Organ on Chip in Development (ORCHID)

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Executive Summary

Task 4.3 resulted in developing a **test version** of the Digital Platform (**DP**) (**PROTOTYPE**), following the specifications of D4.1. A pilot group has been formed and has already tested the architecture, design and ergonomics of the DP. Their comments have been integrated in the current version. This prototype version of the DP will evolve and more content will be added in the next few months. The launch of the platform will be before M18 of the project (see MS7).

Introduction and Overview

The main goal of this Coordination and Support action (CSA) is to create a roadmap for Organ-on-Chip (OoC) technology and to build a network of academia, research institutes, industry, and regulatory bodies to move OoC technology from promise in the laboratory into reality for European citizens and the rest of the world. One of the objectives is to explain and promote the technology by defining and launching **a digital platform** which could become a worldwide reference for OoC technology in the coming 2-4 years.

The digital platform aims to bring together players (researchers, laboratories, companies, patient associations, regulators) and to create a community in the OoC field. It will evolve over time through the addition of information, publications, collaborative projects and various contents supplied by the members who will progressively become part of it.

 The deliverable 4.2 provides a **test version (Prototype)** of the DP.

Science and Technology

1/ Test version of the Digital Platform

The virtual link to the DP is the following: https://xd.adobe.com/view/bca51476-a3dd-4aaf-7b31-ecfce93e66a4-ca94/

This virtual link illustrates the way the DP has been conceived in terms of global architecture, functional design and ergonomics, according to the specifications established in D4.1. This first draft has evolved as the project progressed, while needs and objectives were better defined. For instance, the DP integrates now the consensual working definition of OoC established during the ORCHID Vision Workshop by experts. An OoC is defined as "*a fit-for-purpose microfluidic device, containing living engineered organ substructures in a controlled microenvironment, that recapitulates one or more aspects of the organ's dynamics, functionality and (patho)physiological response* in vivo *under real-time monitoring"*. This evolution will be taken into account and developed further in the next phase "Technical Direction, Development and Implementation of the DP".

2/ Development of the LOGO for the OoC DP

A logo for the OoC digital platform has been specifically created and presented by WP4 ORCHID partners, along with the DP in development, at the ORCHID Vision workshop at Stuttgart (23 May, 2018). This logo contains (1) the human aspect (head with the arms, expressing that everybody can come to the platform and is very welcome to find what they need on OoC; also expressed by the term 'for all');

(2) the topic (it is all about 'OoC'); (3) the colors of the original ORCHID logo (3 colors, the dots have the lilac color). The look and feel of the DP is based on the colors and style of the logo.

3/ Constitution of the Pilot Group

Six important target groups have been identified for the DP:
- the general public & institutions (government, health foundations, charities etc)
- the research community (Universities, research institutes)
- hospitals/university medical centers and medical practitioners
- industrials (pharmaceutical , cosmetic , chemical industries, food, among others …)
- patient associations
- regulatory agencies

A Pilot group of 10 persons, representing the different target groups, has been formed from ORCHID partners and stakeholders that were interviewed in WP2. Their input regarding the functional specification of the DP has been collected and analysed. Their comments have been integrated in the current version of the DP.

3/ Project Management

Regular meetings and email exchanges with the WP4 ORCHID partners allowed to design a blue print of the foreseen functionalities of the digital platform. Supporting tools have been used to facilitate exchanges between ORCHID members for visualising graphic mock-ups, for exchanges and commentaries. Moreover, internal meetings of WP leader and developers have been organised at each stage to ensure an accurate follow-up and validation process.

With regard to this test form, a timetable has been drawn up to meet the delivery dates:

Delivery dates	Milestones
D4.2 Digital test platform (M12)	**MS7** Digital platform tested and ready to be launched (M18)
D4.3 Report on the pilot project (M24)	**MS8** Digital platform accounting a minimum of 100 active members (M24).

4/ Strategic aspects & business model

Implementation of the DP requires a detailed strategy, addressing the following aspects that will be discussed with ORCHID partners:

4.1. Business model

A business model will be further discussed and evaluated to generate financial resources from the DP that will be used for management, maintenance and boosting the development and worldwide dissemination of the DP.

4.2. Memberships and fees.

Different options for subscriptions are possible (see 'Become a member'). Not only individuals (from academia, other) but also organizations (like companies) have the possibility to become a member. The price for subscription will depend on the type of organization and the location of the advertisement (in the reserved box or in the slider on the home page, or other pages) and the duration of exposure (one month, 6 months…).

For instance, in the slider, a 4th page is dedicated to a private member who would have the opportunity to integrate some information (including his company website, logo…) by providing a "personalized subscription fee".

The conditions for the membership, including personalized transcription fees, that enable members to present themselves and their organization (website, logo) in the DP, will be established by the ORCHID members in the frame of the business model. A button "Join Us" links to a form outlining the different types of membership and the various advantages of becoming part of the platform.

4.3. Link with the European Society.

The membership will be discussed in the perspective of the European Organ-on-Chip Society (EUROoCS) which will be launched by the end of 2018. We will define how we will link this digital platform to EUROoCS and its membership. For instance, preferential price could be preserved for people connected with ORCHID project and EUROoCS members.

In addition, following ORCHID, EUROoCS can be the driver of the Digital Platform, supporting its maintenance and update.

4.4. Management of the DP

For some pages (Events, News, Become a Member…), the information will be screened before publication. A management structure will be set up for the DP, including a DP administrator who will be the central coordinator of the DP and will be responsible for monitoring of the content and for keeping the DP up to date.

Conclusion: Validation & Evolution of the DP

Deliverable 4.2 has been achieved in due time.

The DP has been conceived as a flexible and evolving tool. At this stage, the global architecture is finalized and the next step will be the further maturation and implementation of the DP.

In the meantime, the platform will be enriched with relevant content and feedback from experts of the pilot group. Text, headings, schemes will further be improved or modified.