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ITS Digital Lab – The MindSphere Application Center for Connected Mobility

Siemens is the cities' and authorities' number one partner towards a balanced intermodal mobility ecosystem, that manages not only the road network, but also specific fleets within the network and ultimately the traveler across different modes of transportation.

Data-driven applications and services are the major cornerstone to reaching this vision of delivering optimal mobility to our cities' inhabitants.

With the expertise of the new Intelligent Traffic Systems (ITS) Digital Lab, cities can reach the full potential of the digital transformation. In spring 2017, Siemens has set up this new MindSphere Application Center (MAC) for Connected Mobility to provide the relevant expertise in data analytics and artificial intelligence, alongside the relevant traffic know-how, to generate unique insights. The team develops innovative, data-driven applications and services to solve traffic related issues for smart cities. It creates Minimal Viable Products (MVP) in a staged co-creation process with the customers. The team involves and works with the customers closely in short cycles to ensure that the MVP delivers the highest possible value for them early on.

Innovative new mobility solutions for smart cities

To offer an effective and efficient mobility ecosystem in a city while transportation demands continue to increase requires a more holistic approach of how mobility is managed. This is not only relevant within a city (urban) but is equally relevant between cities (inter-urban). At the same time, disruptive new and emerging technologies are changing the perception we have of mobility, opening up many new and exciting opportunities.

Connected vehicles sending data in real-time, infrastructure systems transmitting their status to Siemens' Internet-of-Things platform MindSphere and road users who are connected with their smart phones all produce an immense amount of data. This rich and growing source of data is changing the types of services that are feasible.

The ITS Digital Lab harnesses the growing amount of data and therewith helps to enhance mobility, improve traffic flow, manage operators' fleets and increase transportation efficiency whilst also improving safety, and reducing fuel consumption and environmental impact. The

solutions range from network analyses and smart traffic management functions to fleet management solutions and tools for intermodal mobility management.

Solving mobility challenges through data analytics

The Digital Lab combines information from many different areas and sources, such as:

- Road Infrastructure: such as traffic light controllers, urban central systems, and video and ANPR data
- Fleets: such as vehicles through V2X, e-bikes, public transportation
- Other domains and external sources: such as third party Floating Car Data and weather information.

This gives a rapidly growing base upon which to improve the ways to address the mobility challenges of today and tomorrow. However, due to the sheer quantity and complexity of the available data, generating value from it cannot be achieved through established methods in the traffic realm. Therefore, tackling this data with techniques such as big data analytics and artificial intelligence is crucial to generating meaningful insights that enable the customer's city to transform into a smart city of the future.

That is why Siemens has founded the ITS Digital Lab with the right expertise, that focuses on innovative, data-driven applications and services in order to solve traffic related issues specifically for smart cities.

MindSphere

To generate unique insights, and to develop and operate respective solutions, the Digital Lab relies on Siemens' powerful IoT operating system, MindSphere. MindSphere is the Platform as a Service (PaaS) that enables the team to use cutting edge technologies in all areas from connectivity, data collection and preparation all the way to data analytics, machine learning, and artificial intelligence in order to provide applications or services that empower the customers' business in the age of the digital transformation. At the same time, MindSphere ensures the highest cyber security standards that customers already know and trust.

To learn more, stop by the Siemens booth 308, Hall 12, at Intertraffic 2018, Amsterdam, on March 20-23!