

MEET-CINCH

(Project Number: 754 972)

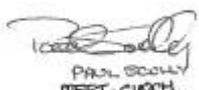
DELIVERABLE D2.4

Potential options for design and hosting of an e-learning platform

Lead Beneficiary: NNL

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EXECUTIVE SUMMARY

This report summarizes the main information about the design and hosting options of the MEET-CINCH “VET e-shop” platform as a follow up to its functional requirements. In addition, options dealing with implementation of NRC Training Passport as a result of MEET-CINCH Consortium discussion are included. Overall, the e-shop concept is presented, its current status and future plans are summarized.

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1 INTRODUCTION

The emphasis of WP 2 is to extend the number and availability of nuclear chemistry training courses, either through the development of new course material or developing further those that were produced in previous CINCH courses to be more readily available and accessible by non-academic end-users within the European Community.

Making these courses available and accessible is a key element of the CINCH e-learning platform “CINCH VET e-shop”.

The concept of such a platform stems from the need to showcase both the existing and newly developed CINCH courses. Furthermore, there exists the potential to broaden the catalogue of nuclear chemistry courses by including courses available from NRC Network participants and other interested third parties (institutes, universities or even companies).

The first stage on the way to the new “CINCH VET e-shop” has been the *definition of functional requirements* (available in DELIVERABLE D2.3 *Functional requirements for the MEET-CINCH e-learning platform*).

The next stage is focused on evaluation of hosting options and design requirements, which will be based on NNL and CTU ideas and suggestions and critical discussions during the MEET-CINCH M18 project meeting at CEA in Autumn 2018. Discussion centered on two aspects, which would influence the functional as well as design and hosting requirements:

- The expected outcome of this task will be a concept for the ongoing sustainability of the e-learning platform (including its management and hosting) beyond MEET-CINCH.
- The possibility to create and host the electronic Training Passport (web database – based on the conclusions of CINCH-II D2.5) as a part of the CINCH e-shop should be investigated.

2 CINCH VET E-SHOP CONCEPT DEVELOPMENT

During the discussion of the various functionalities, some suggestions from the MEET-CINCH consortium were pointing to potential changes in functionality, which would influence the terminology, the design and its content. The main points were:

- There was a strong feeling within the consortium that the platform has the potential to be more than the term “e-shop” suggests. Terms such as “broker”, “signpost” or “catalogue” were suggested, whereas “MEET-CINCH VET portal” maybe the most appropriate.
- The “Training Passport” functionality was broadly seen as a positive addition to the concept, but it was felt that the term “Passport” could be misleading in terms of its status. A passport is a significant document that entitles the holder access arrangements, whereas the intention within the project is to assist mobility by serving as a document / evidence portfolio that an end-user could use to assist in getting access to facilities. Therefore, it should be titled as a training evidence folder or course order history or similar. In simple terms, this is considered as a sustainable bolt-on to the VET portal that requires no management or offers any professional or statutory assurances. The functionality will be therefore limited to storing course order history for courses ordered through the portal, with the option to upload certificates awarded – this could extend to certificates awarded for successful completion of NRC courses outside of the portal.

2.1 “e-Shop” hosting requirements

Hosting requirements are largely constrained from the functional requirements and the need to be sustainable beyond the end of MEET-CINCH.

Financial dependencies play a significant part in whether something is sustainable or not, so a paid commercial service will be more difficult to substantiate as sustainable beyond the end of the project.

A platform capable of managing financial transactions would require management and therefore be more difficult to sustain. The principle was agreed that the platform becomes a brokerage site that catalogues the courses available and then directs the end-user to the course provider to book on to course (and make payment if necessary).

Furthermore, the e-shop should not maintain an alternative database of course data but it should rather function as an “on-the-top platform” accepting data from the platforms of individual course providers, presenting them to the future trainees and directing the interested trainees to the providers. The functionality and availability of the e-shop should be independent on MEET-CINCH project to support sustainability requirements.

The following fundamental hosting requirements were identified:

- Low maintenance with low or zero cost
- Hosted at public, commercial provider independent server / domain.
- The hosting server has to support programming environment allowing easy platform development, user management, and uploading of user materials. The combination of Apache+PHP+SQL, which the current alpha-version is using, is considered industry standard and shall be easily obtainable.
- The place should support protection for personal data storage, if any.
- Support for small and simple database may be required for storing information about courses completed by registered users, if the user wants so.

With the respect to the above items, unification with CINCH graphical and programming environment may be favorable.

2.2 “e-Shop” design requirements

The following conclusions follow from the discussions carried and the following design requirements were identified:

- Title of the portal has to be the dominant item of the heading, advertising the page. This presumes attractive and informative title.
- Logos and design should follow CINCH trademark and relation to the NRC Network.
- Small explanatory slogan/subtitle will be appreciated thus increasing direct impact to the page visitors.
- Full introduction and information about the portal have to be provided, most likely in the “About” or “Scope” sections of the menu.
- Responsivity of the design will be of high importance fully related with functionality and capability of the programming environment.
- In case of user accounts available, the link to the privacy policy should be available all the time and stressed during creating the account.
- Fancy and modern design will improve user comfort as well as proper placement of the active elements of the layout (filters, buttons, text fields etc.).
- For the courses, simple procedure of adding the new course should exist, optionally with the possibility to edit them by their responsible providers.

With respect to the above defined requirements, current layout will be redesigned and several versions will be created and tested to find optimum solution.

2.3 “e-Shop” Concept

Based on the discussions between the NNL and CTU, a concept has been developed which is considered to meet the requirements of the functional specification as well as an integrated track of a NRC training course portfolio. Through its development as part of the project, there are no commercial fees or costs and thereby fulfilling the requirement as a sustainable entity. Costs are likely to be limited to its hosting on a server – presently it is hosted on a server owned and maintained by CTU at no cost, and other NRC members could potentially offer to host the platform in the future.

The alpha version of the platform is located <http://radchem.s0c4.net/>

Sample screenshots are presented as follows:

Network
Nuclear and Radio Chemistry

Operated by meet cinch

Course topics

- [Fundamental nuclear chemistry](#)
- [Applied nuclear chemistry and radiochemistry](#)
- [Radiation chemistry](#)

NRC Passport login

Email:

Password:

Login to NRC Passport

Forgotten password?

My selection
0 courses

<http://radchem.s0c4.net/index.php>

Any type

Any exam

Any time

Search...

Any provider

[Clear filters](#)

CINCH Vocational Education and Training (VET) e-shop

was developed and launched within the H2020 Euratom Fission 2016-2017 project MEET-CINCH – A Modular European Education and Training Concept In Nuclear and RadioChemistry (CA 754972, 01/06/17 – 31/05/20). This new platform was designed to provide easy access to and details of, including periodicity and pricing, of all courses brought at least to a pilot level during the CINCH-I (Coordination of education In Nuclear Chemistry, Euratom FP7 2007-2010), CINCH-II (Cooperation in education and training In Nuclear Chemistry, Euratom FP7 2010–2013) and the MEET-CINCH projects. The main objective of this project series has been to mitigate the effects of the decline of number of staff qualified in nuclear chemistry in Europe. The CINCH VET e-shop is a platform that is expected to be a major contribution to the sustainability of the results achieved in all the mentioned projects.

However, the ambition of this platform is greater than indicated above – it aims at becoming a platform where all providers of courses in the field of nuclear and radiochemistry can advertise and offer their VET / CPD courses. The successor in the operation of this e-shop is assumed to be the European Network on Nuclear and Radiochemistry Education and Training (NRC Network) nrc-network.org – an informal organisation of providers and users of education and training in NRC – that has been initiated by the CINCH project series partners. To have your course implemented on CINCH VET e-shop, please contact the site administrator.

Fig 1: Main page of the alpha version of the e-shop. On the top row, there is a menu for filtering courses by their type, on the left side by their content.

Network
Nuclear and Radio Chemistry

Operated by meet cinch

Course topics

- [Fundamental nuclear chemistry](#)
- [Applied nuclear chemistry and radiochemistry](#)
- [Radiation chemistry](#)

NRC Passport login

Email:

Password:

Login to NRC Passport

Forgotten password?

My selection
0 courses

Hands-on

Any exam

Any time

Search...

Any provider

[Clear filters](#)

FREE **Paid** **Supported**

Usage of FDG for Medical Imaging	
2018-06-24	Martin Sacha
Hands-on in Detection of Ionizing Radiation	
2018-03-22	Mojmír Němec
Hands-on Radiochemical Methods	
2018-02-01	Mojmír Němec

Fig 2: List of available courses based on selection criteria. The user can filter the list further down.

The screenshot shows a web interface for course selection. At the top left, there is a logo for 'Clear and Radio Chemis'. Below it, under 'Course topics', are links for 'Fundamental nuclear chemistry', 'Applied nuclear chemistry and radiochemistry', and 'Radiation chemistry'. To the right, there are filter dropdowns for 'Any type', 'Any exam', 'Any time', and 'Any provider', along with a search bar and a 'Search' button. A 'Clear filters' link is also present. Below the filters is a red dashed box containing the course details for 'Hands-on in Detection of Ionizing Radiation'. The details include a course description, an outline of exercises, goals, start date (2018-03-22), lecturer (Mojmír Němec), course code (UOH-15DEIZ), price (0), and host institution. A red 'Subscribe course' button is at the bottom of the details box. On the left side, there is an 'NRC Passport login' section with fields for email and password, and buttons for 'Login to NRC Passport' and 'Forgotten password?'. Below that, it says 'My selection 0 courses'.

Course topics

[Fundamental nuclear chemistry](#)

[Applied nuclear chemistry and radiochemistry](#)

[Radiation chemistry](#)

NRC Passport login

Email:

Password:

My selection
0 courses

Any type ▾

Any exam ▾

Any time ▾

Any provider ▾

Search...

[Clear filters](#)

Hands-on in Detection of Ionizing Radiation

Course description: The lecture is a practical introduction to fundamental principles of detection of ionizing radiation (IR), interaction of IR with matter, and functionality and settings of particular types of detectors and detection systems.

Outline:

Outline (exercises):

1. Plateau and dead time measurement of the GM and scintillation detectors.
2. Measurement optimisation in gamma scintillation counting.
3. Study of the statistic character of radioactive decay.
4. Liquid scintillation counting 1+2 - measurement of alpha na beta emitters.
5. Methods of neutrons measurement.
6. Dose and dose rate determination with Fricke dosimeter
7. Determination of radionuclides in environmental samples with high resolution gamma-ray spectrometry.
8. Alpha spectrometry

Goals: Students will get knowledge about principles of the detection of ionizing radiation, they will also get competencies to correctly choose and to set detection system for various types and energies of radiation including interpretation of the results.

Start date: 2018-03-22
Lectures given by: Mojmír Němec
Course code: UOH-15DEIZ
Price: 0
Host institution: [Hands-on in Detection of Ionizing Radiation](#)

Fig 3: Detail of selected course, where the user can see the syllabus, start date, tutor and/or respective institution, price and other details.

3 CONCLUSIONS

The second stage on the way to the new “CINCH VET e-shop” – *concept development* – has been reached. The draft concept was developed in the interaction between CTU, who is responsible for this task, and NNL as the WP2-responsible. The first functional pre-alpha version, its content, functionality and design were discussed during the Autumn 2018 (M18) MEET-CINCH meeting.

The e-shop will be titled more appropriately such as training catalogue or portal.

The training passport will be titled more appropriately such as a NRC training course portfolio or similar.

It is recommended that the CINCH VET e-shop will be designed and programmed in line with these requirements. An alpha-version of the e-shop with limited functionalities and not-optimised structure of courses is available at <http://radchem.s0c4.net/> (January, 2019).