities under FAIRer principles. To enable this, a cloud solution (FNS Cloud) is appropriate because as it will reduce development and production costs and enhance informed consumer choice. However, such accessibility can only be achieved fully if FNS data, tools, and services have appropriate corresponding resources to provide technical and operational know-how for users from a range of disciplines and areas of the value chain.

Training, education, and support needs to be easily found, just-in-time learning and contribute to professional practices of user communities. Fragmentation of the research landscape is mirrored in the lack of provision of training, education, and support for user communities. A recent review of the training landscape across Europe, carried out by the ESOC Training Working Group, identified the need for a shared glossary of terms and a competency framework, given the diversity of backgrounds, disciplines, and processes used. A call was also made for the acknowledgement and coordination of regional/ thematic/ EU competence centres defined as, *“a shared hub of expertise offering leadership in adopting FAIR and open science principles and implementing the corresponding practices, coordination and cataloguing services to connect relevant people, guidance, learning resources and curricula.”*

FNS researchers require a similar collation of training and education opportunities. However, this process must be careful not to reproduce the wealth and range of existing training, but instead must review and curate the best available in the area, which is directly related to the effective use and development of FNS Cloud. WP7 is responsible for the development of this training, education, and support and curation of these resources in an accessible form. WP7 objectives which allow it to achieve this purpose are:

- (a) Create and launch an FNS-Cloud Community of Practice (CoP), managed via the project website (WP6) and a repository populated with eLearning and social media designs and tools.
- (b) Develop sustainable method(s) for capturing knowledge created in routine use of FNS-Cloud, so it is accessible and user-friendly for the CoP and new users.
- (c) Provide a rolling programme of work- based learning, skill-based training, knowledge-based education, and practical support (helpdesk), building capacity amongst food and nutrition security (FNS) individuals and communities, leading to improved professional practice, increased awareness of the benefit of open research data, and exploitation of food research data resources.

This work package is working closely with all beneficiaries to identify content and opportunities to enhance skills and build capacity for FNS Cloud user communities. These activities include design and delivery of eLearning that will be curated within the FNS-Cloud Community of Practice (myFNSCloud), promoting collaboration, and sharing of results and expertise. Other WP7 activities (e.g., work-based learning) are described in D7.2 Period 1 Report on WBL training, internships, events and CoP whilst this one (D7.1) focuses on the **FNS-Cloud eLearning Catalogue, listing and describing these resources, their development and future planning for the benefit FNS Cloud user communities.**



2.2 Purpose of this deliverable

This Deliverable is a report about the eLearning activities within the project, and those to be developed for FNS Cloud user communities in the future, which are listed within the FNS-Cloud eLearning catalogue.

More specifically:

- Section 2: Introduction to the FNS-Cloud objectives and WP7 contributions
- Section 3: Background information about the FNS-Cloud training, education, and support strategy
- Section 4: FNS-Cloud eLearning strategy
- Section 5: Activities delivered by FNS-Cloud (WP7) during Period 1(M9-18)
 - Full list of training, education, and support (Appendix I)
- Section 6: Status of the training, education, and support eLearning and resources allocated
- Section 7: Reports on the engagement by beneficiaries, wider user communities, and recommendations for Period 2 (M19-36)
- Section 8: Catalogue of eLearning resources for development during Period 2 (M19-36) and Period 3 (M36-48)
- Section 9: Conclusions, recommendations, and planning



3 Training, eLearning, and education strategy

The strategy developed by WP7 beneficiaries (UWTSD, EuroFIR, EFF, ILSI, RTDS, QIB) to address the aims of the project and needs of user communities was to design a range of activities (Figure 1: WP7 cycle of development and review of learning activities), including workshops, eLearning, work-based learning (WBL), conferences, and accreditation (for participation). Each was designed to address specific learning objectives and are curated via the FNS-Cloud Community of Practice (CoP) platform, which during Period 1 was accessible only to the consortium. This was a deliberate decision that it allowed WP7 to create, test, and launch content with a defined user community who were generally supportive before releasing robust and successful outputs to the wider FNS research user communities.

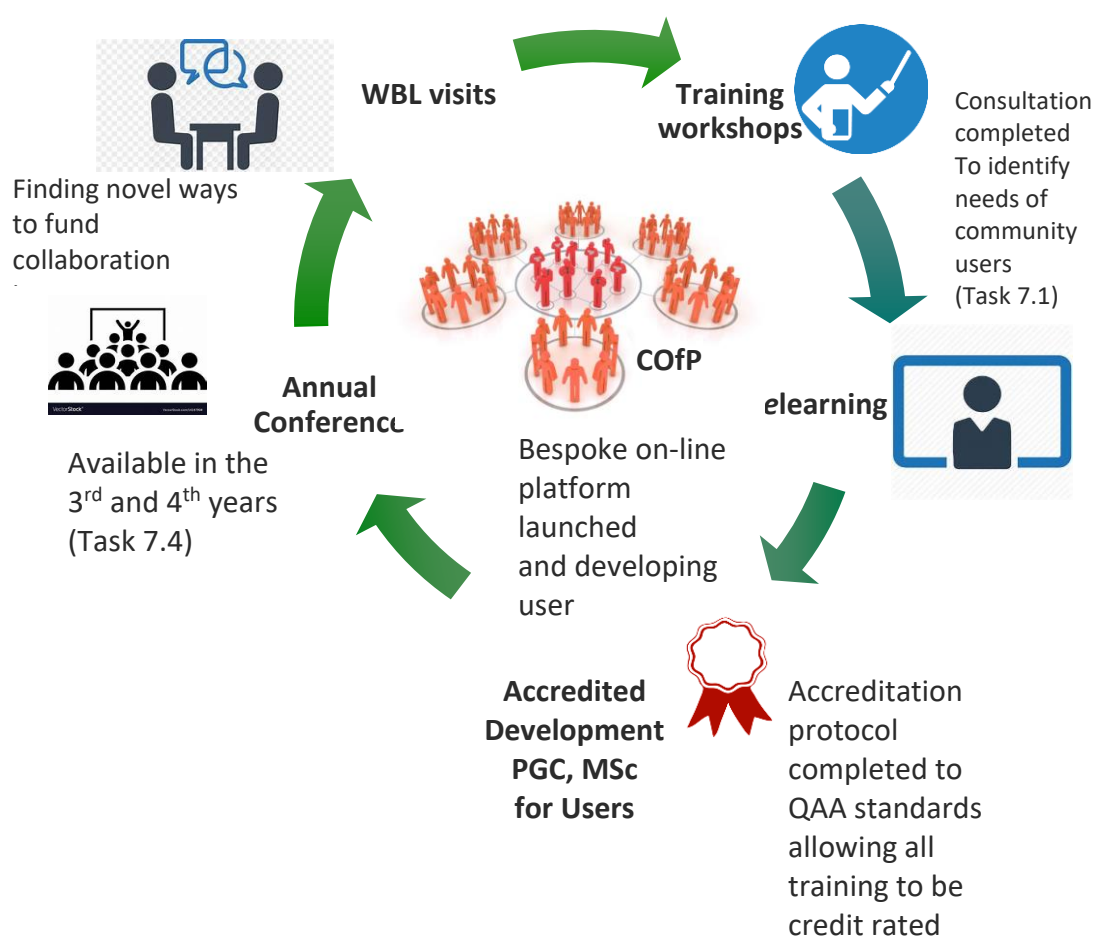


Figure 1: WP7 cycle of development and review of learning activities

This deliverable concentrates on the development of eLearning resources and their presentation in the FNS-Cloud eLearning Catalogue for user communities including beneficiary. It also describes accreditation protocols that have been developed to enable eLearning to be acknowledged within an academic framework. Other elements of the strategy are covered in Deliverable 7.2.

4 Collaboration with other WPS and Other Project/networks

Clearly, FNS-Cloud eLearning resources must be designed in collaboration with the Task and WP leaders who are creating project outputs. These outputs are predominantly tools, datasets, processes, use cases, field labs, and demonstrators. In addition, there is value in creating resources that detail and expand upon underpinning concepts and models that have been employed to develop FNS resources and inform their use. Examples include the choice of data storage and construction of the FNS Cloud catalogue.

This collaboration has been facilitated through:

- Visits (virtual) and interviews with Task and WP leaders during Period 1 (M8-18) to identify existing and emerging outputs, their forms, and what training, education, and support needs are appropriate to support use and future exploitation for FNS research by user communities.
- Follow up survey at M22 to identify any further development and required resources.

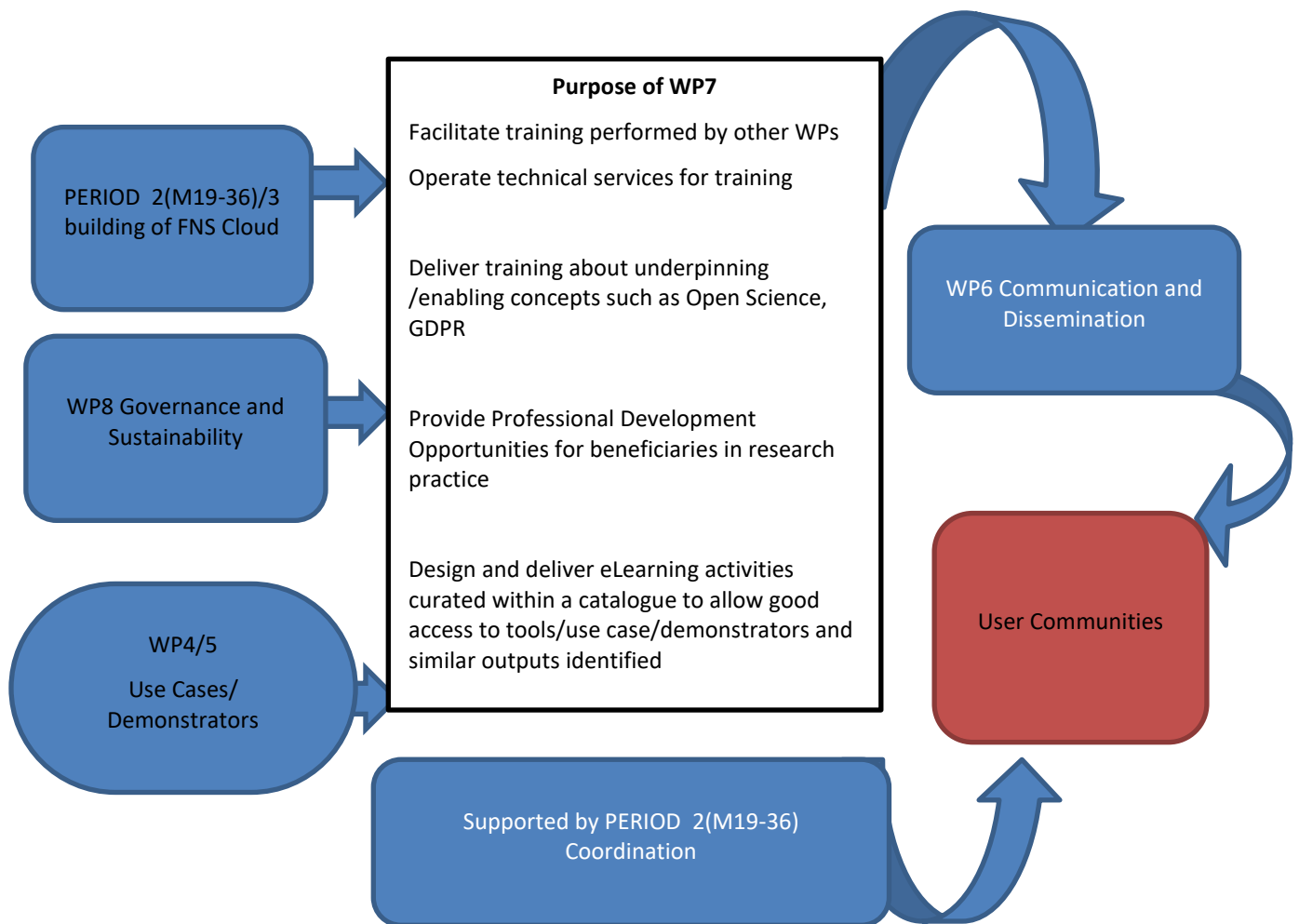


Figure 2: Collaboration Strategy Adopted by the WP

4.1 Training and eLearning development process

The first part of the eLearning development process was a consultation exercise with FNS-Cloud beneficiaries. Task 7.1 organised six 30-minute interviews with 10 individuals leading use cases or demonstrators during September-October 2020. These guided interviews focused on what general or introductory (e-)courses on Open Science and the FNS-Cloud would you like to take and what courses do others need to take to use your tools/use cases and demonstrators. Results from these interviews identified gaps and training, education, and support needs for the first period of the project.

The graphic below was generated using NVivo 12 qualitative analysis software following inductive coding of the 2600-word interview transcripts.

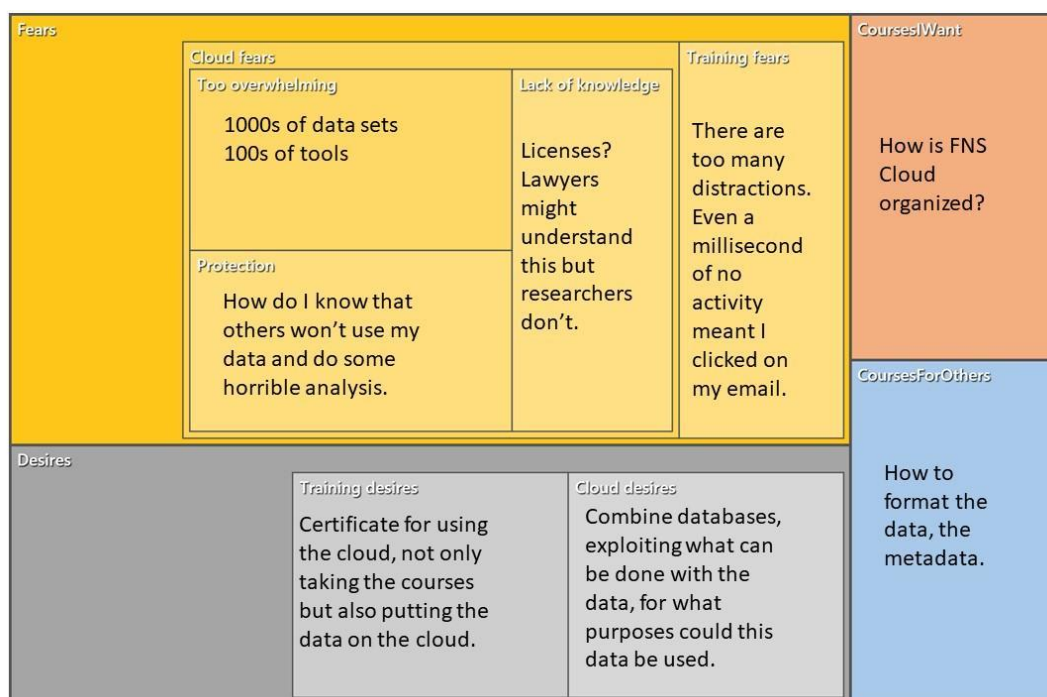


Figure 3: Thematic Analysis of Consultation Interviews

The graphic shows that fears were the most common sentiment expressed, specifically about training and the Cloud. Text in the yellow boxes shows representative remarks in each of the four fear categories. Desires were also a common theme, again about training and the Cloud, and text in the grey boxes shows representative remarks in these areas. Finally, interviewees gave specific input to the questions, naming courses they would want to take and courses they think others would need. The two boxes on the right give the titles of a representative course in each category.

The interviewees provided 37 course titles (Appendix 2) which, by inductive coding, were grouped into three categories: FNS-Cloud Basics (11 titles), Data (18 titles), and FNS-Cloud Connections (8 titles). Course ideas for FNS-Cloud Basics included understanding what the cloud is, how it is organised, and how to find information. The Data courses were about uploading data, protecting uploaded data, and finding others' data. In Connections, other initiatives such as GitHub and Elixir, were suggested. The Courses identified as appropriate for user communities were less numerous and were suggestive of less consideration at an early stage of the project. Subsequent consultations with beneficiaries through a survey and analysis of



presentations at consortium meetings have confirmed and expanded upon topics of interest (full description to follow further analysis) and, thus, have informed the initial draft eLearning Catalogue (Appendix 3).

Once topics were identified, online courses were developed using the eLearning platform Articulate Rise, following the process identified in Figure 4. As discussed previously, it is clear (through EOSC and similar) that there is fragmentation of training and education within the sector, so it was decided that all training, education, and support developed within FNS-Cloud should NOT seek to reproduce existing resources in the public domain, but curate courses that identify best practice and exemplars.

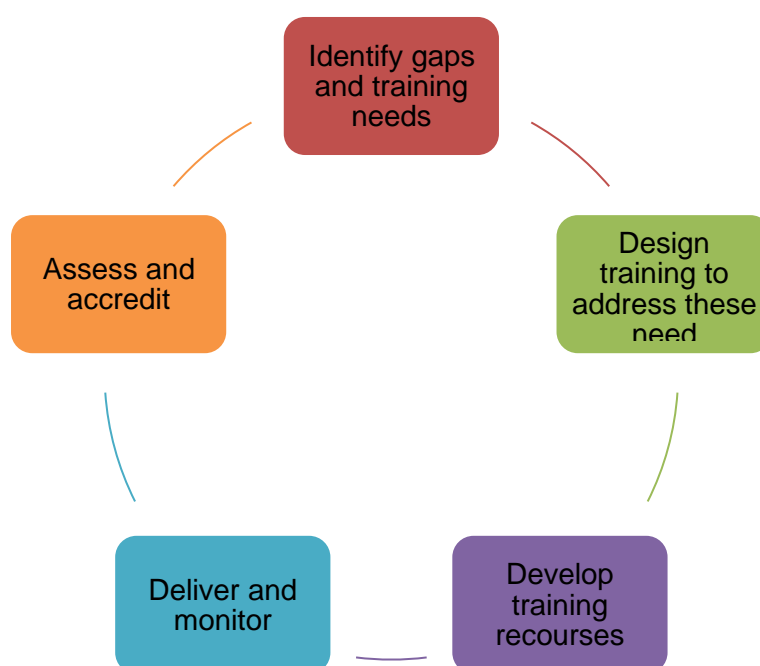


Figure 4: Assessment of Need, Design, Development, Delivery, and Accreditation

Completed eLearning is published on myFNSCloud (Community of Practice). The original intention with WP7 eLearning was to generate interactive manuals and similar technical support resources specific to FNS-Cloud datasets, tools, and services. This would allow user communities to engage in ‘just in time’ learning about protocols and procedures for effective use of the FNS Cloud. This would not require external monitoring of completion or details concerning who had taken it. However, with the advent of COVID-19 public health restrictions, eLearning substituted face-to-face training, education, and support and these activities are part professional development that can be used towards higher education credentials (see below).

As such there needs to be appropriate monitoring of the use and completion of the courses.

4.2 Recommendations for Period 2 (M19-36)

- The eLearning design process has been effective in delivering resources in a timely and efficient manner. Participant feedback on the aesthetics of the platform identified it as provided a stimulating and attractive environment. However, it does not include the capacity to monitor completion or collate user feedback. This was not an issue when considering eLearning resources that are a substitute to or in addition to technical manuals for example but needs to be developed for eLearning that is part of the professional development of individuals. Such monitoring is also required if eLearning is to be part of an accredited provision that will contribute to a university credential. Use of Google metrics and other monitoring tools will be explored in Period 2 (M19-36) and appropriate provision made for the eLearning resources.
- Activity during Period 1 (M9-18) across all WPs concentrated upon initial tasks to develop outputs underpinning FNS Cloud. Outputs will increase as the project progresses. It is, therefore, essential for consultation on eLearning to continue as new outputs become available. Thus, the eLearning Catalogue (Appendix 3) is a living document that will be modified as the needs of user communities in response to FNS-Cloud outputs become clear and further modules or courses are completed.



5 eLearning outputs – Period 1

After consultation with beneficiaries and our multiplier communities (EuroFIR, ISEKI-FA, EFFoST, and ILSI-EU), the following areas of training, education, and support were identified as being appropriate for development in Period 1 (M9-18) and, potentially, Period 2 (M19-36):

1. Training (eLearning) on data management and exploitation
2. Bespoke eLearning on FNS-Cloud tools and services
3. Introductions to user FNS-Cloud cases, field labs, and demonstrators
4. eLearning on project management and reporting (internal only)
5. Professional development of user communities (Section 6)

5.1 Training (eLearning) on data management and exploitation

The interactive workshops held during the consortium meetings identified there was a dearth of understanding around the issues of Open Data. This led to development of two eLearning modules, one on data management and the other on licencing; these will also be three modules introducing the WP5 Demonstrators. A course on Reflective Practice was introduced to support applicants for WBL Grants.

- **Introduction to Open Science** covers the philosophy, application, opportunities, and issues associated with the move towards open science. While this course is open to anyone with an interest in open science, it is primarily geared towards FNS researchers. The course has six modules [(1) Course Overview; 2) Definitions and Components of Open Science; 3) Opening Your Research; 4). Advantages and Challenges in Doing Open Science; 5) References and Further Information and 6) Rate this Course] and takes about an hour to complete. It was available in January 2021 and has been accessed by 74 beneficiaries (w.e.f. 31.08.2021).
- **GDPR** summarises the protections issues that should be considered in the data cycle. This course has nine modules [1)- Personal data and how to protect them; 2) GDPR-compliant data is necessary for data to be Open and FAIR; 3) GDPR in the data cycle - Planning; 4) GDPR in the data cycle - Collection and Input; 5) GDPR in the data cycle - Processing, Management & Transformation; 6) GDPR in the data cycle - Dissemination or Output; 7) Legal requirements; 8) References and further information and 9) Rate this course] and it takes 90-180 minutes to complete, depending on how many links are followed. This course was available in April 2021 and has been accessed by 23 beneficiaries (w.e.f. 31.08.2021).
- **Licensing** is under development with WP8 and WP1, as an eLearning course and a series workshop. The course is expected to be available from September 2021 [1) Copyright, open licensing, and database rights; 2) What is an open data license? 3) What kinds of CC licenses are available? 4) How and why to choose an open data license; 5) The benefits of an open data license; 6) Open data licenses and attribution; 7) References and further information and 8) Rate this course].



6 eLearning during Period 2

During Period 2, additional eLearning modules will be delivered based on FNS-Cloud outputs. Thus, it is not possible to identify fully the type of resource, design, or content until the work is further advanced. However, it is clear there are needs around FNS-Cloud tools and Services (WPs 2-3) and Use Cases, Field Labs (WP4) and Demonstrations (WP5).

6.1 Bespoke eLearning on FNS-Cloud tools and services

WP2 is implementing core FNS-Cloud components, so Services (WP3), Use Cases (WP4), and Demonstrators (WP5) can be integrated to support FAIRification. WP2 needs comprehensive guidelines/ recommendations for data access and sharing, some of which may be delivered as eLearning modules or courses. Similarly, WP3 is developing services that will integrate with FNS Cloud and the Services will support standardisation and interoperability of data from other sources. To that end, WP3 is also developing advanced methodologies for handling and exploring heterogeneous FNS data. eLearning will enable user communities to understand better and feel confident about exploiting these sophisticated approaches.

Thus, potential eLearning modules and courses include:

- FNS Cloud catalogues: Exploitation of FAIR data sources and services (WP2, WP3, WP6)
- FNS-Cloud data requirements and pre-processing (WP2-3)
- FNS data curation and annotation (WP2-3)
- FNS data mapping, matching, and merging (WP2-4)
- FNS data analysis and visualisation (WP2-3)

6.2 Introductions to user FNS-Cloud cases, field labs, and demonstrators

WP4 is using nine use cases and field labs to help make existing and emerging FNS data FAIRer, generating proof-of-principle data where none exists, and testing the FNS-Cloud infrastructure, tools, and services. More specifically, the use cases are using existing FNS data to develop a food traceability & metrology search engine (milk, olive oil, fish), food labelling data and reformulation tools, total diet studies risk assessment tools, food intake, consumer behaviour & lifestyle mapping tools, merging strategies, data quality and usability assessments, and a type 2 diabetes and hypertension risk assessment tool. Likewise, the WP4 field trials are using emerging data or gap filling to develop novel dietary intake and behaviour tools, a meal planning app, identify healthy diets for healthy microbiome, and deliver an alert classification system for food-diet-drug interactions (IMDEA, ES). For future exploitation, each of these tools, appropriate datasets for inclusion and interrogation, and interpretation of the results must be explained, and eLearning is an obvious solution. Similarly, WP5 will bring datasets and new knowledge, tools, and services together to answer research questions around agri-food (DEM01: traceability, metrology, labelling, (re)formulation, and benefit:risk), nutrition and lifestyle (DEM02: intake, behaviour, purchase, preparation, consumption, and composition), and non-communicable diseases and microbiome (DEM03: healthy diets,



healthy microbiome, risk for T2D, food-drug interactions), which are highlight sophisticated novel approaches. To ensure that access and exploitation is FAIR and user communities confident in their use, WP7 will co-develop eLearning modules/ course for the tools and demonstrators.

At this point in the FNS-Cloud timescale the eLearning Catalogue should be considered a 'living' document that will continue to evolve during the life cycle of FNC-Cloud.

6.3 Professional development of user communities

- **eLearning on Reflective Practice**

WBL grants were made available to beneficiaries as part of the training, education, and support offer focusing on professional development and collaborative learning. These grants are allocated on competitive application and require individuals to evidence critically reflective engagement with their professional development and contributions to project outcomes. An eLearning course introducing reflective practice was produced to support these applications (see D7.2 for details).

- **Professional Development of FNS Researchers**

The dominant descriptive framework used across Europe for professional development is VITAE (2010, see Deliverable 7.2). It identifies 12 major competencies across four domains covering research governance and organisation, personal effectiveness, knowledge and intellectual abilities and engagement, influence, and impact. Competencies are presented as a maturity model with indicative abilities for the five phases of career development from novice researcher/student to seasoned professional/ research leader. Using this framework, a series of online events have been developed for beneficiaries, whilst they are unable to take up face-to-face WBL Grants. A consultation on aspects of the framework would be useful for early and mid-career professionals in FNS-Cloud was undertaken with beneficiaries during the M18 consortium meeting. A series of workshops covering personal management, community engagement, project management and qualitative analysis of data have been planned and eLearning will be developed from these resources.



7 Accreditation of training, education, and support

To facilitate organisation and delivery of training, education, and support for improving skills and confidence among FNS user communities, an initial set of resources, tools and services were provided and exploited by WP7, including a dedicated eLearning platform, a bespoke Community of Practice (myFNSCloud) to enhance collaboration and curate resources in the FNS-Cloud eLearning Catalogue, and a process by which those completing the training, education, and support can achieve ECTS credits.

7.1 eLearning platform

Articulate Rise was chosen to enable building of responsive eLearning courses. Using the latest web technologies, Rise 360 automatically adapts courses for every device and orientation responsively, without the need for manual adjustment. With the vast array of devices that might be used to access the FNS-Cloud courses, it was important to ensure user communities are able to access the modules/ courses without needing to download anything extra software: Articulate Rise only requires a web browser, meaning everyone with a smartphone, tablet, or computer (PC or Mac) are able to access the modules/ courses.

The software allows access to 7+ million images that are royalty-free, with no cost and no attribution required, as well as several screen templates for learning, interactive, and quiz type screens, such as interactive sorting, labelled graphic, process, timeline, accordion blocks, multiple choice, multiple response, fill-in-the-blank, and matching quizzes. With WP7 working virtually, it was also important to be able to share content for review and feedback, and Articulate Rise has allowed this to occur seamlessly.

7.2 Community of Practice - myFNSCloud

myFNSCloud was developed as a 'knowledge hub and repository' for FNS-Cloud resources. Currently, it is restricted to beneficiaries but will be open to all user communities from autumn 2021 in a phased approach starting with FNH-RI and Elixir Food and Nutrition Community.

myFNSCloud specific purpose is to:

- Provide just-in-time information and data enhancing access and re-use of food data within Europe
- Enable access and sharing of training, education, and support achieved by user communities
- Support WBL routes to established and recognised postgraduate qualifications
- Host a range of fora (online, real-time, f2f, and group)

myFNSCloud will be the repository of the FNS-Cloud eLearning Catalogue and other resources (see D7.2).

7.3 Accreditation of training provision for ECTS credits

Consultations with FNS-Cloud beneficiaries identified that individuals who undertake training, education, and support require measurable acknowledgement of their work, preferably one that reflects the depth and range of learning achieved. The European Credit Transfer and Accumulation System (ECTS) is a tool in the Bologna Process for making courses more transparent. It helps individuals to move between countries and have their academic qualifications and study Periods recognised. Credits taken at one higher education institution count towards qualifications at another. The credit system enables recognition of learning based



on defined outcomes and associated workloads. ECTS credits have been adopted by most countries in the European Higher Education Area as the national credit system and is increasingly used elsewhere. Conventionally, allocation of credits to a specific course has been restricted to those developed and delivered within the university system through a validation process. This restricts allocation to university providers and not courses run by specialist providers (e.g., clouds or competency centres) outside the HEI system. Within WP7, a more accessible system has been developed that allows allocation of credits to modules/ courses that are provided outside of the HEI sector, whilst still maintaining the high-quality oversight and monitoring to ensure that standards of provision and assessment are not compromised.

Details of the process – **Accreditation Process for Non-University Learning and Development Programmes** – are in Appendix 1 with reference to generic HEI committee structures found in the UK, but these can be mapped across other European university governance systems. The process undertakes a review of due diligence for providers organisations, reviews and validated provision and assessment against generic descriptors and, finally, provides an external examiner for monitoring of submission standards. This Accreditation process has several benefits for training, education, and support within FNS-Cloud:

- 8 All eLearning can be ECTS accredited providing a clear benchmark of learning expected
- 9 Individuals can choose not to take the assessment but those that do will receive the credits
- 10 FNS-Cloud credit count towards university credentials

7.4 Recommendations for Period 2 (M19-36)

Development of training infrastructure was appropriate in response to the need for online delivery during 2020-2021. Although it is hoped that public health restrictions will be lifted over the coming year, there are distinct advantages associated with delivery online, not least that these can be more recorded for future use and time investment for participants and tutors is reduced. Therefore, it is expected that development of online tools will continue in parallel and allow a more 'blended approach' with face-to-face engagement reserved for discussion and critical engagement, as opposed to knowledge transfer, which can be achieved through eLearning. The FNS Cloud eLearning Catalogue is, therefore, expected to contain descriptions of this blended provision as well as the eLearning courses whether developed by FNS-Cloud or other providers.

The accreditation process has also not been exploited fully, as the availability of training, education, and support has been limited, as expected for Period 1 (M9-18). As provision develops within Period 2 (M19-36), eLearning resources will be reviewed to ascertain if they are appropriate for accreditation and post graduate certification validated to allow accreditation. The assessment of accreditation potential will be available within the FNS Cloud eLearning Catalogue to support selection of an appropriate bundle of courses towards credentials, which can be weighted towards specialisations or more general underpinning courses.



8 Current engagement and the enhancement strategy

The focus of Period 1 (M9-18) was development of WP and task strategies, development of internal WP communication, and the establishment of reporting practices and management systems. Coupled with the COVID pandemic, this has resulted in less cross-WP engagement than might have been expected. The CoP was piloted with beneficiaries, but participation to date has been relatively low, as the outputs of the product were still in the pipeline. Introduction to Open Science was released in January 2021 on myFNS Cloud. Since then, 78 people have accessed the course. Additionally, an unsolicited request to use the course as a university teaching aide was received from IMDEA in spring 2021. Twenty-two students participated and, in a final round of questions, they were very positive and *“learnt things they didn't know in advance and that usually are not covered in regular education.”* The researcher commented, *“Congrats for all the job and the course! It is very useful for teaching.”* GDPR (Data Protection in the Data Cycle) was released in April 2021 on the My FNS Cloud site and has been accessed by 28 FNS-Cloud individuals.

8.1 Recommendations for Period 2(M19-36)

The CoP was piloted with FNS-Cloud beneficiaries during Period 1 but here is now a growing number of resources. These are sufficient to allow myFNSCloud to be made available to user communities in a phased approach (see Section 7.2). The training, education, and support envisaged in Period 1 (Task 7.1) and WP6 will be used to introduce myFNSCloud to other communities and share other training, education, and support resources as they become available. This will drive development of the profile of FNS Cloud amongst user communities. This phased release of myFNSCloud also required that contact is maintained and developed with user communities, such as EOSC and similar, which will be facilitated by WP7 within multipliers (EuroFIR, EFFoST, ILSI-EU, and ISEKI-FA) whose associations include FNS and ICT researchers.



9 Future use of the FNS-Cloud eLearning Catalogue

As identified previously, the focus of Periods 2 (M19-36) and 3 (M36-48) will be development of online resources to enable FNS user communities to access just-in-time learning. These resources will be on myFNSSCloud or hosted elsewhere and accessed via either myFNSSCloud or the FNS Cloud (cloud solution) catalogues. The FNS-Cloud eLearning Catalogue will allow these resources to be easily found and accessed.

FNS-Cloud eLearning Catalogue (Appendix 3) is currently categorised into the following four sections:

- **Resources on underpinning concepts** for all user communities and introduces concepts such as GDPR, Open Science, and Licensing. Modules/ courses are designed to ensure that all the operational principals of FNS Cloud are well understood by all users.
- **Using FNS Cloud** provides 'know how' on the operational aspects of working with the cloud solution, such as using catalogues and will be particularly useful to new users from all disciplines.
- **Introductions to tools, user cases and demonstrators**, again provide 'know how' on the operational aspects of working with FNS Cloud and will be particularly useful to new users from all disciplines.

It is envisaged that these categories will develop further as FNS-Cloud outputs become available.

9.1 Recommendations for Period 2 (M19-36)

As identified in previous Sections, Period 2 requires engagement with Task and WP leaders over the next six months to plan eLearning development for the remainder of the project. This has been initiated and will be undertaken in collaboration with T7.1, so that training, education, and support for FNS-Cloud user communities raise the profiles of these resources. As engagement increases, it will be possible to obtain feedback on design, fitness for purpose, and allow identification of further needs.



10 Appendix 1 Accreditation Process

Accreditation Process for Non-University Learning and Development Programmes

**Prepared within the Governance
structure of UWTSD but applicable
within HEIs across Europe**



Process for Accreditation of Non-University Learning Provision

1. Qualifying criteria and supporting evidence

i) Sector-specific or skills-based courses

The criteria relate to the level of learning and volume of credit that could be awarded:

- Learning and development courses must be at levels 4-7
- Learning and development courses must have the potential to be accredited at a minimum of 20 and a maximum of 40 credits.

Supporting evidence

Applicants are required to provide information to support their application for accreditation. This evidence will demonstrate that the level and amount of credits applied for are correct, and that the structure, content, delivery and assessment satisfy academic quality standards. This will help to ensure that learners can expect a positive learning experience.

The evidence that is required is specified in the application form/s AC2a/AC3a (Appendix 1).

Additional information required

Applicants are also required to demonstrate legal, financial and academic due diligence, and to provide relevant information as specified in the Due Diligence Form C3A (Appendix 2). In addition, applicants should provide copies of their following policies:

- Health and Safety Policy, and any relevant risk-assessments
- Diversity Policy
- General Data Protection Regulations Policy
- Safeguarding policies (where relevant)

2. Procedure for Accreditation of Commercial Learning Programmes

Step 1

Initial contact and exploratory discussion between potential client and accreditation tutor arranged.

Step 2

If client decides not to progress no further action is taken, otherwise, the proposal is discussed in more detail and advice is given on completing the proposal forms (AC2/AC3 and C3A)

Step 3

Client completes and submits the proposal forms to the nominated tutor

Step 4



Proposal is reviewed by the nominated tutor, and where amendments are necessary or additional information required, referred to the applicant who will be invited to amend and re-submit.

Step 5

The tutor checks and submits the proposal forms AC2a/AC3a and C3a to the Head of Quality. Where the applicant organisation is seeking approval to incorporate academic programmes into the Professional Practice Framework, as in 3 and 4 in table 1 above (using shell modules) with a bracketed title e.g MA in Professional Practice (xxxxx), the tutor will also complete and submit the internal document PV1a for approval by SMT.

A copy of AC2a/AC3a is sent to the Head of Collaborative Partnerships.

If SMT approval is given form C3a is forwarded to the Head of Collaborative Partnerships.

Step 6

The Head of Collaborative Partnerships will arrange internal scrutiny of the information in relation to legal, financial, and academic aspects of the proposed accreditation partnership. The findings of the due diligence process are reported to the Due Diligence Standing Group for consideration.

Step 7

The detailed programme information is presented to the RPEL/Accreditation Board for scrutiny and initial approval of level and credit value, following which the programme information is presented to the Academic Standards Committee for final programme approval through the Chair. The Academic Standards Committee will either approve or ask for further information until it can approve.

Step 8

The IHM Head of Quality notifies the Head of faculty, and the accreditation tutor will notify the organisation of the decision, whether the application is approved or not.

Step 9

An “Agreement for the Supply of Services” (hereafter “The Agreement”) is signed by the applicant and the University, and the specific sub-set of the University’s Register of Collaborative Partnerships is updated by the Collaborative Partnerships Office. The Agreement will be subject to Review every five years.

Step 10

Forms Schedule 1 – Service Level Agreement, and Schedule 2 – Costs, are completed and sent to the accredited organisation.

Step 11

Programme is implemented. A faculty tutor is appointed to oversee the accreditation. Their tasks will be to:

- meet the accredited client to go through the “Handbook – a guide for accredited providers”, the SLA and Costs,
- initiate an invoice for accreditation fees.
- support client trainers and/or assessors in assessment methods and practice



- arrange Moodle training.
- review a sample of the submitted work by the students on the accredited provision and submit it to the RPEL/Accreditation Board for scrutiny as identified.
- monitor the course/programme in accordance with procedures as set out in AQH Chapter 4.6 and 4.8.3 and 4.8.4
- liaise with the lead on the accredited provision in relation to all matters pertaining to the accreditation and academic standards.
- report annually to Senate, via IACPC, on its operation.

Step 12

Following annual review, where it becomes apparent that an articulation should not continue, due to changes that affect the delivery or the programme, concerns regarding the delivery of the programme, or because the anticipated number of students has not materialised, steps will be taken to terminate the partnership as outlined in the Agreement.

3. Programme support

i) Delivery and assessment

To maintain academic standards and quality of provision, WAPPAR tutors will support client trainers and/or assessors where necessary. This will include training in assessment methods and practice

ii) Programme/material development

WAPPAR tutors can provide support with developing the client programme or materials as required. This includes arranging the development of Moodle pages for academic courses with access for the provider and their learners (for which there will be a charge).

iii) Monitoring

Monitoring is a requirement of the agreement, and depending on the nature of the client programme, will involve feedback from learners, review of assessments, verification, and moderation of assessed work. University processes for sampling and verification of assessed work will apply, as specified in Chapter 4 of the AQH

4. Programme administration processes

4.1 In house and sector-specific commercial courses

Following approval of the proposed training course/programme the organisation now referred to as the “provider”, will complete a registration process (format of their own choosing) which must include full names and dates of birth of all learners. A copy will be submitted to the WAPPAR accreditation administrator.

The provider will submit a Scheme of Work with specified dates for taught sessions and submission of assessments



The provider will submit an assessment plan for each course/programme

The provider will also maintain a record of attendance for every taught session.

The provider will submit a summary sheet of results for all assessments including referrals

The accreditation administrator will maintain close contact with the provider and ensure that all documentation is submitted appropriately and on-time.

4.2 Academic Courses/programmes

These will be incorporated into the Professional Practice Framework. The provider administration will be specified in Schedule 1 Service Level Agreement and in accordance with university registration and submission processes.

5. Certificates for accredited courses

In-house and sector-specific commercial courses

On successful completion of accredited learning course/programmes, learners receive certificates (which are approved by the University as confirmed by the RPEL/Accreditation Board) from the provider stating the courses' level and credit value.

6. Accreditation Period

Accreditation will be awarded for a Period of five years, after which, if the client wishes to continue, an application must be made for re-accreditation. This will ensure that standards

are maintained and that training courses/materials and practices remain current and relevant. Re-accreditation will involve the submission of an application form, an updated portfolio and a review with the accreditation tutor. Applications will be submitted to the RPEL Board for approval.



Form C3a

Client Proposal for Accreditation

This proposal for Accreditation is for clients (e.g. employers, sector bodies, commercial training and development organisations) who wish to accredit sector-specific or generic courses that are not linked to UWTSD validated programmes. Distinguishing characteristics of this provision include:

- **Teaching.** Delivery of the learning experience will be undertaken by the client.
- **Enrolment and Registration.** The learners will be enrolled on the UWTSD Student Record System (SITS), but instead will be registered as external learners. Learners will receive a transcript stating the credits achieved.
- **Programme or Module Learning Outcomes.** The learning outcomes are developed by the client (see later section) and agreed by UWTSD, i.e., not associated with UWTSD modules.
- **Assessment.** Learners undertake assessment designed and first marked by the client (not linked to validated modules). UWTSD moderates the assessment.
- **Exam Board.** The RPEL and Accreditation Board considers the assessment (oversight by EE associated with claims for non-standard applications for credit).

OVERVIEW OF THE PROPOSAL	
Course Title	
Total number of course credits	
CQFW level of client's course	

CLIENT PROFILE (to be completed by the client after consultation with the UWTSD adviser)
Client name and address
A. Background information
1. Description of the applicant organisation, to include: date established; legal status (with supporting documentation); private or public sector; size; organisation and management structure.
2. Summary of mission, values, and development plans
B. Academic background
1. Brief details of Client's training/professional development activities, e.g. scale, scope, audience/target group(s)
2. Client's existing relationship with the University (if any)
3. Summary of experience in delivering higher education programmes, and details of any UK universities or accrediting bodies with which the organization has had a partnership during the last 10 years
4. List of academic programmes offered over the past 3 years, with details of language of provision, student numbers and any partner institutions or accrediting bodies
5. Details (with supporting documentation) of any reports on the organisation by relevant government, statutory and accrediting bodies (or equivalent) in the past 3 years
C. The proposal
1. Reasons for proposing accreditation, especially relationship to client business objectives
2. Envisaged or actual start date
3. Mode of delivery (e.g. seminar, presentation, workshop)
4. Audience/target group (admission requirements, selection methods)

5. Duration of activity (hours) <ul style="list-style-type: none"> a. Formal contact hours b. Estimated other relevant participant activity c. Total guided learning hours (a) + (b)
6. Estimated learner numbers involved per cohort and number of cohorts
7. Estimated frequency of delivery (e.g. once only, quarterly, etc.)
8. Content: append a copy of the detailed course outline/syllabus; example of programme materials issued to participants; specify ownership of copyright to programme and course materials
9. The proposed language of (i) delivery and (ii) assessment
10. Client programme learning outcomes: identify what the participant who successfully completes the activity will know and be able to do (must be approved by UWTSD)
11. Assessment of outcomes <ul style="list-style-type: none"> a. detail method(s) used (e.g. oral, written, report, project) b. assessor(s) c. procedures to ensure assessment quality control (e.g. verification of assessment brief, first and second marking or moderation process, estimated sample size, etc.)
12. Resources: <ul style="list-style-type: none"> a. Staffing – the number of training and support staff and their names, academic qualifications and employment status (i.e. whether they are full- or part-time); details of their teaching/training/assessing experience b. Facilities – classrooms/workshops/training venues and learning support materials and equipment available to support the proposed programme(s) of study
13. Staff development and appraisal arrangements
14. English/Welsh language proficiency of staff and students, if appropriate
15. Any other information relevant to the proposal (Adviser to append Client's publicity materials etc).

Declaration

I declare that all information provided in this application is correct and true to the best of my knowledge and belief

SIGNATURE OF CLIENT: _____ **Date:**

Name (please print):

Title:



Form CP 3A**Due Diligence (accreditation of commercial learning programmes)****A Legal and Financial Due Diligence**

In addition to Proposal Form PL2B, the applicant is requested to supply the information listed below. The information should be sent with the accompanying documentation to the University. The documents should be indexed to correspond with the numbering used below.

Where the information to be supplied may constitute “personal data” or “sensitive personal data” pursuant to the General Data Protection Regulations 2018, the applicant is asked to ensure that, unless appropriate consent has been obtained from the data subject, the data is anonymised prior to its supply.

- 10 A copy of the constitutional documents for the organisation, for example Articles of Memorandum for a Limited Company (incorporating any amendments which have been made) (with English translation where appropriate) notarised where appropriate.
 - Confirmation of the solvency of the organisation to include audited accounts for the last three years.
- 11 Details of any state or public sector funding applicable to the organisation
- 12 Details of any contracts with third parties which may confer rights on those parties in relation to the accreditation proposal
- 13 A list of the names and qualifications of the Directors and/or senior managers of the organisation.
- 14 Details of the organisation’s arrangements for intellectual property rights.
- 15 Details of any quotations or tenders which the organisation has submitted which are relevant to the proposal.
- 16 Copies of all permits, authorities, registrations, licences, approvals and consents (whether granted by public or private authorities or otherwise) held by the organisation and necessary to carry on both the work of the organisation or the proposal
- 17 Details of any of the following which is current, or which is known to be pending threatened or possible in relation to the organisation or the proposal partnership.
 - any litigation or arbitration proceedings (whether as claimant or defendant);
 - any prosecution; and
 - any investigation or inquiry by a governmental or official body.
- 18 Details of all relevant grants, loans, payments or allowances taken out by or granted to the organisation in relation to the proposal.



- 19 Other than as required elsewhere in this questionnaire, please provide details of any liabilities which are relevant to the organisation or the proposal.
- 20 Details of any data protection requirements relevant to the organisation or the proposal.
- 21 Copies of the reports of any inspections that have been carried out on the organisation by relevant external bodies over the last five years.
- 22 A list of any academic colleges or universities with which the organisation already has a partnership arrangement.

B Academic Due Diligence

In addition to scrutiny of the Profile Document, the academic due diligence will be based on, but not necessarily limited to, the following enquiries, which will be undertaken by the University:

- Enquiries directed to all other UK universities and colleges with current (and, where appropriate, previous) partnerships with the organisation, requesting comment on their experience of working with the organisation.
- Scrutiny of the organisation's website and other publicly available information, to ascertain whether it appears generally accurate and of an appropriate quality.
- Scrutiny of all marketing materials to be used in promotion of accredited programmes
- Reports published by QAA and other relevant external bodies, either relating directly to the organisation or to its relationship with other UK institutions.
- In respect of UK organisations, confirmation of UK Visas and Immigration licence status.



11. Appendix 2 Course titles provided within WP and Task Leaders consultation

<u>FNS-Cloud Basics (11)</u>	What is the content of the FNS Cloud?
	What is FNS Cloud?
	How is FNS Cloud organized?
	How could I take advantage of each of the tools that are available?
	FNS cloud road map
	How can I benefit from the FNS cloud? What is there for me?
	The architecture of the cloud.
	Community of the cloud. How do I contribute, how does the community work?
	How to search effectively on FNS cloud
<u>Data (18)</u>	What type of data are there?
	Who can upload and where?
	Can I use the cloud to do analyses?
	How to load data and share data while protecting data
	What data should I share, how do I do it?
	Sharing my data: my rights and responsibilities
	A database of useful data sets.
	Classification of data in FNS cloud.
	What is data mapping/coding?
	How to map/code your dietary intake data so that it can be uploaded
	How can you find a dataset?
	What can you get out of this data, what questions can you answer with this data?
	Concepts of dimensions: how to use it for effective data searching.
	To demonstrate that FNS cloud can handle and connect all types of data.
	Best practices on how to formulate consent for a study that collects multiple data. How to make the proper consent form so that data can be shared on the FNS Cloud.
<u>FNS-Cloud Connections (8)</u>	Will the cloud be connected to other resources e.g., elixir?
	Learning to use GitHub
	Where are others going with their research. Want to hear the new ideas.
	How open access conditions will evolve.
	Access to calculation tools.
	Training in software, software hosted by rvm.
	Training to use the tools, not so much for the data.
	How does it all come together; what topics are related

12 Appendix 3 Initial draft of FNS Cloud eLearning/online Catalogue

No	Title/ Author	Description	Learning Outcomes/ Curriculum	User Level *	Target Users
Resources on underpinning concepts					
1	An Open Science Taster	Webinar of a recorded workshop/eLearning	<ul style="list-style-type: none"> Definitions and Components of Open Science. Opening Your Research; Advantages and Challenges in Doing Open Science 	General	External
2	GDPR	Workshop/eLearning	<ul style="list-style-type: none"> Personal data and how to protect them. GDPR compliant data is necessary for data to be Open and FAIR. GDPR in the data cycle - Planning. GDPR in the data cycle - Collection and Input. GDPR in the data cycle - Processing, Management & Transformation. GDPR in the data cycle - Dissemination or Output. Legal requirements 	General	External and internal
3	Licensing	Workshop/eLearning	<ul style="list-style-type: none"> Copyright, open licensing, and database rights. What is an open data license? What kinds of CC licenses are available? How and why to choose an open data license. The benefits of an open data license. Open data licenses and attribution 	Intermediate	External and internal
4	Reflective Practice	eLearning	<ul style="list-style-type: none"> What is reflective practice and its benefits Models of reflection Application within professional development 	General	Internal
5	Sustainability in the context of FNS Cloud	Structured Blog	<ul style="list-style-type: none"> What do we mean by sustainability? What are the roots of the concept and how can they be applied to FNS Cloud 	General	Internal and external
Using FNS Cloud					
6	FNS Catalogues	Collection (WP 2(M19-36))	<ul style="list-style-type: none"> Catalogues - a searchable inventory of FNS resources (datasets, tools and services) Central platform - a hub for FNS 	General	Internal and external

			specialists and stakeholders to find and access relevant resources and (in the future) access the Community of Practice		
7	Data Requirements and applicability Criteria	eLearning with illustrative case study (D3.1.4.1)	<ul style="list-style-type: none"> Recommendations from FNS Cloud as to how data should be presented for each target audience 	Intermediate	Internal and external
8	The FNS methodologies for data preparation, analysis and visualization (WPERIOD 3(M36-48))	tbc	<ul style="list-style-type: none"> To be confirmed 	Intermediate	Internal and external
9	Submission of Meta Data	tbc	<ul style="list-style-type: none"> Infrastructure for the submission of metadata about research to the FNS Cloud directly and through external sources 	Intermediate	Internal and external
Introductions to Tools, User Cases and Demonstrators					
10	Meet the Demonstrators		<ul style="list-style-type: none"> General introduction to the demonstrators and their aims 	General	Internal and external
Using the Tools					
11	Network Analysis**	eLearning	<ul style="list-style-type: none"> Using network analysis to study the molecular and regulatory mechanisms involved in inflammatory bowel syndrome 	Intermediate	Internal and external
12	Pathway Analysis Practical**	eLearning	<ul style="list-style-type: none"> Pathway analysis helps you to interpret the data in a biologically meaningful context. We will use the data from the Inflammatory Bowel Disease Multi Omics Database. 	Intermediate	Internal and external
13	FNS-Cloud Tools for Analysis of Dietary Intake Data	Webinar On-line Manual (Field lab 1, Demo 2)	<ul style="list-style-type: none"> Specific dietary intake assessment statistics 	Intermediate	Internal and external
14	Production chain datasets search app	On-line manuals (T4.1)	<ul style="list-style-type: none"> visualisation of production chains for fish, milk and olive with their definitions and relevant datasets with a search functionality 	Intermediate	Internal and external
15	TDS app for the public	In-app manuals (T4.3)	<ul style="list-style-type: none"> a responsive web app for customers who would like to learn more about the food they consume and get informed how 	General	Internal and external

			to make healthier choices in the context of food risks (contamination)		
16	Demonstrator (5.4.2)	In app manuals (5.4.2)	<ul style="list-style-type: none"> Tool for type-2 diabetes and hypertension risk assessment and personalised dietary and lifestyle feedback 	General	Internal and external

*(general, expert, or intermediate)

** Developed by Lauren Dupuis Maastricht University

