

EDIH Czech Technical University in Prague

EDIH CTU

European Digital Innovation Hub in the Czech Republic in the field of
Artificial Intelligence (AI) and Machine Learning (ML)

GRANT AGREEMENT NUMBER: 101083359

Deliverable D4.3

Service portfolio evaluation and optimisation

(version 2 – update 31 December 2024)



Co-funded by
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Project title	EDIH Czech Technical University in Prague (EDIH CTU)
Grant Agreement number	101083359
Funding scheme	Digital Europe Programme (DIGITAL) Call: DIGITAL-2021-EDIH-01 Topic: DIGITAL-2021-EDIH-INITIAL-01
Type of action	DIGITAL Simple Grants
Project duration	1 January 2023 – 31 December 2025 (36 months)
Project coordinator name	CTU - CESKE VYSOKE UCENI TECHNICKE V PRAZE
Deliverable number and title	D4.3 Service portfolio evaluation and optimisation
WP contributing to the deliverable	WP4 Training, education and consulting
Deliverable type	R - Report
Dissemination level	Public
Due submission date	31 January 2024, V2 31 December 2024
Actual submission date	31 January 2024, V2 31 December 2024
Deliverable Lead	Jaroslav Liskovec
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Final approval	Barbora Zochova, Mikulas Cizmar

Status

This deliverable is subject to final acceptance by the EDIH Chairman and Business Development and Technology Transfer Manager.

This deliverable was approved on 30 January 2024, updated version 2 on 31 December 2024.

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History of changes		
When	Who	Comments
December 2024	Jaroslav Lískovec	update of the document

Confidentiality	
Does this report contain confidential information?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Is the report restricted to a specific group?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

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List of Abbreviations and Acronyms

AI	Artificial Intelligence
CTU	Czech Technical University in Prague
DMA	Digital Maturity Assessment
DTA	Digital Transformation Agenda
EC	European Commission
EDIH	European Digital Innovation Hub
GA	Grant Agreement
KPI	Key Performance Indicator
ML	Machine Learning
MoIT	Ministry of Industry and Trade
PSO	Public Sector Organization
R&D	Research and Development
SME	Small and Medium-sized Enterprise

Executive Summary

This deliverable describes how EDIH CTU reviews its service portfolio and how the results of these reviews are used to improve existing services and develop new ones. The approach combines quantitative monitoring (service uptake, delivery performance, satisfaction, and DMA results where applicable) with qualitative inputs (client feedback, case reviews and expert input).

The updated version reflects the gradual increase of service delivery following the delayed issuance of national funding rules in September 2023. It also aligns with the project's reporting set-up (KPI monitoring, customer satisfaction reporting and the evaluation of Open Calls) and explains how evidence from these sources feeds into portfolio decisions.

1. Introduction

EDIH CTU supports the digital transformation of SMEs and public sector organisations, with a focus on AI and machine learning. A maintained and well-documented service portfolio is necessary to ensure that the hub offers services that are relevant, feasible to deliver, and aligned with the objectives of the Digital Europe Programme. This deliverable sets out the evaluation approach and the mechanisms used to update and optimise the portfolio.

Service delivery started later than planned due to the late issuance of national rules required for implementation (“Decision on Grant Provision”) by the Ministry of Industry and Trade at the end of September 2023. As a result, the first version of D4.3 was prepared with limited delivery data. The current update reflects the increased volume of delivered services and the availability of evidence from KPI monitoring, customer feedback and Open Call evaluations.

Relevant evidence sources include, in particular, the evaluation results of Open Calls (D3.4) and the lessons learnt process (D3.5), as well as customer satisfaction reporting (D4.2) and KPI monitoring (D1.3). This deliverable describes how these inputs are used to steer service improvements and portfolio updates.

1.1 Scope and limitations

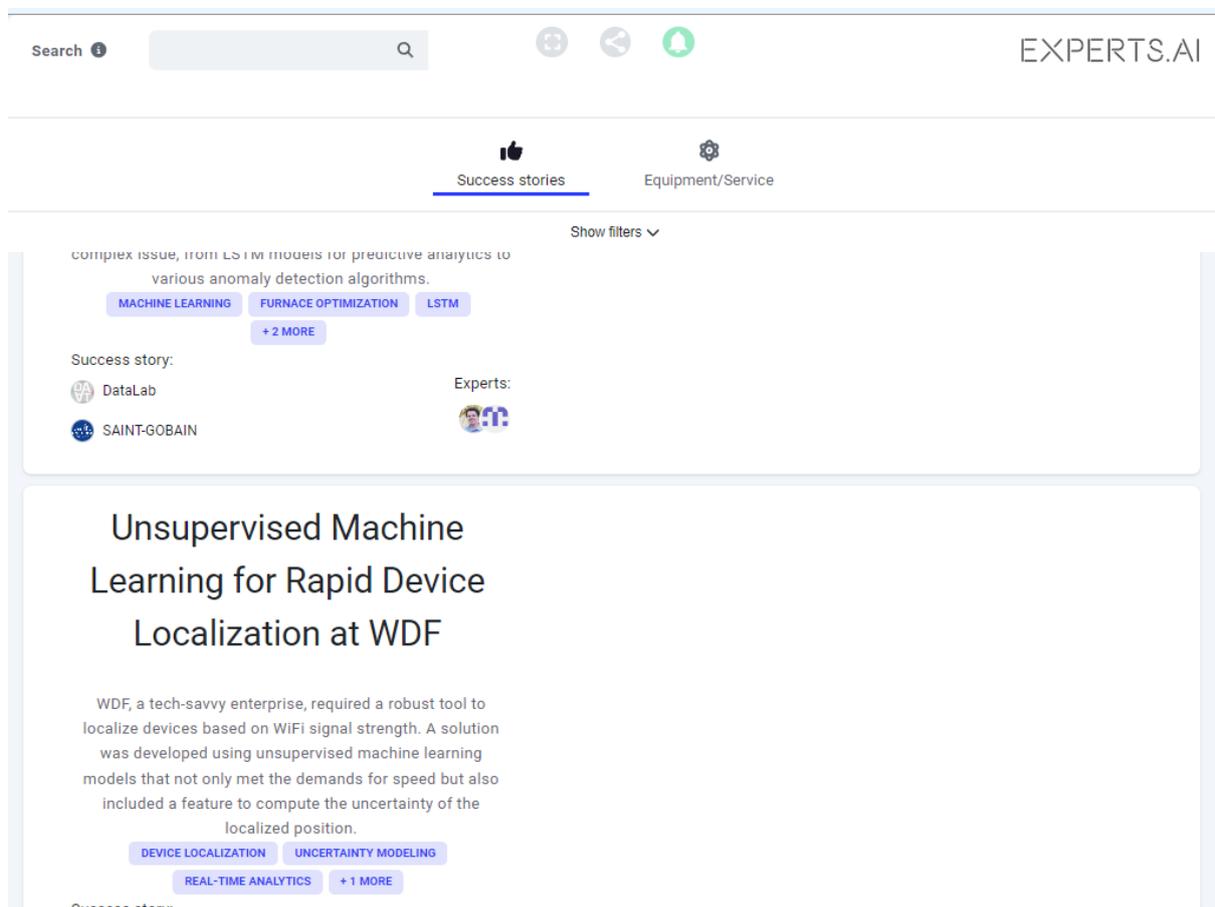
In this deliverable, “service portfolio” refers to the set of standardised services and supporting infrastructure offered by EDIH CTU under the project’s pillars, including their descriptions, delivery process, and capacity assumptions. The document focuses on the evaluation and optimisation of services (content, delivery quality, relevance and scalability). Detailed yearly results of Open Call evaluations, customer satisfaction analysis and KPI monitoring are reported in dedicated deliverables; this document explains how evidence from these sources is used for portfolio decisions.

2. Overview of EDIH CTU Services

An overview of the services and infrastructure offered by the EDIH CTU was described in detail in Deliverables *D3.1 EDIH Infrastructure* and *D3.2 EDIH Services*. Information about the technologies and services is also provided on the edihctu.eu website and is updated based on the modification and expansion of the services offered.

For easier navigation through services in the EDIH CTU portfolio, a special widget has been incorporated on the website dedicated to the EDIH CTU services. Such a widget helps potential customers filter services and infrastructure according to their needs. Also, it is possible to contact the respective team and/or the expert responsible for such a technology/service, thus it serves for a direct communication between stakeholders and the EDIH CTU teams.

Picture 1 Widget “Experts.AI” – focus on Success Stories



The screenshot displays the 'Experts.AI' widget interface. At the top, there is a search bar and navigation icons. Below the search bar, there are two tabs: 'Success stories' (selected) and 'Equipment/Service'. A 'Show filters' dropdown is visible. The main content area shows a success story titled 'Unsupervised Machine Learning for Rapid Device Localization at WDF'. The story text describes a solution developed using unsupervised machine learning models for device localization based on WiFi signal strength. Below the text, there are tags for 'MACHINE LEARNING', 'FURNACE OPTIMIZATION', 'LSTM', and '+ 2 MORE'. The 'Success story:' section lists 'DataLab' and 'SAINT-GOBAIN' as participants. The 'Experts:' section shows a profile icon. The bottom part of the story includes tags for 'DEVICE LOCALIZATION', 'UNCERTAINTY MODELING', 'REAL-TIME ANALYTICS', and '+ 1 MORE'.

Furthermore, detailed information on various success stories that form the base for the technologies and services provided by delivery teams of the EDIH CTU is also published in the form of individual fliers on the website <https://www.edihctu.eu/realizace-sluzeb/>.

Picture 2 Examples of success stories flyers

Strojové učení
Optimalizace laserového plazmového urychlovače pomocí AI

Strojové učení
Detekce a predikce anomálií pro výrobu minerální vlny

Strojové učení
Strojové učení pro rychlou lokalizaci zařízení na konferenci WDF

Strojové učení
Vysoce přesná klasifikace obrázků pomocí Deep Learning

Digital Twin Development for Optimizing HPC in Car Manufacturing

Overview

In collaboration with a leading car manufacturer, a digital twin of their HPC system was developed. The aim was to understand how various system settings impact site and waiting times for computational tasks.

Machine learning was employed to generate synthetic loads and queries, allowing for simulation under multiple scenarios, such as cluster failure or unexpected workload spikes.

Keywords

digital twin
high performance computing (HPC)
site time
server management
machine learning
synthetic data generation

Situation

The car manufacturer utilized an HPC system where site and waiting times for computational tasks were high and optimal. The challenge was to adjust system parameters, including CPU cores, memory, network, and storage configurations, for maximum efficiency. An added complexity was the need to anticipate varying scenarios that the system might face.

Solution

A digital twin was developed to precisely emulate the car manufacturer's HPC system. Machine learning algorithms were utilized to create synthetic loads and queries, enabling realistic simulations. This allowed for in-depth analyses of how different settings would affect site and waiting times, providing actionable insights for optimization.

Benefits and Results

- Achieved a deeper understanding of how system settings influence site and waiting times, thereby enabling targeted optimizations.
- The synthetic loads and queries generated by machine learning provided a powerful tool for simulating a wide range of scenarios, thus preparing the HPC system for unforeseen events.
- The system proved that licence fees could be cut by 9% without increasing waiting time.
- The digital twin served as a sandbox for experimentation without impacting the real-world HPC system, leading to informed decision-making.
- The success of this project opens the door for broader applications of digital twins and machine learning in optimizing computational systems.
- The methodologies developed can be adapted for similar challenges in other industries, thereby demonstrating the robustness and versatility of the approach.

Picture 3 Widget “Experts.AI” focus on Equipment

EXPERTS.AI

testbe

Success stories

Equipment/Service

Show filters ▼

Showing 10 out of 25 items

Ontologie procesu obrábění a procesu měření obrobených kusů CZ ▼

Formální reprezentace znalostí o struktuře výrobního i měrového procesu má velké využití v mnoha aplikacích týkající se zefektivnění či automatizace kontroly kvality. Proto byl vytvořen softwarový balík, který obsahuje Java aplikaci zodpovědnou za vytvoření znalostní báze, znalostní bázi samotnou a skripty pro interakci s touto znalostní bází v Pythonu. Znalostní báze je OWL ontologie reprezentující proces obrábění hlav motoru a proces měření znaků kvality

service

AI matchmaking CZ ▼

V rámci test before invest nabízí AI EDIH ČVUT technickým fakultám a univerzitám službu AI matchmaking. Cílem služby je nasazením párování s využitím umělé inteligence v prostředí zákazníka, udržitelným a měřitelným způsobem zlepšovat propojení studentů a expertů z akademického prostředí, malých a středních podniků nebo státních institucí. Klíčovou přidanou hodnotou je výrazné zkrácení času při navazování a prohlubování kontaktů mezi experty a

TRL: 9 service

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Data Science Project Consultations en ▼

Our team of highly experienced researchers at Datalab specialize in a variety of fields related to data science and machine learning. We are available to consult with you on the best solution

service

3. Methodology for Evaluation

The evaluation of services offered by EDIH CTU ensures that service content, delivery quality and capacity remain aligned with project objectives and the needs of end users.

This chapter describes the evaluation framework and the criteria used for portfolio decisions. The framework is used to: (i) verify that services meet client needs and programme objectives, (ii) monitor delivery quality and efficiency, and (iii) identify portfolio improvements based on evidence.

Depending on service type and maturity, methods are selected case by case. Each evaluation uses a defined evidence set and results in documented follow-up actions.

3.1 Methodological Approach

3.1.1 Quantitative Analysis

- **Service Utilisation Metrics:** Measurement of service uptake rates, including the number of projects supported, consultations provided, and training sessions conducted. Such information is also summarized and reported via the [DTA portal](#) and, in the Deliverables, e.g., *D1.3 Monitoring of KPIs* or *D5.2 Report on provided services related to knowledge sharing*.
- **Performance Metrics:** Analysis of key performance indicators such as project completion rates, time-to-delivery for services, and customer satisfaction scores is being done. Such information is also summarized and reported via the [DTA portal](#) and for the previous year, in the Deliverables, e.g., *D1.3 Monitoring of KPIs*, *D4.2 Customer satisfactory report*, and *D3.4 Evaluation report of Open Calls*.
- **Impact Metrics:** Where applicable, quantitative evidence of outcomes (e.g., progress in digital transformation). For services under Test Before Invest, Digital Maturity Assessments (DMA) are performed for each contracted service and reported via the DTA portal as one of the key indicators of impact.

3.1.2 Qualitative Analysis

- **Stakeholder Feedback:** structured feedback is collected after service delivery via a short customer survey (Google Forms) and supplemented by follow-up calls where needed. The survey combines closed questions (for quantitative analysis) with open questions to capture improvement suggestions. Aggregate findings are reported in D4.2 and feed into the portfolio review process.
- **Expert Reviews:** Involvement of external experts to review service methodologies and outcomes, providing an unbiased assessment of service quality and effectiveness is considered as a potential tool to optimise the EDIH CTU services.
- **Case Study Analysis:** It represents a detailed examination of specific projects or service cases to understand their impact and identify best practices and areas for improvement.

3.1.3 Evaluation Tools

- **Surveys and Questionnaires:** Surveys and questionnaires are essential tools employed by the EDIH CTU to collect structured feedback from service users. These tools are designed to be both comprehensive and user-friendly, allowing for the efficient gathering of valuable data regarding the experiences and satisfaction levels of service users. The survey used by the EDIH CTU includes a mix of quantitative questions,

which can be easily quantified and analysed, and qualitative questions that provide more in-depth insights into the users' experiences and opinions.

- **Interviews:** In addition to surveys, the EDIH CTU conducts interviews and focus groups as part of its evaluation process. These are more in-depth methods of gathering qualitative insights from stakeholders, including clients, partners, and industry experts. Interviews are typically one-on-one sessions that allow for a deep dive into individual experiences and perspectives, providing a detailed understanding of the impact and effectiveness of services. Focus groups, on the other hand, bring together small groups of stakeholders to discuss and provide feedback on specific services or overall experiences with the EDIH CTU. These discussions are invaluable for gaining diverse perspectives and for fostering a deeper understanding of the needs and expectations of different stakeholder groups.
- **Benchmarking to other EDIHs:** Comparison with similar services offered by other EDIHs may be used to enhance the EDIH CTU services. By benchmarking against peers, the EDIH CTU can measure its performance in the broader context of the digital innovation ecosystem. This can not only help in identifying best practices and areas for improvement but also provide insights into innovative services and approaches being adopted elsewhere. Benchmarking enables the EDIH CTU to maintain a competitive edge and ensure that its services are in line with, or surpass, industry standards.

3.1.4 Periodic Review and Continuous Improvement

- **Regular Evaluation Cycles:** Establishing a schedule for periodic evaluations was a key aspect of the EDIH CTU's commitment to unceasing improvement and compliance with the GA on continuous reporting towards the European Commission. These evaluations, on 1,5-annual basis, are designed to systematically assess the effectiveness and impact of the services provided. The evaluations align with the compulsory reporting commitments to the European Commission, ensuring transparency and accountability in service delivery.
During these evaluations, reviews of all service areas are conducted. This includes analysing service uptake, client satisfaction, the achievement of set objectives, and the overall impact of services on digital innovation. The findings from these evaluations not only feed into the reports submitted to the European Commission but also provide valuable insights for internal strategic planning and decision-making.
- **Adaptive Evaluation Framework:** Recognising the dynamic nature of digital services and market demands, the EDIH CTU can employ an adaptive evaluation framework. This framework would allow for the modification of evaluation criteria and methods over time to better align with the evolving nature of services and market dynamics. Such adaptability would ensure that the evaluation process remains relevant, effective, and capable of capturing the true impact of services.
As part of this adaptive approach, the EDIH CTU can revisit and revise its evaluation criteria. This may involve incorporating new metrics, adjusting existing ones, or adopting new evaluation methodologies. For instance, if a new service is introduced or a significant shift in market needs is identified, the evaluation framework should be updated to reflect these changes. This ensures that the evaluations accurately capture the performance and relevance of all services.
- **Feedback Loop Integration:** An important component of the EDIH CTU's evaluation process can be the integration of a feedback loop into service design and delivery. Findings from evaluations, including stakeholder feedback, performance data, and benchmarking results, are systematically analysed and used to inform service

improvements. This integration of feedback ensures that services are continually refined to better meet the needs of users and to address any identified gaps or areas for enhancement.

This feedback loop also plays a crucial role in fostering a culture of continuous improvement within the EDIH CTU. By actively using evaluation findings to facilitate service development and delivery, the EDIH CTU ensures that its offerings are not only current and effective but also continually evolving to meet the highest standards of quality and relevance in the field of digital innovation.

Evaluating the services of the EDIH CTU is an ongoing process that requires a balanced approach combining quantitative and qualitative methods. By systematically assessing service performance and impact, the EDIH CTU can continually refine its offerings to better meet the needs of its stakeholders and contribute effectively to the digital transformation goals of the European Commission.



4. Strategies for Optimisation

Optimisation of the EDIH CTU service portfolio is essential to ensure maximum impact and alignment with the dynamic needs of the digital innovation landscape. This chapter discusses the strategies designed to enhance the effectiveness and efficiency of services offered by EDIH CTU.

4.1 Service Enhancement Strategies

4.1.1 Tailoring Services to Market Needs

Market Analysis

The process of market analysis is fundamental in ensuring that the services offered by EDIH CTU stay relevant and on the cutting edge of technology. This can involve, for example, a comprehensive approach to understanding current market dynamics, emerging trends in technology, and future forecasts. To achieve this, the EDIH CTU engages in the collection and/or studying of a wide array of data, ranging from industry-specific reports, and market surveys, to analyses of technology trends. This extensive data gathering allows for the identification of emerging trends, particularly in key areas like digital transformation, artificial intelligence, Internet of Things, and machine learning.

Additionally, an integral part of this analysis involves a thorough examination of the services provided by competitors and other EDIHs. This analysis ensures that the EDIH CTU not only keeps pace with but also surpasses industry standards. Conducting these analyses regularly allows the EDIH CTU to stay ahead of market developments and adjust its service offerings accordingly.

In this matter, the EDIH CTU cooperates closely with other EDIHs and with the National Centre for Industry 4.0 at the Czech Technical University in Prague. Also, it uses information and data provided by the EU Innovation Radar Platform.

Customisation

Customisation of services is a critical strategy for the EDIH CTU, aimed at meeting the specific needs of varied industry sectors and client profiles. This starts with the gathering of detailed information on a potential client, such as the company size, existing digital maturity, and specific client needs. Based on this information, the EDIH CTU is able to offer tailored services that address the unique challenges and objectives of each client.

One-on-one consultations form a key aspect of this customisation process. Through these personal interactions, the EDIH CTU gains a deeper understanding of the specific challenges faced by clients, allowing for the development of more targeted and effective solutions. Furthermore, regular collection and integration of client feedback into service design are crucial. This feedback mechanism ensures continuous improvement and personalisation of services.

Special attention is also given to developing industry-specific solutions. Recognising that different sectors have unique challenges and opportunities, the EDIH CTU focuses on creating specialised services and solutions that cater to these sector-specific needs. This approach not only enhances the relevance of the services but also ensures a higher impact in supporting clients' digital transformation journeys.

Tailoring services to market needs through regular market analysis and customisation is a dynamic and continuous process at the EDIH CTU. It is a vital strategy that ensures services remain relevant, competitive, and highly responsive to the ever-evolving digital landscape and the specific needs of various stakeholders.

4.1.2 Quality Improvement Initiatives

Staff Training and Development

The cornerstone of enhancing service quality within the EDIH CTU revolves around the continuous professional development of those cooperating in the project, particularly in emerging digital technologies and customer service. Recognising the rapidly evolving nature of digital innovation, The EDIH CTU places a high priority on ensuring that its team members are not only well-versed in current technologies but are also prepared for future advancements. This entails training programmes that cover various aspects of digital technologies, including but not limited to, artificial intelligence, data analytics, cybersecurity, and cloud computing.

The EDIH CTU uses the EDIH Academy under the DTA as one of the information and training sources. Furthermore, study visits to other EDIHs, knowledge-sharing and best-practice sharing are also crucial in supporting the EDIH CTU teams to stay on top of their expertise.

Moreover, understanding the critical role of effective customer service, the training should also extend to soft skills development. This includes, e.g., workshops and courses on communication skills, problem-solving, and client relationship management. Such skills are essential in ensuring that the technical expertise of the staff is complemented by their ability to engage effectively with clients, understand their needs, and provide solutions that are not just technically sound but also align with the client's business objectives.

This approach ensures that the staff at EDIH CTU remain at the forefront of digital innovation expertise, thereby directly enhancing the quality of services provided to clients.

Process Optimisation

In parallel to staff development, the EDIH CTU is committed to the continuous optimisation of its service delivery processes. The goal here is to streamline operations to improve efficiency and reduce the turnaround times for service delivery. This is achieved through a meticulous review of existing processes, identifying areas where delays or inefficiencies occur, and implementing solutions to address these issues.

Process optimisation involves the adoption of modern methodologies such as lean management and agile practices. These methodologies focus on minimising waste, maximising resource efficiency, and enhancing flexibility in service delivery. Additionally, the EDIH CTU integrates advanced digital tools and technologies into its processes. This includes for instance automation tools aimed at improving operational efficiency.

A key aspect of process optimisation is the emphasis on a client-centred approach. This means reconfiguring processes not just for internal efficiency but also to enhance the client experience. For instance, improving communication channels, and reducing response times are all part of this client-centred process improvement.

In essence, the quality improvement initiatives at the EDIH CTU, encompassing both staff training and development and process optimisation, are fundamental to ensuring that the hub delivers services of the highest quality. These initiatives are not one-off efforts but ongoing

endeavours, reflecting the EDIH CTU's commitment to excellence in serving its clients and contributing to the broader landscape of digital innovation.

4.2 Portfolio Expansion Strategies

4.2.1 Development of New Services

Innovation Exploration

The EDIH CTU's approach to enlarging its portfolio with new services begins with a deep dive into innovation exploration. This process is centred on identifying and integrating emerging digital technologies and methodologies offered by the consortium, primarily by the CTU, into the service portfolio, ensuring that the offerings remain at the forefront of the digital revolution. The focus is on scouting for new and emerging technologies, such as advanced machine learning algorithms, blockchain applications, next-generation IoT solutions, or other cutting-edge AI/ML technologies, that have the potential to revolutionize various industry sectors.

This exploration is not a solitary activity but involves collaboration with technology experts, industry leaders, and academic researchers. Through these collaborations, the EDIH CTU gains insights into not only the technological aspects but also the practical applications and market viability of these innovations. Workshops, technology fairs, and participation in conferences serve as platforms for such collaborative explorations.

Once potential technologies are identified, the EDIH CTU undertakes a rigorous assessment process to evaluate their relevance to the current market needs and their alignment with the EDIH CTU's strategic objectives. The most promising technologies are then developed into new service offerings, which are gradually integrated into the existing portfolio. This process ensures that the EDIH CTU remains a dynamic and progressive hub, continuously evolving with the technological landscape.

Service Diversification

In tandem with exploring new technologies, the EDIH CTU is also committed to diversifying its range of services. This strategy involves expanding the service portfolio to cover new areas of digital transformation and innovation, thus catering to a broader spectrum of client needs. The aim is to create a more holistic service offering that addresses various facets of digital transformation - from initial digital maturity assessments and strategy development to the implementation of advanced technological solutions.

Service diversification at the EDIH CTU is conducted with a keen understanding of the diverse needs of different industry sectors. For instance, while the manufacturing sector may require advanced robotics and automation services, the healthcare sector might benefit more from AI-driven data analytics and telemedicine solutions. By diversifying its services, EDIH CTU aims to provide tailored solutions that are specific to the challenges and opportunities of each sector.

The development of these new services also involves a feedback loop with existing clients. By engaging clients in the development process, the EDIH CTU ensures that the new services are not only technologically advanced but also practically relevant and user-friendly. This client-centric approach in service diversification helps in building services that are truly beneficial to the clients and enhances the overall value proposition of the EDIH CTU.

In conclusion, the development of new services through innovation exploration and service diversification is a key strategic focus for the EDIH CTU. By continuously expanding and

updating its service portfolio, the EDIH CTU ensures that it remains a vital contributor to the digital transformation journey of its clients and a leader in the digital innovation ecosystem.

4.2.2 Enhancing Collaborative Efforts

Partnerships

A key aspect of the EDIH CTU's strategy for broadening its service capabilities lies in the formation of strategic partnerships. These alliances encompass a broad spectrum, including collaborations with industry leaders (i.a., through consortium partners AMSP or SPCR), academic sector, and other EDIHs. By forging such partnerships, the EDIH CTU aims to create a synergistic environment where knowledge, resources, and expertise are shared and leveraged for mutual benefit.

The partnerships with industry are particularly focused on gaining practical insights into the challenges and needs of various sectors. These insights are invaluable in shaping services that are not only technologically advanced but also highly relevant to the market and are exploitable primarily by EDIH CTU's target groups – SMEs and public sector organizations. Collaborations with academics at the CTU serve a dual purpose. Firstly, they facilitate access to the latest research and developments in digital technologies. Secondly, they provide an avenue for engaging with emerging talent, thereby fostering a new generation of innovators.

Moreover, collaborations with other EDIHs and technology incubators (such as the Technology Incubation at the CzechInvest) are crucial. Such networks enable the sharing of best practices, experiences, and knowledge, further enriching the EDIH CTU's service offerings. These partnerships are not static but are continually developed and nurtured, ensuring they remain fruitful and relevant to the evolving digital landscape.

Community Engagement

In addition to forming strategic partnerships, the EDIH CTU significantly emphasises active engagement with the broader digital innovation community. This involves participating in and organising a variety of community-focused events, such as workshops, seminars, hackathons, and conferences. These events serve as platforms for knowledge exchange, networking, and showcasing innovations.

Community engagement also extends to online forums and social media platforms, where the EDIH CTU maintains an active presence. Through these digital channels, the hub interacts with a global community, sharing insights, sparking discussions, and staying abreast of global trends and challenges in digital innovation.

Furthermore, the EDIH CTU recognises the importance of contributing to the local community. This includes engagement with local businesses, start-ups, and educational institutions to foster a collaborative ecosystem. By supporting local initiatives and talent, the EDIH CTU not only contributes to regional economic development but also cements its role as a key player in the local digital transformation landscape.

In summary, enhancing collaborative efforts through strategic partnerships and community engagement is central to the EDIH CTU's approach to broadening its service capabilities. These collaborative efforts not only enhance the quality and relevance of the services offered but also contribute to building a robust and dynamic digital innovation ecosystem.

4.3 Implementation of Optimisation Strategies

4.3.1 EDIH CTU Further Steps

Short-Term Goals

In the area of service improvement and client satisfaction, the EDIH CTU recognises the importance of setting and achieving short-term goals. These immediate objectives are designed to deliver quick wins, which are crucial not only for maintaining momentum but also for building confidence among stakeholders. These goals typically focus on tangible improvements that can be realised in a relatively short timeframe, usually within few months.

One such objective might be enhancing the user experience on the EDIH CTU website, making it more intuitive and informative for clients seeking information about services.

Another immediate goal involves the implementation of a more efficient client feedback system, allowing for quicker and more effective responses to client enquiries and concerns.

The achievement of these short-term goals is not only a measure of the EDIH CTU's responsiveness to immediate needs but also serves as a stepping stone towards more substantial, long-term objectives. Regular meetings of the EDIH CTU "core team" and progress tracking are integral to this process, ensuring that these short-term goals are on track and aligned with the overall strategic direction.

Long-Term Vision

Parallel to setting short-term goals, the EDIH CTU is committed to establishing a long-term vision, which is essential for sustained growth and the continual evolution of its service portfolio. This vision extends beyond immediate market needs and looks towards the future landscape of digital innovation. The first step of such a long-term vision has been already done in Deliverables *D2.3 Exploitation Plan* and *D2.4 EDIH CTU Business and Sustainability Plan*.

A key aspect of this long-term vision is the continuous adaptation and expansion of the service portfolio to keep pace with technological advancements and emerging industry trends. This might include plans to develop advanced services in areas such as next-generation AI etc., as these technologies mature and find practical applications.

Another critical component of the long-term vision is the focus on building robust partnerships and expanding the network of collaborators. This includes not only strengthening existing relationships but also exploring new alliances that can bring additional value to the EDIH CTU's services.

Furthermore, the long-term vision encompasses a strong commitment to research and development, ensuring that the EDIH CTU remains at the forefront of innovation. This commitment may manifest in the establishment of dedicated R&D units at the CTU or collaboration with other academic institutions for joint research initiatives.

4.3.2 Resource Allocation

Financial Planning

Effective financial planning is also very important for the optimisation of the EDIH CTU services, particularly given the dual-source nature of its funding. With half of its budget sourced from the European Commission's Digital Europe Programme and the other half from the national source (the Ministry of Industry and Trade, MoIT), there is a critical need for aligning with the rules and regulations set by both donors.

The original budget had been already done and approved by the EC and the MoIT before the start of the EDIH CTU project. Currently, the financial planning process at the EDIH CTU involves a strategic allocation of these funds to ensure the optimal balance between individual sub-services under each pillar and the amount of provided services (either new initiatives or the expansion of existing services).

Adherence to Donor Guidelines

Adhering to the guidelines set by the European Commission and the MoIT is a fundamental aspect of this financial planning. This compliance involves understanding and implementing the specific requirements regarding how funds can be used, reporting standards, and timelines for expenditure. Regular financial reviews are part of this compliance process, ensuring that all expenditures is transparent, accountable, and in line with donor expectations.

Budgeting for New Services

For new services, careful budgeting involves detailed cost projections that encompass development, implementation, and evaluation stages. It also includes considering potential risks. This foresight is necessary to ensure that new services are not only innovative and impactful for the company requesting the service but also financially viable and sustainable. For this reason, the EDIH CTU requires as one of the prerequisites for accepting the client's Service Request Form a detailed project plan where also possible risks are described.

4.4 Monitoring and Feedback Integration

4.4.1 Performance Monitoring

Performance monitoring within the EDIH CTU is an integral part of ensuring the effectiveness and efficiency of optimisation strategies. This monitoring is centred around two main components: Key Performance Indicators (KPIs) and Digital Maturity Assessment (DMA).

Key Performance Indicators (KPIs)

Key Performance Indicators are essential tools used by EDIH CTU to measure the success and impact of its optimisation strategies. These indicators were selected before submitting the application to the European Commission to provide meaningful insights into various aspects of service performance. Regular tracking of KPIs helps in evaluating whether the services are meeting their intended objectives and where improvements are needed.

Digital Maturity Assessment (DMA)

Digital Maturity Assessment is a tool used by the EDIH CTU to measure the digital readiness and capabilities of its clients. This assessment helps in understanding the current state of digital adoption and maturity among clients, which in turn informs the development and customisation of services. For this task, the EDIH CTU uses questionnaires and guidelines prepared by the [DTA](#). There are different questionnaires for different types of clients – for SMEs and for the PSOs.

4.4.2 Continuous Feedback Loop

The implementation of a continuous feedback loop is one of tools of the EDIH CTU's strategy for service optimisation. This loop involves two primary components: the integration of stakeholder feedback and the adaptation of strategies based on this feedback and performance data.

Stakeholder Feedback Integration

Integrating feedback from stakeholders – which includes clients, partners, and even internal staff – is pivotal in the process of refining and enhancing services at the EDIH CTU. This feedback is gathered through various channels such as surveys, interviews, workshops, and direct communications. The aim is to gain a comprehensive understanding of the stakeholders' experiences, expectations, and any challenges they may face in relation to the services offered.

The feedback collected is then meticulously analysed/discussed in the EDIH CTU team and used to prepare service improvements. For instance, if clients express a need for more personalised support in implementing digital solutions, the EDIH CTU might respond by enhancing its consultancy services or providing more tailored training programmes. This responsive approach ensures that services not only meet but exceed stakeholder expectations, thereby enhancing client satisfaction and engagement.

Adaptive Strategies

In conjunction with integrating stakeholder feedback, the EDIH CTU is ready to employ adaptive strategies to ensure its service optimisation efforts are effective and relevant. This involves adjusting optimisation strategies based on both the feedback received and the analysis of performance data.

Adaptive strategies might include modifying existing services, introducing new service offerings, or altering delivery methods to better align with stakeholder needs and preferences. For example, if performance data indicates a particular service is underutilised, the EDIH CTU adapts its strategy by modifying the service to make it more appealing or by increasing awareness among potential users through targeted marketing efforts.

Furthermore, adaptive strategies extend to organisational learning and development. Based on feedback and performance data, the EDIH CTU continually updates its operational processes, staff training programmes, and resource allocation to improve efficiency and effectiveness.

5. Conclusion

D4.3 defines how EDIH CTU evaluates and updates its service portfolio. The evaluation combines monitored indicators (uptake, delivery performance and the project KPIs, including DMA where applicable) with structured qualitative feedback from clients and delivery teams. Quarterly portfolio reviews, approved by the Evaluation Team, translate evidence into concrete follow-up actions (service adjustments, documentation updates, capacity planning, or development of new service modules). This provides a consistent basis for quality management and ensures traceability of portfolio decisions for reporting purposes.