I. Definitions for FM and SFM:

- Facility management is a profession that encompasses multiple disciplines to ensure functionality of the built environment by integrating people, place, process and technology.

- The term "smart" is relative to everything which have digital or electronic components, and incorporate functions of sensing, actuation, and control in order to describe and analyze a situation, and make decisions based on the available data.

- This growing sector is often called the "Internet of Things". It highlights the growing application of the Internet as it quickly jumps from computer browsers and cell phones and lands in the laps of everyone

- Besides, with the advent of new technologies such as cloud computing, we have an opportunity to unify the management of multiple geographically dispersed facilities.

II. Brief Summary of the article: "*A Cloud-Based Approach for Smart Facilities Management*" *D. Laut, J. Liu, S. Majumdar, B. Nandy, M. St-Hilaire, and C.S. Yang.*

II.1. Introduction:

- one of the key objectives of this multi-disciplinary collaborative project is to develop and establish an innovative cloud-based facilities management platform that enables the sharing of resources by providing the connectivity and inter-operability among diverse resources and also managing these resources in a more effective manner.

key challenges that are discussed next:

• Providing inter-operability:

• Timely Analysis of Data:

• Standardization of Data Formats:

• Simultaneous Access of Software Tools:

II.2. Cloud-based solutions:

Cloud computing concept can be defined as "on-demand provisioning of software, hardware and data as a service" and the advantages include:

- Minimize the prohibitive cost of managing the computer infrastructure.
- Provide access to the most specialized software including the latest updates.
- Data is stored in the cloud and therefore accessible anywhere.

- High availability is an asset of cloud computing. As the cloud is composed of multiple servers and data storage units, failure of a piece of hardware does not prevent the use of the software and data.

This paper proposes to use a cloud-based platform for smart facilities management which can offer additional features to the advantages cited above:

- Unify geographically dispersed resources for smart facilities management and making them available on demand to a user.
- Make diverse resources inter-operable such that they can be accessed through a common pre-defined interface by any client irrespective of the technology of implementation for the client.
- Facilitate the collecting of data from multiple sources and combining them. Better results can be achieved and decision can be made based on measured data that reflects the current health of the facility.
- Dynamically increase or decrease the number of resources used required for handling a specific facility failure scenario for example.

II.3. Based-cloud platform:

Figure1. The core components of the cloud
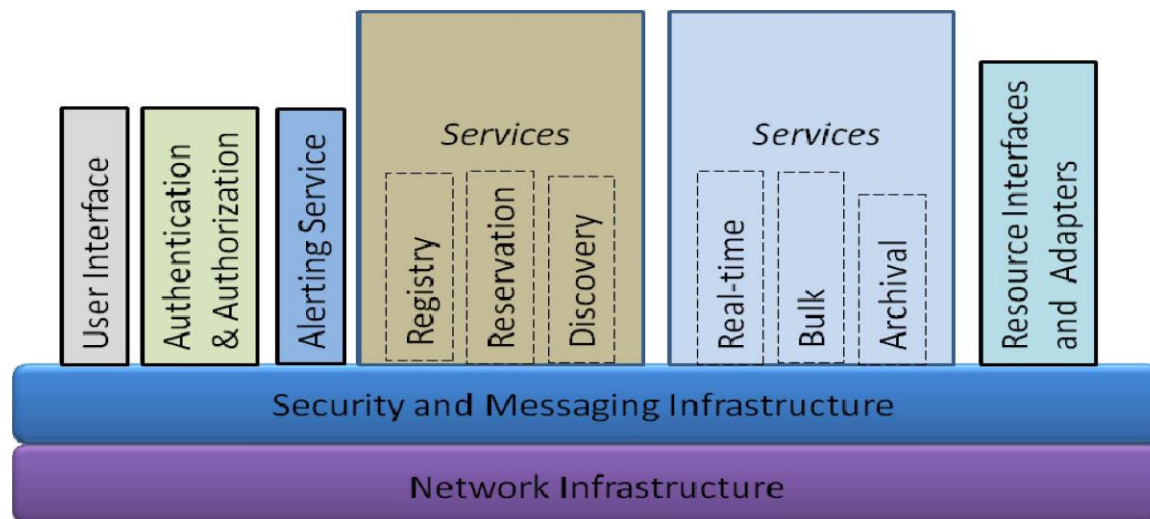
II.4. Summary and conclusions:

In this paper, the research goal was to come up with a cloud-based smart facilities management platform. As an example of applications, two of them were described: i) management of sensor-based bridge infrastructures, and ii) management of smart machinery.

Although the paper primarily focuses on these two applications, the proposed cloud-based platform is designed such that it can support/manage a multitude of other smart facilities.

III. Smart Building Alliance (SBA) for Smart Cities.

From browsing some websites of innovative news associations working on SFM:

http://www.smartbuildingsalliance.org/smart-cities/contexte-enjeux

From smart building to smart city:

http://www.smartbuildingsalliance.org/smart-cities/cest-quoi

A frame reference for smart building:

The Smart Buildings Alliance for Smart Cities (SBA), an association formed by the combination of actors such as Bouygues Construction, Cofely, EDF, Rabot Dutilleul, Siemens, Spie and Vinci Facilities, announces the publication of its Ready2Services frame of reference specification for basic Smart buildings, or intelligent buildings.

-http://www.constructioncayola.com/environnement/article/2015/06/11/100415/un-referentiel-pour-smart-building.php

file:///C:/Users/badissane05/Downloads/Presentation_SBA_MEITO_21052015.pdf

BIG DATA: http://www.usine-digitale.fr/big-data/