STW

AI FOR MORE SUSTAINABLE AND INCLUSIVE COMMUNITIES

ARTIFICIAL INTELLIGENCE IN PUBLIC ADMINISTRATIONS

EVENT REPORT

7th **of February 2024**
online

SERN

ARTIFICIAL INTELLIGENCE IN PUBLIC ADMINISTRATIONS

The seminar was the first one in a series of seminars under the initiative **SERN thematic wall (STW)**. The initiative is a thematic working approach that gives shape and substance to several of the priorities and activities foreseen by the SERN strategy.

In this case the theme chosen is **AI for more sustainable and inclusive communities**. **Four seminars** will take place during the period of February, March and April 2024. The focus will be on **AI's integration into public administrations, educational systems**, and into **services for vulnerable groups**, and it encapsulates SERNs commitment to explore the multifaceted ways in which AI can be leveraged for the collective good.

The first seminar addressed the **implementation of artificial intelligence in public administrations** and welcomed five speakers from Sweden, Italy, and Portugal. After the seminar, all the participants received a form for sharing their good practices of using AI in public administrations, some of which will be showcased in an upcoming seminar on the 20th of March 2024.

TOPICS AND SPEAKERS

AI-focused Services for Public Sector Organisation
Cristiano Passerini, *Director Project Digital Innovation Hub,* Lepida (IT)

Accelerating the use of AI in Sweden: Insights from Östergötland's Municipalities
Sara Karlsson, *Ecosystem and Partner Manager* – Linköping Science Park East Regions, AI Sweden (SE)

Digital Twin – in Urban Planning
Jennie Olofsson, *Library Strategist* & Patrik Pettersson, *GIS-developer,* Härnösand Municipality (SE)

Fundão, Smart Rural
Ricardo Gonçalves, *Head of Innovation, Investment and Strategic Planning,* Fundão Municipality (PT)

Bologna Digital Twin – Enhancing the Public Value of Data
Francesco Nelli, *International Relations Officer,* Bologna Municipality (IT)

AI-focused Services for Public Sector Organisation
Cristiano Passerini, *Director Project Digital Innovation Hub*, Lepida (IT)
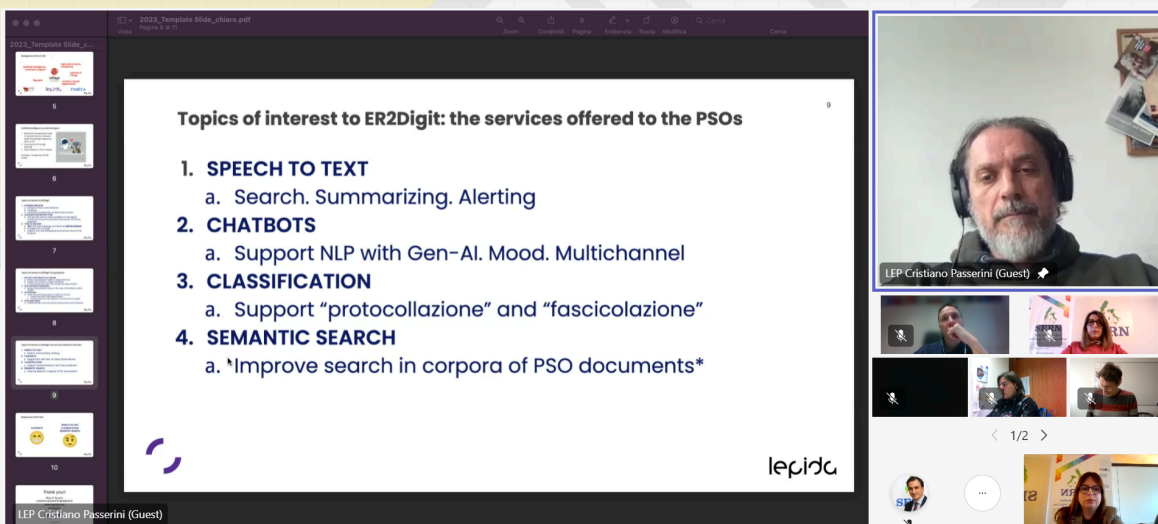
The first speaker was Cristiano Passerini, representing Lepida, an in-house company of the regional government in Emilia-Romagna (Italy). Among other things, Lepida works with the implementation of new modern technologies in the Public Sector Organisations (PSOs).

Cristiano Passerini explained how Lepida currently work with AI, but also how they are expecting to leverage AI in the future. The municipalities, Universities, health authorities, the regional government and many other stakeholders work together with the help of Lepida to find innovative solutions and the goal is that what they do should be replicable also in other places.

Lepida has developed a data center where they can test different ideas in a trusted environment. ER2Digit is one of the 13 European Digital Innovation Hubs (E-DIH) in Italy. It is used for working to get the most out of existing data and for finding innovative digital solutions.

In their work, they intend to use AI for many different things, such as speech-to-text-tools, chatbots, classification tools, and for semantic searches in corpuses. Some of these uses are already widely known, while others need more introduction. Informing the inhabitants about the advantages of using AI is for Lepida essential for getting the population on board in the development of new practices.

Lepida identified some important points when it comes to working with AI. Firstly, that there is always a need to analyze the results, to examine what kind of side-effects the AI gives – it always needs to be used in awareness of the risks. Secondly, it is important to protect the data in use when working with AI, anonymizing or pseudonymizing it. Thirdly, raising awareness on all levels of the organization is important since there are often many misunderstandings regarding AI that can lead to fearing it or avoiding it.

Accelerating the use of AI in Sweden: Insights from Östergötland's Municipalities

Sara Karlsson, *Ecosystem and Partner Manager,*
Linköping Science Park East Regions, AI Sweden (SE)

The second speaker was from AI Sweden, a national center for applied AI. It is a non-profit organization that works in the private sector, as well as in the public sector and within the academic sphere. Their job is to accelerate the use of AI in Sweden.

Sara Karlsson, their representative in the seminar, presented three examples of how they work to accelerate the use of AI in municipalities.

The first example was from Linköping Municipality where the social services worked on a project for one year to create a forecasting tool using machine learning. What the project gave was primarily a deeper understanding of the organization's own data among the staff, but also of how they could use AI as a tool, even if the forecasting tool itself never was perfected during the year of the project.

The second example was from Norrköping Municipality, where a broad group of staff went through an AI-training which was based on a mix of courses, seminars, and discussions. In this case, the interests of the staff were central to what they learned, as they could choose what courses they wanted to attend.

The third example was from Mjölby municipality, where the focus was the municipality website and how AI could personalize it for each user, making it more efficient.

The general points that AI Sweden brought forward when it comes to the challenges regarding AI were similar to the ones that Lepida touched upon. The legal aspects and the trustworthiness of AI need to be addressed and evaluated for each case. AI is sometimes like a black box where you cannot always know what happens inside. Another aspect is that before understanding the use of AI it is common that staff are worried about losing their jobs. In reality, their jobs might change but are not likely to disappear.
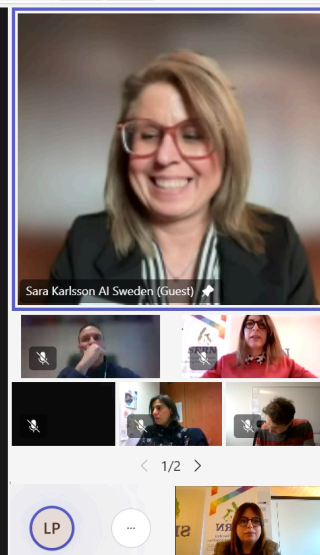
Digital Twin – in Urban Planning

Jennie Olofsson, *Library Strategist* & Patrik Pettersson, *GIS-developer,*
Härnösand Municipality

The representatives of Härnösand Municipality – Jennie Olofsson and Patrik Pettersson – presented the use of AI that the staff of their municipality have in the urban planning. To visualize the growing city, they are using a digital twin, which also is accessible by the inhabitants on the municipality website.

Härnösand has developed a growth strategy for the period leading up to 2040, since the prognosis is that there is going to be around 15.000 new jobs in the area due to new production of renewable energy. This obviously means that there is going to be an enormous change in terms of new buildings and facilities. For planning this, digitalization is central.

Some examples of what the digital twin can show are the intended use of land, the maximum height of new buildings, what planned parks are going to look like, where the sunlight will fall after the construction of a new facility, different building scenarios for the same site, etc. The digital twin is here an efficient and clear tool for communicating with the citizens and stakeholders. It is also possible to work with virtual reality (VR) to let the intended users enter the planned buildings or places to understand properly what they will look like before building them. This way one can understand flaws in the blueprints and planning before building and save money.

Other cities have also used similar AI-models to look at the possible impacts of extreme events like flooding.
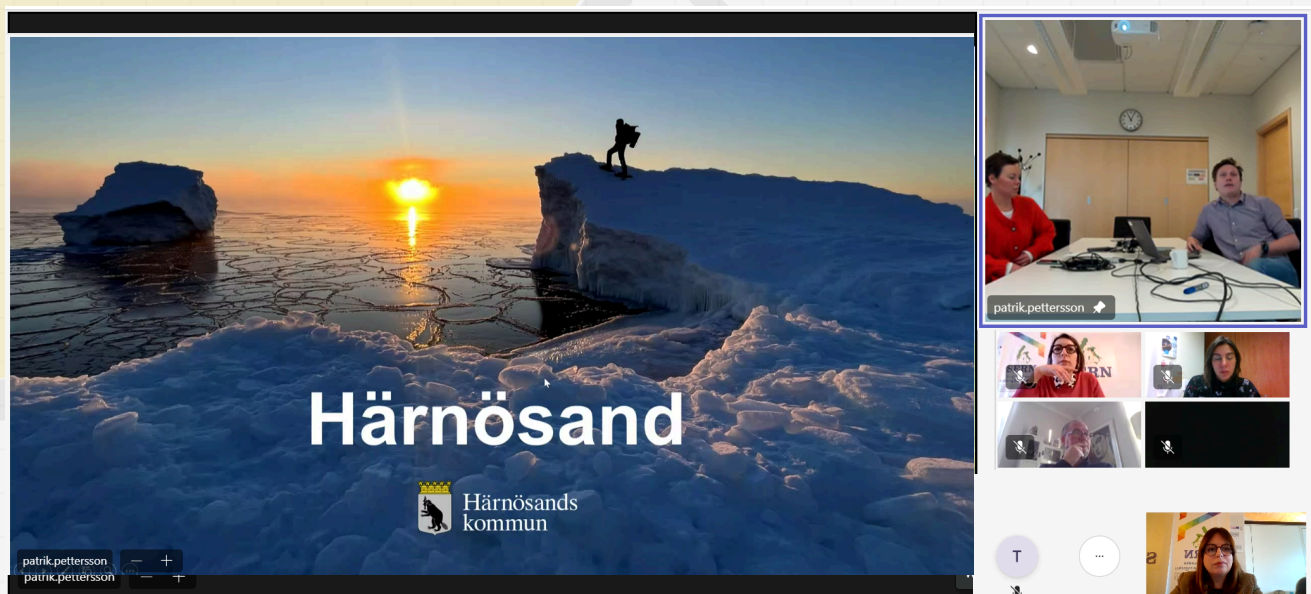
Fundão, Smart Rural
Ricardo Gonçalves, *Head of Innovation, Investment and Strategic Planning,* Fundão Municipality (PT)

The fourth speaker came from Fondão Municipality in Portugal. Ricardo Gonçalves explained how digitalization for them is essential in the social and economic development. The city experienced a major decrease of inhabitants in the past, which led them to make an innovation-plan to tackle the problem. They created a consortium of public and private partners and started working with international partners, which gave many opportunities for development.

Part of this innovation-plan was of course digitalization. For example, training bootcamps were set up, where unemployed people could learn software development and as the first Portuguese municipality, they have implemented IT-learning into ALL the schools from 6yo, including the use of AI.

AI is also put to practical use in technology for agriculture, for example in systems that work to detect plagues among crops. In the area, they also combine traditional uses of technology with AI to predict high risks of wildfires to be able to combat them or prevent them more efficiently.

The municipality have also introduced methods for gamification for changing habits of mobility. One example is the institutionalizing of carpooling and how they worked to let that take shape. In a place like Fondão this is essential for connecting the widespread villages within the municipality in a sustainable way. Another area where AI is going to be important is within water management.
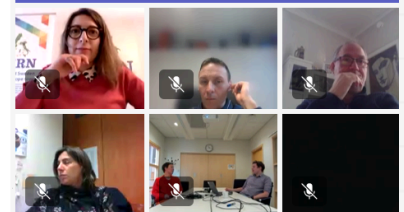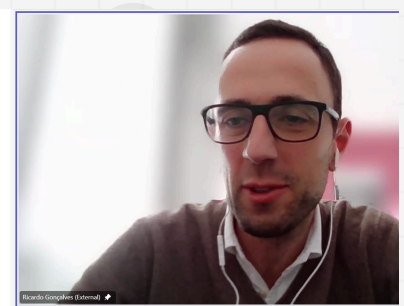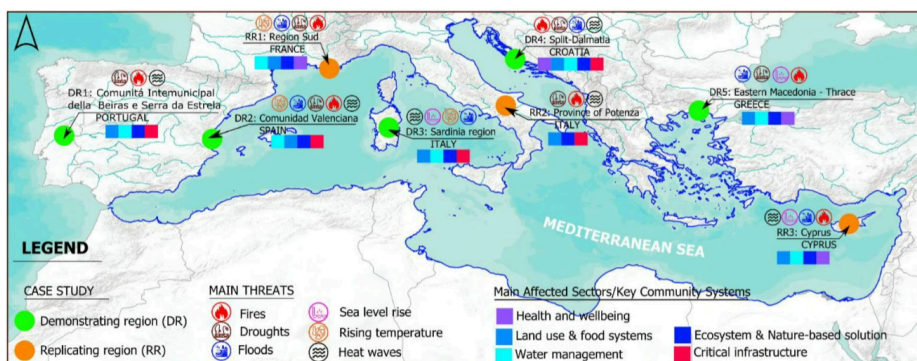
Bologna Digital Twin – Enhancing the Public Value of Data

Francesco Nelli, *International Relations Officer*, Bologna Municipality

Our final speaker, Bologna Municipality represented by Francesco Nelli, has created a digital twin (DT) to be able to foresee the needs that the urban planning should consider in building a sustainable and coordinated society. The digital twin uses data and knowledge to implement analysis and forecasts. The hope is to bring about change and tackle environmental, economic, and social challenges by experimenting with different forms of public engagement. It has research and innovation approach, which they claim is unique to their digital twin.

It is a full digital model of the city, reflecting the city behavior, constituted of the physical infrastructure but also of the urban systems and the relations between them. It represents the city with its physical infrastructure, processes, social and organizational dynamics. It understands the mutual influence that the different urban systems have on each other. It is possible for it to coevolve with the city and feeding off its data. It can also predict and anticipate behavior and changes occurring in the real world.

The model will start out from what they know and what is already clear (areas like mobility, energy and climate change), and then it can be expanded to be more complex to map areas where there might be hidden problems or future challenges.
The digital twin can support decisions, help optimize systems and assessing risks and their impacts.

The ethical and civic approaches are central to their project. They prioritize transparency and ethical handling of data, as well as fairness and openness regarding the use of algorithms. As we have seen in several of the speakers, this is a crucial point to take into account when working with AI.