"Adding socio-economic value to industry through the integration of artists in research and open innovation processes"

DELIVERABLE 2.6

Visualisation Challenges – Year 1

Grant agreement no: 732112

Adding value to research and technology through integration of artists in projects and synergy creation between creative industries, entrepreneurs, researchers and arts

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Executive Summary

This document formalises the content of the Deliverable 2.6 (D2.6), "Visualisation challenges" in the first year of the VERTIGO project. It covers several methods and tools which have been implemented with the overall goal of attracting and engaging artists and ICT-Projects to get involved with VERTIGO. The main focus is the presentation of the innovation challenges proposed by ICT-Projects in order to make them as accessible as possible for artists.

D2.6 builds on the Co-creation Methodology described in Deliverable 2.1 (D2.1) and the Communication Manual for Co-Creation Processes of Deliverable 2.5 (D2.5). Workflow development, interaction with stakeholders and global perspectives in relation with the STARTS initiative (starts.eu) have increased the criteria for the task of visualizing the challenges to the following:

- To create a scalable process, which can be used for greater number of collaborations, and other projects and programs
- To accelerate the process and reduce number of iterations
- To empower the main actors of challenges and projects
- To induce good practices among contributors, especially ICT-Projects to generate new collaborations at large, beyond the residencies of VERTIGO itself
- To make the most of the visualization content by using it in different contexts over the full cycle of each residency

These requirements mean that the task of visualizing the challenges should be fully integrated into the co-creation methodology. D2.6 therefore employs the Information Pipeline concept developed by EPFL in D2.5 in order to deliver the visualisation of challenges through the use of a lean, scalable, dynamic and impactful system.

As such, D2.6 focuses mostly on implementation and results at M12 and provides:

- a refinement of content requirements from ICT-Projects and artists through the design and format of application forms, and
- a development of the design concepts presented in D2.5 to provide efficient communication to artists and ICT-Projects on the VERTIGO web platform.

SECTION 1 – Objectives

1.1   Objectives

The main goal of the visualisation of challenges is to bring Artists and ICT-Projects together in the VERTIGO project. Their initial interactions are made via the VERTIGO website, and therefore the way content is gathered and designed is vital to the success of this task.

The key objectives are therefore

- To induce ICT-Projects and Artists to provide written and visual content that will stimulate co-creation

- To present ICT-Project information in a way that is attractive to Artists

- To present residencies and outcomes in a way that will inspire future ICT-Project and Artist applicants

- To provide Artists complete and clear information to allow them to make a decision on which ICT-Project to apply to collaborate with

- To induce ICT-Projects and companies to adopt an approach towards larger challenges, meaning beyond pure technical performance, to open new perspectives and potentially gain impact and added value

- To employ a system which is scalable (building on Information Pipeline concept in D2.5)

1.2   Actors and content

The actors concerned with co-creation, as specified in D2.1 and D2.5, are as follows:

- ICT-Projects
- Artists
- Producers
- VERTIGO partners
- The Artistic Network
- Dissemination partners

In this deliverable, there is a special emphasis on ICT-Projects and Artists. This is because ICT-Projects need to express their technology in a way that can be understood by Artists. The Artists need to present themselves and their work with the VERTIGO project in a way that will attract other future VERTIGO Artists.

Content focuses here on the ICT technology. The goal is to move beyond technical performance by showing the proposed technology into a wider context, demonstrating its potential and expressing it in a form that stimulates Artists. However, this is not only about becoming more attractive to Artists and generating a residency project. It is also about providing Artists with a good understanding of what can be done, what are the limitations, how a collaboration can develop and what skills are required. VERTIGO's ultimate goal is to boost innovation; this means setting real collaborations between ICT-Projects and Artists in order to create real artefacts and generate credible potentialities for emerging technologies.

SECTION 2 – Methodology

Challenge visualisation has a specific position in the global methodology of co-creation and the concept developed by EPFL. It is the starting point of all residences and is therefore the subject of a specific task and deliverable. As VERTIGO opened its first call just four months after its official kick-off meeting, we have planned to work on the following path.

a) Specification of content to be provided by ICT-Projects, to make VERTIGO scalable and efficient. Implementation for the first call, via traditional forms and the initial VERTIGO website.

b) Specification of the flow linked to the Challenge Visualisation for the main VERTIGO platform, designs of wireframes and layout.

c) In parallel to b), observation of first call inputs and evolutions of specification for the platform. Improvement of specific content provided by ICT-Projects. Evolution of strategy by the emergence of new parameters (timing, authoring, etc.).

d) Observation of initial challenge visualisation impact in the first residencies and in the first Jam Session.

The first call was not based on the full VERTIGO online platform as the first deadline for applications came very soon after the official launch of the VERTIGO project. However, having reviewed the content provided by ICT-Projects, as well as interacting with them more personally, we have gained a rich input for the conception of the platform, the final designs, the co-creation methodology and the challenge visualisation. Based on this, our observations that influence our methodology for the visualisation of challenges are as follows:

- There is a diversity in the quality of inputs from ICT-Projects. Technical descriptions were mostly of good quality, whereas visual material was less impactful.
- The recognition of the societal impact of ICT-Projects must be more developed. Jam Sessions will be instrumental tools to improve challenge visualisation.
- The inputs from the first residences, as well as final layout of the platform, will set the tone in terms of quality of expression, for the continuation of the VERTIGO project.
- The first inception meetings are a strong follow up to the challenge visualisation, as they provide a direct dialogue between the partner and the residency actors.

SECTION 3 – Implementation

The overall strategy of the Co-Creation Methodology, is based on several principles. These are briefly described here and are given in detail in D2.5.

- **Efficiency**. Designing a system that gathers content from different actors at specific stages, in such a way that value can continue to be added to the it throughout the residency cycle.

- **Social and human-centred outcomes**. Inducing ICT-Projects and artists to produce work addresses social and cultural issues, whilst remaining creative and open.

- **Pragmatism**. Creating a platform that allows artists and ICT-Projects to exchange clear and practical information with each other.

- **Quality**. Inducing actors to contribute visual and written content of high quality for effective communication and dissemination of the VERTIGO project.

- **Scalability**. Creating an infrastructure that looks after itself as much as possible and reduces the manual work of the VERTIGO team.

- **Dynamic perception**. Communicating a diverse and dynamic message about the VERTIGO project to the public and potential actors.

In the context of challenge visualisation, EPFL has followed these principles with the following contributions:

- A refinement of content requirements from ICT-Projects and Artists through the design and format of application forms.
- A development of the information flow between actors.
- An elaboration of the design concepts presented in D2.5 to provide efficient communication to artists and ICT-Projects on the VERTIGO web platform.

These inputs (written content and screen-layouts) have been transmitted to consortium members in Work Package 3, via Taiga, the digital tool used by the VERTIGO consortium to manage the development of the web platform. They have been processed at three levels. Firstly, ensuring compatibility and coherence with other inputs for the platform, secondly, by turning design propositions into technical specifications, applying styles and graphic charters and finally by developing detailed interfaces.

SECTION 4 – Designs

4.1 ICT-Project and Artist Application Forms

These forms play an integral role to the visualisation of challenges as they are the source of all the content that is provided to the main actors and the public. The content from the ICT-Project form is directly reused to showcase the ICT-Projects to Artists. Information from the Artist form is directly reused to create the Residency page.

Figure 1.   ICT-Project application form expanded and ICT-Project application form retracted

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Figure 2. Artist application form expanded

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The description at the top of the form page gives a global explanation of how to fill in the form, with key details about submission processes.

The form is then split into sections. For the ICT-Projects there are four sections: Key Details, About your ICT-Project, Images and About the Residency. For Artists there are two sections: Artistic Profile and Artistic Proposal. These sections help to break up the form to make it easier to fill in.

The choice of questions to ask the actors is mainly detailed in D2.5 and D3.2. Work for D2.6 involved phrasing and grouping these questions in order to make the form-filling process as simple and logical as possible. Instructions and examples that give extra detail about how to fill in the forms were also introduced. These ensure that the ICT-Projects know how to provide both written and visual content and in what way it will be used. These specifications will also help to unify the content provided by different ICT-Projects.

4.2 ICT-Projects List

The ICT-Project List page showcases all of the open ICT-Projects who are looking to attract Artists to join them in a VERTIGO residency. It plays an important role in giving Artists an engaging and dynamic overview of the type of technologies they could work with.
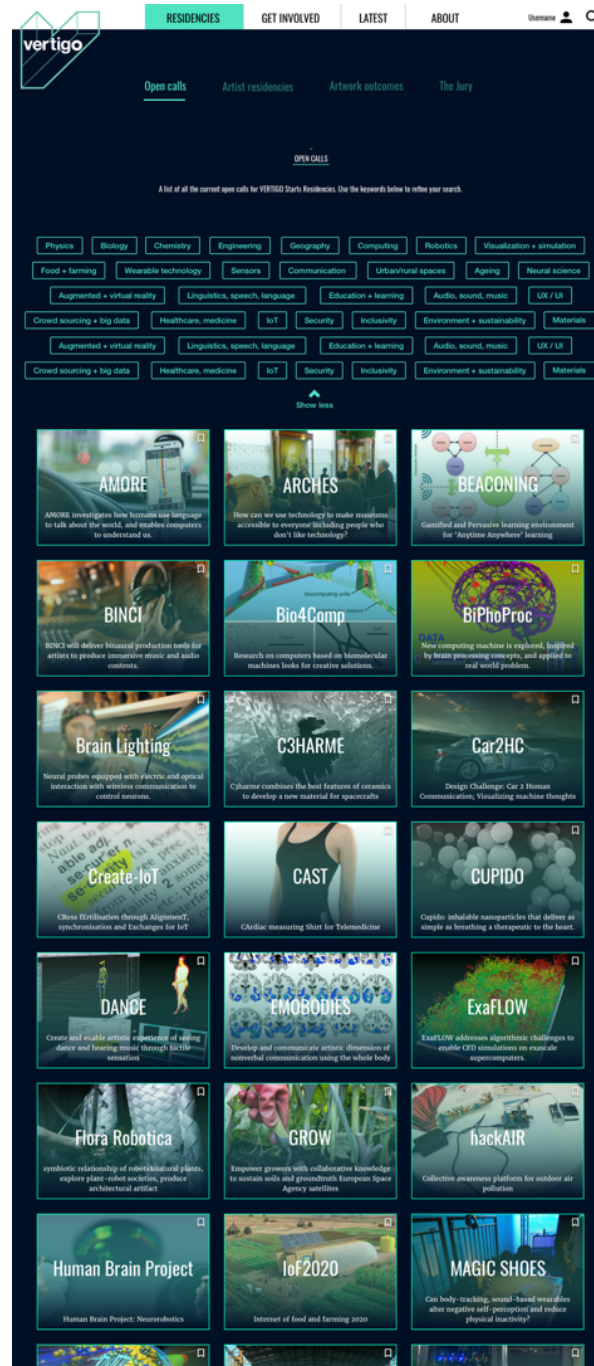

Figure 3.   ICT-project list

This page uses content provided by the ICT-Projects in their application forms. Therefore, no new content has to be made by the VERTIGO team, producing a scalable and streamlined system.
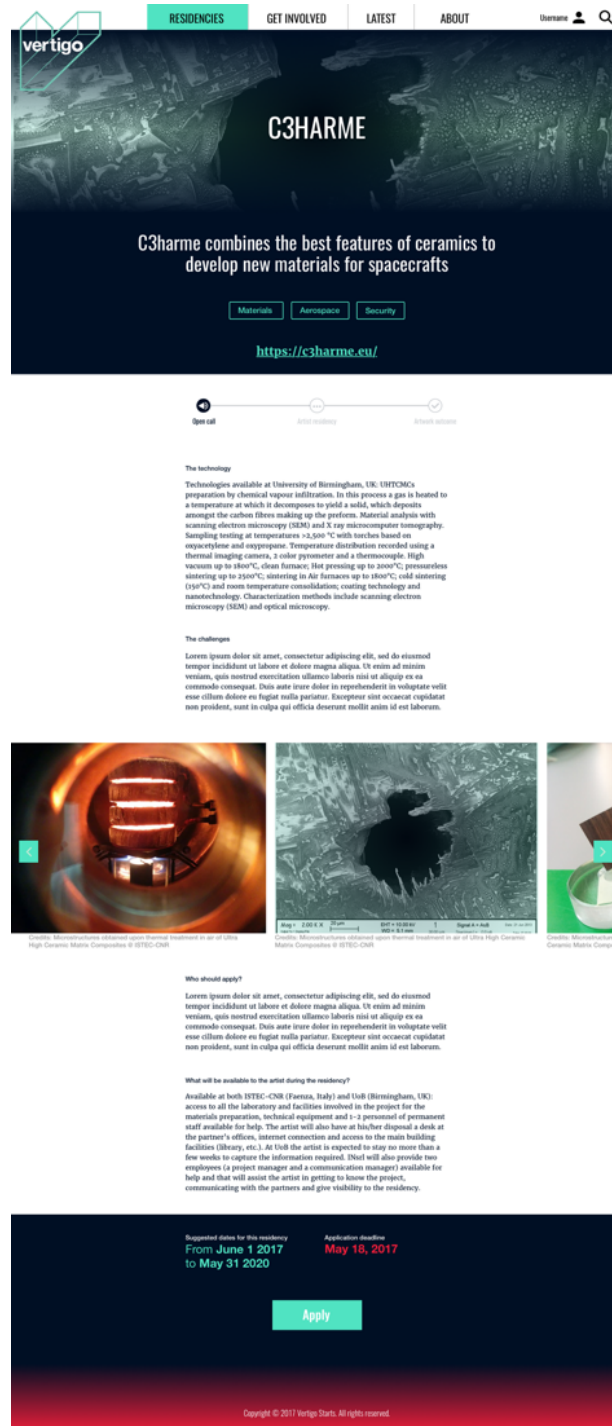
A retractable keyword selector allows artists to refine their search by technology type, which eases their selection and simultaneously showcases the range of subjects available.

The ICT-Projects are show in boxes in a clear 3-across grid. This gives Artists an overview of several projects at a time for comparison. The ICT-Projects are uniformly presented but key information is given to allow Artists to assess which one is most relevant to them. Each ICT-Project box has an image, the ICT-Project name, a short description and keywords (when hovering over the image with a computer mouse). The images provided by ICT-Projects are made to look appealing, uniform and integrated into the platform by being cropped to size and using a colour filter.

Clicking on a ICT-Project box directs to the ICT-Project Detail page.

4.3 ICT-Project Detail

The ICT-Project detail page profiles and showcases an individual ICT-Project's profile from the content they provided in their application form. It provides Artists with all the information they need to decide whether they want to co-create with the project and their technology.

Figure 4.   ICT-Project detail

The top section of the page is an expanded version of the boxes from the ICT-Project list. It shows an individual project's name, short description, main image, keywords and website. When the Artist lands here from the ICT-Project list page, this summary confirms their selection and introduces the content to come below. It also acts as a quick reference if an Artist returns to the page.

Underneath this is the timeline which describes the three-stage process that an ICT-Project will pass through if it becomes part of a VERTIGO residency. The ICT-Project detail page becomes the Artist residency detail page and artwork outcome detail page. The timeline helps to communicate the dynamic narrative of VERTIGO residencies to prospective Artists. More details are given about this timeline in section 4.4.

Short descriptive blocks then provide more information to the Artist in digestible pieces. "The Technology" and "The Challenges" give a background at the beginning of the page. The text is then broken up with a carousel of images that give more visual and contextual detail about the ICT technology.

Then more detailed and logistical information is shown below, once the reader is already interested. The text answers the two questions "Who should apply?" and "What will be available to the artist during the residency?" to help Artists understand whether the ICT-Project is right for them

Finally, at the bottom of the page, key dates are given alongside the Apply button which directs the Artist to the application form.

4.4 Residency and Residency Outcome pages (list and detail)

The Residency and Artistic Outcome sections of the website will showcase ongoing and completed VERTIGO residency projects. These will act as examples for future prospective applicants to the scheme by showing them the process and expected results of such a residency.

Figure 5.   Artist residencies list and Artwork outcomes list

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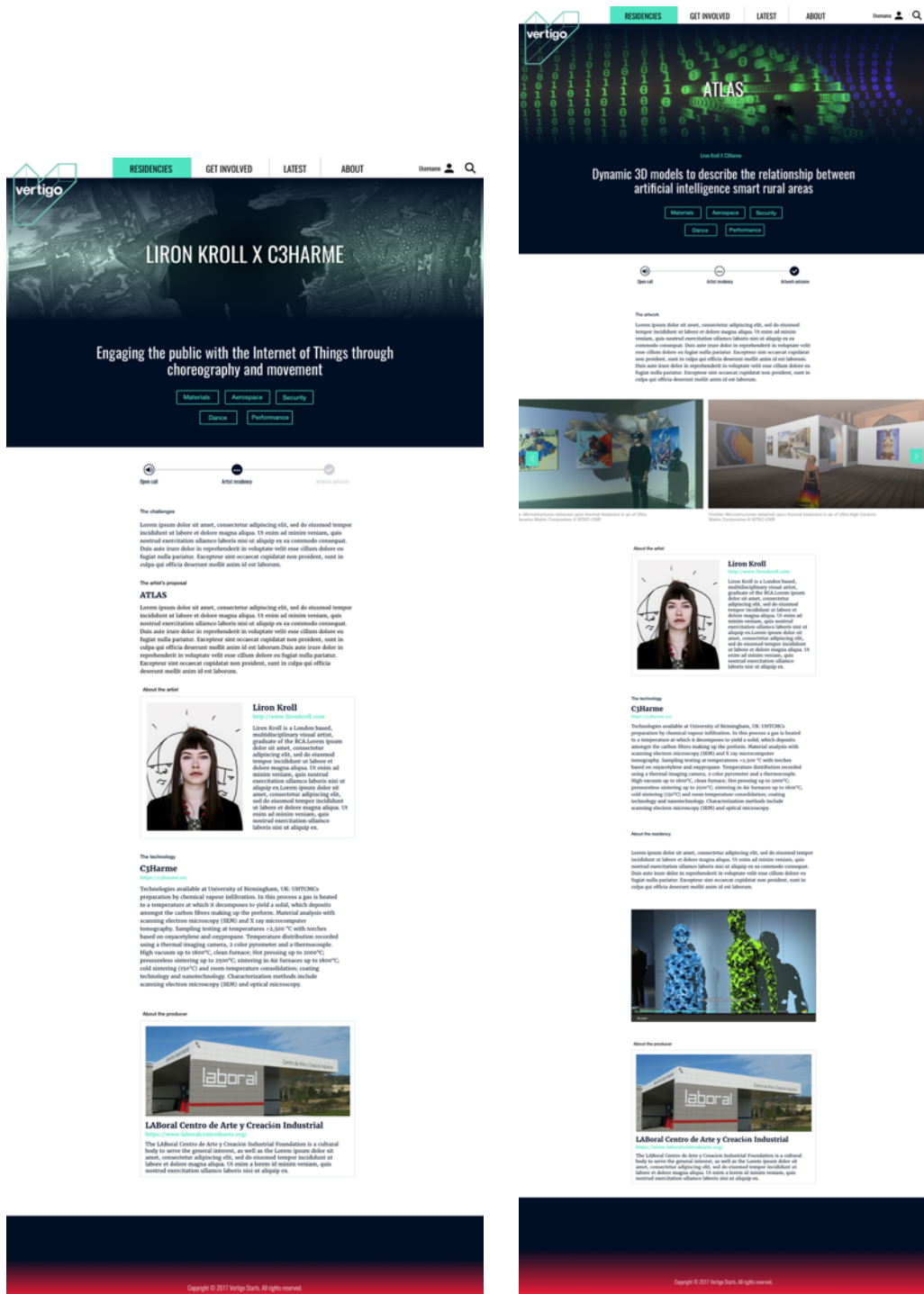
Figure 6.   Artist residency detail and artwork outcome detail

The Artist residency and Artistic outcome lists keep the same visual language as the ICT-Project list but are differentiated using different highlight colours. They also use a two-across grid as there are fewer residencies and outcomes and show more of the VERTIGO process.

The Artist residency detail page is similar layout to the ICT-Project detail page. Some content from the ICT-Project detail is reused but it is rearranged to suit the new purpose of the page, which is showcasing the combination of an ICT-Project and an Artist. Therefore, new content is also added from the Artist's application form to show their profile and proposed project, and also from the Producer if one is involved in the residency.

The Artistic outcome has a similar layout again but in addition to the Artist, ICT-Project and Producer profiles, it shows images and text about the real artefact produced as a result of the residency.

Once a residency is complete, the timeline feature allows prospective ICT-Projects and Artists to toggle between the three stages of past residencies (Open ICT-Project, Residency, Artistic Outcome) to explore its progression.

4.5 Homepage and main menu

This dynamic page welcomes new and returning users to the VERTIGO platform. It will often be the first page that potential ICT-Projects and Artists will see and therefore plays an important role.

Figure 7.   Homepage designs for a) the public and b) logged in users.

The VERTIGO title and summary sentences to give an immediate overview of the VERTIGO project. For the public (i.e. users who are not logged in) there is also a short video explaining the VERTIGO Projec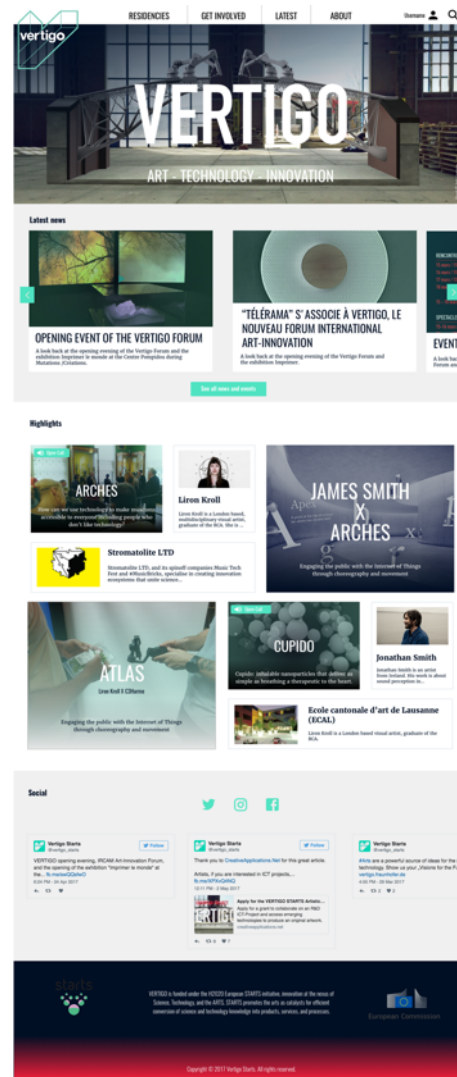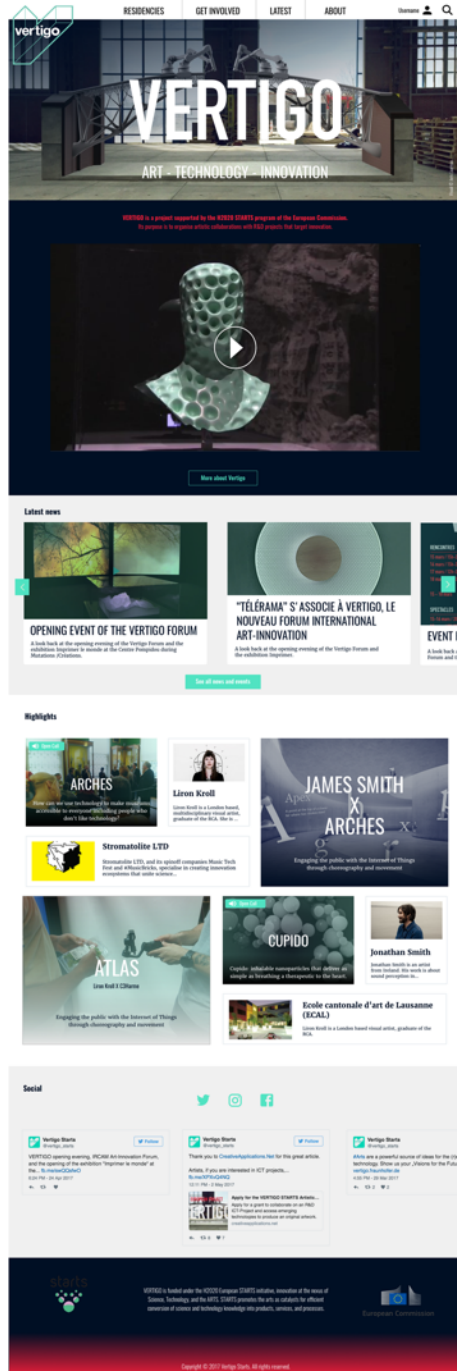t in more detail. Videos are effective tools for quick communication within the artistic community. However, this is removed for logged in users to give them more direct access to the content below which is more relevant for them.

The latest news section, made up of news modules of large images and titles, then gives an overview of recent VERTIGO updates. The Highlights section takes modules of content from other parts of the website to showcase Artists, ICT-Projects, Producers, ongoing residencies and artistic outcomes. The featured modules change on a regular basis. Finally, a feed from VERTIGO's social media platforms is displayed at the bottom of the page.

All the elements on the homepage are designed to show the dynamic nature of the VERTIGO project to all concerned stakeholders. It aims to quickly describe what VERTIGO is and then to engage them through meaningful content. The content does not have to be created from scratch by the VERTIGO team, but instead is reused from other parts of the website. This content changes over time to encourage the Artists to come back to see the development of the project.

The number of main menu items has been restricted to just four. This creates a clear indication of the site's structure for ICT-Projects and Artists. This top-level menu is available from anywhere on the site and thus acts as an anchor or reference point for navigation. The search and personal space (Sign In / Log In) are shown at the end of the main menu bar.

4.6 Other pages of the web platform

EPFL also provided design specifications for other pages of the website. Although these are not directly Visualisations of Challenges, they do contribute to Artist and ICT-Project experiences of the site.

The Get Involved section provides one page each to Artists and ICT-Projects. It acts as a single place to find all relevant information about applying to the VERTIGO project with links to other important parts of the website.

News, Events and About pages give a context and background to the VERTIGO project, showing its status within the dynamic community of science and the arts.

Producer pages give Artists a list of potential producers to apply for a residency with. A short description, location, a website link and picture are given so that Artists can easily compare different options.

The Jury pages show short biographies of jury members to give applicants an indication of how their application will be judged.

SECTION 5 – Observations and Evolutions

We have conducted the following analysis of ICT-Project challenge expression. Input for this analysis has come from the forms completed and submitted by ICT-Projects in the first call of the VERTIGO project, as well as from our more personal interactions with ICT-Projects. Observing and analysing the successes and difficulties that have been experienced has given us learnings to improve the visualisation of challenges.

We defined several key parameters to objectively analyse the submissions provided by ICT-Projects in their application forms. We derived the following results:

1. Around 90% out of the 45 projects that applied completed over 90% of the form.
2. Around 50% of the 45 projects that applied required assistance with completing the form.
3. As a cohort, we gave a score of 2/5 for the quality of the messaged delivered on visual content, the more "emotional" media. There was a large diversity of inputs.
4. As a cohort, we gave a score of 3/5, for how well ICT-Projects expressed their technology as a challenge and not just a pure technical specification.
5. As a cohort, we gave a score of 3/5, for how well ICT-Projects opened up their projects to a creative input rather than providing a design mandate.

We also produced a more qualitative list of observations from our interactions with ICT-Projects and Artists during the management of residencies at inception meetings and via email correspondence.

- Some Artists were unsure how their work would fit into what the ICT-Project was looking for.
- Occasionally, Artist propositions did not exactly match what ICT-Projects had expected.
- Artists sometimes only found a project they were interested in on their second time looking at the list as it was difficult to extract the key information from ICT-Project profiles.

These results suggest that the forms needed to be improved to make them easier for the ICT-Projects to fill out and to reduce the input required by VERTIGO partners. There appeared to be a need to make the forms simpler to fill out, as well as to be more direct in what they were asking of ICT projects. In addition, improvements of other parts of the VERTIGO website could also impact the quality of information provided in the forms.

Incorporating this analysis, in the new platform we therefore provided:

- a more logical layout of the form
- a clear grouping of information types in the form
- more detailed instructions and examples of how to complete the fields of the forms
- showcases of previous residencies and submitted information to prospective actors to give examples of what collaborations look like
- better explanatory information about the aims and expectations of the VERTIGO project

- clearer and more direct presentation of ICT-Project information, including the introduction of keywords, and automatic editing of images

We will also continue this monitoring into the next call, so we can continue to improve the experience for external actors, as well as creating higher quality content which will contribute to the success of the VERTGO project.