

BSI Smart Cities Interoperability Technical Committee Meeting Report

Friday 21st June 2013

Welcome & Introductions

Trevor Gibson welcomed the members and introduced himself. A round table introduction followed. The following members were in attendance:

1. Glasgow City Council – Steven Revill, TSB Future Cities Demonstrator – City Data Lead
2. Chairperson, Peterborough City Council – Trevor Gibson, Programme Manager Peterborough Future Cities Demonstrator
3. Sedgemoor D.C. – Paul Davidson, CIO for Local eGovernment Standards Body (LeGSB) – **via teleconference**
4. Imperial College London – Koen H. van Dam, Research Associate, Digital City Exchange
5. University Campus Milton Keynes – Matthew Clifton, Strategic Projects Executive (Smart Cities)
6. University of Bristol – Dritan Kaleshi, Senior Lecturer in Communication Networks
7. Huawei Technologies – Victor Kueh, Industry and Standards
8. IBM – Jamie Caffrey, Client Solutions for Smarter Cities
9. Schneider Electric – Paul Bates, Integration Manager
10. Ethos Smart - Adrian Ulisse, Partner
11. Mobius Networks – Peter Simm, Strategic Planning and Development Manager
12. TSB Future Cities – David Altavev, Future Cities Demonstrator Manager
13. Future of Cities Foresight – Eleri Jones, Project Manager
14. Secretary, BSI - Saviour Alfino, Project Manager, Smart Cities Standards Strategy

Review of outputs from the meeting on 17th May including feedback from the Advisory Group meeting of 14th June

The meeting report from the kick-off meeting held on 17th May 2013 was reviewed with particular attention to section "Other Suggestions for Work". The members generally agreed that those are the key needs identified.

The committee also reviewed the output from the Advisory Group meeting held on 14th June 2013. The following output of key issues identified by the Advisory board were reviewed:

1 Smart City Overview

Developing a balanced and comprehensive introduction to the topic

2 Partnership working (PAS 181?)

Guidance on the organizational structures and processes to manage a smart city programme

3 Data sharing

Standards to make data easily shareable

4 Enabling infrastructure/equipment/platform

Guidance as to what the enabling infrastructure is and how it could be managed, given that it will benefit many agencies. This would include wired and wireless connectivity, sensor networks, Digital Consumer Unit in the home and a common platform to enable data management and sharing

5 Smart Citizen (PAS 181?)

Ensuring that the citizen is at the heart of the strategy. Supporting the Active Citizen so that they are producers and not just consumers

6 City model

Developing a simple and common model of a city and its systems

7 Urban modelling tools

Standards to enable interoperability between them

8 Gaining investment

Making the case to city council and investors

9 Procurement

Developing fit for purpose procurement processes for smart city projects

10 Good practice examples

Collecting examples of best practice in a pattern format that will enable easier utilization

11 New practices for industry

Guidance for industry on more effective ways of engaging with cities

12 Smart City roadmap (PAS 181?)

Guidance on how to prioritize and link together initiatives within a city

13 Planning Guidelines

Developing planning guidelines that would support smart city initiatives

14 Legal issues

Guidance to ensure rights and responsibilities are clearly understood in the new products and services

15 Ethics

Guidance on identifying and handling ethical issues

16 Inclusivity

Ensuring smart city products and services include everyone

17 Sustainability impact assessments

Developing a process of sustainability impact assessment

18 Transport and Urban mobility

What needs to be done to ensure that existing standards work in this area takes into account the wider smart city context?

19 Health and Social care

What needs to be done to ensure that existing standards work in this area takes into account the wider smart city context?

20 Energy

What needs to be done to ensure that existing standards work in this area takes into account the wider smart city context?

21 Skills and Education

What are the implications of the move to a smarter city for the education and training of citizens (including at school) to enable them to play an effective role in the process

22 Resilience / industrial regeneration

How can the move to a smarter city be used as an impetus for economic growth, or at the very least that sufficient new jobs and businesses are created locally to replace any lost through the changes

23 Measuring success

What are relevant and practical KPIs, How can behaviour change be captured etc.

24 Use of data

What data sets should be monitored, recognizing that this will change over time? Are there new measurements of value, such as wellbeing data? How can we capture citizen behaviour and how can we learn from this how to better shape the city around the citizens' needs?

The committee generally agreed that the issues identified by the Advisory board are relevant . Key issues 3, 4, 6, 7 and 24 are most relevant to this committee. The committee also reviewed the **hierarchy of key issues** as classified by Mr. Allan Mayo at last advisory group meeting. This is shown in next page.

1. Smart City Overview
10. Good Practice
Examples



6. City Model
12. Smart City Roadmap
11. New Practices for
Industry



4. Enabling Infrastructure /
Equipment
& Platform

2. Partnership Working
3. Data Sharing

5. Smart Citizen
16. Inclusivity

7. Urban Modeling Tools
17. Sustainability Impact
Assessment

19. Health and Social Care
18. Transport and Urban
Mobility
20. *Energy*

Missing are:

8. Gaining Investment

9. Procurement

13. Planning Guidelines

14. Legal issues

21. Skills and Education

22. Resilience/Industrial
regeneration

23. Measuring success

24. Use of data

The Public Sector Concept Model as a basis for Smart City Interoperability

Paul Davidson from the Local e-Government Standards Body (LeGSB) and CIO of Sedgemoor District Council, presented on a possible “Smart City Concept Model”.

Please refer to separate slides circulated through the BIS Intelligus system and also to: <http://www.pauldcdavidson.com/pscm/>

Refer also to:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/85986/A-Concept-Model-for-the-UK-Public-Sector.pdf

And:

<http://standards.data.gov.uk/challenge/describing-and-sharing-our-information>

Open discussion – The Public Sector Concept Model as a basis for Smart City Interoperability

The committee enquired how such a model would work in the context of a smart city. It was argued that this model is powerful since anybody can contribute to the whole process of “linked data” and there is no one organization in the lead. Governance is still required on what data to be used. However, this model enables more organizations and individuals to contribute to this data.

The committee enquired on who should be leading this sort of project and whether this is more of technical in nature or if it is more of a policy type (leadership) of initiative. Paul Davidson argued that this should be led more by policy makers, however, technology people should still contribute to this sort of project.

IBM argued that they have their own open source concept model. It is more used for their own commercial interests and is more oriented towards services. However, it was generally acknowledged that standards are key especially when it comes to vocabulary and semantics.

ACTION: It was agreed that IBM should circulate their own model to the rest of the committee members since this is seen as a quick start opportunity.

A discussion followed on the commercial aspects of this model and its use for commercial matters. It was argued that such a data concept model could be the “bedrock” on which to build even when commercial matters are involved and is relatively easy to get this sort of work going.

The committee expressed concerns that it could be very challenging to define the scope of a “Smart Cities Data Concept Model” since it could potentially get too big to manage especially if details are taken down to roads, cars or paper clips!

It was argued by Paul that there is a need to approach it with a type of thinking that events occur in space and time and hence it is impossible to define the whole universe out there.

There is also the need to make reference to existing standards such as RDF and Sparql and a process will have to be defined and adhered to in order to be able to do this properly.

Glasgow City Council offered to work very closely on this project and offer Glasgow as a test case. It was agreed that Glasgow would supply data as required while this project is being developed.

Peterborough City Council agreed to provide contact detail for a “data person” in order to get involved closely with this project and also provide valuable data as required.

IBM suggested that this work should be tied closely to a “use case” in order to engage more people.

It was agreed that a smaller steering group would be formed to develop this project further and come up with a basis of a business case. The members that agreed to be part of this sub-group are:

- Paul Davidson
- Matthew Clifton
- Steven Revill
- Koen H. van Dam
- Adrian Ulisse
- Jamie Caffrey

It was agreed that other standards bodies such as W3C should be involved as early as possible in such a process.

ACTION: Sub-group to organise ad-hoc meetings as necessary in the next couple of weeks.

The TSB “IoT” Project

Dritan Kaleshi, Senior Lecturer in Communication Networks from the University of Bristol presented the work of the IoT-Bay project which is part of the TSB IoT Interoperability Ecosystem Demonstrator call.

Please refer to separate slides circulated through the BIS Intelligus system.

In summary, the desired outcomes of the TSB IoT Interoperability Ecosystem Demonstrator call are:

- To launch an Internet of Things cluster where ecosystem concepts and solutions can be developed and demonstrated
- To make a material amount of data from “things” discoverable and accessible while taking account of issues such as ownership, security and privacy
- To have live “information hubs” where this data can be aggregated and made accessible at scale for application and service prototyping – and demonstrate/launch in Q4
- To help drive interoperability with a consensus on data formats, open interfaces and service enablers with buy-in across multiple sectors and application areas
- Become a platform for the involvement of owners, application and service developers and technology providers to collaborate and to allow innovative companies, particularly SMEs, to test their ideas
- Projects run 1st April 2013 – 31st March 2014
- 8 Projects @ £800K each (£6.4M scheme)
- Projects (in no particular order): DISTANCE, IoT-Bay, OpenIOT, STRIDE, Smart Streets, EyeHub, International Airport, i-MOVE
- Cross-cluster Interoperability Working Group : Definition of common action plan (in Q1) to deliver demonstrable cross-cluster interoperability solutions (in Q4)

IBM questioned at what “layer” is this group working when it comes to city level. Is it at the upper level of the ontology? It was generally agreed that the data concept model as described by Paul Davidson is useful at the upper level of ontology and could help to describe general concepts that are the same across all knowledge domains. This would support very broad semantic interoperability between a large number of ontologies which are at a lower level.

The committee agreed that the project as described by Dritan Kaleshi is a practical demonstrator for an Ecosystem and should address ontologies which are at a lower level.

The committee agreed to follow closely developments within this projects in order to be able to address other areas of work as necessary at a lower level of the ontology in the near future.

Open discussion – Focused on actions from last meeting and new areas identified at this meeting

PAS 180:

Saviour Alfino asked the committee members if they wanted to contribute to PAS 180's steering group. Adrian Ulisse and Jamie Caffrey expressed interest to join the PAS 180 steering group. Koen H. van Dam suggested that a colleague at Imperial College London would be interested to join the steering group.

FUTURE OF CITIES FORESIGHT:

Eleri Jones provided a verbal update on the future of cities foresight project.

More information can be found here:

<http://www.bis.gov.uk/foresight/our-work/projects/current-projects/future-of-cities>

SUMMARY:

A summary was presented as shown in Annex 1 diagram by Trevor Gibson. It was generally agreed that the key areas for further work are:

- Smart City Data concept model at upper level of ontology
- Mapping of existing standards on a city model
- Engagement and collaboration to address a number of issues as identified at the advisory group meeting (refer to diagram in Annex 1 for reference to Key issue numbers)
- Interoperability Ecosystem at a lower level of ontology

It was agreed that this output will be shared with the Advisory Group for validation. It was also agreed that the Data concept model and Mapping exercise will be initiated as soon as possible by BSI after the approval of the Advisory Group has been granted.

Date & Place of next meeting

It was agreed that the next meeting will be held on Thursday 5th September 2013 at BSI in Chiswick starting at 10.30am

In the meantime, interaction through the BIS Intelligus system and further virtual meetings will be organised to scope the work further.

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Annex 1: Summary of Outputs from the meeting

