EDIH-MADRID REGION

EUROPEAN DIGITAL INNOVATION HUB – MADRID REGION

D 6.1 REPORT SERVICES PROVIDED DURING THE FIRST YEAR. WP6

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Executive Summary

This document explains the procedures to evaluate and report the quality of the services provided by EDIH MADRID REGION during the second year of the project. The main goal is to help project managers and stakeholders to assess the performance and take informed decisions for the future phases of the project. This deliverable is addressed to Work Package 6 (WP6) and focuses in providing digitalization support services specifically for the public sector in the Madrid region. The main objective is to improve the digital capabilities of public sector entities (municipalities and other public companies), making them more efficient and digitalized.

Introduction

The EDIH MADRID REGION project aims to establish a European Digital Innovation Hub (EDIH) in Madrid, with the goal to digitize the public sector and small to medium enterprises (SMEs).

The primary goals of the project include:

- Accelerate the digital transformation of SMEs and public sector organisations in the Madrid region (municipalities with less than 20.000 inhabitants and regionalized public sector companies)
- Provide support services like digital maturity assessments, skill development, and helping to find public investments for their digital transformation.
- Promote the integration of advanced digital technologies to improve digital operational actions by testing some of the most advanced technologies in the market.

The project focuses in the following key sectors:
- SMEs in the service industry.
- Industrial SMEs transitioning to Industry 4.0.
- Regional and municipal public administrations.
- Mobility and transport sectors.

The project started on December 1, 2022, and has a duration of 36 months, with phases for implementation, monitoring, and evaluation. In this deliverable, the analysis focus on the services provided during the second year of the project and evaluates the achievements and problems found in WP6: Municipalities and public sector regionalized companies.

A key element of the EDIH MADRID REGION project is its focus on the digital transformation of regional and municipal public administrations. This is achieved through detailed digital maturity assessments and customised support services for the public sector. The main aim is to improve the digital capacity of these entities, making them more efficient and improving their operational performance.

Objectives Enhanced Digital Capabilities: improving digital maturity and capabilities within the public sector.

The objectives of the project related to public sector digitalization include:

- **Enhanced Digital Capabilities:** Improve digital maturity and capabilities within the public sector.
- **Efficient Service Delivery:** Achieve more efficient and effective public services through digital technologies.
- **Skilled Workforce:** Develop a public sector workforce with skills to use digital tools effectively.
- **Implementation of Digital Solutions:** Ensure the adoption and success of tested digital solutions.
- **Secured Funding:** Facilitate access to financial resources for digital transformation projects.

Partners Involved in WP6

1. **Comunidad de Madrid (CM):** As the lead beneficiary, CM oversees the coordination of all WP6 activities, ensuring they align with regional digital strategies and address the specific needs of the public sector.
2. **Fundación para el Conocimiento madrimasd (MADRIMASD):** Provides essential methodological support and ensures the quality and consistency of digital transformation services to maximize their effectiveness.
3. **Universidad Carlos III de Madrid (UC3M):** Contributes academic expertise and access to advanced digital tools to support digital maturity assessments and testing services.
4. **Entidad de Gestión de Derechos de los Productores Audiovisuales (EGEDA):** Manages educational and digital content resources, supporting the digital transformation of public sector education and communication initiatives.
5. **Asociación de Empresarios del Henares (AEDHE):** Offers business support and conducts digital maturity assessments for public sector organizations, leveraging their deep understanding of local needs.
6. **Hewlett-Packard Servicios España (HPE):** Provides high-performance computing resources and technical expertise to facilitate advanced digital assessments and implement tailored digital solutions.
7. **MOVEN** is a technological firm based on mobility data analysis and recommendations of newmobility solutions to accelerate the sustainable transformation of the sector. MOVEN focuses on Public Sector (particularly, local Authorities) by providing recommendations and urban mobility solutions adapted to each city, based on the analysis of huge amount of mobility data.

Description of services provided WP6

The following services have been provided:

- **Test before invest,**

156 DMAs have been carried out to public services:

  o 136 are Town Councils of towns with less than 20,000 inhabitants. For the City Councils, personal interviews have been carried out with each one to carry out the DMA and identify their needs.
  o 6 to health services training center
  o 8 to educational training centers, schools

o 1 to public transport service
o 1 to a rehabilitation center.

One test before invest to the Ministry of Defence's Directorate General of Armament and Matériel for an application of AI for the inspection of electronic material to to universities, health training centres, high school institutes.

98 services of carrying out a study of the level of security and exposure in the City Council's email with the aim of detecting vulnerabilities and evaluating the level of awareness and training of city council employees of this type of threats that lead to theft of confidential information, installation of ransomware, trojans...

107 services consisting on a study to assess the cybersecurity status of the websites of the municipalities in the region, with the aim of providing specific recommendations to each of them, as well as other actions and policies on the matter.

5 services of mobility application for city councils

2 services in a technology park that include CRM analysis and web optimization

- **Training services**

A total of 21 training activities have been conducted in universities, institutes, and health services with the following contents

  o Cloud Services: 3 sessions, 41 attendees
  o Communication network: 2 sessions, 3 attendees
  o Artificial Intelligence & Decision support : 8 sesions, 54 attendees
  o Big Data: 3 sessions, 31 attendees
  o BI Tools: 1 session, 1 attendee
  o Internet services: 2 sessions, 3 attenddees
  o New technologies for Audio-Visual sector – Media: 2 sessions, 6 attendees

- **Support to find investment services:**

96 services provided by the madri+d Foundation in the "Funding Search for Municipalities" offers personalized support to identify and access funding opportunities co-financed by the European Union. We help local governments navigate the complex landscape of EU funding programs, securing financial resources for sustainable development, infrastructure, innovation, and social projects.

We offer tailored funding research, identifying EU programs and co-financing opportunities aligned with municipal needs. We assess project eligibility by analyzing feasibility and compliance with European funding requirements. Additionally, we provide application advisory services, supporting the preparation of proposals, gathering necessary documentation, and optimizing the application process.

We also facilitate the creation of consortiums, helping municipalities find suitable partners and establish strategic alliances for EU-funded projects. Moreover, we offer grant management support, providing advisory services on project implementation, financial management, and compliance with reporting obligations.

- **Networking and access to innovation systems**

6 sessions for the presentation of an innovation program in sustainable mobility:
Logistics and urban freight distribution. The objective is to introduce the program's stakeholders and the digital platform, as well as to invite key industry players and engage in panel discussions on this topic.

Service Delivery Analysis

These services include everything from digital transformation projects and tools for data-driven decision-making to platforms for citizen engagement and smart city solutions. The main goal is to drive sustainable development **and bring public administration up to date**. Each service is designed with an emphasis on quality, scalability, and aligning with the broader objectives of improving public services and fostering innovation across municipalities and other public sector organizations.

List of Services to Public Sector

1- **Virtual assistant services** for city councils, promotional videos of municipalities accessible through QR and NFC and a robotics and artificial intelligence solution for the rehabilitation of minors are being managed for application.

2- **Chatbot for Web Municipalities**

An AI-powered chatbot designed specifically for municipal websites to enhance citizen engagement and streamline public services. This intelligent virtual assistant provides 24/7 support, answering frequently asked questions, guiding users to relevant resources, and assisting with common tasks such as appointment scheduling, service requests, or document submissions.

The chatbot is customizable to reflect the municipality's specific services and policies, ensuring accurate and relevant information for users. By automating routine inquiries, it reduces the workload on municipal staff and improves the efficiency of public service delivery, offering a seamless, user-friendly experience for residents.

3- **Email Security and Vulnerability Study**

This service involves conducting a comprehensive assessment of the City Council's email security and exposure levels. The study aims to identify vulnerabilities, evaluate potential risks, and assess the level of awareness and training among municipal employees regarding cybersecurity threats. These threats include phishing attacks, ransomware, trojans, and data theft. The findings will help implement targeted strategies to strengthen email security and enhance staff preparedness to mitigate risks effectively.

4- **Creation of Accessible Digital Content Using NFC and QR Chips**

This service focuses on the development of audiovisual digital content to promote an accessible municipality. By integrating Near Field Communication (NFC) and Quick Response (QR) chips, municipalities can offer interactive and inclusive content that improves access to information and services for all citizens, including those with disabilities. This initiative underscores the commitment to fostering an inclusive community through innovative technology.

5- **Development of an AI-Powered Virtual Assistant**

This service entails creating a virtual assistant equipped with Artificial Intelligence to provide location-specific information. Hosted on a tablet, the virtual assistant supports both text and voice interactions, offering an intuitive and user-friendly way for citizens and visitors to access essential information about municipal services and locations. This solution enhances the accessibility and efficiency of public information delivery.

6- **Cybersecurity Audit of Municipal Websites**

This study evaluates the cybersecurity status of municipal websites across the region. The assessment aims to identify vulnerabilities, propose specific recommendations for improvement,

and develop actionable policies to enhance the cybersecurity posture of each City Council. By addressing potential risks proactively, this service ensures the safety and reliability of digital resources for municipalities and their residents.

7- **Pilot Test of a Rehabilitation and Training Solution Using Social Robotics and AI**

This functional pilot project tests a solution that integrates assistive social robotics and Artificial Intelligence for rehabilitation and training purposes. The initiative explores innovative ways to support individuals in need of rehabilitation, offering personalized and interactive training experiences. By leveraging cutting-edge technologies, this service aims to improve the quality of life and foster greater independence for users.

8- **On-street automated parking in regulated zones**: Connected car technology, implementable via software or through a device connected to the vehicle (dongle), to efficiently manage parking in regulated areas.

9- **Digital auditorium for audiovisual content and streaming events**: A platform for disseminating content and organizing online events, facilitating communication and citizen engagement.

10- **Training in digitalization and creating learning experiences in corporate environments**: Training programs to develop and digitalize learning experiences in corporate settings, enhancing employees' digital competencies.

11- **Support for businesses within the European Single Market**: Assistance to take advantage of opportunities provided by the European Single Market, facilitating cross-border collaboration and expansion.

12- **Digitalization roadmap**: Development of a personalized strategic plan recommending how to effectively approach the digitalization process.

13- **Incident control for public transport infrastructure**: SaaS platform for monitoring and managing incidents in public transport infrastructure, improving operational efficiency.

14- **Personalized advice for strategic business decision-making**: Specialized consultancy to support strategic decision-making, optimizing business performance and competitiveness.

15- **Electric bike subscription**: Subscription system for electric fleets allowing companies to provide sustainable vehicles to their employees, promoting eco-friendly mobility.

16- **Support for applying for funding for innovative projects**: Assistance in preparing and submitting applications for funding for innovative projects, facilitating access to financial resources.

17- **Measurement of mobility patterns and healthy habits, with incentives**: A tool to encourage sustainable habits among employees and stakeholders, using technology to monitor and promote healthy practices.

18- **Access to EU funding programs**: Guidance to identify and apply for European Union funding programs, supporting the development and growth of local projects.

19- **Implementation of open data platforms**: Support in setting up and managing open data platforms to promote transparency and facilitate access to public information.

20- **Digitalization of administrative processes**: Services to streamline and automate administrative workflows, enhancing efficiency and reducing manual tasks.

21- **Smart city solutions**: Deployment of technological tools and platforms to transform municipalities into smart cities, improving urban management and citizen services.

22- **Cybersecurity audits and consulting**: Comprehensive evaluation of IT systems to identify vulnerabilities and recommend measures to enhance cybersecurity in public administration.

23- **Advanced data analytics for decision-making**: Implementation of analytics tools to process and interpret large datasets, enabling informed decision-making in public policies.

24- **Training in green and digital transformation**: Capacity-building programs focused on combining sustainability initiatives with digital technologies for holistic development.

25- **Cloud adoption for public administration**: Guidance and technical support to migrate systems and services to cloud platforms, improving scalability and accessibility.

26- **IoT integration for public services**: Solutions to integrate Internet of Things (IoT) devices into public infrastructure, enabling smarter and more efficient service delivery.

27- **Citizen engagement platforms**: Development of digital platforms to enhance communication and interaction between local governments and citizens.

28- **AI-powered chatbots for public services**: Implementation of AI-driven chatbots to assist citizens with inquiries and provide faster service response times.

29- **Municipal energy efficiency solutions**: Technological initiatives to monitor and optimize energy usage in public buildings and infrastructure.

30- **Digital twin creation for urban planning**: Development of digital replicas of cities or municipalities to simulate and plan urban development projects

31- **Blockchain for public administration**: Solutions to implement blockchain technology for secure and transparent management of public records and processes.

32- **Digital skills assessment for public employees**: Tools and methodologies to evaluate the digital competencies of municipal employees and identify areas for improvement.

33- **Public procurement digitalization**: Services to digitize and optimize procurement processes, enhancing efficiency and transparency in public contracts.

34- **Disaster recovery and business continuity plans:** Development of robust strategies to ensure public services remain operational during and after emergencies or disruptions.

35- **GIS (Geographic Information System) solutions**: Implementation of GIS tools to improve territorial planning and management, aiding municipalities in decision-making processes.

36- **Sustainability tracking and reporting platforms**: Creation of digital platforms to monitor and report on sustainability initiatives and environmental impact.

37- **Integration of 5G technologies**: Support for deploying 5G infrastructure to enhance connectivity and enable advanced digital services in municipalities.

38- **Digital identity and e-government solutions**: Implementation of secure digital identity systems and platforms to facilitate online access to public services for citizens.

39- **Predictive maintenance for public infrastructure**: Application of advanced analytics and IoT to predict and prevent failures in public facilities and infrastructure.

40- **Smart lighting systems for municipalities**: Deployment of energy-efficient and intelligent lighting solutions to reduce costs and improve urban infrastructure.

41- **Digital health monitoring systems**: Tools to support public health management, including monitoring health trends and optimizing healthcare delivery in local communities.

42- **CRM implementation consulting**: Expert advice to implement a Customer Relationship Management system effectively.

43- **Carpooling service for public and private organizations**: Shared mobility solutions for municipalities, universities, and businesses.

How services have been offered and implemented

During this period, the Digital Maturity Assessments (DMA) for municipalities with fewer than 20,000 inhabitants were completed, reaching a total of 134 through personal interviews. These interviews not only facilitated the DMA process but also provided an opportunity to engage with local authorities and identify their needs in terms of digitalization.

The DMA results were incorporated into the Digital Transformation Assessment (DTA) tool, enabling the necessary analyses for each municipality. Based on these analyses, an action plan was developed, incorporating services deemed essential for improving digital maturity levels and fostering technological inclusion, particularly for municipalities at earlier stages of digital adoption.

As part of these services, cybersecurity assessments were conducted for the municipalities:

- study of the level of security and exposure in the City Council's email with the aim of detecting vulnerabilities and evaluating the level of awareness and training of city council employees of this type of threats that lead to theft of confidential information, installation of ransomware, trojans...
- study to assess the cybersecurity status of the websites of the municipalities in the region, with the aim of providing specific recommendations to each of them, as well as other actions and policies on the matter.

The results of these assessments, along with the DMA analyses, were integrated into the final action plan, which is now ready for delivery to the relevant organisations

Other relevant Digital Maturity Assessments (DMA) include those conducted for the Early Care Center and a school, both of which were offered Service No. 7: " Pilot Test of a Rehabilitation and Training Solution Using Social Robotics and AI ". This service is currently being implemented as a pilot program, with the aim of extending its deployment to other schools within the Community of Madrid.

How Services They Have Been Offered

During this period, seven meetings have been scheduled, organized by geographic regions across the Community of Madrid. All municipalities will be invited to join these sessions, which are designed to introduce the services than can be offered to them.

These meetings will also provide a space to present tailored action plans to each municipality and share the results of their Digital Maturity Assessments (DMA). By taking this personalized approach, the goal is to give each municipality a clear understanding of the strategies and resources specifically available to them.

This meetings with each municipality will give us the chance to gather feedback on the proposed services, creating an open dialogue between municipalities and the organizing team. This feedback will be crucial for fine-tuning the services to better meet the unique needs and expectations of each municipality, ensuring a more effective and inclusive digital transformation across the region.

Communication and centralization of contact

The Community of Madrid has centralized communication as the entity responsible for Work Package 6 (WP6), ensuring an efficient and streamlined flow of information among all stakeholders. This approach helps coordinate actions effectively and reduces redundancies throughout the project.

As the lead for WP6, the Community of Madrid has taken on the responsibility of managing all communication efforts, ensuring municipalities are kept informed about the project's objectives, progress, and the services available to them. This centralized strategy ensures consistent messaging and promotes a shared understanding of the project's goals across the region, enabling a smoother and more cohesive implementation of the initiative.

Community of Madrid has acted as a single contact point, in this way the engagement for municipalities is easier, making it easier for them to connect with the project team and ensuring their questions and concerns are addressed as soon as possible. This consolidation of communication has also enhanced transparency and accountability, keeping all municipalities, partners and clients aligned and well-informed throughout the process.

This centralized communication strategy not only improves the efficiency of project execution but also fosters trust and collaboration among municipalities, EDIH partners, and other stakeholders. Ultimately, it strengthens the foundation for the success of digital transformation efforts across the Community of Madrid.

Best practices and Continuous Improvement

During the second phase of the project, our focus has been on developing action plans, offering services, and collecting service requests to facilitate their implementation in the final phase.

This effort has led to the completion of additional DMAs and an increase in service requests. More importantly, it has strengthened engagement with organizations, allowing the project to provide support and enhance their digital maturity.

A key highlight is the implementation of the assistive robotics solution in the Base Center and the school. This initiative aims to assess its effectiveness and promote its adoption within these institutions through this pilot project.

Furthermore, through direct engagement with municipalities and the execution of DMAs, specific needs have been identified. As a result, the Community of Madrid has committed to addressing these needs by developing a common electronic platform and a digital security framework, which we consider a significant success case.

Conclusions

The first 24 months of the EDIH Madrid Region project have established a solid foundation for advancing digital transformation across municipalities and public sector entities in the Community of Madrid. It has been important to take a structured and focused approach, the project has made significant strides in assessing the digital maturity of these entities and addressing their specific needs.

The implementation of Digital Maturity Assessments (DMAs) has played a key role by knowing the real problems of the municipalities. Visit them have given us value information of the real problems they have in digitalization, some of them is as basic as not having people with a basic knowledge of possible digital solutions. Thanks to the visits to municipalities, we have been able to tailor services such as cybersecurity audits, training programs, and AI-powered solutions to each municipality.

As the project moves into its next phase, it benefits from a strong foundation and high expectations for the integration of innovative technologies. Upcoming initiatives, including additional training sessions, pilot programs, and scaled implementation of solutions, aim to further improve public service delivery and promote sustainable development throughout the region.

The EDIH Madrid Region project highlights the critical role of quality, scalability, and collaboration in driving successful digital transformation, setting a standard for similar initiatives in the future.

We have learnt that it is recommended to maintain regular communication with municipalities to ensure their evolving needs are met, invest in training programs to maximize the impact of digital solutions, and prioritize scalable and sustainable solutions to expand services to more public entities