



Digital Twins. Practical application to Neàpolis and to the city of Vilanova i la Geltrú

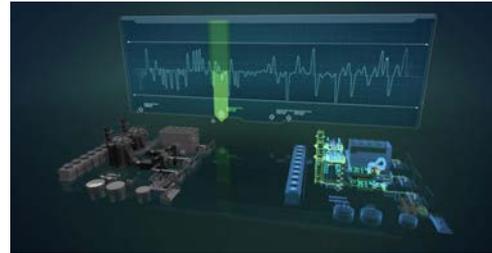
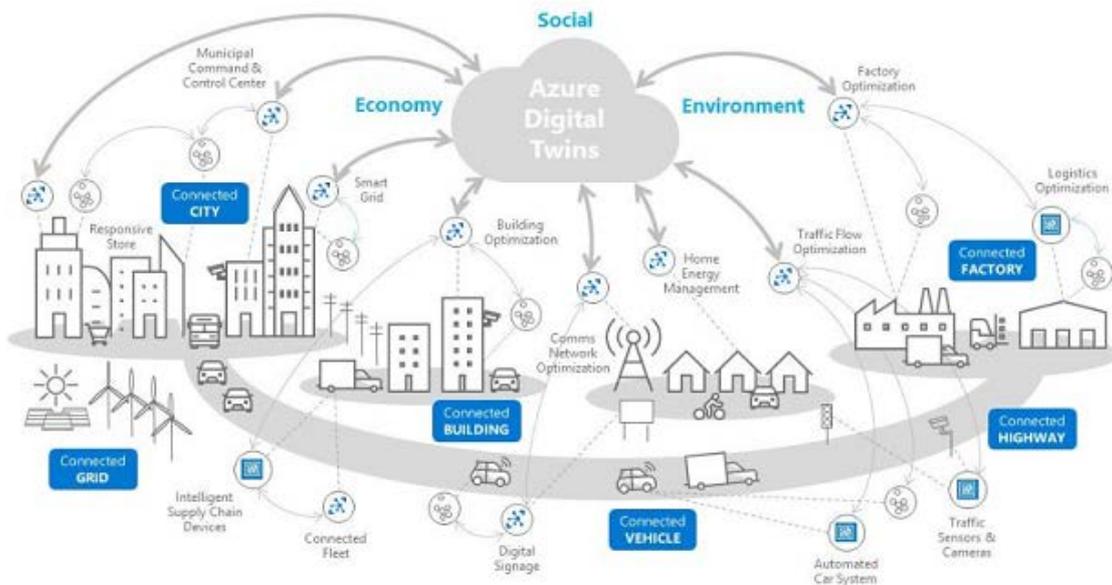


Image of the Neàpolis building



Scheme related to the concept of Digital Twins

Introduction:

Neàpolis is an agency that promotes innovation in technology, design, university, coworking and entrepreneurship. In this transversal concept, Neàpolis offers training, premises and support to increase cooperation and provide more learning opportunities through a community which aspires to entrepreneurial excellence.

As a public agency for innovation in ICT and multimedia, since 2006 Neàpolis has contributed to the consolidation of Vilanova i la Geltrú and its area of influence as a business hub for the ICT, innovation, media and creative sectors. Neàpolis aims to support local innovation and competitiveness in ways which include promoting regional, national and international cooperation.

In the same sense, for the Vilanova i la Geltrú city council is important to apply innovation to the city. In this framework, one of the considered targets is to apply the Digital Twins concept to the city.

A Digital Twin can be defined as a digital representation of a real-world entity or system. In the context of IoT, digital twins are linked to real-world objects and offer information on the state of the counterparts, respond to changes, improve operations and add value. With an estimated 21 billion connected sensors and endpoints by 2020, digital twins will exist for billions of things in the near future. Potentially billions of dollars of savings in maintenance repair and operation (MRO) and optimized IoT asset performance are on the table.

It's a concept related with the framework of the smart cities.

Project Brief:

The Outcome of this EPS project is to propose the application of the concept Digital Twins to Neàpolis and Vilanova i la Geltrú. And that the proposed methodology can be exportable to other cities. The main goals to be fulfilled are the following:

- 1.- Study the characteristics of Neàpolis.
- 2.- Study the characteristics of the city of Vilanova i la Geltrú and the possibilities of its future growth in innovation.
- 3.- Study the history, evolution and the current situation of the Digital Twins concept around the world.
- 4.- Investigate which is the future evolution of the Digital Twins concept around the world.
- 5.- Propose the implementation of the Digital Twins concept in Vilanova i la Geltrú.
- 6.- Propose a plan of phases to implement the Digital Twins concept in Vilanova i la Geltrú
- 7.- Calculate the cost of these phases, including all the concepts involved (sensing, data management, etc.).
- 8.- Propose an occupation plan, in order the work derived from these proposed Digital Twin concept, be made by people and companies of the territory.
- 9.- Introduce the concept hybridization, in the sense that different professions collaborate generating new transverse professions.
- 10.- Describe all the advantages and benefits that the implementation of Digital Twins concept brings to Vilanova i la Geltrú and to the territory in general.
- 11.- Propose a methodology to package the concept of implementation of Digital Twins in Vilanova i la Geltrú, in order it can be exported to other places, to other countries.

Company

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