MORPHOSENSE

One line pitch:
Morphosense offers an efficient monitoring system based on high tech sensor network, via a customized dashboard to enable Structural Health Monitoring

Market Analysis:
The operating cost can be saved by using SHM systems, which facilitate condition-based maintenance for various civil infrastructure. The global SHM market was valued at USD 505.0 Million in 2014 and is expected to grow at a CAGR of 24.7% between 2015 and 2020. The key driving factors for such a market include the ageing infrastructure, government support, and the increasing need for effective solutions for maintaining infrastructure. The rising demand for cost-effective and accurate inspection methods, aging infrastructure, and potential threat of damage due to natural calamities are creating demand for SHM across several applications. These are some of the driving factors for the SHM market

Value proposition:
MORPHOSENSE Offers a highly efficient monitoring system based on both MEMS sensors network and data fusion. Thanks to the signal processing to analyze the complete information, the technology is an efficient tool to provide a SHM through a customized Dashboard. It provides a real time, continuous monitoring for any Civil Engineering, Railroad, Maritime or Energy application, and gives all the information to optimize budget and maintenance planning. The MORPHOSENSE offer includes a sensor node network, an easy set up on any strcture – existing structure or under construction structure, measure and process interest parameters defined with user, informs the user in an effective representation.

Business Model:
The MORPHOSENSE business model is based on Data Oriented Services. Thanks to the powerful technology, MORPHOSENSE propose a sensor nodes network to fix onto the structure to be evaluated. Once the sensor Nodes network is set, the system records all the parameters of the structure and give a complete Structural Health Monitoring. Therefore, MORPHOSENSE will propose a FULL PANEL OF SERVICES based on data, in a customized dashboard, including 3D deformation and modal frequency. MORPHOSENSE provides then SERVICES enabling a Highly Efficient Monitoring in a real time mode and in a continuous way. A periodic report with parameters defined with the user is received as part of a monthly subscription.

IP and Regulatory situation:
MORPHOSENSE has a strong IP thanks the two fundamentals patents (Method and Device for Acquisition a Geometric Shape, Patent US20080211808 and Method and Device for Acquisition a Deformable Geometric Shape, Patent US20080066334) which are licenced from CEA with exclusivity onto the domains covered by MORPHOSENSE. Furthermore, MORPHOSENSE has a know-how licence from CEA-Leti covering the design of MEMS-sensors network and associated algorithm for geometry and vibrations monitoring. The patent portfolio of MORPHOSENSE will increase thanks to R&D developments in progress concerning the next generation of MORPHOSENSE technologies.