

MATERIART

Art and Science of Materiality in Architectural Design Education

ERASMUS+ KA-203 Strategic Partnership in Higher Education Project

"MATERIART: The Art and Science of Materiality in Architectural Design Education"

PROJECT REPORT

O2 - MATERIART OPEN PLATFORM



PROJECT INFORMATION

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1. INTRODUCTION

1.1. Output Description

MATERIART Open Platform (O2) is a digital and online platform established as a communicative platform that enables international networking, interaction, and collaboration while being a database for the calls and the outputs of the existing International Intensive Studios in Architectural Design (ISAD). All the MATERIART ISAD calls, registration forms and outputs are accessible via MATERIART Open Platform. The platform is open to public access, and all institutions are encouraged to use this platform to share the forthcoming short-term organizations.

1.2. Guide to Reading Document

This report maps a detailed framework of the Open Platform that was developed during MATERIART project. This report could be regarded as:

- **a guide** for utilizing Open Platform, and
- **documentation** of the three-year process of developing such platform through its content, focus, structure and implementation.

1.3. Setting the Scene

Tectonics, ways of doing, and architectural thinking has been encountered technical, aesthetic and cultural implications of the emerging digital technologies, communication technologies, and new materialities. Architectural practices in all the fields of the discipline are thus in a reformation process. Notably, the changes in communication technologies foster the transformation in the communicative aspects of the architecture, which requires multidirectional interaction.

There are a number of issues in architectural education in terms of multidirectional and international communication, collaboration and interactivity focusing on pedagogical development, tutoring methods and strategies, which hampers the communication of the actors in architectural education and architecture practices to absorb the transformation. Concerning, the identified problems are as follows:

- Departmental curricula in a fixed program of studies that do not employ any strategy for multidirectional and international communication,
- Lack of multi-cultural communication during the formal education period.
- Impossibility to educate an all-knowing student in isolation from the expanding diversity in practices and research,
- Lack of innovative approaches in studio teaching, which requires a bottom-up approach that fosters tutors and tutors to learn from each other and develop new ideas. Also, not all academicians are fulltime at studios, since they are also practising the profession. Up-to-date researches do not thus fuse into a studio setting. There is a weakness in fostering knowledge

triangle to work in the field of education. Accordingly, to support research and development to fuse into the practice, there is a need for a platform which is accessible to all.

Diverse cultures, attitudes and geographies nourish the discipline, which requires an international effort, intense communication and knowledge sharing. Architecture is a discipline that supports such international linkages between education, research and profession on an international level via ACE, UIA and EAAE, however learners and tutors may not have direct opportunities to be a part of these linkages due to economic, geographical, procedural and time-related limitations. This hampers the possibility to stimulate intercultural and civic competences of students and internationalization of HEIs. Accordingly, the discipline of the architecture needs **transnational effort, intense communication and knowledge sharing via borderless platforms for both learners and tutors to sustain its dynamic and fertile ground both for the academia and for the practice.** Here, MATERIART Open Platform was developed to fill this gap.

MATERIART seeks a method to support multidirectional and international communication to adapt existing architectural curricula to the rapid transformation in the field. In three-years project period, the project team aimed at developing alternative and experimental design studio models that were built upon various tutoring strategies in which both conventional and digital tools are integrated. Here, Open Platform acts as a backbone to sustain the development of studios through communication. The implemented studio strategies were shared via Open Platform, where the developed strategies were expected to foster integrative skills in up-to-date architectural design methods and to raise awareness of the professional role of the architect during the age of transformation. Besides the developed studios, Open Platform provides access to the past ISADs organized in Europe between 2000-2020. For further use, the institutions are expected to spread their ISAD calls and outputs via Open Platform. Accordingly, MATERIART, with O2 Open Platform, aimed at developing a borderless platform, which fosters peer communication and multi-layered inter-institutional collaboration.

In three-years project implementation, MATERIART Open Platform

- spread the MATERIART ISAD calls,
- disseminated the outputs of the MATERIART ISADs,
- included all student projects of MATERIART IPs,
- hosted O3: MATERIART Open Course Module,
- acted as a hub to archive all short-term intensive architectural design studios organized in EUROPE between 2000-2020, including details of ISADs (call for application; studio course details; studio projects; studio/project topics; teaching staff; institutions; year of education, length of the workshop, scholarship opportunities etc.),
- presented the analysis of the ISADs organized in Europe between 2000-2020 as O1 "Alternative Pedagogies,"
- provided a sorted listing search, based on criteria according to details mentioned above within the scope of O1,
- provided a discursive ground as a forum area open to all interested parties,
- provided a "Chat-zone" for students either searching for ISADs; participating in ISADs; completing ISADs, which is expected to promote the interactivity and peer communication, and
- provided an open space for institutions (HEIs; design institutions; software developers) looking for partners to organize ISADs.

2. IMPLEMENTATION

2.1. Focus

The primary focus of the Open Platform is to breed a collaborative learning environment for tutors and learners and to diversify the architectural studio contents and methods. Open Platform is structured to provide an interactive/flexible knowledge, research, and experience exchange online hub open to a broader readership and discursive collaboration.

Workteam Platform (WT P) was responsible for establishing the Open Platform. After the completion of the project, TOBB ETU Design and Architecture Student Society is going to be responsible for the platform, which will support the sustainability of both the platform and the project.

2.2. Structure

MATERIART Open Platform highlighting the significance of inter-institutional communication and peer interaction is structured as a digital and online platform. Two main pillars structure MATERIART Open Platform as (1) technical infrastructure and (2) content. The technical infrastructure is based on a website that provides facilities such as ISAD call board, chat-zone, ISAD archive, analysis/mapping board of O1 and Materiart ISADs. The content is based on MATERIART ISADs, existing ISADs in Europe between 2000-2020, forthcoming ISADs, and a MATERIART Glossary call which is spread to compile current trends in architectural discussion field.

2.3. Pilot Implementation

The pilot implementation was performed within the three-years of project duration. The platform is used primarily for the MATERIART ISADs. The calls and registration procedures of ISADs were shared via Open Platform (<https://www.materiart.org/platform>). Each ISAD has its particular page in the platform with its call, program, studios, outputs and registration box. Since the beginning, a chat-zone is structured to support communicative and discursive ground. In this sense, a broader community operated as a critical respondent. O1 "*Alternative Pedagogies*" as the mapping and analysis of the existing ISADs in Europe is also added to the platform. The data of existing ISADs are shared with the audience as *ISAD archive* containing available details of the events. A call-board is structured for the forthcoming events.

The preparation process requires an inter-institutional effort and collaboration. There are a number of phases that were followed during MATERIART Open Platform implementation. Preparations must be performed for technical infrastructure, and the collection and the organization of the content.

The platform is split into four main areas containing (1) Alternative Pedagogies (O1) as analysis and archive of the existing ISADs, (2) ISAD call board, (3) Materiart Course Module (O3) which has Materiart Workshop outputs and reports and activities, and (4) Chat zone-Forum (Figure 1).



Figure 1: The Structure of MATERIART Open Platform

AREA 1: This area of the platform consists of the Materiart Intellectual Output 1 (O1). Within the scope of O1, the retrieved data of the existing ISADs took place in Europe between 2000 and 2020 (in which data retrieval procedure could be found in MATERIART Intellectual Output Report 1) is presented visually.

The availability of past ISAD data is quite crucial for future activities. In the field of architecture, currently, there are several attempts to form online platforms like event calendars that map the conferences of archi-talks that aim to increase the communication between and integration of different parties in the field, or e-learning platforms that aim to increase the speed of knowledge-sharing, (like S-architecture or Arkitera). However, these attempts do not fulfil the complementary needs of the field due to their non-interactivity and scale; and also such platforms do not present the data of the previous ones and the analysis of such data. Providing user-friendly access to the existing ISADs would facilitate to analyze the changing trends in the discipline of architecture, which could provide a basis for further researches within the scope of architectural education. Also, it is one of the MATERIART project goals to learn from each other through tutoring strategies to develop alternative ones. At this stage, AREA 1 could be used as a guide, which provides a broader background of the implemented strategies and a basis for future activities. Here, the platform is expected to form a ground that knowledge to be flourished, shared and exchanged in a world-wide scale.

The presented data is also mapped as O1 and is presented as analytics of the retrieved data which enables MATERIART project to draw certain conclusions about the ideal ISADs through investigating the properties such as length, country, topic, and the audience of existing ISADs (Figure 2). This saturated information could also support tutors and researchers for future organizations and the analysis of the trends in architecture as a timeline.

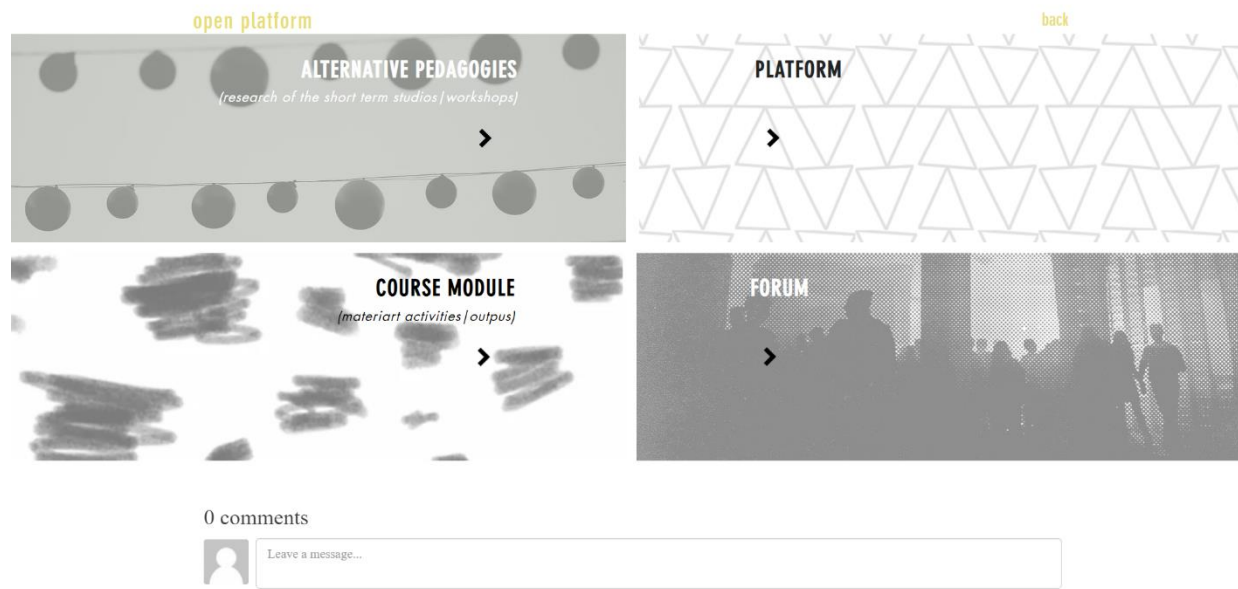


Figure 2: AREA1 of MATERIART Open Platform (<https://www.materiart.org/open-platform>)

AREA 2: ISAD call board is structured for future events, which enabled MATERIART Platform to be used after the completion of MATERIART. ISAD call board is open to the public announcements. The interested bodies are required to submit an ISAD registration call with a number of details. The generation of the registration form is based on the mapping and analysis of the existing ISADs (O1). The mapping and analysis phase showed that there are several aspects/filters/parameters to be considered, which enables a sorted listing. Sorted listing facilitates the website users to access the data that is sought by the user quickly. Accordingly, the parameters that are expected to be provided by the ISAD organizers are identified as (1) the name of the workshop, (2) organizing institutions, (3) workshop description (workshop theme, application requisites and deadlines), (4) starting/ending date (5) duration of the workshop, (6) registration fee (if applicable), (7) workshop location, (8) workshop URL, (9) recognition and validation of the learning outcomes, and (10) e-mail address (Figure 3-4).

PLATFORM

share the information about the alternatives with MateriART!

name of workshop

organizing institution(s)

a public body at local, regional or national level

a social partner or other representative of working life, including chambers of commerce, craft/professional associations and trade unions

a research institute

a foundation

media publisher

a higher education institution (HEI)

school/institute/educational center (at any level, from pre-school to upper large scale or small-medium size enterprise)

secondary education, and including vocational education and adult education

a non-profit organization, association, NGO


a body providing career guidance, professional counselling and information services


Other

name(s) of institution(s)

name(s) of institution(s) - II

workshop description (please include the workshop theme, application requisites and deadlines)

 workshop description (please upload if it is a document)

 logo or poster of workshop

starting date

ending date

duration of workshop

registration fee (if applicable)

yes no

other

recognition or validation of the learning outcomes of the participants in learning

europass youthpass ecvet ects

national instruments/certificates

other

workshop-city

workshop-country

workshop URL

Email Address

Submit

Figure 3: ISAD Registration Form (<https://www.materiart.org/platform>)

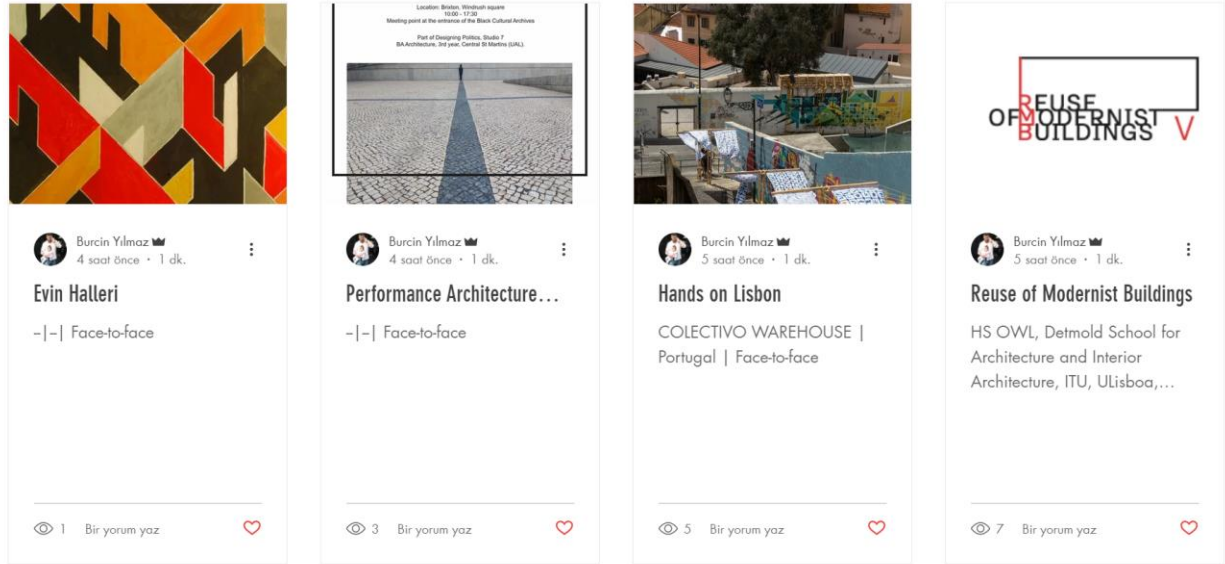


Figure 4: New ISAD Posts

AREA 3: This area of the platform is based on the content of the MATERIART ISADs. First, MATERIART Open Course Module is documented, which could be used as a guide to establishing an international ISAD module at the universities which support the informal learning and mobility of the students by employing transferable credits (ECTS) between the institutions.

Secondly, the MATERIART ISAD activities are documented through the calls, contents and outputs. Also, the publications that are produced out of MATERIART events are archived in this area, which is open to public access. During the project implementation, AREA 3 is also used for collecting the students' registration for MATERIART ISADs (Figure 5).

- **Event Call:** Each partner institution launched a call for the application that directed students to the Online Platform to collect the applications.
- **Student Registration:** Students register their application via a page on the MATERIART Online Platform.
- **Studio Briefs, Workshop Outputs and Participants:** Each studio developed a workshop brief that explains its thematic description, tutoring method, studio objectives, schedule and required programs and materials. According to the workshop briefs, the participants produced their outputs. The briefs, workshop outputs and the participant details are accessible via Online Platform.

The documentation of MATERIART activities could be regarded as a preliminary step that forms a ground for the pedagogical exchange by sharing the developed strategies publicly. Here, for the near future, as already MATERIART Open Platform (O2) enabled to establish closer bonds between the whole network engaged in architectural design education will also establish benchmarks for pedagogical exchange at a transnational scale as promoted by the EU directive.



Figure 5: MATERIART Activity Sample Pages

AREA 4: This area consists of a chat-zone and forum that was expected to form and sustain effective communication as an informative/discursive hub for all architecture students and tutors in a world-wide scale. However, chat-zone did not work as it was expected. The discussion environment was performed weakly, and contributors/participants preferred to sustain the communication via email groups and social media accounts/platforms. The platform is also used as a tool for project dissemination that contains video recordings of the events that enabled visitors to access the events without attending in person (Figure 6).

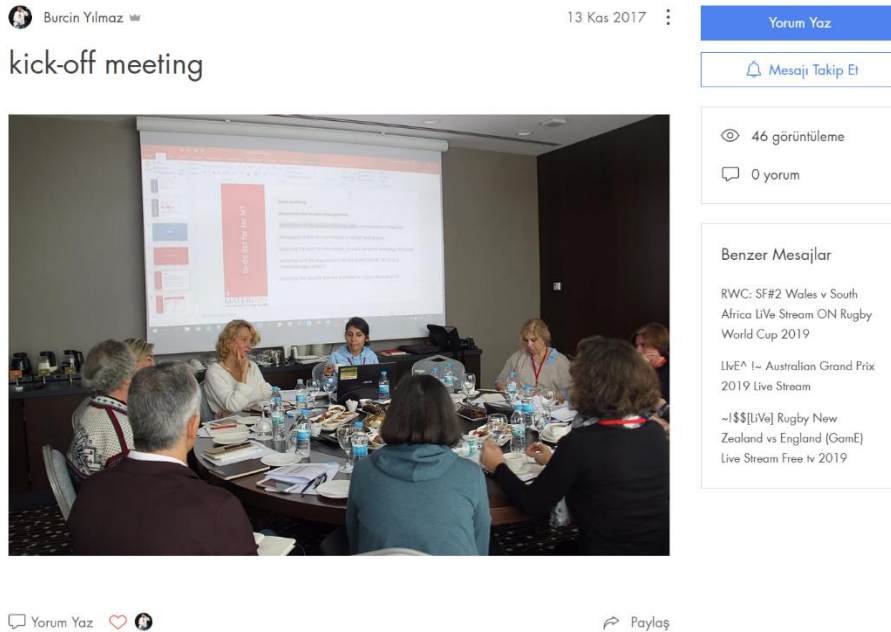


Figure 6: MATERIART Forum

3. EVALUATION

MATERIART is structured with a system of interrelating actions assessed in a controlled and iterative way that resulted in the production of the intermediate and final results. In such a process, evaluation played a significant role in Materiart Open Platform to receive feedback from the participants for the further improvements of the implementation.

3.1. Methodology and Data Retrieval

MATERIART Open Platform followed a methodology based on critical questioning with spiral iteration, which is **to define, to analyze, to test, to assess, to re-test, to re-assess** inline with the MATERIART activities. During each content revision of the platform, the user-friendliness, the interactions and the access rates are assessed. Such data are digitally collected from the website service provider. The focus of such an evaluation is to receive feedback from the public audience. In this respect, there are a number of qualitative and quantitative impact indicators that are employed during the evaluation, which were defined at the project implementation.

3.1.1. Quantitative Impact Indicators

The quantitative impact indicators were the primary data which provides feedback on how the audience interacts with the platform. Accordingly, how many unique audience visits, or how many new audiences visits the platform is significant metrics that measure not only the impact of the platform on architectural education field through interaction but also the dissemination of the MATERIART project. The indicators were defined as follows (Table 1):

Table 1: Quantitative Impact Indicators

Quantitative Impact Indicators	
<ul style="list-style-type: none">Number of accesses to the online platform	which measures the overall recognition of the MATERIART and particularly the platform
<ul style="list-style-type: none">Number of comments on MATERIART IP student studio works	which measures the dissemination of the event and the impact of the activity results
<ul style="list-style-type: none">Number of requests from other stakeholders (other than partners) to join the platform	which measures the overall interest in the communicative ground of MATERIART Platform that aims to provide informal and flexible interaction environment for architectural education
<ul style="list-style-type: none">Number of new ISADs (other than the IPs organized by this project) included into platform	which measures the overall interest of the actors in architectural education in implementing the MATERIART Open Course Module and contributing to Open Platform

<ul style="list-style-type: none"> Number of new strategic partnerships formed by means of the communication enabled by the platform 	which measures the platform's one of the targets aiming at increasing the disciplinary dialogue
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3.1.2. Qualitative Impact Indicators

The qualitative assessment of the platform is based on the direct responses and comments of the audience on open discussions, identified as follows during the project application (Table 2):

Table 2: Qualitative Impact Indicators

Quantitative Impact Indicators	
<ul style="list-style-type: none"> Comments on all the open discussions (studio works, studio teaching methods, contents) 	which measures the overall evaluation of the MATERIART outputs focusing on studio works, studio teaching methods and contents

3.2. Overall Results and Analysis

MATERIART Open Platform is assessed through qualitative, quantitative and SWOT analysis. The results are presented as in the following sections.

3.2.1. Results of Quantitative and Qualitative Impact Indicators

MATERIART Open Platform targeted to provide a borderless interaction ground for the actors in the field. According to such an aim, it is worth mentioning here that AREA 1 and AREA 3 of the Platform worked as it was planned (Table 3). However, AREA 2 and AREA 4 did not work as planned, although such areas were active since the beginning of the project. The audience, rather AREA 4, preferred social media applications for interactions such as Instagram and Facebook (Table 4). However, at the beginning of the project, as an extra activity, a call for the Glossary of MATERIART was established to compile the existing discussions in the field, through a collection of a trending terminology. The call still remains and will remain open, and the 85 entries that are collected from the public call are presented to the audience.

Table 3: Results for the Quantitative Impact Indicators of MATERIART Open Platform

Quantitative Impact Indicators for MATERIART Open Platform	
<ul style="list-style-type: none"> Number of accesses to online platform for three years 	31471 views from desktop 11605 views from the mobile devices 537 visits from the tablets -- Direct unique access: 5948 Organic unique search: 3166 Unique Referral: 1464 1345 returning- 5417 first time

	<p>The number of visits to the publications found on the project website: 1042 times</p> <p>The number of visits to the glossary found on the project website: 2192 times</p> <p>--</p> <p>Countries accessed: Canada, USA, Mexico, Ecuador, Peru, Paraguay, Brazil, UK, Finland, Norway, the Netherlands, France, Spain, Italy, Austria, Denmark, Croatia, Switzerland, Czechia, Portugal, Germany, Greece, Romania, Turkey, Russia, Poland, Algeria, Morocco, Senegal, Nigeria, Malaysia, Australia, Saudi Arabia, India, Pakistan, Sri Lanka, Malaysia, Jana, Philippines, China, Oman</p>
<ul style="list-style-type: none"> Number of comments on MATERIART IP student studio works 	N/A
<ul style="list-style-type: none"> Number of requests from other stakeholders (other than partners) to join the platform 	N/A
<ul style="list-style-type: none"> Number of new ISADs (other than the IPs organized by this project) included into platform 	N/A
<ul style="list-style-type: none"> Number of new strategic partnerships formed by means of the communication enabled by the platform 	<p>A number of partnerships are structured with schools:</p> <ul style="list-style-type: none"> INSTITUT NATIONAL DES SCIENCES APPLIQUEES, STRASBOURG HOCHSCHULE ANHALT POLITECHNIKA GDANSKA AALTO KORKEAKOULUSAATIO SR UNIVERSITAT POLITECNICA DE VALENCIA GAZI UNIVERSITESI UNIVERSIDADE LUSÓFONA DE HUMANIDADES E TECNOLOGIAS <p>The interactions with abovementioned schools are structured for the future Erasmus+ KA 203 Strategic Partnership projects.</p>
Qualitative Impact Indicators	
<ul style="list-style-type: none"> Comments on all the open discussions (studio works, studio teaching methods, contents) 	N/A

Table 4: The Interactions Table for Social Media Platforms of MATERIART

The number of interactions on social media	
Instagram	163 followers

Facebook	132 friends, 138 followers
Twitter	8 followers

3.2.2. SWOT Analysis of the MATERIART Open Platform

The questions given at the SWOT analysis table were prepared to map the contributions and the drawbacks of the developed platform and its relevance to the EU Directive 2013/55 (Table 5). Also, SWOT analysis was used to identify prospective strategies to improve the weaknesses of the implemented platform.

Table 5: Questions for MATERIART Open Platform SWOT Analysis

	Favourable	Unfavourable
Internal	Strengths 1.What are the strengths of the Open Platform? (In equipping the students to address the challenges of the profession and the skills, knowledge, and competences as defined in EU Directive 2013/55) 2.What does Open Platform better than existing architectural curricula? 3.What are unique strategies this platform offers?	Weaknesses 1.What are the weaknesses of the Open Platform? 2. What do existing architectural curricula better than the Open Platform? 3.What can be improved in the Open Platform?
External	Opportunities 1.What conditions may positively affect the Open Platform? 2.What opportunities are available to the Open Platform?	Threats 1.What conditions may negatively affect the Open Platform?

The SWOT analysis for MATERIART Open Platform resulted as follows (Table 6):

Table 6: SWOT Analysis Results of MATERIART Open Platform

	Favourable	Unfavourable
Internal	Strengths 1.What are the strengths of the Open Platform? (In equipping the students to address the challenges of the profession and the skills, knowledge, and competences as defined in EU Directive 2013/55)	Weaknesses 1.It is observed that social media use dominates over website-based platforms. In this respect, platform should also be available for social media. 2. Existing architectural curricula does not allocate borderless and informal

	<p>2. Platform offers new opportunities and practices to the existing curriculum as follows:</p> <ul style="list-style-type: none"> • Providing a borderless interaction ground which enables informal and extracurricular activities. • Providing a data set and its analysis that could be used as a guideline for the future ISADs. • Providing an user-friendly showcase of the existing ISADs. • Providing an access to the outputs of events and developed alternative pedagogies. <p>3. Platform offers a number of unique strategies focusing on disciplinary and international communication by targeting to structuring a peer-network and a database for further research on the impacts of ISADs on architectural education by presenting the curated data in the field.</p>	<p>learning environments. In this respect, existing architectural curricula does not offer a better platform compared to MATERIART Open Platform.</p> <p>3. Open Platform's integration to social media platforms could enhance the accessibility, practical use and dissemination.</p>
External	<p>Opportunities</p> <p>1. The more institutions and the individuals are using the platform, its positive impact on the field of architectural education would increase.</p> <p>2. The greatest opportunity for the Open Platform lies in the effective use of it by the larger national and international organizations such as EAAE, ARCC and ACSA.</p>	<p>Threats</p> <p>1. It is observed that the audience remain passive in using forum and chat-zone while actively using the platform to follow the MATERIART activities publications and event outputs. The audience's preference not to use such communicative ground is the primary threat to the platform</p>

4. FURTHER IMPLEMENTATION

MATERIART Open Platform will remain open and sustained by TOBB ETU Architecture and Design Student Society. In three years, Open Platform is used as a showcase, an archive, and a call board that enabled tutors and students to communicate for MATERIART project events. However, Open Platform requires further support for dissemination, which is expected from TOBB ETU Architecture and Design Student Society. The MATERIART outputs such as O1-Alternative Pedagogies, O3-Open Course Module and Glossary call will also remain accessible to the public audience.

With the current pandemics, the e-communication and learning platforms become valuable and beneficial more than ever. In this regard, Open Platform has the potential to be a part of such an e-communication and e-learning platform for architectural education. In this respect, a number of strategies are determined

and shared with TOBB ETU Architecture and Design Student Society to maintain the activity of the platform as follows:

- Collaborating with existing student societies of national/international and public bodies,
- Disseminating the platform via national and international design and architecture websites,
- Sending monthly public newsletters,
- Sustaining the communication with the student societies of the project partners to spread the future ISAD calls of their institutions.
- Communicating officially with the institutions to upload the outputs of their ISADs.