WEBINAR SUMMARY

AVOIDING LOCK-IN WHEN BUILDING OPEN ICT SYSTEMS: HOW TO MAKE BETTER USE OF STANDARDS IN PUBLIC PROCUREMENT?

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Mr. Federico Aresu from PwC opened the webinar briefly introducing himself and the project he's currently working on within PwC. As part of the project "*Best practices for ICT procurement based on standards in order to promote efficiency and reduce lock-in*" between DG CONNECT and PwC, Federico and his colleague are implementing a series of activities and initiatives to support the EC in promoting the use of open standards by European public administrations for the purchase of ICT goods and services.

Having introduced the audience to the project, Federico moved on to presenting the main communication channels with which interested stakeholders might keep in touch with the EC and its initiatives relating to the adoption of open standards for ICT procurement.

- **The online version of the Guide for the procurement of standards-based ICT**: http://www.openictprocurement.eu/
- **The Joiunup Community "Open Standards for ICT procurement"**: https://joinup.ec.europa.eu/community/open_standards_ict/home
- **The Twitter account "Open ICT Procurement"**: https://twitter.com/Open_ICT_Proc

Last but not least, Federico presented the listeners the set of workshops and online webinars the European Commission is sponsoring to stimulate a debate around the use of open standards for ICT procurement. This webinar, is indeed the first webinar of a series of webinars which will be realized over the next 24 months to promote the debate. Interested stakeholders who do not want to miss future webinars and workshops are therefore kindly invited to register to the above mentioned Joinup Community and Twitter account.

After this brief introduction Federico left the floor to Professor Lundell which in approximately 30 minutes presented to the 25 participants "*How to make better use of standards in public procurement*".

Mr Lundell opened this second part of the webinar briefly introducing himself and his research activities. He then moved onto explaining why Open Standards are very important for European public administrations. According to professor Lundell Open Standards:

- Promote a healthy competitive market (the existence of Open Standards reduces the risk and cost of market entry, and so encourages multiple suppliers).
- Reduce the risk to individuals and organizations of becoming technologically locked-in.
- Are a basis for interoperability which supports systems heterogeneity, thereby avoiding lock-in and increasing options for individuals and organizations.
- Offer a basis for long-term access and reuse of digital assets, and in particular when supported by Open Source Reference Implementations.

In addition, procurement which requires implementation of Open Standards minimize risks for:

- Standard lock-in
- File format lock-in
- Competence lock-in
- Cognitive lock-in
- Educational lock-in
- History lock-in
- Vendor lock-in
- Compatibility lock-in
- Transform lock-in
- Tool lock-in
- System lock-in
- Cloud lock-in

This is why the European Commission released the Guide for the procurement of standards-based ICT. As reported in a EC press release of June 25 2013, the "*Guide is here to help national authorities grab every*

opportunity for innovation and efficiency" and "*to help them avoid dependence on a single ICT supplier*". Indeed, "*following the recommendations in this new against lock-in approach [the Guide for the procurement of standards-based ICT] could save the EU's public sector more than €1.1 billion a year*."

However the implementation of open standards might be very problematic. As emerged in Professor Lundell's study of "*OSS projects implementing PDF*":

- There can be a number of different problematic issues related to clarity and detail in the specification of standards.
- Implementations of a specification of a standard may deviate from the specification.
- Licensing and patent issues are perceived as a concern by contributors to open source projects implementing a specification of a standard.
- There are influences between the specification of a standard and its implementations in software systems.

In addition, several fundamental challenges relate to the use of standards:

- Organizations use a variety of different applications and file formats.
- Organizations often need to preserve and modify their software systems and digital assets for more than 30 years, sometimes even more than 70 years
- Maintenance and support contracts for proprietary licensed software are provided for (up to) 10 years
- Digital assets (files) outlive proprietary software in any maintenance scenario
- Software used for the initial creation of digital assets will not be available during the complete life-cycle for many systems (for companies and public sector organizations)

But why do all these problems emerge? Many of them are certainly related to the standardsdefinition process.

According to BSI (British Standards), a standard "*is a published document that contains a technical specification or other precise criteria designed to be used consistently as a rule, guideline, or definition.*" But (far too) often public procurement refers to standards with technical specifications which:

- Lack complete implementations (stdandard in specification ≠ stdandard in tools)
- Lack sustainable implementations (asset outlive applications)
- Lack reusable implementations (no open source software reference implementation)
- Refer to specific trademarks and products (proprietary standard)
- Contain references to external web sites (dynamic standard)
- Are incomplete

For most software standards the formal specification is insufficient and the actual standard may differ from across implementations. […] the formal specification is inherently incomplete and the actual standard is defined both through the written specification and through actual implementations (FLOSSPOLS 2005).

Whilst standards that are set through formal standard setting organizations go through a formal development process, they may still contain barriers to implementation by all interested parties (Europe Economics 2012).

This is why, according to Professor Lundell, procurement of IT in public sector organizations should always refer to standards with technical specifications which are:

- Published and completely specified

- Available under transparent conditions without dependencies on brand names, trademarks, patents, and (closed) industry consortia
- Available under royalty-free (RF) conditions – RF allows implementation under different proprietary and different Open Source licenses ("FRAND licenses create barriers for Open Source projects")
- Implemented in (several) long-term sustainable projects, including copyleft licensed Open Source projects
- Implemented (or at least can be implemented) in healthy Open Source projects under GPLv3

A good practice example is that of the Swedish governmental agency for public sector procurement, which provides that contracting authorities can state mandatory requirements for standards only if the standards meet the requirements of an open standard according to SOU 2009:86 and EIFv1.

According to SOU 2009:86 and EIFv1 a standard can be defined open if:

- The standard has been published and the standard specification document is available either freely or at a nominal charge. It must be permissible to all to copy, distribute and use it for no fee or at a nominal fee.
- The standard is adopted and will be maintained by a not-for-profit organization, and its ongoing development occurs on the basis of an open decision-making procedure available to all interested parties (consensus or majority decision etc.).
- The intellectual property – i.e. patents possibly present – of (parts of) the standard is made irrevocably available on a royalty-free basis
- There are no constraints on the re-use of the standard

Furthermore, one of Professor Lundell latest studies clearly shows the potential benefits and innovative ways of using Open Source licensed implementations of a standard as a means for an improved standardization process. Indeed, the development of standards benefits from Open Source implementations, and vice versa.

In conclusion, both the EC and the national governments are responsible for the deployment of effective policies that would allow European public administrations to easily and successfully adopt open standards when procuring ICT goods and services.

At the end of Professor Lundell's session Federico Aresu took again the floor to run the Q&A session which lasted 20 minutes. Indeed, the 25 participants posed Professor Lundell a total of 10 questions for each of which he has offered his point of view. At the end of the Q&A session professor Lundell remembered the participants his email address, asking them to mail him any additional questions regarding the webinar or his research work (bjorn.lundell@his.se).