

ACUTE - Accessibility and Connectivity Knowledge Hub for Urban Transformation in Europe

WP5 – Future of the Knowledge Hub

D5.2 Report on up to 3 long-term future development scenarios of the Knowledge Hub

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Authors: Aldis Erglis
Hans Häuslmayer
Susanne Wrighton
Alain L’Hostis

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Project Partners

Organisation	Country
University of Natural Resources and Life Sciences, Vienna BOKU	AUSTRIA
Université Gustav Eiffel UEiffel	FRANCE
Centre d’études et d’expertise sur les risques, l’environnement, la mobilité et l’aménagement Cerema	FRANCE
Latvia University of Life Sciences and Technologies LBUTU	LATVIA
University of Latvia LU	LATVIA
Research Institutes of Sweden RISE	SWEDEN
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Grazer Energieagentur GmbH, Graz Energy Agency GEA	AUSTRIA
VTI/Sweden’s national centre for research and education on public transport K2	SWEDEN
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1. Introduction

WP5 of the ACUTE project aims at establishing functions and structures of a possible Knowledge Hub for ENUAC, DUT or even beyond on European level. We try to answer the question, if and how a Knowledge Hub can continue to stay operative. The second deliverable of WP5 was to evaluate value propositions of Knowledge Hubs, define different scenarios for implementation for marketing guidelines and to estimate cost and budget positions of the different scenarios.

1.1. Value prioritisation

The aim of the Knowledge Hub is to disseminate the results of the research projects and make them accessible and understandable. However, not all results of research projects are of equal value for all stakeholders. In the table below, we analyse the value of different deliverables for different key stakeholder groups. As we see, structured research information delivers high value for all key stakeholder groups. Analysing possible cooperation between different stakeholders including research organisations, businesses, and government institutions, we identified scientific project deliverables with high value, like tools, data, applied methods and community events.

Table 1: Value framework of sharing the research results.

Key stakeholder groups \ Value categories	Access to original research information	Access to structured research information	Access to tools, data and applied methods	Participation in community events and trainings
Research institutions	High	High	Medium	Medium
National and local government institutions	Medium	High	High	Medium
Businesses, developers	Medium	High	High	High
Urban development-oriented NGOs	Medium	High	High	High

The value framework analysis shows that, to get higher value from research results, information gathered and created during the research should be prepared and transformed for future use by different stakeholder groups, as other target groups than researchers sometimes struggle to understand research results. This hypothesis has been confirmed in several of the ACUTE National Pilot Workshops with practitioners. The accessibility of research results is an important part of the impact of research on different stakeholder groups. To improve the accessibility of research results, stakeholders want to participate in projects and receive updated and well-structured information after projects have ended. Therefore, it is essential to have a platform for publishing, maintaining and replenishing research results to make information more accessible through different activities, which are discussed in the next chapters of this document.

1.2. Options for information sharing

Based on the value analysis it is clear that there is a definite requirement for a platform, such as a knowledge hub, that provides accessibility to information generated in research projects. We have developed three possible logical scenarios for the future development of a Knowledge Hub (for DUT). The table below shows three different options for such a Knowledge Hub.

Table 2: Three different scenarios for Knowledge Hub.

Knowledge hub level	Description	Maintaining costs per year*
Marketplace	A platform where different stakeholders can find partners, suppliers or customers for their research, data, training and other value-added services related to the Knowledge Hub topic.	>440K/EUR
Community	Community-based Knowledge Hub, where a community leadership group provides regular updates about Knowledge Hub topics, providing online meet-ups/seminars, news, training, etc.	<120K/EUR
Static content	Published searchable content created during the project.	<15K/EUR

* Maintenance costs include maintenance of existing content and creation of additional content.

The possible options for a Knowledge Hub have been developed using an analytical approach that considers the maximum, minimum and optimal accessibility of information. We consider the scenarios “Marketplace” and “Community” as advanced scenarios and “Static Content” as the most basic one. In the advanced scenarios, information storage and exchange is combined with paid and free services. Simple static content assumes the publication of information and self-service access through web infrastructure. Maintenance costs mentioned in the table above are explained in further sections of this document.

Other scenarios with different services and information structures could be developed; however here we first present the two extremes of the scenarios (**Static content** and **Marketplace**) to illustrate their advantages and disadvantages. Then based on our analysis we are selecting the **Community** scenario as the most appropriate of all of them. In the next section, we will discuss each of the selected scenarios in detail.

2. The Knowledge Hub Scenarios

2.1. Methodological framework

For the analysis of the single Knowledge Hub scenarios, a methodological framework, based on the well-known Business Model Canvas principles (see f.e. <https://www.strategyzer.com/>), was used.

The methodological framework is structured to cover all parts necessary:

- Value proposition(s)
- Customer relationships with private and public users
- Customer Segments
- Communication Channels
- Key partners for delivering content
- Key Activities – Processes
- Key Resources
- Cost structure (discussed in detail in the following chapters)
- Revenue streams (discussed in detail in the following chapters)

Title		Date	Created by	Version			
Key Partners Universities and research institutions to collaborate on research projects and share knowledge. Communication and distribution platform.	Key Activities Conducting research and analysis on mobility and carbon reduction, including literature reviews, data collection and case study analysis Key Resources Expert researchers and analysts with expertise in mobility transportation, sustainability and environmental science. Cooperation platform.	Value Propositions Curated and up-to-date information on mobility and carbon reduction strategies, including case studies, best practices, and policy recommendations <table border="1"> <tr> <td> Research and Analysis Products: • Sustainable transportation research • Online forums • Customized research reports </td> <td> Key risks Lack of funding to support research, development and operations </td> <td> Measure of Success Number of website visitors and subscribers, number of events </td> </tr> </table>	Research and Analysis Products: • Sustainable transportation research • Online forums • Customized research reports	Key risks Lack of funding to support research, development and operations	Measure of Success Number of website visitors and subscribers, number of events	Customer Relationships Personalized email newsletter and alerts to keep customers informed about relevant updates and resources Channels Website and online platform with user-friendly interface and comprehensive content. Project showcase Platform	Customer Segments Businesses and organizations in the mobility and transportation industry, including public transportation agencies, ride-hailing companies, automotive manufacturers and infrastructure providers, DUT projects
Research and Analysis Products: • Sustainable transportation research • Online forums • Customized research reports	Key risks Lack of funding to support research, development and operations	Measure of Success Number of website visitors and subscribers, number of events					
Cost Structure Salaries for researchers and analysts, including research assistants, data analysts, and content curators		Revenue Streams Subscription fees for access to premium content and services, such as exclusive research reports, webinar recordings and online courses					

Figure 1: Framework analysis template.

A more simplified explanation to understand this framework is provided in figure 2 below:

- The analysis and reading of the framework starts with the value proposition (or the **Topic** section [1]) in the centre of the framework. Here the main focus of the Knowledge Hub is defined.
- **Content** [2] shows how the content is created, by whom and using which business processes.
- In **Community** [3], the members, customers or users of the Knowledge Hub are defined.
- Finally, the economic model of the future Knowledge Hub should be defined and analysed. This is done by limiting [4] **Costs** and [5] **Revenue streams** and answering the question of how the Knowledge Hub is to be financed.

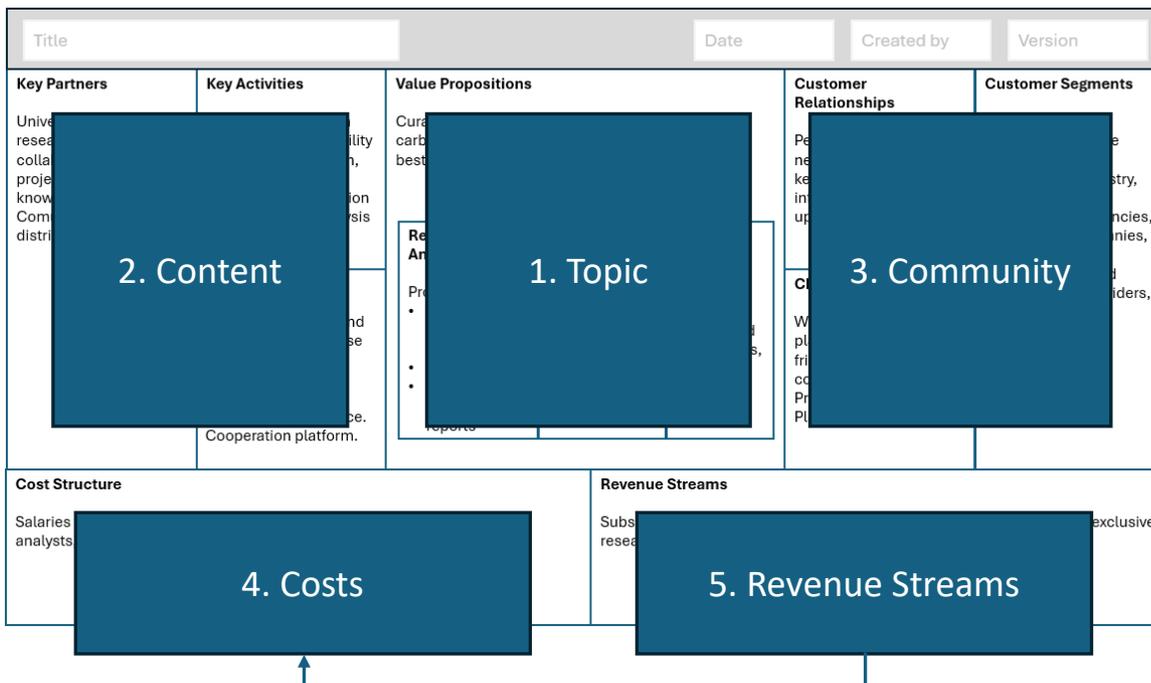


Figure 2: Analysis pattern of the methodological framework.

2.2. Static content

The most common and simplest way of providing information is to create and publish static or near-static content on a website, including searching and filtering the information. It was also considered to be the most basic scenario for a Knowledge Hub.

The advantage of this scenario lies in its simplicity and the low resources and labour input required to provide information to the general public. At the same time, it would be possible to integrate static content into a community scenario (see section 2.4) anytime. The disadvantage of the static content scenario is that there is a risk of setting up just another project or research programme website whose structure and content updates are not improved by user feedback and which loses its relevance some time after the project or programme has ended.

The economic model for the static content scenario could be developed based on the amount available in a project or programme for dissemination measures. Any popular Content Management System (CMS), such as WordPress, could be used as a technological solution for static content. At least the following functionality should be available for publishing static content:

- Content publishing,
- Search,
- Content catalog,
- Media library,
- Analytics (content).

Static content		21/11/2024	ACUTE	Final
Key Partners <ul style="list-style-type: none"> • DUT • Funding Agencies • Programme Bodies • Selection of ACUTE partners • Individual Projects Representatives • Communication Team Commitment and contribution	Key Activities <ul style="list-style-type: none"> • Results publication • Related news • Related events Key Resources <ul style="list-style-type: none"> • Budget • Dedicated team • Partners 	Value Propositions <p>Information on (urban) mobility, logistics, accessibility, connectivity projects.</p> <div style="border: 1px solid black; padding: 5px;"> Measure Success <ul style="list-style-type: none"> • # websites visits • Citations of the content • Active after projects / programme ending </div>	Customer Relationships <ul style="list-style-type: none"> • Subscription to community site (email updates) Channels <ul style="list-style-type: none"> • Community platform • Email • Newsletter • Social Media • Repository 	Customer Segments <ul style="list-style-type: none"> • Funding organisations • Other communities • Government organisations • Research organisations • Researchers • Journalists • Municipalities • Businesses <ul style="list-style-type: none"> • Logistics • Industry • Consultancy • Transportation • ... • Startups • NGOs
Cost Structure <ul style="list-style-type: none"> • Website setup and maintenance costs • Administration costs • Community platform content maintenance 		Revenue Streams <ul style="list-style-type: none"> • Partner contributions • Project dissemination budgets 		

Figure 3: Static Content Scenario.

2.3. Marketplace scenario

The marketplace scenario is the most sophisticated from the perspective of providing structured research information and services, including paid services. It is based on a value proposition that offers paid services in areas related to the research topic. The **Key Activities** section of the framework lists possible additional non-research value-added services that **Key Partners** (and other external partners) could offer.

Marketplace Scenario		21/11/2024	ACUTE	Final
Key Partners <ul style="list-style-type: none"> DUT Funding Agencies Programme Bodies Selection of ACUTE partners Individual Projects Representatives Communication Team <p>Long-term commitment and contribution</p>	Key Activities <ul style="list-style-type: none"> Result publications Related news Related events Trainings Workshops Webinars Networking events Input to future call contents Curation of resources Generating new research topics (academic, B, M, PhD) Consultancy Project results: <ul style="list-style-type: none"> Tools Publications Recommendations 	Value Propositions <p>Curated and up-to-date information on (urban) mobility, logistics, accessibility, connectivity and carbon reduction strategies, including case studies, best practices, and policy recommendations.</p> <p>Research and value added services marketplace platform.</p>	Customer Relationships <ul style="list-style-type: none"> Subscription to community site (email updates) Membership 	Customer Segments <ul style="list-style-type: none"> Funding organisations Other communities Government organisations Research organisations Researchers Journalists Municipalities Businesses <ul style="list-style-type: none"> Logistics Industry Consultancy Transportation ... Startups NGOs
Key Resources <ul style="list-style-type: none"> Budget Dedicated team Partners 	Measure Success <ul style="list-style-type: none"> Marketplace Size (XXX members in 5 years) Revenue per year/contracts per year Citations of the content Active in X years 	Channels <ul style="list-style-type: none"> Community platform Email Newsletter Social Media Online events In-person events Partner events Key partner websites Webinars Repository 	Revenue Streams <ul style="list-style-type: none"> Membership fee Consulting Services Trainings Tools/data Research projects Partner contribution Basic Funding / Tender 	<ul style="list-style-type: none"> Membership fee <ul style="list-style-type: none"> Organisations Individuals Partner contributions
Cost Structure <ul style="list-style-type: none"> Community platform subscription Administration costs <ul style="list-style-type: none"> Community moderation Communication with stakeholders Marketplace management, Legal services Community platform content maintenance Content creation by partners Event management Travels Media experts 				

Figure 4: Marketplace Scenario.

The main advantage of the marketplace scenario is the possibility to get very specialised and contextual services from experts working who are working on research projects or who could start specific research to satisfy client needs. It works very well when the collection and analysis of data is needed. Furthermore, this scenario could be self-sustaining based on transaction fees and value-added services offered by the platform, without charging membership fees or referrals from critical partners. The marketplace should offer the following functionalities:

- Accounts and registration (for users, clients, suppliers, other),
- Service catalog,
- Content catalog,
- Global content search,
- Partner search,
- Service requests,
- Media library,
- Contracting and legal document management,
- Payments processing,
- Project management/tracking tools,
- Marketing services,
- Publishing services,
- Content distribution,
- Security features,
- Analytics (usage, users, content).

The marketplace scenario requires a specialized technology platform that provides functions such as multi-client capability, integrated payments and contract conclusion. Therefore a ready-made and operational technology platform should be developed or an existing one adapted. This also indicates that the marketplace scenario should most likely be part of one of the existing large technological platforms such as

[Patreon](#), [Kajabi](#), [Skillshare](#) or [Mighty Networks](#). The complexity of the needed technological platform is one of the main disadvantages of the scenario, as the development of such a platform would require significant investments.

2.4. Community scenario

The community scenario is based on a group of people who are interested in the topic covered by the Knowledge Hub. Researchers can thus continue to maintain and develop the knowledge created after and between actual research projects. The aim of the community hub is to obtain and create the most accurate and relevant information about the topic and share it with community members, usually through community meetings, emails and publishing on the web.

Community Scenario		21/11/2024	ACUTE	Final
Key Partners <ul style="list-style-type: none"> • DUT • Funding Agencies • Programme Bodies • Selection of ACUTE partners • Individual Projects Representatives • Communication Team <p>Long-term commitent and contribution</p>	Key Activities <ul style="list-style-type: none"> • Result publications • Related news • Related events • Trainings • Workshops • Webinars • Networking events • Input to future call contents • Curation of resources • Generating new research topics (academic, B, M, PHD) • Consultancy • Project results: <ul style="list-style-type: none"> • Tools • Publications • Recommendations Key Resources <ul style="list-style-type: none"> • Budget Dedicated team • Partners 	Value Propositions <p>Curated and up-to-date information on (urban) mobility, logistics, accessibility, connectivity and carbon reduction strategies, including case studies, best practices, and policy recommendations.</p> <p>Research and value added services platform.</p>	Customer Relationships <ul style="list-style-type: none"> • Subscription to community site (email updates) • Membership 	Customer Segments <ul style="list-style-type: none"> • Funding organisations • Other communities • Government organisations • Research organisations • Researchers • Journalists • Municipalities • Businesses <ul style="list-style-type: none"> • Logistics • Industry • Consultancy • Transportation • ... • Startups • NGOs
Cost Structure <ul style="list-style-type: none"> • Community platform adaptation and/or subscription • Administration costs <ul style="list-style-type: none"> • Community moderation • Communication with stakeholders • Community platform content maintenance • Content creation by partners • Event management 		(Optional) Revenue Streams <ul style="list-style-type: none"> • (Membership fee) • (Consulting Services) • (Trainings) • (Tools/data) • Basic Funding / Tender 		

Figure 5: Community Scenario.

Regular in-person or virtual communication keeps the community alive and provides specific topics that may be of interest to the members. The topics can be provided by members or leaders of the community or by external partners. One of the goals in the community scenario is to increase the size of the community. The economic model for the community scenario can be based on membership fees from permanent members and other additional sources of revenue yet to be developed, but will mainly depend on basic funding or tendering for the technical operation of such a platform. The community will be stable and self-sustainable when it comes to maintaining regular activities and acquiring new information that can be structured and shared by all members of the community, but in addition to technical support, a certain degree of community management will also be required. The advantage of the community hub scenario is the collection and maintenance of high-quality, contextualised and up-to-date content. The role of the community management group will be to integrate all relevant sources and other communities that could make a valuable contribution to the community hub.

In order to operate such a community hub successfully, there should be a specialised technological platform for community management that includes communication services, event management, and content management services. The technology platform for operating the community should offer at least the following functionalities:

- Multi-tenancy (several communities),
- Accounts (community members),
- Visibility on the internet without mandatory registration on the platform,
- Multi-user content publishing,
- Content library,
- Search functions (content, events, members),
- Media library,
- On-site events (publish, register),
- Online events (publish, register),
- Communication tools (emails, blogs, Q&A etc.),
- Analytics (Statistics).

We recommend the community scenario as the most efficient one for preservation and development of projects knowledge, as the swarm intelligence of the community of researchers and practitioners ensures the most interactive and most cost efficient way without the lowest entry barrier and guidance level needed to build a Knowledge Hub beyond individual projects or research programs lifetimes.

Moreover, content and structure are improved due to the close co-operation between community members, based on user/member feedback, while providing visibility of the knowledge to a broader public not being registered on such a community platform. One of the partners both in the ACUTE project and in DUT, the french organisation Cerema, already provides such a technological platform (<https://www.expertises-territoires.fr/>), which will be described in more detail in Deliverable D5.3.

3. Marketing guidelines and materials

3.1. Knowledge hub marketing

Marketing tools, especially email and social networks, play a crucial role in promoting a Knowledge Hub. These platforms enable a direct and personalized approach to target audiences and ensure that the dissemination of information is both efficient and effective.

Email marketing allows for the creation of tailored content that can address the specific needs and interests of community members. Through newsletters, updates, and personalized messages, email campaigns can keep the audience informed and engaged with the latest developments and resources available in the Knowledge Hub. Additionally, email provides a feedback mechanism, allowing users to share their thoughts and suggestions, which can be invaluable for continuous improvement.

Apart from that, social networks offer a dynamic space for interaction and community building. By leveraging these platforms, the Knowledge Hub can reach a wider audience, facilitate real-time discussions. Social media marketing strategies can include regular posts, interactive content, and live sessions that highlight the hub's offerings and encourage active participation. The viral nature of social networks can significantly amplify the reach and impact of the Knowledge Hub's promotional efforts. Together, email and social networks create a comprehensive marketing strategy that not only promotes the Knowledge Hub but also builds a loyal and engaged community that is essential for the hub's success and sustainability.

It should not be forgotten that platforms such as Expertises Territoires already offer a customised information, notification and news letter service to their members; nevertheless other "outside" activities may be necessary to attract more users to the community, as word-of-mouth may not be sufficient, the broader the topic and the more stakeholders a potential community could include.

Thus it is essential to prepare three types of marketing materials to build a successful community. First, a **detailed site profile** should be created to provide comprehensive information about the organisation and its offerings. Second, engaging and shareable information should be posted on **social media platforms** to reach a broader audience and foster community interaction. Lastly, **pre-recorded demo sessions tailored for key stakeholders** should be developed to showcase the unique features and benefits of the services or products, thereby enhancing stakeholder engagement and support.

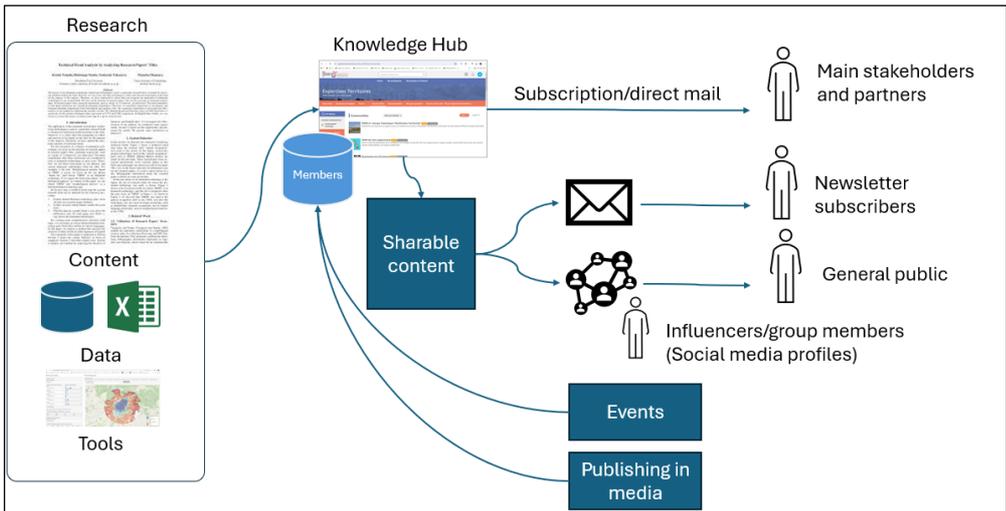


Figure 6: Conceptual marketing process.

3.2. Marketing guidelines elements

The following marketing guidelines elements give a structure for using, planning and executing Knowledge Hub marketing. It is essential to define Target Audiences, Content Strategy, Engagement and Community Building, Social Media Actions, Email Marketing and Newsletters, Analytics and Performance Tracking and Monetization and Partner Strategies.

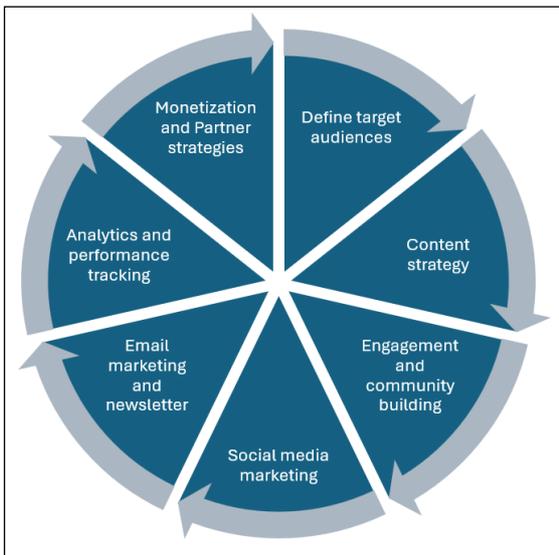


Figure 7: Marketing guideline elements.

These elements comprise for example:

Target audiences

- Research institutions;
- National and local government institutions;
- Businesses, developers;
- Urban development-oriented NGOs.

Content strategy

- Provide executive summaries and briefs of the research;
- Provide comparable structure and common taxonomy;
- Detailed analysis and presentation of digital tools and templates;
- Publishing of available analytics and datasets;
- Identify community-level activities.

Community building

- Build a community of subscribers as registered profiles with contact informations;

Social media marketing

- Influencers/group members who are recognized or build expert profiles in social media
- Mirroring information of key activities on social media with direct links to the Knowledge Hub
- Publishing new content
- Events/trainings

Email marketing

- Built-in admin function with the possibility to send rich content to registered members as campaigns or individual email addresses;
- Member segmentation and grouping for email marketing needs.

Analytics and tracking

- Tracking of email marketing;
- Basic analytics of activity of registered and public users like (unique) visits, content analysis, registrations, time on site etc.

Monetisation and partner strategies

- Membership fees;
- Sponsorships etc.

4. Cost estimations of a Knowledge Hub

4.1. Approach and cost structures

In this chapter an estimation of costs associated with each single scenario are given. These estimations comprise budget needed for technology, service, and working hours/ employees. The calculated budgets are expert estimates and therefore may vary depending on the scope and intensity of the implemented scenario. However, considering the expected value of a Knowledge Hub, a significant investment should be made to create a truly valuable platform for all stakeholders involved.

Set-up costs

Based on the scenarios described above, table 3 provides a breakdown of the budget positions required for the initial launch and content creation per Knowledge Hub scenario. Included in these set-up cost are initial investments, like programming costs for the static website or developing or buying and adapting solutions for community or marketplace platforms. These solutions have then to be filled with content. Marketing for the platform, helpdesk- and training functions as well as search engine optimisation are also budget positions which have to be considered before the platform or website can get started.

Table 3: Cost elements for set-up of the different scenarios for Knowledge Hubs.

Budget position	Static content	Community	Marketplace
Initial Website / Platform Investment	Programming simple website	Develop or buy and adapt existing community platform	Develop or buy and adapt existing marketplace platform
Preparing content and media	Simple content	Platform setup, content preparation	Lot of different types of contents and setups
Initial marketing & promo events	Internet ads	Events, internet ads	Events, internet ads
Helpdesk	N/A	Technical Helpdesk	Fully functional helpdesk
Training	Basic training	Trainings to run a community platform	Trainings to run a marketplace platform
Search Engine Optimisation	Maybe optimise for search engines	Optimise for search engine optimisation	Optimise for search engine optimisation

Operational Costs

Table 4 below shows the budget positions required for the constant further development and ongoing maintenance of the platform per Knowledge Hub scenario. There may be some licensing costs or renting fees on a yearly basis for using the technical solution developed; constant marketing can ensure that a customer relation is built and people visit the platform regularly. In case that events (like webinars, conferences etc) have to be produced, additional costs to a normal content and community management may occur. The more sophisticated the platform, the more development activities, legal services and/or membership support it must provide and reserve budget for this activities.

Table 4: Cost elements for operating the different scenarios for Knowledge Hubs.

Budget position	Static content	Community	Marketplace
Platform yearly maintenance	Platform renting fee	Platform renting fee	Platform renting fee
Internet Marketing	Internet ads	Internet ads	Internet ads
Content and community management	Creating and updating content	Creating and updating content	Creating and updating content
Event management	N/A	Planning and running events (in-person, online)	Planning and running different types of events
Legal services	N/A	N/A	Legal services for supporting marketplace transactions
Communication costs	N/A		
Membership support	Providing essential support, email	Providing full support to the community members, email, phone	Providing full support to the community members, email, phone
Development activities	Planning and developing improvements to the site	Planning and developing improvements based on member feedback	Planning and developing improvements based on member feedback and requests

4.2. Detailed Cost Breakdown

Table 5 contains detailed costs for the budget required for each scenario. As explained above, the calculated budgets are expert estimates and therefore may vary depending on the scope and intensity of the implemented scenario. It is clear that the more sophisticated a Knowledge Hub scenario is, the higher its associated set-up and running costs are. There is already a big difference between set-up costs of a "normal" website compared with a community platform solution; but there is another big step to take if one wants to implement a marketplace solution.

Table 5: Budget breakdown for Knowledge Hub scenarios.

Initial creation (of the content) - estimations									
	Static content			Community			Marketplace		
	Type	Number	Amount	Type	Number	Amount	Type	Number	Amount
Initial Website / Platform Investment	n.a.	n.a.	€ 20 000	n.a.	n.a.	€ 500 000	n.a.	n.a.	€ 800 000
Preparing content and media	hours	250	€ 12 500	hours	400	€ 20 000	hours	650	€ 32 500
Initial marketing & promo events	ads	1	€ 300	events/internet	5	€ 5 000	events/internet	10	€ 10 000
Helpdesk	-	-	-	hours	40	€ 2 000	hours	160	€ 8 000
Platform setup and configuration	hours	80	€ 4 000	hours	160	€ 8 000	hours	360	€ 18 000
Trainings	hours	16	€ 800	hours	40	€ 2 000	hours	160	€ 8 000
SEO	service	1	€ 300	service	1	€ 500	service	1	€ 1 500
			€ 37 900			€ 537 500			€ 878 000
Maintenance per year - estimations									
	Static content			Community			Marketplace		
	Type	Number	Amount	Type	Number	Amount	Type	Number	Amount
Platform yearly maintenance	platform	1	€ 100	platform	1	€ 5 000	platform	1	€ 15 000
Internet marketing, SEO, Ads	ads	1	€ 500	ads	1	€ 5 000	ads	1	€ 15 000
Content / Community management	hours	240	€ 12 000	hours	1000	€ 50 000	hours	2500	€ 125 000
Event management	-	-	-	events	12	€ 36 000	events	12	€ 36 000
Legal services	-	-	-	-	-	-	hours	300	€ 90 000
Communication costs	-	-	-	hours	120	€ 6 000	hours	400	€ 20 000
Membership support	hours	20	€ 1 000	hours	100	€ 5 000	hours	480	€ 24 000
Development activities	hours	20	€ 1 000	hours	240	€ 12 000	hours	2400	€ 120 000
			€ 14 600			€ 119 000			€ 445 000

These linear relationship between level of complexity of the platform and its associated costs is also kept for the running costs per year. Based on experts estimations the running development costs which have to be undertaken over the whole life-cycle of a platform are ten times higher in the marketplace scenario than in the community scenario, while community management costs are more than double. This is easily explained by the fact, that in the community scenario the "community itself" overtakes a lot of the work associated with running the platform, while in the marketplace scenario a much more cost intensive top-down approach in running the Knowledge Hub is paramount. Adding then necessary legal services, higher marketing costs and membership support activities, it is clear that annual costs in running a marketplace are 3-4 times higher than in the community scenario, of which a ratio of 20% between set-up and annual running costs is good estimation, when deciding which option to take.

5. Conclusions

In conclusion, the development and sustainability of a Knowledge Hub are essential to ensuring the accessibility, dissemination, and long-term utility of research outputs across diverse stakeholder groups. By evaluating value propositions, implementation scenarios, marketing strategies and costs this analysis identifies three potential models—Static Content, Community, and Marketplace—each offering unique advantages and limitations in balancing functionality, cost, and stakeholder engagement.

The **Static Content scenario** represents a straightforward, cost-effective approach to providing structured information. Its simplicity makes it appealing for initial deployment, requiring minimal resources for setup and maintenance. However, its limited interactivity and reliance on self-service access risk diminishing relevance over time, particularly without mechanisms for ongoing updates and user feedback. This model, while valuable in its own right, serves better as a foundation for more dynamic scenarios.

The **Marketplace scenario** offers the highest level of sophistication by incorporating value-added services, such as paid access to specialized tools and expertise. While it has the potential to become self-sustaining through transactional revenue, its complexity demands significant technological investment and operational expertise. This makes it less feasible for immediate implementation but a promising long-term evolution of the Community scenario.

The **Community scenario** is highlighted as the most balanced and feasible option for sustaining a Knowledge Hub. By fostering collaboration among stakeholders—researchers, practitioners, businesses, and policymakers—it creates a self-sustaining ecosystem of shared knowledge and expertise. Membership fees and external funding can support operations, while active community management ensures the quality and relevance of content. The inclusion of advanced communication tools, event management features, and member-driven content further enhances its utility and impact. This model is well-suited to adapt to evolving stakeholder needs while maintaining engagement and relevance.

Effective marketing strategies play a pivotal role in the success of a Knowledge Hub. Combining targeted email campaigns, active social media presence, and pre-recorded stakeholder-specific demos can enhance visibility, engagement, and community growth. Platforms such as Expertises Territoires provide useful benchmarks, showcasing the importance of tailored marketing materials and ongoing outreach to attract and retain users.

Budget considerations across scenarios reveal that while initial and maintenance costs vary, the long-term value generated by a well-implemented Knowledge Hub justifies substantial investment. A thoughtfully designed platform, underpinned by a robust economic model and strategic marketing efforts, can transform research outputs into actionable insights, fostering innovation and collaboration across sectors.

Ultimately, the **Community scenario emerges as the most appropriate solution for a DUT Knowledge Hub**, combining accessibility, stakeholder engagement, and scalability. By focusing on continuous improvement, structured content and dynamic interaction, a Knowledge Hub can fulfill its mission to make research outputs more accessible, impactful, and enduring for all stakeholders involved.

It is this Community scenario that the ACUTE project bases its recommendations on to develop a valid future management model. A detailed report on this can be found in D5.3.