

IMI2 Project 802750 - FAIRplus  
FAIRification of IMI and EFPIA data

## WP4 – Communication and outreach to FAIR data user community

### D4.1 Description of the objective evaluation criteria for the application review

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## 1. Executive Summary

In order to increase all aspects of data discovery, accessibility and reusability, FAIRplus is launching a unique Fellowship Programme. By pooling PhD and/or postdoc students from Life Sciences departments of affiliated academic institutions with expert partners from SMEs, the programme provides an opportunity for researchers to build FAIRdata research groups in the field of FAIR data management. The programme is designed by the FRAUNHOFER INSTITUT FIT and implemented by selected FAIRplus partners. The purpose of this Fellowship Programme is to intensively train eligible PhD and/or postdoc students together with industry partners (from the EFPIA and SME network) in FAIR data management procedures. An increased knowledge transfer for FAIR data transformations will naturally lead to a wider sharing of best practices, greater opportunities for innovation, and more insights that can benefit the whole of society. The Fellowship Programme is - until further notice - scheduled to be active until the end of 2021.

The following report provides an overview of the FAIR Fellowship Application Process, eligibility, preliminary application deadlines, information about the evaluation process as well as the evaluation criteria of both candidates and the selection of suitable project data sets.

## 2. Methods

The FAIRplus Communication and Outreach Team, identified the fellowship procedure, eligibility, and criteria for successful candidates and projects as well as timeframes and deadlines. Regular meetings were scheduled between the Project Lead and other group members in order to discuss the main procedures and election criteria via email and telephone.

**Table 1.** Fellowship Programme Team

Contact person	Institute
Andreas Pippow (M)	FIT Fraunhofer
Franziska Kroh (F)	FIT Fraunhofer

## 3. Results

The results accomplished are as follows. Note: a thorough description of the application procedures and deadlines, and the project criteria will be published on the FAIRplus website in order to attract potential candidates interested in FAIR data management project work.

### 3.1. The FAIRplus Fellowship

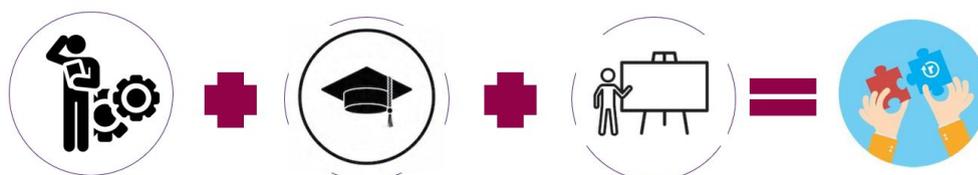
The fellowships are awarded with the aim to promote intensive knowledge exchange between the FAIRplus project team, the European Federation of Pharmaceutical Industries and Associates (EFPIA) partner companies as well as the small-to-medium enterprises (SME) and affiliated academic partners. Fellows, who successfully concluded the programme, will be able to confidently distribute their FAIR data knowledge and thereby become FAIRplus Ambassadors within their own organizations and beyond. The FAIR Ambassador Scheme will be elaborated on at a later stage in the project.

### 3.2. Fellowship Capacity

Over the period in which the fellowship scheme is carried out, FAIRplus will be able to cover costs for a total of four academic fellows. Additionally, EFPIA staff will actively participate in the Fellowship Programme; based on the results of an explorative poll it is estimated EFPIA will be able to contribute with approximately eight fellows in this programme, bringing the total to 12.

### 3.3. Application Process

During the three months Fellowship Programme period, formal and applied training will cover the theory of FAIR processes as well as the application of FAIR tools and workflows. The FAIRplus Fellowship Programme consists of different stages, the last one being the presentation of a specific FAIRdata problem and its practical resolutions with the help of FAIRplus tools. The picture below illustrates the stages:



**Figure 1.** Stages of the FAIRplus Fellowship Programme. Stage 1: Identification and definition of problem-based FAIRdata scenarios. Stage 2: Problem-based peer-training. Stage 3: Presentation and evaluation of FAIRdata solutions.

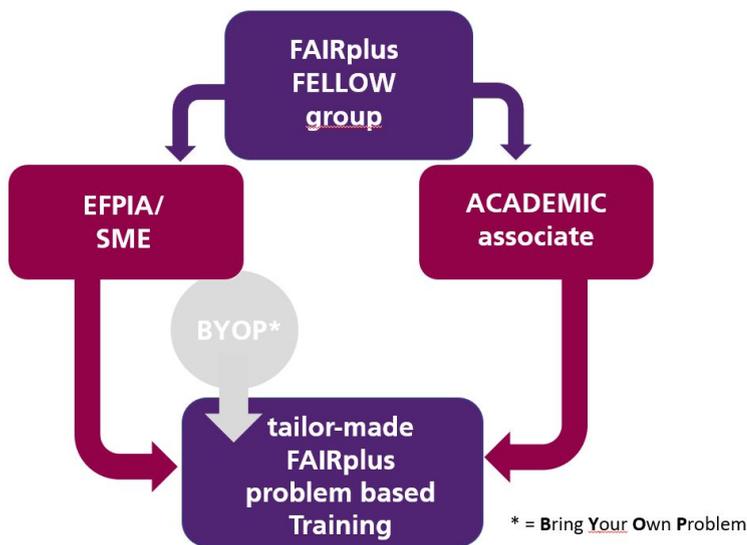
The fellowship scheme is open for applications from three groups:

- A) EFPIA partners
- B) SME partners
- C) and affiliated academics, e.g. PhD students and postdocs

Figure 2 below illustrates the three groups being represented on two sides: a real-problem/real-case side (EFPIA and SME) and an academic-theoretical side (academic associates).

A FAIRplus jury will evaluate all submitted problem-based FAIRdata scenarios from group A and B as well as CVs and profiles from group C. The jury consists of two independent experts who are appointed by the FAIRplus Scientific Industry Advisory Board (SIAB) to evaluate the applications on its behalf. The SIAB monitors the evaluation process to ensure objectivity of the scoring and equal treatment of the applicants. Selection criteria are described in further detail for each group below.

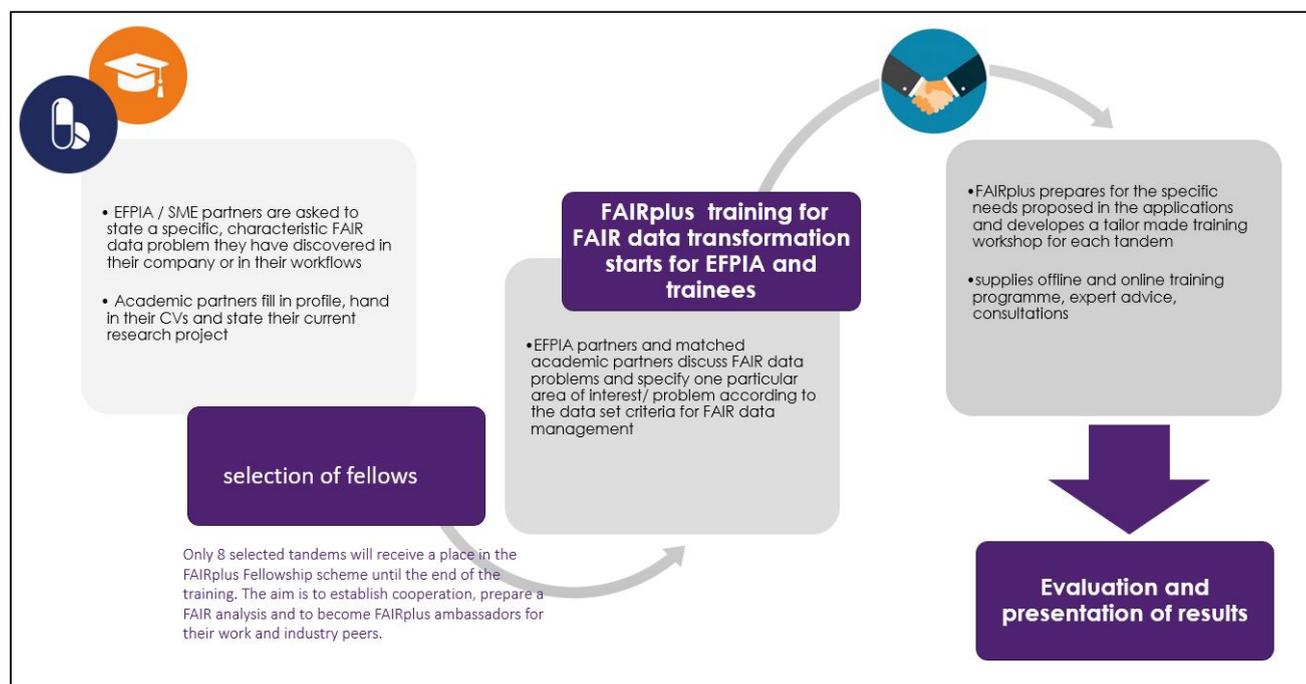
After the selection, a total of 8 different problem scenarios are matched with 8 academic or SME candidates exclusively on the basis of the interests and experience stated by EFPIA, SME partners and academic partners. After a total of 8 teams are pre-selected by the coordinators of the Fellowship Programme (lead by the Fraunhofer Institute FIT), the matching partners will be notified. This two-step selection process ensures significantly higher quality of the training by matching the content to each fellow's problem-case scenarios and research interest.



**Figure 2.** Fellowship Collaboration Model

Digital training courses, supported by online coaching, introduces successful candidates to the FAIR standards over a period of three months. During this time, all fellows will collaborate closely with each other and apply their joint knowledge and hands-on experience from the workshops to their previous stated relevant and real-life case scenarios. Meetings on-site should be able to lend support to all fellows in reaching substantial insights in FAIR data management problems. The importance of this pre-selection should become clear once more in the flowchart below. At the end of the course, fellows are required to present their FAIRification project results to representatives from the FAIRplus consortium. They thereby demonstrate their capability of acting as a FAIR data expert. The successful candidates are awarded with

a certificate from representatives of the FAIRplus consortium.



**Figure 3.** Detailed flowchart of application process

## 3.4. Eligibility

### 3.4.1. Who is the ideal FAIRplus fellow?

Eligible FAIRplus fellows come from three different backgrounds: the European Federation of Pharmaceutical Industries and Associations (EFPIA), project affiliated small-to-medium sized enterprises (SMEs), and associated academic scholars, such as PhD students, post docs and other research staff in general. In addition to that, suitable candidates have to be on par with the following requirements:

### 3.4.2. Requirements for EFPIA fellows

- working for an EFPIA and being well informed about the data management processes within the organization
- interested in FAIR data management and able to describe a strong case example of a real FAIR data problem

### 3.4.3. Requirements for SME fellows

- working for an SME and being familiar with the data management processes within the organization
- interested in FAIR data management and able to describe a strong case example of a real FAIR data problem

### 3.4.4. Requirements for academics

- researchers with a strong background in data management/ analysis and a strong interest in FAIR data processes
- researchers, with a current research project that fits the programme content and goals

The image below demonstrates again the future fellows' background and the additional requirements. Please note here: All participants need to be affiliated with a FAIRplus project partner.

## What is a FAIRplus Fellow?

### Who can participate

- **affiliated** project- partners  
European Federation of Pharmaceutical Industries and Associations (EFPIA) representing the pharmaceutical industry operating in Europe
- **affiliated** medium - sized enterprises (SMEs)
- **associated** academic scholars (PhDs, post docs, researchers ...)



### Requirements

#### EFPIA partners:

- everybody, who is working for an EFPIA and is very familiar with the data management processes within the organization
- everybody, who is interested in FAIR data management and can (to an extent) describe a strong case example of a real FAIR data problem

#### SME partners:

- everybody, who is working for an SME and is very familiar with the data management processes within the organization
- Everybody, who is interested in FAIR data management and can (to an extend) describe a strong case example of a real FAIR data problem

#### ACADEMICS

- Interested researchers with a strong background in data management and a huge interest in FAIR data processes
- researchers, with a research project that fits the programme content and goals

**Figure 4.** What is a FAIRplus fellow

The eligibility requirements for both, firstly real problem cases and secondly, academic research projects, are reviewed in two separate steps by the FAIRplus jury (appointed by the SIAB) and applications are accepted accordingly.

The requirement profile is expressed in the form of criteria against which the applications are scored. Scoring is performed by two independent examiners that are provided by the consortium. Each criterion will be scored on a scale from 0 to 5 in accordance with regulations of the European Commission<sup>1</sup>.

<sup>1</sup>[https://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/from-evaluation-to-grant-signature/evaluation-of-proposals/elig\\_eval\\_criteria\\_en.htm](https://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/from-evaluation-to-grant-signature/evaluation-of-proposals/elig_eval_criteria_en.htm)

## 3.5. Evaluation criteria

### 3.5.1. EFPIA and SME partners

FAIRplus will award fellowships only to those EFPIA and SME applicants who state a specific problem related to the described data criteria.

#### Criterion 1: Relevance to FAIR data management

An exposé describes a relevant FAIRification problem that can be addressed using the methods and procedures developed, or to be developed, in FAIRplus. This problem is detailed in clear FAIRification objectives and goals.

#### Criterion 2: Feasibility of the project

The exposé is credible with respect to the described FAIRification goals. The goals are realistic with respect to availability of data, competencies/support available for FAIRification, and in timelines (can the proposed project be completed in the available time).

#### Criterion 3: Data access and data description

Access to data is realistic and in line with FAIRification goals. Basic knowledge about data is proven. The exposé describes realistic access to the needed experts. Feasibility of the project is compatible with legal and ethical obligations.

FAIRplus will award fellowships to EFPIA and SME partners only if an eligible candidate is able to fully describe a real FAIR data management issue according to the questions below. Further, EFPIA and SME fellows have to be willing to share this description and the evaluation of their problem with affiliated FAIRplus partners, in order to instigate (cognitive) insights into FAIR data process obstacles and issues.

FAIR data management questions:

#### 1. FAIRification Goals

- Which dataset do you plan to FAIRify?
- Why do you plan to FAIRify the dataset (value/relevance of the dataset)?
- What is the expected outcome of the FAIRified dataset?

#### 2. Dataset description

- How would you describe the dataset that is to be FAIRified?
- How is metadata to this dataset provided (i.e. in what structure)?
- Who produced the data set?
- Who was included in the data production and do they have legal access to the data?

### 3. Dataset access description

- How is data access for FAIRification ensured?
- What type of license is placed on the data?
- On which hosting platform are you going to provide the data for FAIRification?
- Who will be the users of the data set, and how is their access guaranteed?
- Is (part of) the data set sensitive or does it contain personal data? If yes, how are all legal obligations secured?

### 4. Competency description

- Is there someone in the company who can take over the responsibility of mentor and partner ('buddy') for the fellow? If yes, what is their role in the data generation process?
- To what extent are the following stakeholders available for the FAIRification project: data owner, data generator, domain expert?
- How are key decision makers interested in using the FAIRification results?
- How do they support this project?
- What are your learning objectives in this project?

#### 3.5.2. Candidates from affiliated academic institutions

FAIRplus will award fellowships **only to those** who are in addition to the above mentioned programme entry requirements:

- currently employed by **and/or** conducting research in the area of data management/ analysis at a project affiliated university, as listed below:
  - Heriot Watt University Edinburgh
  - Imperial College London
  - Maastricht University
  - Manchester University
  - Oxford University
  - Université du Luxembourg
  - Université Toulouse III Paul Sabatier
- **and/or** enrolled with a relevant PhD or postdoc on data management/analysis in a relevant field of study such as:
  - Life Sciences
  - Bioinformatics
  - IT
- knowledgeable, interested and at best already experienced in data science management and analysis

Eligible applicants must submit a CV together with a project/research description, an online questionnaire, and hand in a minimum of one academic reference letter to the FAIRplus Scientific Industry Advisory Board (SIAB) by 31.03.2020. Successful candidates will be matched with the most suitable EFPIA project partner by the FAIR selection board in the course of the programme.

## 4. Discussion

Completing the programme will enable all successful candidates to work independently as FAIR data advisors. Fellows will achieve a substantial amount of hands-on-practice in the field of FAIRdata and hopefully instigate valuable business exchange and feedback. Industry partners will gain a substantial insight into FAIR procedures and methodologies. With the Fellowship Programme, FAIRplus will be able to establish a pilot phase in which experts from many fields will be able to give insurmountable feedback on the FAIR guidelines and procedures and will be rewarded with a better idea of future training and service ideas.

Over the following six months the Communications and Outreach Team will work towards the deliverables and project objectives, with the main focus being on the finalisation of the Fellowship Application Procedure. Details of the programme will be discussed at a later stage and together with relevant project partners and stakeholders.

## 5. Conclusion

We have seen that creating the FAIRplus Fellowship Programme needs the active support and input from many more Work Packages and cannot be done in isolation. In order to make the programme a success, many big and small decisions must be made in accordance with other work groups and depends therefore strongly on swift, effective communication and exchange.

One of the next milestones will be to develop a suitable learning design for the Fellowship Programme. This process should consist of two pillars: pillar one focuses on the participants and tries to get a good understanding of their problems, knowledge gaps of FAIR data management and their expectations towards the programme. This can be analysed by qualitative data collection (e.g. in the form of interviews).

For the second pillar, we need strong input, support and regular communication with other FAIRplus working groups. In order to develop an encompassing curriculum for all partners, we need the insight of one or more adjunct Work Packages, such as e.g. Work Packages 1 and 2, where tools, workflows and solutions will be defined as a vital part for FAIR data processing. Once the tools, workflows and thematic areas of the

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FAIRplus project are defined, we can build upon these and start designing a course that matches the busy lives and work engagements of all associated EFPIA, SMEs and academic fellows.