

# AMICE

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Report:      Concept      Knowledge  
Sharepoint (e-info platform and event  
concept)

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## Abstract

The concept of the Knowledge Sharepoint describe its main features, requirements, overall structure, as well as the technical implementation of the associated E-Info Platform and the event concept in its various formats. The Knowledge Sharepoint is one of the tools of the AMiCE consortium that is developed at a transnational level and tailored to the needs of the target users. This deliverable gives a few guidelines and set the respective framework conditions. The objectives and methodology of the knowledge sharepoint are presented in the first place, before defining the main target groups: SME´s, RTOs and Policy. The two tools integrating the knowledge sharepoint are also defined, the e-info platform and the event concept. For both of them, the main needs of target users are analysed, and the information required to fulfil them are further presented, building upon the AMiCE workshops. The basic structure, content elements, as well as maintenance and the marketing strategy are also presented. The event concept of the KS is its physical part and it aims to build and strengthen trust between stakeholders and the AMiCE consortium. Once an atmosphere of trust is created, the process for adopting new technologies will be eased by means of different tools and services offered by the alliance with the objective of increasing innovation and business competitiveness in the targeted regions of CE. This deliverable gives a few guidelines for developing such events in an effective and consistent manner across-regions. The results of the present deliverable enable a target group-specific and needs-oriented approach in the development process of the e-info platform as well as the identification of relevant contents within the framework of advanced manufacturing and circular economy.

**RELEASE**

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## List of Abbreviation

Abbreviation	Meaning
SME	Small and medium-sized enterprises
AM	Additive Manufacturing
CIRC	Circular Economy
RTO	Research and Technology Organisation
3DP	3D Printing
EIP	E-Info Platform
BSO	Business Support Organisation
CE	Central Europe
EEN	Enterprise Europe Network
DB	Database
DBS	Database System
DBMS	Database Management System
SLS	Selective Laser Sintering
RSS	Really Simple Syndication
HSZG	Hochschule Zittau/ Görlitz
SEO	Search Engine Optimisation
URL	Uniform Resource Locator
GDPR	General Data Protection Regulation
CMS	Content Management System
WCAG	Web Content Accessibility Guidelines
KET	Key enabling technologies
WP	Work Package
EU	European Union

## Table of contents

1. Introduction.....	1
2. Scope.....	1
3. Objectives.....	5
4. Methodology .....	6
5. Target users.....	6
5.1. Background.....	6
5.2. The needs of the target groups .....	7
6. E-info platform (EIP) .....	2
6.1. Development of the EIP .....	2
6.2. Structure of the platform.....	4
7. The event concept.....	7
8. Marketing strategy.....	10
9. IPR / General Data Protection Regulation (GDPR).....	10
10. Conclusions.....	11

## List of Tables

Table 1. The needs of SMEs and the information that is needed to fulfil them. ....	1
Table 2. The needs of RTOs and the information that is needed to fulfil them. ....	1
Table 4. Benchmark analysis with regards the KS .....	15
Table 5. CMS Matrix Source: <a href="http://www.cmsmatrix.org">www.cmsmatrix.org</a> , <a href="http://neos.io">neos.io</a> , <a href="http://drupal.org">drupal.org</a> (✓+: via plugin) .....	16

## List of Figures

Figure 1. The KS is a communication tool that will provide tailored information to the three target users: SMEs, RTOs and Policy.....	3
Figure 2. The Knowledge Sharepoint comprising the e-info platform (EIP) and the Event Concept .....	4
Figure 3. Simplified representation of the structure of the EIP as site map .....	5
Figure 4. Timeline planned for the EIP. ....	7
Figure 5. Timeline planned for the events.....	10
Figure 6. Development of keywords on Google. Source: Google Trends .....	10
Figure 7: Showcases available in additively.com .....	13
Figure 8: The functionality for finding research partners in AMNetwork. ....	14
Figure 9. The European Technology Platform in Additive Manufacturing. ....	14
Figure 10. The dedicated events organised by the AMPlatform. ....	15

## 1. Introduction

The aim of the AMiCE alliance is to be an effective support for SMEs in their process of adopting new manufacturing technologies. Within the AMiCE project, this applies to advanced manufacturing technologies and circular economy. Thus, different activities and tools will be designed specifically for the target users by the partners of the consortium.

The target users are not only the SMEs but also two additional important innovation stakeholders, RTOs and policy. One of these tools is the knowledge sharepoint (KS). This tool intends to provide tailored information to the target users in order to support them during the process of adopting advanced manufacturing technologies and circular economy principles.

The KS is comprised by an online tool, called the **E-info platform**, and an offline part in the form of **events concept**. The event concept is the physical approach of the knowledge sharepoint. Its main aim is to be the next step in building the trust between target users and innovation stakeholders (experts) in the process that companies (namely SMEs) will likely pass through for adopting new technologies. It is aimed at taking the online communication one step further with target users and convince them in their decision-making process for adopting new technologies. For both digital and physical communication tasks, the KS is the facilitating tool and the information used by the platform is provided and tailored by the partners of the consortium, BSO and RTO.

## 2. Scope

### 2.1. The AMiCE alliance

The AMiCE project will tackle the following challenges faced by SMEs when adopting advanced manufacturing technologies:

1. Additive Manufacturing (AM) technologies are knowledge- and capital intensive. Currently, completely new business and innovation ecosystems appear, the risks to rely on these rapidly changing structures is high and cannot be safely estimated.
2. There is a significant knowledge disparity between research institutions and SMEs. Entrepreneurs simply don't know what is possible and feasible, cannot estimate the opportunities and risks. This is a high obstacle for SMEs to take up advanced technologies.

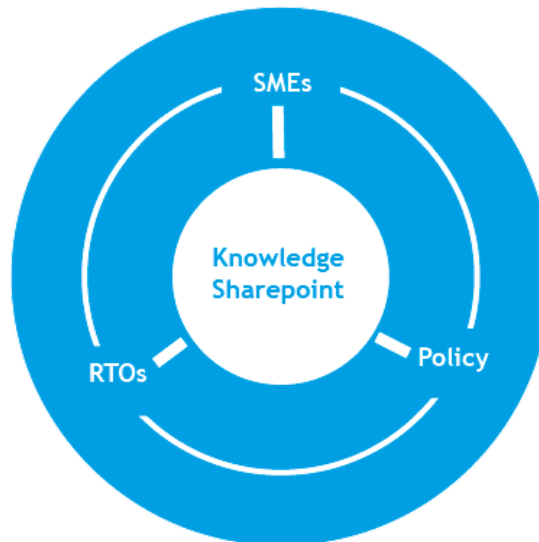
3. The innovation support schemes follow traditional manufacturing structures. AM requires addressing many topics in a short and same time (i.e. materials, energy efficiency, ICT-applications, new value chains, competitors etc.)
4. Existing support organisations and clusters do not strive to think out of the box, are not always linked with the appropriate knowledge partners. Their project-based approach prevents them from benchmarking with and learning from top-level players, i.e. from other European regions.

The rise of 3D printing and the fragmentation of required knowledge across different areas require transnational cooperation, which would allow replication of best practices in different places. AMiCE will connect five innovation hubs that prioritise advanced manufacturing in their regional strategies. A tandem of partners including a business support organisation (BSO) and a leading university (RTO) represents each innovation hub.

## 2.2. The Knowledge Sharepoint

The **Knowledge Sharepoint (KS)** is one of several tools that the AMiCE consortium would like to make available to target users for easing the process of adoption of advanced manufacturing technologies and circular economy. The KS is a communication tool that will provide tailored information to three types of target users: SMEs, RTOs and policy actors (Figure 1).





*Figure 1. The KS is a communication tool that will provide tailored information to the three target users: SMEs, RTOs and Policy.*

The information provided to target users is tailored according to their main interests. These interests are related to their corresponding needs, which might differ between each other given their different nature. For example, while SMEs are highly interested in increasing their business activities, RTOs tend towards seeking partnerships that allow them to transfer their knowledge effectively, that is, to transform their knowledge and ideas in market products and technologies. As for policy actors, their main interests lie in providing the most suitable and effective supporting mechanisms in their region (to both SMEs and RTOs), which could allow strengthening their position at national and/or European level. A more detailed analysis of the specific needs per target users is made in further sections although some of them can be listed as follows:

- technology opportunities and innovation needs for SMEs in order to increase their business activities.
- supporting schemes by policy actors to SMEs and RTOs.
- profiles of experts for specific innovation topics offered by RTOs.
- experiences and best practices in the fields of industrial policy and the development of the regional innovation 4.0 ecosystem.

To archive these goals, the KS is comprised of two complementing tools (see Figure 2).

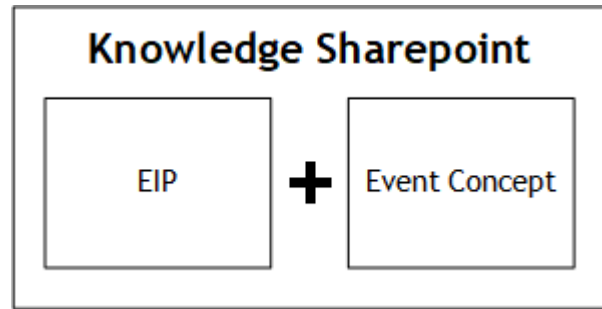


Figure 2. The Knowledge Sharepoint comprising the e-info platform (EIP) and the Event Concept

The **E-info platform (EIP)** represents the online part of the KS. Annex I presents the background study made for benchmarking purposes. The EIP digitally provides the information to the target users. It is a website that makes the first contact with the target users and it must provide tailored information in order to be useful, effective and attractive. The information displayed by the EIP is prepared and provided by the AMiCE consortium and by taking into account the specific needs of the target users. The EIP will be implemented as a public website, which is complemented by 10 regional and 1 transnational events, where partners and innovation stakeholders of the involved regions will meet each other personally. This is the start of the process of adoption and naturally cannot entirely rely on digital communication. Convincing the target users to adopt new technologies (that entail a certain risk) should be built on further actions, by creating a cooperation of trust between stakeholders and experts, that is, between the targets. For this purpose, the KS is complemented by the Event Concept.

The **Event Concept** is the offline part and it should continue providing tailored information to the target users, this time in the form of bilateral or multilateral communication approaches. It stands for the planning and organisation of informative sessions, workshops and masterclasses. By this manner, users belonging to the target groups have the chance for meeting experts and relevant stakeholders that would be able to answer their doubts, concerns, and offer their support. Through these physical meetings the target groups receive a tailored information of potential opportunities at first hand, according to their specific needs and situation. In this framework, the AMiCE consortium is focusing on the organisation of 10 regional plus 1 transnational events, where partners and innovation stakeholders of involved regions will meet each other through the different types of events and corresponding formats. In general, the events will provide the following information:

- Presentation of the AMiCE alliance and the KS

- For specific topics of interest, introduction of contact persons, their competence and equipment.
- Exchange of ideas, insights and generation of new projects.

Besides providing information, the event concept also aims to set the framework for networking activities between companies and RTOs on specific research topics.

### 3. Objectives

The main objectives of the KS are:

- To provide tailored information to the target users: SMEs, RTOs, and policy actors.
- Through both digital and physical tools, to build trust between target groups and innovation stakeholders (experts).
- Facilitate networking activities between stakeholders across sectors and across regions of CE.
- Ease the dialogue between all players in the value chain.
- Promote the alliance and the Interreg program.
- Increase visibility of innovations actors in CE.

This will allow to contribute to the following main goals of the AMiCE alliance<sup>1</sup>:

1. *Closing the knowledge gap*: Due to a lack of both financial and human resources, the target groups are struggling to track developments in AM and CIRC.
2. *Promoting of new technologies and integration in new value chain*: The main motivation criteria of the EIP are the interregional and international knowledge transfer and networking between the target groups and regional innovation systems.
4. *Support companies in becoming factories of the future* by providing the necessary tools for responding to changing conditions and business model levels.
5. *Support schemes* through tailored funding programmes.
6. The *sharing knowledge* between them is an important basis for mutual learning and networking.

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<sup>1</sup> AMICE (2018). Deliverable D.T1.1.3. Development of a co-operative manufacturing innovation 4.0 support strategy.

## 4. Methodology

The KS aims to provide tailored information to target groups for easing the process of adoption of new technologies that ultimately will increase their business activities. This will be a two-stage process:

- A first contact is made by the EIP, which will provide digital information to users. Hence, it should be easy to follow, intuitive and freely accessible to all interested actors in the regions involved. The target users showing the highest interest will be then invited to the second stage.
- The second stage involves physical meetings through different kinds of events where they would be able to exchange more detailed insights and build the trust needed for taking a final decision for adoption. The user will be informed about demonstrators and success stories. The exchange between the main target groups SME's, RTO's and policy actors also stands in the foreground and the transfer of knowledge for mutual learning.

Thus, the methodology of the KS is about combining digital and physical approaches and define the way in which they complement each other.

During the digital approach of the e-info platform, the interest of target users (SMEs, RTOs, and policy agents) is maintained by offering tailored information, satisfying their interest until the next phase. This tailored information is presented in the form of functionalities. As for the physical approach, this takes place through bilateral or multilateral conversations. For the most promising cases, companies and experts are invited to these physical meetings, which aim at creating an ambience of trusts that could favour the process of adopting new technologies. This can be encouraged within the framework of events where companies can make explicit contact with experts and find solutions for new product developments. Both approaches are described in further sections.

## 5. Target users

### 5.1. Background

*Small and medium enterprises (SME)*

Given their particular nature, SMEs face the adoption of new technologies in a different way than large companies: their smaller structure ease the flow of information and

can in general react with more flexibility, however, they usually struggle with financial scarcity. This target group is reach through the BSOs of the AMiCE's tandems.

### *RTO*

RTOs bring together key people from the entire innovation chain, that means members from basic and technological research, from product or process development, prototyping and demonstrators. RTOs are usually also members of international networks and innovation clusters to identify cross border connections and acquire knowledge from other regions<sup>2</sup>. Since the core task of the RTOs is to use science and technology in the service of innovation, to improve quality of life and to develop economic competitiveness, they are in seek of establishing valuable partnerships with companies and develop joint projects that could allow them to attain an effective transfer of knowledge. This target group is reach through the technical partners of the AMiCE's tandems.

### *Policy and administration*

Policy and administration include local and regional agencies aimed at increasing job creation, business competitiveness and economic growth through support schemes. Additionally, innovation strategies must be driven and supportive frameworks created through policy decisions<sup>3</sup>. This target group is reach through both tandem partners of AMiCE.

## **5.2. The needs of the target groups**

The consortium analysed the needs of the target users according to their nature as well as the information that is needed to fulfil each of those needs. This analysis is presented in Table 1Table 2Fehler! Verweisquelle konnte nicht gefunden werden..

<sup>2</sup> European Association of Research and Technology Organisations (EARTO). Available in: <http://www.earto.eu/about-rtos.html>

<sup>3</sup> European Commission on Policy. Available in: [https://ec.europa.eu/regional\\_policy/en/policy/what/investment-policy/](https://ec.europa.eu/regional_policy/en/policy/what/investment-policy/)



Table 1. The needs of SMEs and the information that is needed to fulfil them.

Need	How to fulfil
Technical requirements to use the technologies	- Basic information about the type of technologies, materials and equipment needed.
Education & training of employees	- Workshops/ Trainings / Webinars - Consulting services available in the region (offline & online)
Value proposition to the business activity	- Different advantages offered by the technologies as it was detailed in the foresight study (main drivers for adoption) - Related disadvantages/shortcomings for the current technology available - Diagnostic process (as presented in the deliverable of the strategy, foresight scenarios) - Potential effect and changes in value chains & production lines for different manufacturing sectors - Examples of potential applications, e.g. degree of customisation, functionalization and design. - Success stories (as presented in the foresight study) - Information about legal issues, IPR, data protection <del>- New business contacts: main key players in the region</del> - Key figures in terms of improving productivity
Information about supporting mechanism/ funding programmes per region	- Relevant funding opportunities: tailored to opportunities in advance manufacturing technologies for SMEs (per region)
Trends	- Information about current and coming standards and related regulations - Currents problems on the market, latest achievements (regional and EU level) - Project ideas and innovation challenges - Linkage to other projects
Innovation challenges	- Success stories - Challenges from industry - Technology offers
Joining the innovation community	- Innovation clusters and workshops - Information about running projects

Table 2. The needs of RTOs and the information that is needed to fulfil them.

Need	How to fulfil
Education of employees	- Workshops/ Trainings / Conferences / Seminars - Staff exchange
Value proposition to the business activity	- Industrialisation aspects - Marketing activities - Mass customisation aspects - Information about legal issues - project development
Information about supporting mechanism/ funding programmes per region	- Tailored information regarding the funding opportunities that are applicable to RTOs at regional, national and EU level - Information about particular support from regional administration in the preparation of funding opportunities
Trends	- Last achievements of large users and most important key players (e.g. machine manufacturers) - Events, innovation clusters and experts - Linkage to other projects - Needs of industry; gaps in the technology
Innovation challenges	- Currents needs on the market according to sectors of interest - Scientific gaps in the technologies
Interaction with the scientific community	- Forum/ question and answer functionality - FAQ

Table 1: The needs of policy and administration and the information that is needed to fulfil them.

Need	How to fulfil
Reach a large audience for promoting policy measures	<ul style="list-style-type: none"> <li>- Through the contact with BSO/RTOs</li> <li>- Promotion of events</li> </ul>
To effectively provide information about supporting mechanism/ funding programmes per region	<ul style="list-style-type: none"> <li>- Prepare tailored information regarding the most suitable funding opportunities</li> <li>- Mapping of companies per sector</li> <li>- Methods for enhancing production development</li> </ul>
Information about trends	<ul style="list-style-type: none"> <li>- Contacts with national agencies and other administrations (including EC related)</li> <li>- Linkage to other projects</li> <li>- Linkage to other platforms and their database</li> </ul>
Innovation challenges	<ul style="list-style-type: none"> <li>- Currents needs on the market according to sectors of interest</li> <li>- Scientific gaps in the technologies</li> </ul>
Create and sustain a favourable ecosystem	<ul style="list-style-type: none"> <li>- Information about regional legal requirements</li> <li>- List of certificate programmes</li> </ul>
Promote events	<ul style="list-style-type: none"> <li>- Dissemination channels</li> </ul>
Create jobs, economic growth in the region	<ul style="list-style-type: none"> <li>- Successful Frameworks of support</li> <li>- Successful innovation strategies</li> </ul>

The tailored information of the KS is prepared according to the needs of targeted users and by paying attention to the different ways of fulfilling each of the needs.

A collateral effect of the KS is the access to industry contacts in each region although not an objective per se, but rather accessible through BSOs. A list of expert contacts of registered RTOs and SMEs might be also provided by BSO.

## 6. E-info platform (EIP)

It is the digital part of the knowledge sharepoint and therefore is the first contact of target users with the alliance. It is a public website containing tailored information for the target groups, which is prepared by partners according to their needs (Tables 1-3) and further presented in the form of “functionalities”.

### 6.1. Development of the EIP

The development of the EIP will take place in six phases:

1. **Requirements Engineering:** This is the process of documenting, analysing, tracing, prioritizing and agreeing on the requirements. It also includes the measures needed



for controlling changes and communicating activities to relevant stakeholders. The requirement specifications about the EIP include information about the goals, the scope, timeline, maintenance, system environment, external interfaces, resources and internal data.

2. *Design:* After defining the scope, a sitemap and early conceptual mock-up are created to discuss the user interface of the EIP. This early mock-up will not show the final design regarding colours, typography etc. although it should present a mature idea of how the content would be presented. In this phase it is possible to work with placeholder content.
3. *Development:* In the development phase, the University of Applied Science Zittau/Görlitz (HSZG) determines the programming environment, programming language and technical approach. This phase requires that the requirements and design are already defined.
4. *Content creation:* In this phase the content for the pages is created based on the sitemap, the identified goals and the scope. To control this process, a content manager should be assigned.
5. *Test:* In this phase the EIP is tested with various devices (different browsers, mobile, desktop) and by different stakeholders (ideally representatives of the target groups). Different aspects are considered important for assessing performance (e.g. loading time), accessibility, SEO quality and the user experience. The user experience is related to the way the user understands the structure of the platform and can navigate smoothly through to the desired content.
6. *Delivery:* The EIP is published in a beta version and a user manual for the EIP and a manual for technical administration are handed over to the respective partners.
7. *Validation:* The partners or the end user are involved in the development of the EIP in the beta version. Feedback about errors, improvements or questions about the EIP will be processed. The feedback can be collected with the help of a Ticket System or simply via e-mail. After completion of the validation phase, the EIP is finally released for public access.

The main target groups and their needs contribute to the first phase, requirements engineering and scope definition. Phases 2 to 6 are not covered in detail in this document. After the launch, all previous phases are successfully finished and the EIP can be made accessible for the public audience.

## 6.2. Structure of the platform

The challenge for the EIP user interface is to make content available as easily as possible to three target groups, two priority themes and five countries. Figure 3 shows a simplified representation of the structure of the EIP as a site map. Site maps are used during the planning of a Website and present a hierarchical view of the site.

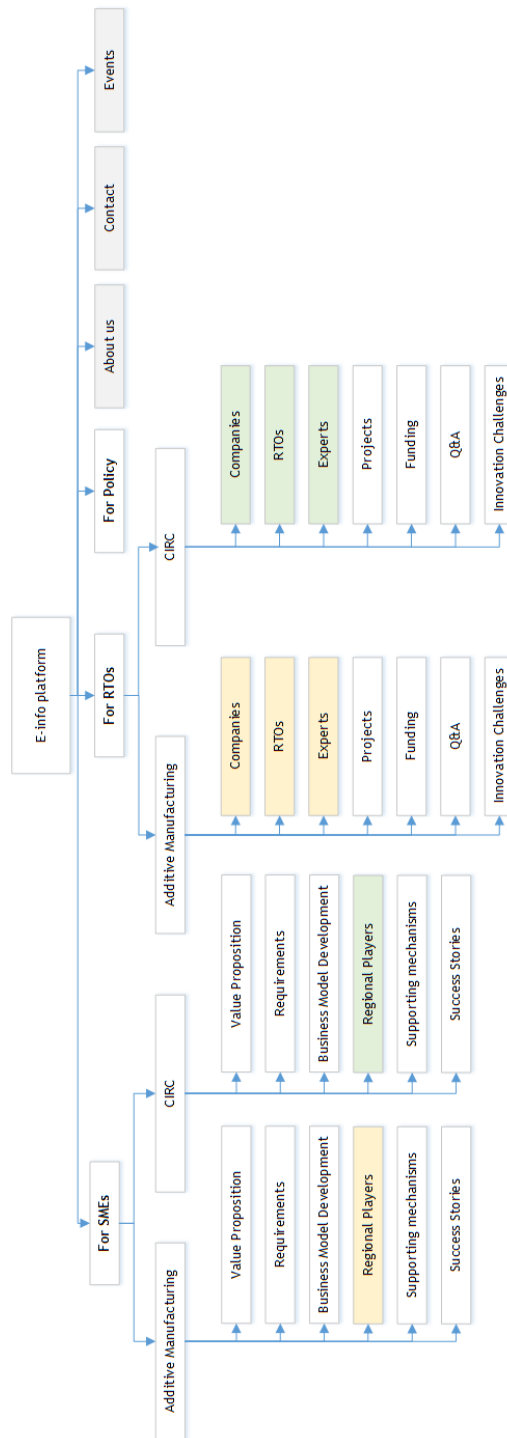


Figure 3. Simplified representation of the structure of the EIP as site map

One approach is to define a core target group, while keeping an eye on a number of secondary target groups in the innovation and development process. The main target groups are SMEs, since this group:

- Implicitly defines what is of high relevance for RTOs
- Has a high relevance for the adoption and future of AM and CIRC
- Usually are in a position where policy support is needed

The main topics that need to be covered for AM and CIRC will be those who can fulfil the identified needs for SMEs and the rest of target groups (Tables 1-3) and presented in the form of functionalities

*Table 3. The functionalities of the EIP according to target users.*

Target user	Functionalities
SME	<ul style="list-style-type: none"> <li>• Value proposition</li> <li>• Requirements</li> <li>• Trends</li> <li>• Success stories</li> <li>• Funding mechanisms</li> <li>• Community</li> <li>• Education &amp; training</li> </ul>
RTO	<ul style="list-style-type: none"> <li>• Value proposition</li> <li>• Trends &amp; challenges</li> <li>• Success stories</li> <li>• Education &amp; training</li> <li>• Funding mechanisms</li> </ul>
Policy	<ul style="list-style-type: none"> <li>• Policy measures</li> <li>• Funding mechanisms</li> <li>• Trends &amp; challenges</li> <li>• Ecosystem</li> </ul>

In addition, the structure also provides for general information, such as information on "About us", events and contact details.

The "About us" page will provide an overview of the project, i.e. a factual brief presentation of the project and its contents: motivation, objectives, content and an introduction to the actors involved. In addition, the benefits of the EIP will be presented, i.e. the advantages of actively using the EIP. The Events page gives a general overview of the next events in the next six months. More detailed information will be available for each event, depending on how up-to-date it is. Events that have already taken place will automatically be transferred to an archive, so that interested EIP visitors will have the opportunity to receive retrospective information on past events. The archive is limited to the last two years. The contact information is assigned to the respective partner country. This includes at least a name, address, telephone number and e-mail address.

An analysis of the technical requirements is presented in Annex II.

### 6.3. Timeline

Regarding the AMiCE application form, the EIP will be implemented and accessible for actors from all involved regions at the 01.12.2019. The launch of the EIP is followed by a one year test run, report on the test run and a review of the platform (Figure 4).

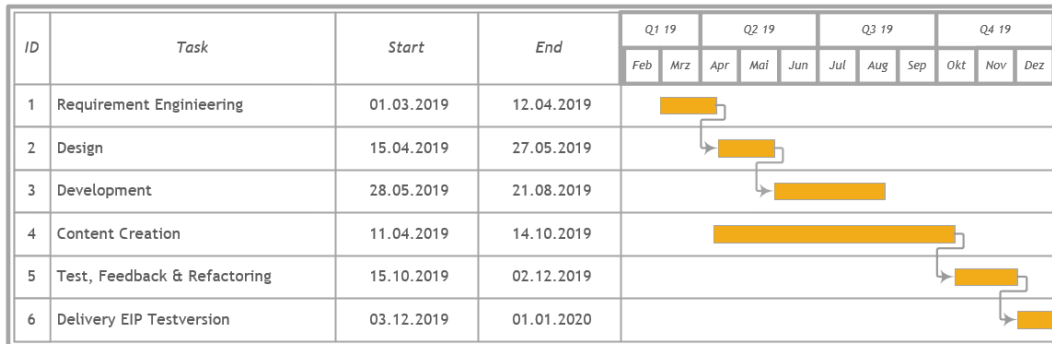


Figure 4. Timeline planned for the EIP.

## 7. The event concept

According to the targeted users, three types of events are considered:

- Info-Sessions:** which are addressed to SMEs and will focus on providing information regarding the content and objectives of the AMiCE project as well as opportunities in the AM and CIRC fields. They will also give the opportunity to learn more about these fields, by introducing the main technologies according to the participants and their sector with the opportunity to speak with representatives in small groups or individually. The info-sessions will have a total duration of 4h. The scientific partners of the tandem will select the main topics as well as the personnel necessary for carrying out the info-sessions (e.g. specific experts from industry or academia).
- Masterclasses:** which are addressed to RTOs and intend to bring the best specialists of each region together. It serves to strengthen communication within the interdisciplinary teams in order to gain new perspectives on topics. Experts can present their current running projects and can meet each other in interdisciplinary teams to create new projects or ideas (e.g. cross-sectorial). SMEs, institutes and universities can foster their abilities during the masterclasses. Led by an expert in the field of AM and CIRC, the group will be introduced to their knowledge and technological capabilities.

- **Roundtables:** which are addressed to Policy. They can be divided in selected categories and enabling discussions among participants (e.g. Round tables as a function of **sector of interest** including those identified in the foresight study for each of the regions, e.g. automotive, aerospace, mechanical engineering, marine, etc; Round tables as a function of **type of technology** including advantages and shortcomings of e.g. powder-based or filament-based technologies; Round tables as a function of **specific challenge** in which key players along the whole value chain are invited to present selected challenges at industry level (e.g. development of components, new materials, improving selected stages in the value chain, value added proposition).

Each regional partner will be able to choose the most suitable topic (e.g. Opportunities according to sectors of interest and a business activities; functionalities and capabilities of the E-info platform) by taking into account the following aspects:

- Current capabilities and expertise in the host organization, including the availability of experts and relevant stakeholders in the region.
- Presence of alternative events in the region, which might increase visibility and attract a larger audience of participants
- Trends in AM and CIRC, including relevant news in policy at EU level
- Specific needs of target users from the e-info platform

As a guidance, relevant topics might be selected from the foresight scenarios and foresight study presented in the corresponding deliverables, and tailored to the specific needs of regions.

During implementation, the events should have a common format for the agenda, invitations and participants list, according to Interreg CE programme.

For the success control after the event and optimization for upcoming events, proper monitoring activities and evaluation are necessary, including the number of participants and their feedback. When giving feedback on an event, it is advisable to hold a debriefing with all participants. Evaluation forms can also lead to an assessment of the previous event and visitor satisfaction. With a survey during the event, information about the participants, their background, general observations of the workshop organisation as well as details about collected inputs of the participants can be collected. In order to harmonize the evaluation of the results, a feedback form is created with contributions from all partners. This can be used to collect background

information, general observations, and information about the participants and details about collected contributions from the participants.

The evaluation form should contain the following information:

- Details on participants (background, number, location)
- Effectiveness of workshop (participation, time management, general impressions)
- Importance of internal / external experts:
- Relevance of topics addressed within the sessions on additive manufacturing and circular economy
- Degree of collaboration within and between individual target groups (RTO, SME, etc.), including their competences, skills, infrastructures for sharing for individual target groups (RTO, SME, etc.)
- Creation of ideas for collaboration mechanisms, future / desired functionalities
- Needs in terms of platform communication opportunities

The results of the survey of the participants and their evaluation of the events will provide a list of the requirements and needs of the participants for further events in the field of AM and CIRC as well as Interreg projects. This data will be collected from all interested and participating parties of the events and the information will be used to support the designed strategy as well as growth and extension of existing networks. A cross-regional dialogue is expected in order to continuously improve the organization of events and their effectiveness.

In terms of timeline, the AMiCE consortium will organise 10 regional events (2 per partner excl. LEITAT) during the period of 2018/2019. In addition, one transnational event will be held at the end of the project in 2020.

The suggested timeline is presented in Figure 5.

	2019										2020											
Region	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
DE																						
CZ																						
PL																						
IT																						
SK																						
All regions																						
<input type="checkbox"/> Regional Event																						
<input type="checkbox"/> Transnational event																						

Figure 5. Timeline planned for the events.

## 8. Marketing strategy

To promote the new community for AM & CIRC in central Europe, a mix of different actions can be considered. Beside a good onside SEO quality it is necessary to promote the link of the EIP in all accessible channels to archive a good offsite SEO quality through backlinks and get a bigger audience:

- Include the URL in the e-mail footer
- Include the URL on every print article of the AMiCE network
- LinkedIn
- AMiCE Interreg Website
- AM & CIRC Platforms

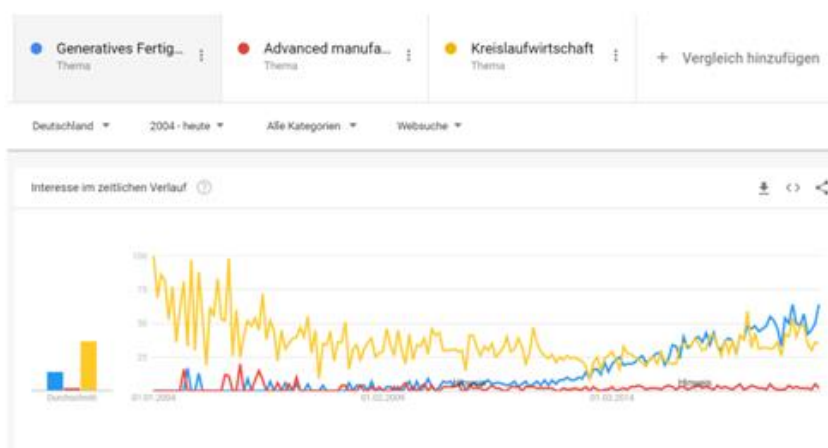


Figure 6. Development of keywords on Google. Source: Google Trends

The keywords of the EIP pages should be inspired by currently trending keywords from the field of AM & CIRC (Figure 6; e.g. via Google Trends research).

## 9. IPR / General Data Protection Regulation (GDPR)

Since May 2018, the European General Data Protection Regulation (GDPR) defines how to handle personal data (customer and employee data). Controllers of personal data must put in place *appropriate technical and organisational measures* to implement the data protection principles. Business processes that handle personal data must be designed and built with consideration of the principles and provide safeguards to protect data (for example, using pseudonymization or full anonymization where appropriate), and use the highest-possible privacy settings by default, so that the data



is not available publicly without explicit, informed consent, and cannot be used to identify a subject without additional information stored separately. No personal data may be processed unless it is done under a lawful basis specified by the regulation, or unless the data controller or processor has received an unambiguous and individualized affirmation of consent from the data subject.

That means that the user has the full control to agree or decline cookies and tracking. All contacts can only be indirectly contacted via the EIP and no sensitive data like e-mail addresses will be shared.

All collected data has to follow the principles of

- Collect data just for special purpose
- Data minimisation / data reduction (just collect data that is necessary for the service)
- Transparency (communicate what data is stored and how it will be processed)

Users have the right to request all data that the EIP has collected, that means that it is necessary to define a responsible person and a defined process to response as fast as possible. If data is collected, e.g. through a contact form, the user has to be informed and to accept or decline it. If a user requests a complete deletion of his personal data the necessary processes have to be able to do so. To guarantee that all personal datasets are as secure stored as possible, all technical possibilities have to be used. If more than 10 people have constantly access to personal data, a data protection officer has to be nominated and named. This person should proof and develop his expertise through continuing education. A list should contain all processing activities in a tabular presentation (which data is when and how long stored). Beside all connected processes have to be documented e.g.:

- How does the process of personal deletion looks like
- What happens if personal data gets stolen

For the EIP the GDPR is especially important regarding cookies, contact forms, newsletter, web analysis and tracking, comments and databases (e.g. expert database).

## 10. Conclusions

The KS is one of the tools developed by the AMiCE consortium to give support to targeted users during the process of adopting new technologies, such as additive

manufacturing and circular economy. It is formed by a digital approach, in the form of the EIP, that is the first contact with the target users. It should get their attention and maintain it sufficiently enough until engaging them to the physical approach, in the form of events. During these events, several meetings will allow to build trust with targeted users and hence establish a dialogue that could ultimately lead to adopt the new technologies. This deliverables sets the framework on what is going to be offered by the KS and its different forms although it is flexible enough so tandem partners can perform the tasks foreseen with freedom, more effectively for each of their regions. This deliverable builds upon the discussions presented in the foresight study and strategy of the alliance and is also linked to the communication strategy of AMiCE, with the aim of reaching the largest mass of targeted users.

## Annex I: Benchmark analysis

Three platforms were analysed before developing this concept for benchmarking purposes: Additively, Amnetwork, and AMPlatform.

### a) Additively:

This platform is owned by Additively AG from Switzerland and it's a digital meeting place in which the main target users are companies, especially for production leads, engineers, product managers, quality responsables, sourcing and procurement professionals and managers. The goal of this platform is to help companies realize their projects faster and more successfully. To do this, it is organised in 7 functionalities or sections: i) topics; ii) events; iii) providers & solutions; iv) community; v) about (section); vi) for providers (section); and vii) personal list (a personal space dedicted to registered users). Regarding the topics, the platform addresses trends (e.g. design for additive manufacturing, new technologies and materials, etc.) which are for informative purposes (including videos, showcases, services offered by third-party companies, providers), application areas, product classes, service classes, technology and an overview. Other areas covered by the platform are related to present basic knowhow, database of service & material providers, experts, and available showcases (Figure 7)

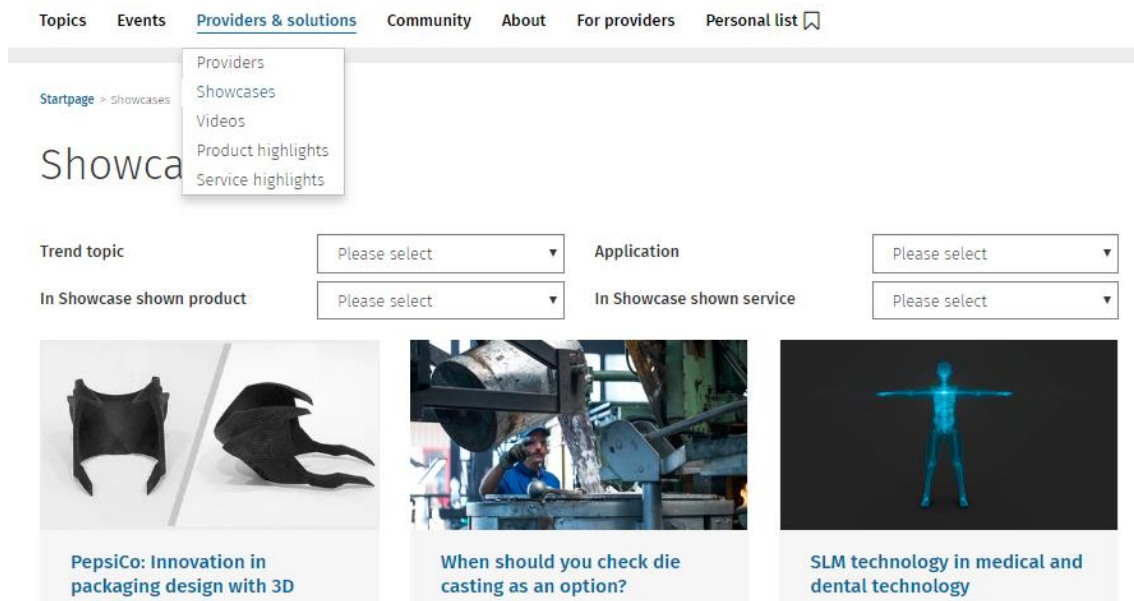


Figure 7: Showcases available in additively.com

#### b) Amnetwork

Amnetwork is located in Switzerland and it aims to enable Swiss industry to realize the full potential of additive manufacturing through the collaboration with Swiss research institutes. Thus, the goal of the platform is to connect companies and research institutes to foster innovation in joint research projects. This platform works through a membership and it offers information regarding events, project examples, and workshops. The AM network also organises symposiums and workshops with the goal of transfer from research to industry. Other functionalities provided include the following::

- Research partner database (see Figure 8)
- Project examples
- Events
- Education
- AM Science Dialogue

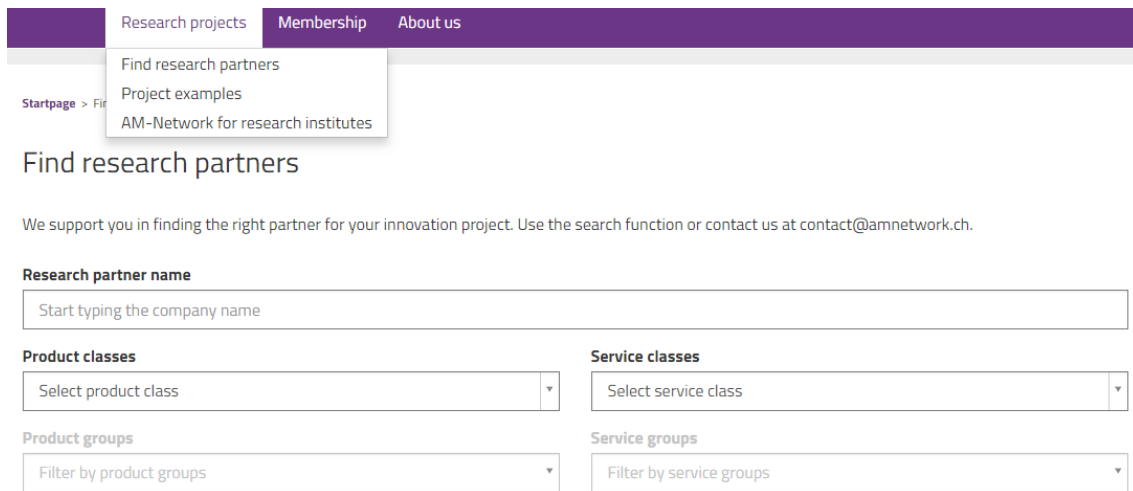


Figure 8: The functionality for finding research partners in AMNetwork.

### c) AMPlatform

The European Technology Platform in Additive Manufacturing was formerly known as [www.rm-platform](http://www.rm-platform) and it has been active for more than 10 years. The AM-platform is a free of charge virtual central European area for all subject related to Additive Manufacturing. Its objective is to contribute to a coherent strategy, understanding, development, dissemination and exploitation of AM (Figure 9).

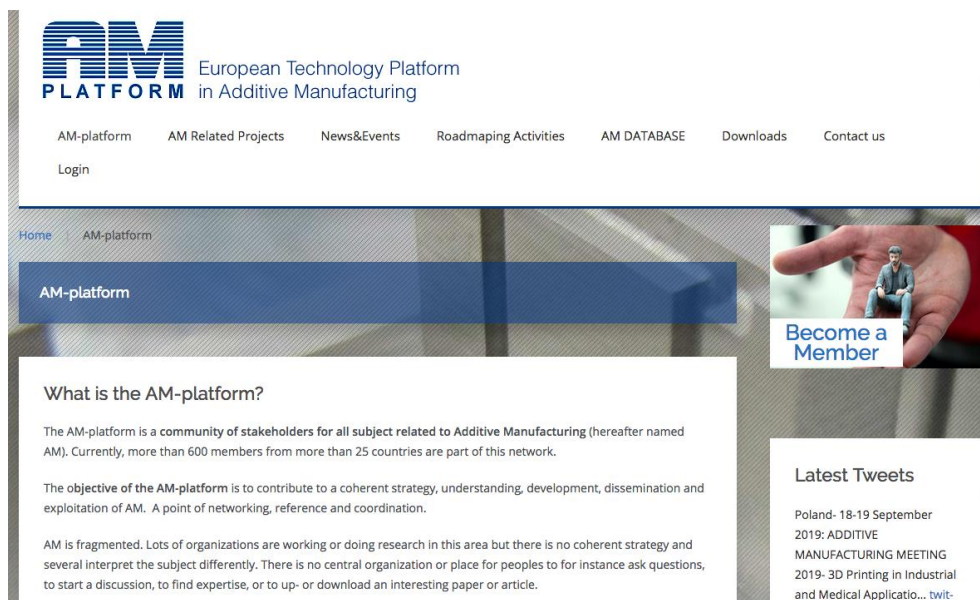


Figure 9. The European Technology Platform in Additive Manufacturing.

The main functionalities of this platform include information on AM-related projects, news & events, roadmapping activities, among others. Similarly to AMiCE, the platform combine dedicated events (Figure 10).

Save the date: AM-PLATFORM MEETING

Next AM-Platform meeting will be held in Lübeck (Germany) at SLM Solutions. Please find a draft agenda below. Presentation abstracts can be checked [here](#). The meeting is free of charge and all of you that would like to join us there please send an email to [pqr@prodintec.com](mailto:pqr@prodintec.com). Space is limited.

TIME	TOPIC	SPEAKER
<b>AM-PLATFORM AND MEETING HOST</b>		
9.15-9.30	Welcome by SLM Solutions and AM-platform	Dieter Schwarze & Martin
9.30-9.50	AM-Platform: a growing community	Martin Schaefer-SIEMENS & Paula Queipo-IDONIAL
9.50-10.15	SAM: Blueprint of AM skills in Europe	Eurico Assuncao-EWF
10.15-10.35	Standardisation: update of current activities	Klas Boivie - SINTEF
10.35-11.00	SLM latest developments and case study: Large-scale application for AM	Dieter Schwarze & Lukas Pankiewicz -SLM solutions
11.00-11.30	Networking Coffee break	
<b>AM-PLATFORM COMMUNITY</b>		
<i>AM progress on sectors</i>		
11.30-11.45	AM for the railway sector	Gefertec (tbc)
11.45-12.00	Accelerating AM aerospace component production	Harald Egner -MTC
12.00-12.15	AM for Energy sector	Luc Aixala- CEA
12.15-12.30	Binder jetting of industrial precision components in high volumes	Hans Kimblad- DIGITAL METAL
<i>AM &amp; the value chain segments</i>		
12.30-12.45	Conditioning of powders for additive manufacturing	Adriaan Spierings-INSPIRE
12.45-13.00	Metrology in Additive Manufacture	Prof. Mick Morris- AMBER Research Center

Figure 10. The dedicated events organised by the AMPlatform.

**Benchmark analysis**

Table 4 below presents the benchmark analysis for the platforms taken into consideration.

Table 4. Benchmark analysis with regards the KS

Platform	Similarities	Differences
Additively	<ul style="list-style-type: none"> <li>Informative, especially with regards trend topics, showcases, and news.</li> </ul>	<ul style="list-style-type: none"> <li>It targets partners from industry mainly. No events are related to it.</li> </ul>
AMNetwork	<ul style="list-style-type: none"> <li>Informative with respect research projects (information provided is limited).</li> <li>Project examples presented as success cases.</li> </ul>	<ul style="list-style-type: none"> <li>It targets companies and research institutes only.</li> </ul>
AMPlatform	<ul style="list-style-type: none"> <li>The information presented is very similar to what is intended in AMiCE, also the connection to events that specifically organised by the platform.</li> </ul>	<ul style="list-style-type: none"> <li>Policy is not a target user.</li> <li>The database is available (although is quite limited).</li> </ul>

To sum up, the KS stands over current platforms in the following aspects:

- Policy is included as a target user and recognised as an important stakeholder for enabling innovation by SMEs.

- A database will be available only through BSOs. By this manner ist development will become feasible. This also allows for regional BSO to connect with interested users.
- Unlike current options, the information presented by the platform will be tailored according tot he user.

## Annex II: Technical requirements

The EIP will consist mainly of two parts: the back end and the front end. The back end serves as data and logical layer and the front end represents the presentation layer. The back end of the EIP should support content management for several languages.

The front end should support responsive behaviour to display the content on desktop and mobile devices and handle asynchronous requests especially for filtering big datasets.

To fulfil the requirements, all technology should be open-source licenced and based on functionality that is already available through libraries.

After defining all requirements, a suitable technology stack can be defined. In the best case, a stack can be found that comes with the most features out of the box.

Therefore, two CMS for little to middle sized websites are compared in Table 5.

Table 5. CMS Matrix Source: [www.cmsmatrix.org](http://www.cmsmatrix.org), [neos.io](http://neos.io), [drupal.org](http://drupal.org) (✓+: via plugin)

Features	Neos CMS	Wordpress	Drupal
Newsletter subscribtion & generation	✓	✓ +	✓ +
Events calendar	✓ +	✓ +	✓ +
News/Blog	✓	✓	✓ +
Text&Media	✓	✓	✓
Search	✓	✓ +	✓

Multi-column content	✓	✓	✓
Video Content	✓	✓	✓
Email obfuscation	✓	✓ +	✓ +
Multi-lingual Content	✓	×	✓
Responsive Images	✓	✓ +	✓
Form Builder	✓	✓ +	✓ +
Human-readable URLs	✓	✓	✓ +
SEO-Metadata	✓	✓	✓ +
Comments	✓	✓ +	✓ +
User Registration	✓	✓ +	✓ +
Caching	✓	✓ +	✓
API to access the CMS data	✓	✓	✓
WYSIWYG Editor	✓	✓	✓
Web analytics	✓ +	✓ +	✓ +

Neos CMS seems to be a good choice for the AMiCE project because most features are native and the content editing is intuitive. A big drawback of WordPress is the missing multilingual feature.

## Content Creation

The maintenance of the EIP requires a qualified person who is familiar with the implemented structures. Thus the responsibility should go to the institute where the person works. The management of the EIP should be guaranteed even after the project has ended. The content of the EIP is presented in English. The implementation of the content in six languages (English, German, Polish, Slovak, Italian, and Spanish) is extremely impractical and error-prone. That's why the main language should be English.

## Maintenance

### Technical administration:

The HSZG, as work package manager for the EIP, is responsible for technical support and administration until the end of the AMiCE project in 2020. The EIP will be hosted at the HSZG computer centre in Zittau. In principle, it is possible to operate the EIP via the HSZG computer centre after the end of the project and to provide technical support and administration, but this must be remunerated accordingly.

### Content:

The contents are prepared by all partners in a superregional working group. The head of the work package is responsible for managing the content creation process, which includes, among other things:

- The development of a content strategy;
- The planning and coordination of the creation and publication of content;
- Monitoring and control and;
- The optimization of content.

Each partner involved should provide the desired content on time.