Available online at www.sciencedirect.com

ScienceDirect

Energy Procedia 122 (2017) 679–684

Energy Procedia

www.elsevier.com/locate/procedia

CISBAT 2017 International Conference – Future Buildings & Districts – Energy Efficiency from Nano to Urban Scale, CISBAT 2017 6-8 September 2017, Lausanne, Switzerland

A Science Cloud for Smart Cities Research

Heller A.[a]*, Liu X.[b] and Gianniou P.[a]

[a] *Department for Civil Engineering, Brovej 1, Technical University of Denmark, 2800 Kgs.Lyngby, Denmark*
[b] *Department for Management Engineering, Produktionstorvet, Technical University of Denmark, 2800 Kgs.Lyngby, Denmark*

Abstract

Cities are densely populated and heavily equipped areas with a high level of service provision. Smart cities can use these conditions to achieve the goals of a smart society for their citizens. To facilitate such developments, the necessary IT-infrastructure has to be in place for supporting, amongst many other things, the whole lifecycle of big data management and analytics for research activities. At the Centre for IT-Intelligent Smart Energy for Cities, we have therefore been developing a flexible infrastructure, based on open sourcetechnologies. This paper presents this solution and its application in a city and building research.

Peer-review under responsibility of the scientific committee of the CISBAT 2017 International Conference – Future Buildings & Districts – Energy Efficiency from Nano to Urban Scale

Keywords: Infrastructure for smart cities; cloud computing; big data research; case examples, building application

1. Introduction

"Smart cities" is not a well-defined term, and its complexity is rather great [1]. The "smartness" of a city can stem from its citizens, organizations or technology. The last of these is the main characterization applied in this paper. The simplified idea is that the gathering of information from a city together with its intelligent handling to achieve smart decision-making and control is what constitutes a "smart city". The practical result is an innovative infrastructure.

* Corresponding author. Tel.: +45 4525 1861. *E-mail address:* alfh@byg.dtu.dk

1876-6102
Peer-review under responsibility of the scientific committee of the CISBAT 2017 International Conference – Future Buildings & Districts – Energy Efficiency from Nano to Urban Scale
10.1016/j.egypro.2017.07.369