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# Project Half Double case study

*Project FEMaLe*

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# 1 Introduction

The purpose of this report is to outline a research project's implementation of the Half Double Methodology (HDM), including how the methodology has been applied and evaluated in research projects. Knowledge is obtained through a detailed data collection process, to examine the implementation and application of HDM in project FEMaLe.

# 2 Project information

Endometriosis is a common disease among those assigned female at birth, where tissue normally lining the uterus grows outside the uterus. It is estimated that around 10% suffer from endometriosis - but only a small proportion of the diseases are reported and treated. This might be due to the stigmatization and normalization of the disease within families and across generations as well as between patients and general practitioners.

The EU-funded **FEMaLe project** will develop a scalable multi-omics platform that converts multi-dimensional population datasets and feeds the information into a personalized predictive model to improve the continuum of care for people with endometriosis. This will enable shared decision making in primary and secondary care as part of a personalized pathway. Furthermore, the project seeks to raise awareness, health literacy, and empowerment with an ultimate objective to improve quality of life in people with endometriosis.

FEMaLe will design, validate, and implement a comprehensive model for the detection and management of people with endometriosis by improving the intervention for people suffering from endometriosis.

### Key figures of FEMaLe (2022):

- Employee count: 40 employees.  
17 partners across 9 countries.
- Coordinator: Aarhus University, Denmark.
- Total Budget: € 5.944.134,50.

# 3 Governance

FEMaLe is an EU funded project under the Horizon 2020 programme (H2020-EU.3.1.4.2.) that runs over a 4-year period from January 2021 to December 2024. The project has a total of 17 partners across Europe (Figure 1) and is coordinated from Department of Public Health at Aarhus University. The team is diverse and includes interdisciplinary researchers, patients, surgeons, software engineers and advanced computer scientists etc.

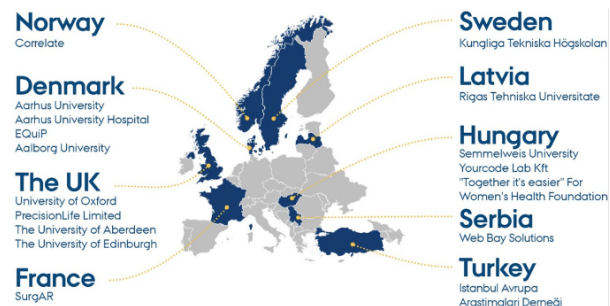


Figure 1: The 17 FEMaLe partners (refer to appendix 1)

The FEMaLe project is divided into 10 work packages (WP), where each of them has its own working areas, such as epidemiology, genetics, technology, mindfulness, and communication. This reflects the overall complexity of the project, where collaboration takes place across WPs and multiple disciplines. The WPs are illustrated in Figure 2. To find more details for each WP, we refer to the project webpage<sup>11</sup>.

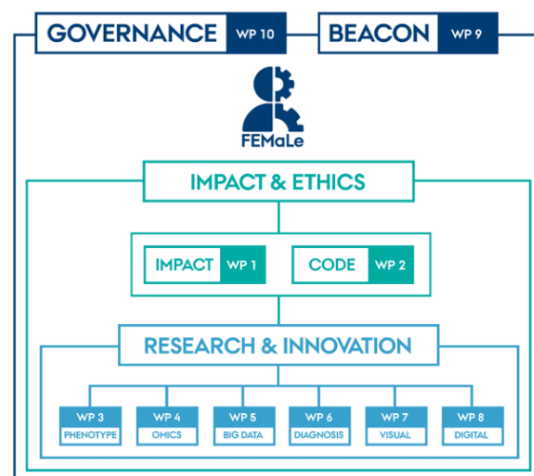


Figure 2: Organizational diagram of FEMaLe (refer to appendix 2)

<sup>11</sup> FEMaLe work packages  
<https://findingendometriosis.eu/about/work-packages/>.

### 3.1 Governance structure

FEMaLe management activities will ensure that the multi-partner and -disciplinary project is properly coordinated and that the work is completed within the terms of the Grant Agreement signed with the European Commission. The Consortium consists of 17 partners from 9 countries.

The FEMaLe project is funded by the European commission (EC), which is why the FEMaLe project has to follow the EC guidelines. This means that we have to ensure to deliver deliverables as promised in the Horizon2020 application and submit it in time. This contradicts with the Half Double concept about focusing on value creation and less on deliverables, because it is necessary that we in FEMaLe deliver the results as promised, which is the 38 mandatory deliverables and 21 milestones.

The organizational structure of the Consortium consists of the following bodies, illustrated in Fig. 3:

- General Assembly is the ultimate decision-making body of the FEMaLe Consortium.
- The two Advisory Boards will assist and facilitate decisions made by the General Assembly.
- The Executive Board is the supervisory body for the execution of the FEMaLe project that reports to and is accountable to the General Assembly.
- Coordinator is the legal entity acting as the intermediary between the FEMaLe Beneficiaries and the European Commission.
- Project Management Office (PMO) assists the Executive Board and the Coordinator daily.

The FEMaLe Coordinator and Project Manager represents the Consortium as a whole and is directly responsible for communication with the H2020 Executive Agency and the Project Officer, including the provision of all technical, financial, and administrative reports.

The PMO supports the FEMaLe Coordinator in the day-to-day running of the FEMaLe project.

The Executive Committee is the body responsible for all project related matters, composed by the WP Leaders, members of the PMO, the PM and, when pertinent, Advisory Board members.

FEMaLe WP leaders meet during bimonthly online meetings in addition to the WP-specific monthly meetings with all WP participants. Leaders and Co-Leaders report on progress, obstacles and resolutions arising during the course of the WP.

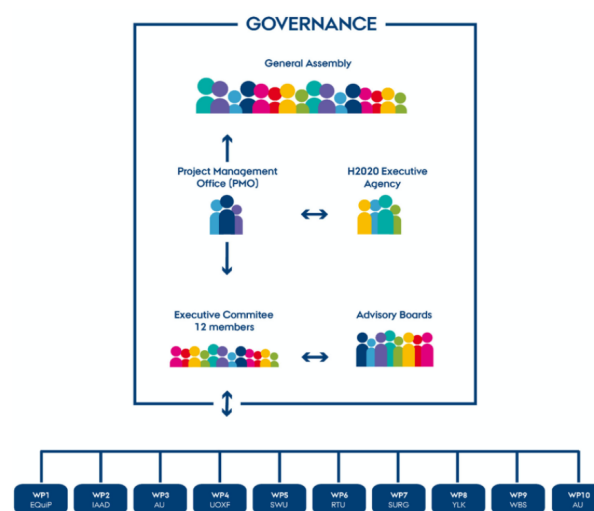


Figure 3: FEMaLe result-driven management framework (refer to appendix 3)

## 4 Implementation of the Half Double Methodology

A core aspect of the HDM is the notion of Local Translation, which is the idea that the methodology must be adopted to fit the organization. As HDM often is used for large organizations and not research projects, FEMaLe focused on how to implement the methodology, including its methods, mindset, and perspective, into a research field. This is in alignment with the methodology, where one of its benefits is the fact that it is designed to be adapted to the organization, its culture, and its systems. The following section will describe how the methods, based on the core elements of HDM, are implemented and used in the FEMaLe project.

## 4.1 Impact

### 4.1.1 Impact case

Very early in the FEMaLe project, Impact Cases (IC) have been developed for each of the 10 WPs. The purpose of the IC is to provide a prioritized overview of the project's business and behavioural objectives to create project value, which includes objectives, success criteria and key deliverables. The IC workshops take place twice a year for each WP, which corresponds to a total of 20 workshops.

For each workshop, we ask questions such as: *What business effect is needed? What will leaders and employees be doing differently/better afterwards?* This to identify the necessary behavioural changes to realize the business impact. The IC thereby forms a common brainstorm and discussion on KPIs and how to measure the impact of the project.

From each IC workshop, specific tasks and KPIs are developed to increase transparency and keep an ongoing overview of the 38 mandatory FEMaLe deliverables and 21 milestones, create a common understanding of the context, and adjust for early impact realization. We experience a high level of engagement at the IC workshops and a high impact for the participants. Furthermore, the workshops provide an opportunity and occasion for reflection for the individuals in the WP.

### 4.1.2 Impact solutions design

The Impact Solution Design (ISD) process is a human-centered, learning-focused, and hypothesis-driven approach to gain early impact, reduce uncertainty, and prove the worth of the project. An example of ISD in the FEMaLe project is the series of planned workshops held with each WP, which are used to monitor the impact of the FEMaLe WPs. These are complemented by using the WP Leader meetings to present progress of the tasks and KPIs agreed on and by using Executive Board meetings to exchange knowledge. Together, these planned activities form a series of workshops that we use to monitor the level of FEMaLe Impact.

An example of an impact solution design in the FEMaLe project is the impact that is created continuously in the project, and not only after the end of the project. Figure 4 illustrates an example of some of the minor objectives (short term impact) FEMaLe has already made, which together constitute the final objective of the project.

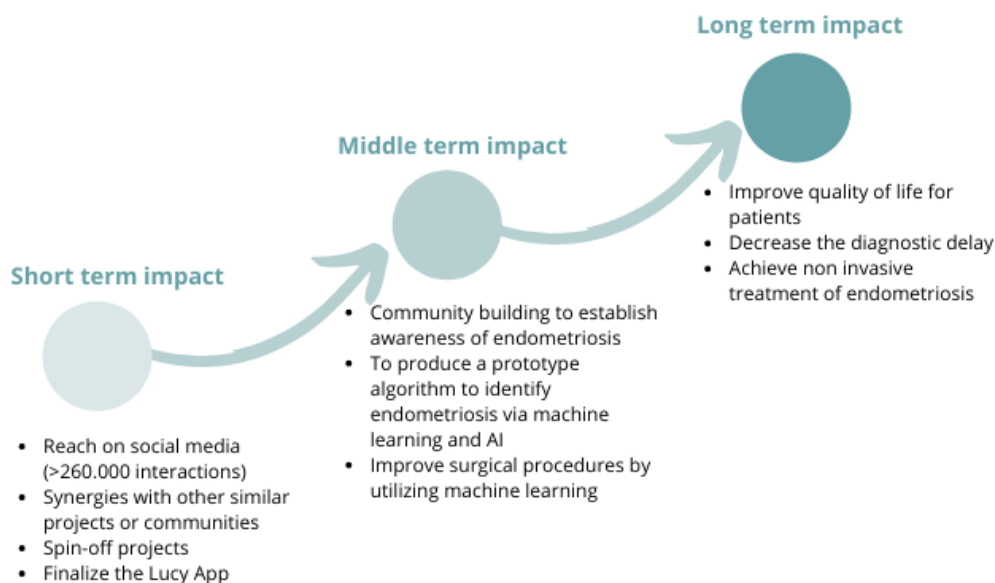


Figure 4: Example of an impact case solution

Another example of an impact solution design is the impact we gained from allocated our resources and building the Lucy app as a minimum variable product.

**Example with minimum viable product:**

One of the deliverables in WP8 was to build new modules in the Lucy app to improve health literacy and empowerment for people with endometriosis-like symptoms. It was also important to obtain data from the users. We chose to allocate resources and build the app as a minimum viable product. By doing this, we ensured a faster translation to different languages and disseminated the app to additional patients and countries. This increased the overall data collection in the app. Also, this increased the project's impact, both for patients, because they could benefit from the app, and for us as researchers.

### 4.1.3 Pulse checks

Impact is ultimately about stakeholder satisfaction. Moreover, user involvement and pulse check are key drivers. Different stakeholders demand different impacts, and these impacts are achieved at different points in the project process. In FEMaLe project we continuously check the pulse of selected stakeholders in the project to get new insights and data-drive dialogue amongst key stakeholders, this to continuously ensure focus on impact, energizing working conditions, collaboration, and personal development in the project.

It is essential that we monitor the satisfaction levels of our key stakeholders in real time to act and adjust processes monthly. The *Pulse Checks* is done through an online questionnaire with five standard questions sent monthly to key stakeholders, providing the basis for an ongoing feedback dialogue. From the most recent pulse check in Dec 2021, representing all 16 FEMaLe Beneficiaries, the results show that:

- 86% are confident that their current work creates an impact for FEMaLe; average score 4,4 of 5.
- 81% believe that they deliver and collaborate effectively in FEMaLe; average score 4,2 of 5.

- 95% are having fun and get energy out of working in FEMaLe; average score 4,4 of 5.
- 71% are developing personally and professionally working in FEMaLe; average score 4,1 of 5.
- 81% are convinced that FEMaLe focuses on early impact creation; average score 4,2 of 5.

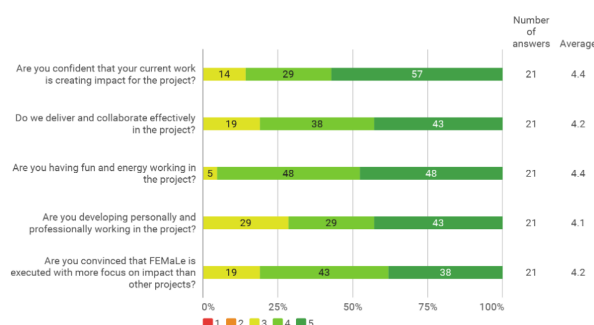


Figure 5: FEMaLe Pulse Check December 2021 (refer to appendix 4)

All pulse checks have shown progress since the baseline measurement. FEMaLe PMO is extremely proud and happy to experience how each member of the FEMaLe Consortium finds it stimulating, rewarding and meaningful to work in the project, enabling efficient and effective processes.

## 4.2 Flow

### 4.2.1 Rhythm in key events

To focus on the overall goal of achieving early impact, there has been a fixed rhythm from the start of the project. The rhythm is mainly determined by the total of 38 deliverables and 21 milestones to be submitted to the EU Commission (<https://findingendometriosis.eu/about/timeline-and-milestones/>), which intensifies the project activities, especially in the months of June and December, and less in February and August.

In addition, there is a fixed rhythm at the project meetings. 4 times a year WP Leader meetings are held, where all WP Leaders are invited to report: (1) work carried out per task, (2) results and synergies and (3) lessons learned. This gives the project an insight into whether all WPs are achieving their goals and whether any challenges arise along the way that the Project Manager or other WP Leaders can help solve. Similarly, Executive Board meetings are also held 4 times a

year to focus on monitoring and assessing the impact of the FEMaLe project. Also, the individual WPs have fixed rhythms, these are however widely varied due to the different sizes and needs of each WP, some WPs work with sprint meetings and others have fixed weekly group meetings. For the preparation of Impact Cases as well as for Formative evaluations, all WPs are helped with methods that can help the WPs to keep a fixed rhythm, if needed. In addition, both pulse checks and KPIs serve as indicators of whether the teams in the WPs are working at the right pace and flow.

Table 3.1.1a – Timing of the different work packages and their components

		2021	2022	2023	2024	
WP 1	PM: WP1	IMPACT: Joint-driven action and sustainability plan				H1 - H4
	1.1	Develop the impact case action strategy				
	1.2	Development and pilot of cost-effective HR methods				
	1.3	All HR specific impact monitoring and assessment implementation				
WP 2	PM: WP2	CODE: ethics, gender, inclusion, HR and Open Science				H1 - H4
	2.1	Impact case guidelines				
	2.2	Ethical framework for ECR				
	2.3	Gender-based and inclusion-driven framework for ECR				
WP 3	PM: WP3	PREDICTIVE: Clinical and population genotyping				H2 - H4
	3.1	Development and validation of baseline questionnaire				
	3.2	Study on prevalence and geographical distribution				
	3.3	Comparative studies to diagnostic safety				
WP 4	PM: WP4	DIGES: Risk classification and subtypes				H4 - H4
	4.1	Risk classifier				
	4.2	Identify endometriosis subtypes				
	4.3	Validate and test the endometriosis subtypes in independent cohorts				
WP 5	PM: WP5	BIG DATA: digital health monitoring and the Lucy App				H1 - H4
	5.1	Translate and validate the Lucy App in Denmark, Scotland, and Sweden				
	5.2	Comparative study based on the Lucy App				
	5.3	The prevalence and geographical distribution of endometriosis the company				
WP 6	PM: WP6	BIOMARKERS: surgical phenotyping using machine learning				H3 - H4
	6.1	Classification of endometriosis				
	6.2	Annotation of endometriosis classes				
	6.3	Developing deep learning program to automate a HR classification				
WP 7	PM: WP7	VISUAL: augmented reality to improve laparoscopic surgery				H3 - H4
	7.1	Collecting videos with metadata				
	7.2	Semantic annotation of laparoscopic videos				
	7.3	Deep learning pipeline for automatic semantic annotation of surgical videos				
WP 8	PM: WP8	DIGITAL: self-management program				H3 - H4
	8.1	Development of self-management and decision-making tool				
	8.2	Conducting a randomized controlled trial				
	8.3	Translation of the programme				
WP 9	PM: WP9	REASON: dissemination, communication and synergies				H1 - H4
	9.1	Dissemination and communication strategy and plan				
	9.2	Strategic action plan				
	9.3	Communication implementation and management				
WP 10	PM: WP10	GOVERNANCE: management, financial, risk and quality				H1 - H4
	10.1	Project management and implementation strategy and tools				
	10.2	Financial management and implementation strategy and tools				
	10.3	Project monitoring, quality control and reporting				

Figure 6: Timing of the different work packages and their components (refer to appendix 5)

### 4.2.2 Visual planning

Due to project start-up during COVID-19, we have had few opportunities to meet physically. Also, the project's employees are spread over large parts of Europe. Therefore, it has been necessary from the beginning to incorporate visual planning tools into the daily work. For this purpose, Miro was used as a visual board, where it is possible to draw, make tables, templates, notes, etc. This software has been used widely during several workshops and project meetings.

In WP1 we facilitated multiple impact case workshops in Miro, where we established goals, tasks and KPIs to monitor the impact. Miro was an interactive way to corroborate and brainstorm online. See figure 7.

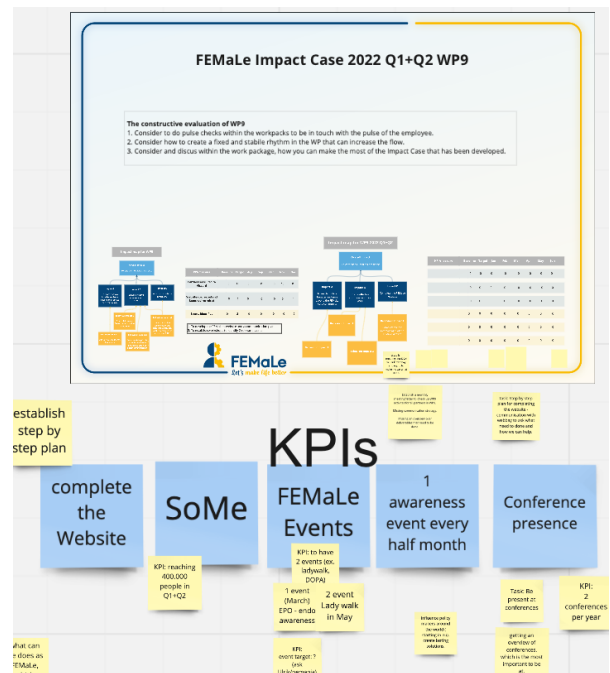


Figure 7: Example of impact case workshop

We are still working on incorporating the tool Correlate in the project so that we will have a shared platform, which all partners have access to. Correlate will provide and deliver a secure, shared drive where all partners have easy access to relevant documents, such as templates, deliverables, minutes, etc. This will hopefully create transparency in the project and a better understanding of the individual as well as collective outputs.

### 4.2.3 Co-location design

The Coordinator and PM works 50% on the FEMaLe project and shares workspace with WP3 and WP8 Leaders at the Dept. of Public Health at Aarhus University. This reduces complexity in time and space and has established commitment from the PMO for +50% allocation and physical/virtual presence in the project.



## 4.3 Leadership

### 4.3.1 Active ownership approach

The regular rhythm of both WP Leader meetings and Executive Board meetings helps to facilitate interaction between the project owner, PM and Coordinator, PMO, and the team, creating the foundation for active participation of the leaders in the project.

Results from the recent Constructive Evaluation verify that the active involvement of the project owner and the coordinator/project manager is very beneficial for the FEMaLe project and its progress.

As an example, we in FEMaLe we are holding WP leader meetings and executive meetings monthly, where the project owner, the project manager and all WP leaders participate to give status over the process over their WP.

### 4.3.2 Collaborative leadership approach

The recent Constructive Evaluation confirmed that both the coordinator/project manager and the WP Leaders are always easy to get in touch with if needed by the rest of the project. This is a result of the people first-approach established in FEMaLe to drive the project forward in close collaboration. We let WP teams influence the processes in alignment with co-produced Impact Cases. Key stakeholders are involved at the right time at the right place.

The coordinator/project manager also arranges 1:1 dialogue with FEMaLers to create purpose and meaning for each individual as well as every team member to celebrate specific skills and experience.

### 4.3.3 Reflective and adaptive mindset

All FEMaLers work to be reflective and flexible in their daily jobs. The first year of the project has been affected by COVID-19, where workspaces and workflows have been challenged. Here, all FEMaLers have been very adaptable, pragmatic, and solution oriented.

Furthermore, several WPs collect a lot of data from registries or through video collection, which has caused major problems in terms of existing GDPR rules in the different countries. Here, the

project has continuously discussed solutions collectively at WP Leader meetings and provided each other with advice and guidance.

In particular, the Coordinator/PM has an adaptive mindset and is open to new creative ideas for the project. This helps to create new synergies with other similar projects or partners.

## 5 Lesson learned

The experiences and learnings from implementing and working with the HDM:

### 1. *Takes time to implement*

The FEMaLe project collaborates with partners all over the EU. Implementation of behaviour changes is challenging and takes time, especially a specific work structure for partners across Europe. We must be patient, listen to the feedback partners and adjust accordingly.

### 2. *Local translation - to a research project*

Local translation is an important aspect of the half double methodology and FEMaLe. We have to adapt and adjust the methods and tools to meet the FEMaLe partners' needs.

### 3. *Each WP has different needs*

All WP works in different fields and have different problems, also they have various numbers of employees. Therefore, each WP has different needs in using the HDM. This makes the implementation complex.

### 4. *Value creation vs deliverables*

The FEMaLe project is funded by the EU, it is therefore heavily focused on deliverables, which contradicts the value of Half Double methodology.

## 6 Conclusion

Overall, we can conclude that the FEMaLe project has had a very positive outcome working with HDM the first 1,5 year. However, we still need to focus on the local translations and how to adapt each method so it's more valuable for each WPs. The methods and tools have been beneficial for collaboration across professions and fields.

## 7 Limitations

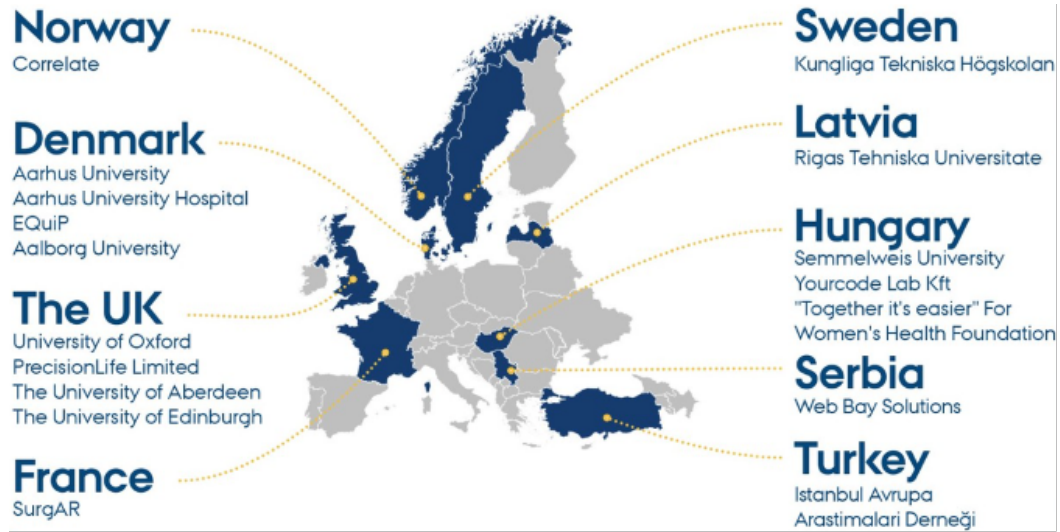
A limitation for the use of HMD is that FEMaLe is a project that contains many sub-projects (WP), where each WP has individual needs and sizes. This means that the individual methods from MDH have to be implemented and integrated differently for each WP, which is a time-consuming process.

Another limitation is that the FEMaLe project is EU founded, which means that the project has to focus on deliverables and is therefore tied up by a fixed management structure, where at the same time we want to focus on value creation.

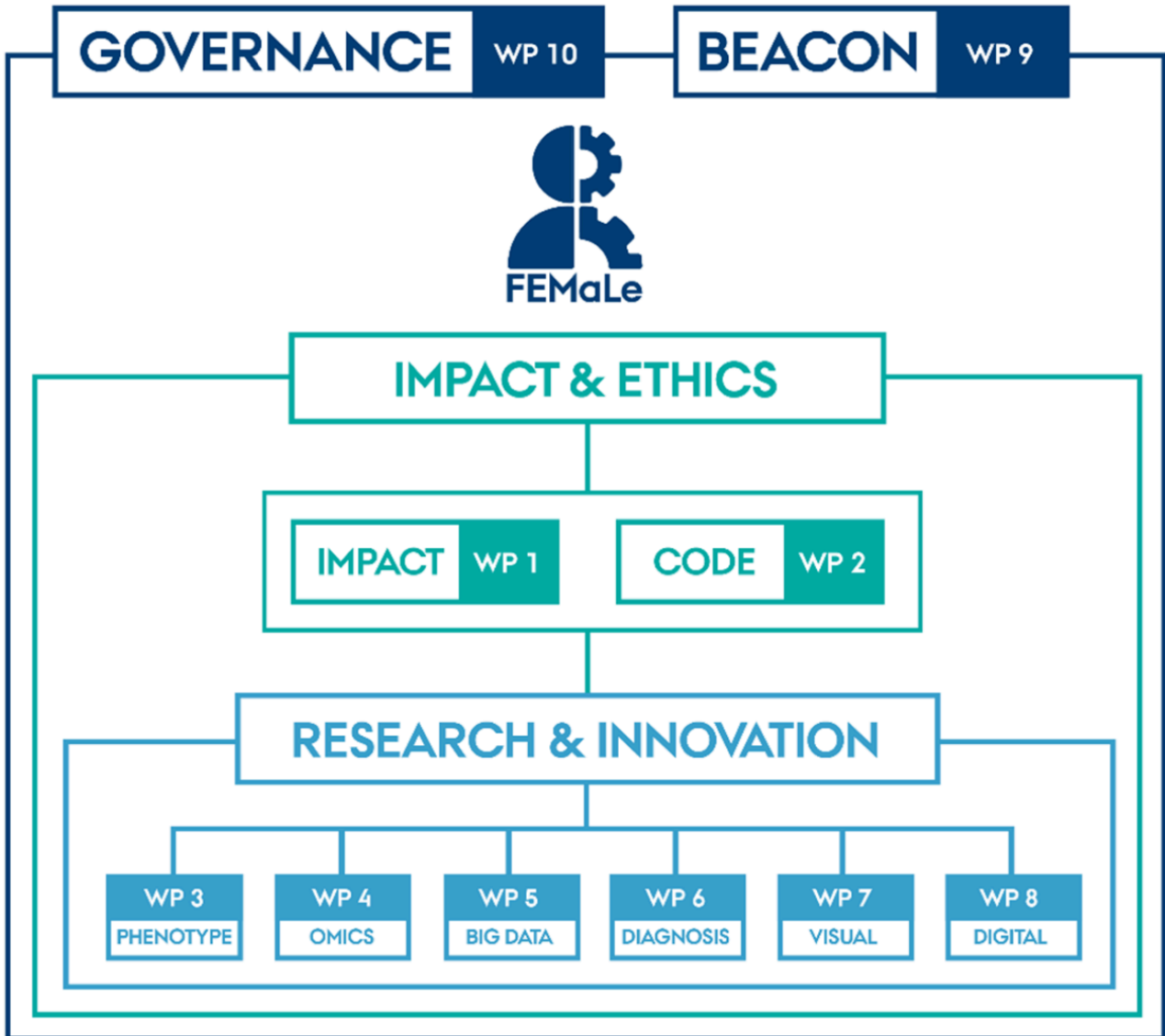
A third limitation is that the FEMaLe project has only existed for 1.5 years, and HDM is therefore not yet fully integrated into the project. Therefore, more follow-ups of the project's use of HDM are required.

## 8 Appendix

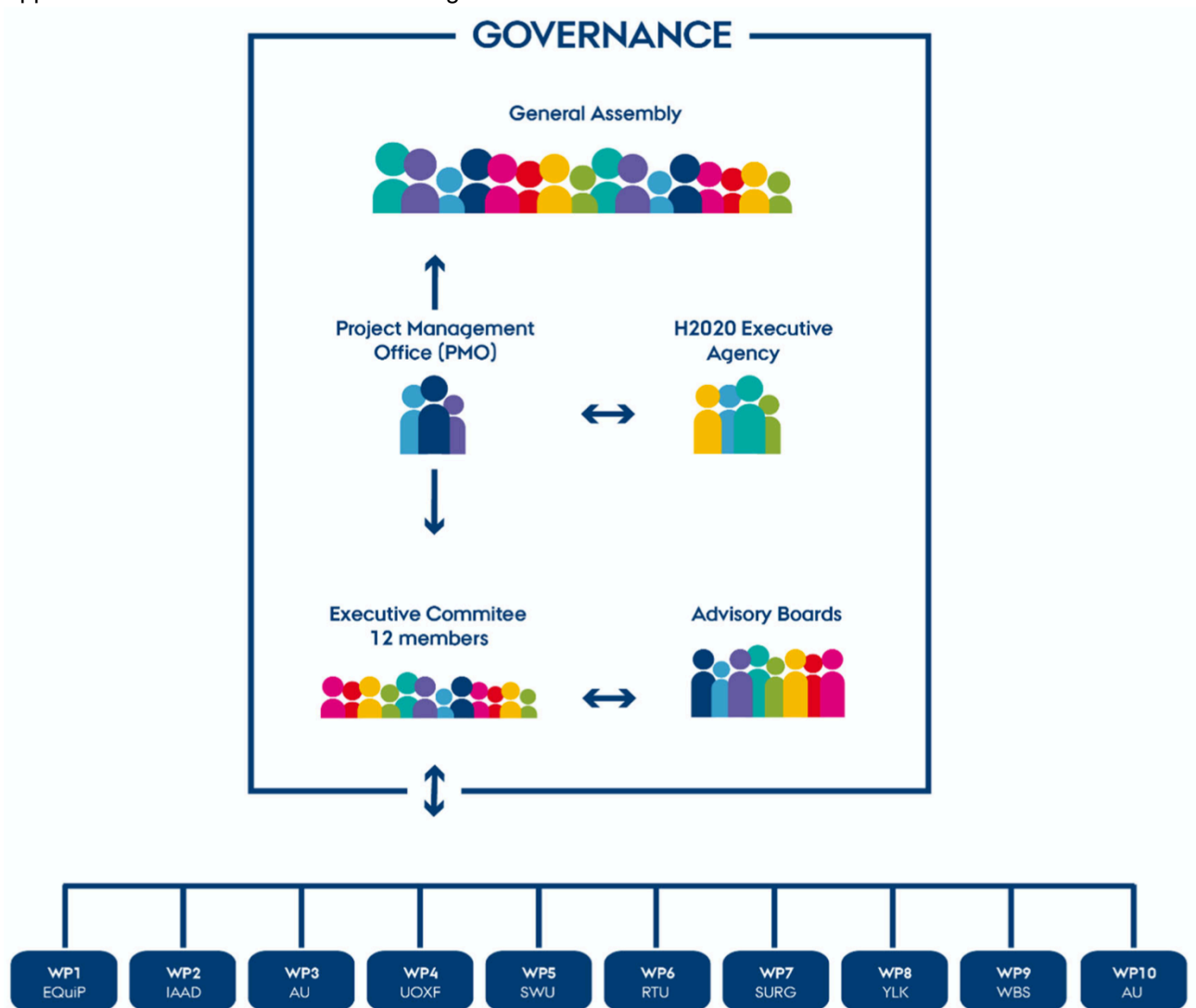
### Appendix 1: The 17 FEMaLe partners



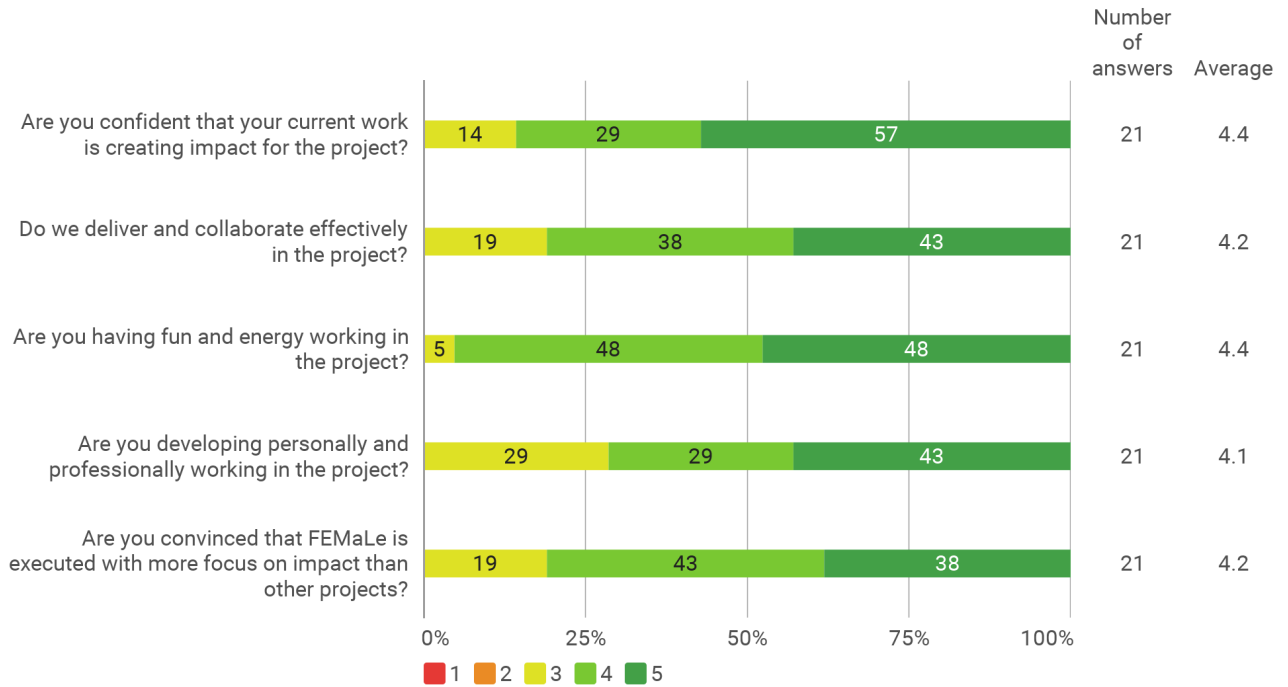
Appendix 2: Organizational diagram of FEMaLe



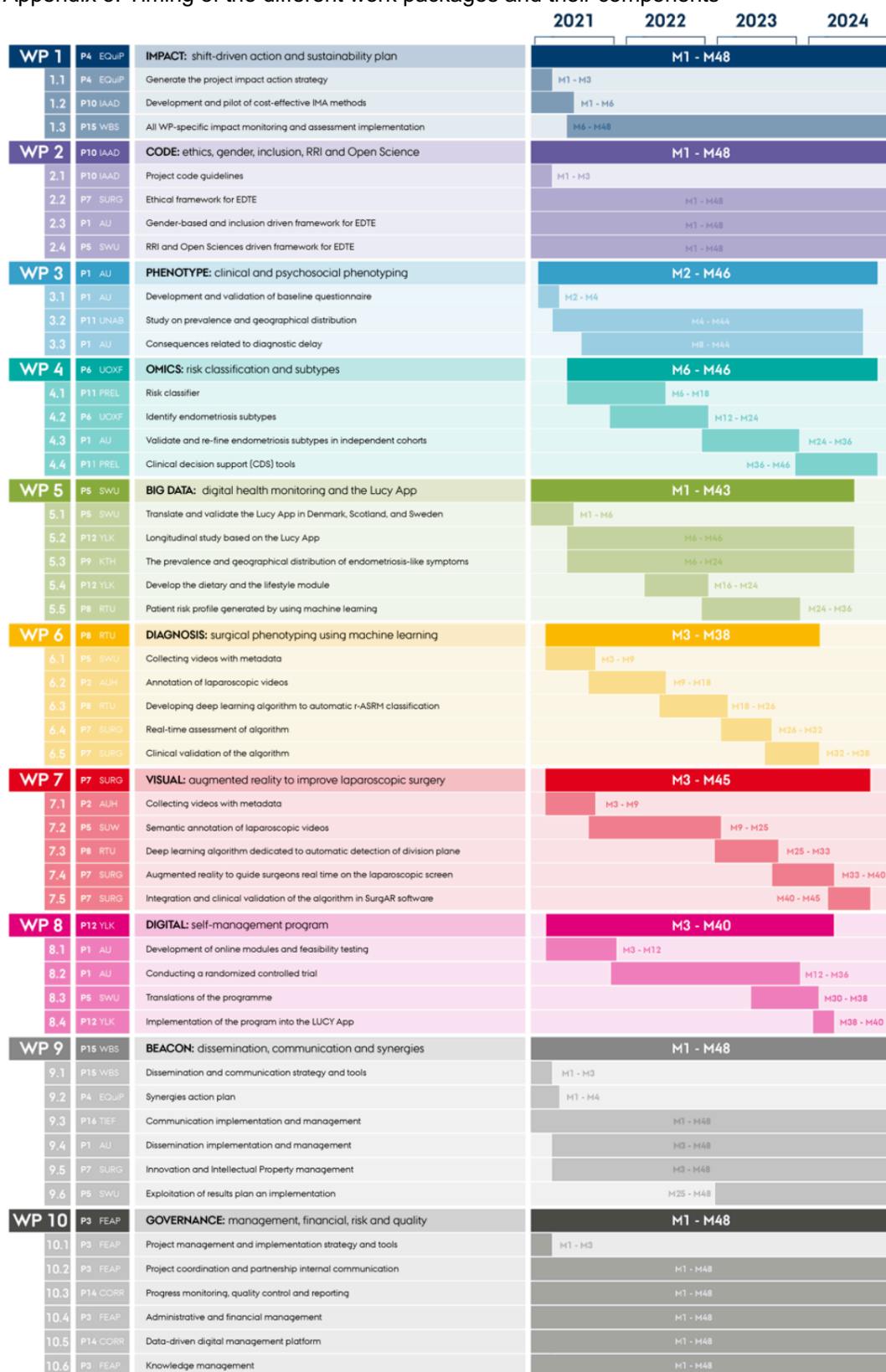
Appendix 3: FEMaLe result-driven management framework



#### Appendix 4: FEMaLe Pulse Check December 2021



## Appendix 5: Timing of the different work packages and their components





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