"Green IT for Green policy" conference recommendations plan

On October 13-14, Belgian FPS of FINANCE organized a conference under the theme "Green IT for Green policy" within the Belgian Presidency of the European Union programme and in a partnership with Oasis (An international organization promoting open standards).

The objective of this two-day conference was to provide an opportunity for the Public and private sectors to debate how Information and Communication Technologies (ICT) can enhance environmental and energy sustainability and competitiveness in line with the goals of the Belgian EU Presidency.

During these two days, more than thirty experts discussed how ICT and Policy could interact within a progressive and dynamic partnership to achieve sustainability goals within tight financial constraints.

As result of this conference, we are honored to propose here after, a recommandations plan presented by domain of action with the aim to make ICT not only a part of the problem but a solution.

Policy :

1. Leadership from the EU is required to foster innovation and provide the institutional framework to connect European innovation policies with initiatives.

2. EU governments set procurement standards to match EU national targets. Procure only EPEAT gold rated products. Procure IT services that are proven to reduce carbon emissions by industry standard measurement and services that use renewable energy to help EU meet 20% RE goal by 2020

3. EU makes recommendation in digital agenda for IT sector to cut emission as an industry by 20% by 2020 a mandatory target along with RE use mandatory target for all companies in the EU, especially via the Datacenter code of conduct.

4. ICT Companies support those policies - EU wide emmisions reduction targets, RE polices, that drive a clean energy economy that will be underpinned by ICT technology.

Investment :

5. Encourage public and private investment in smart infrastructures, that address the key societal challenges of climate change and energy.

6. Smart grid deployment in EU is fast tracked where ever possible.

7. Smart grid projects MUST be enforced to secure stability of the low voltage powergrid

Standards :

8. Promote the use of interoperable technologies and open standards in such infrastructures, to protect public investment and facilitate future developments

9. Promote R&D collaboration between public authorities, universities, and both large and small companies to develop and pilot innovative solutions in these areas.

10. European standards should not be favorite, but international standards to take advantage of innovation on a world market.

11. To many projects are set up without an integrated approach. Webservices should be promoted as a way to achieve interoperability, while supporting innovation.

Measurement :

12. A Green world will only be achieved soon if we combine the information of domestic energy usage, streetlights, electrical cards, building energy management, distributed generation.

13. ICT industry agrees stringent measurement of life cycle wide impact of ICT climate solutions at scale to allow policy makers to makes decsions based on documented emissions reduction potential.

Best practices :

14. Publish and encourage the use of good business practices in the domain of Green IT

15. Publish and encourage the use of good business practices in the domain of Clound Computing

16. Follow up on the successful event organized by PFS Finance in the forms of a yearly event where good practices are discussed and presented

17. Smart metering MUST be implemented in a way that it does support a smart grid, on a substation centric approach. Meaning control of the devices connected to a substation must be handled from that substation.

Communication :

18. Organize a yearly contest in relation to the adequate use by Belgian (or European) enterprises and Public services of Green IT

19. Organize a yearly contest in relation to the adequate use by Belgian (or European) enterprises and Public services of cloud computing

20. Marketing communication campaigns must be an integrated part of Smart metering deployment projects. The right communication will ensure we reach the real goal: behavior change.

Special Recommendations for a Green IT strategy related to Data Centres with the goal to improve Energy Efficiency

1- Preamble:

Electricity consumed in data centres, including enterprise servers, ICT equipment, cooling equipment and power equipment, is expected to contribute substantially to the electricity consumed in the European Union (EU) commercial sector in the near future. Western European electricity consumption of 56 TWh per year can be estimated for the year 2007 and is projected to increase to 104 TWh per year by 2020 (1).

The projected energy consumption rise poses a problem for EU energy and environmental policies. It is important that the energy efficiency of data centre is maximised to ensure the carbon emissions and other impacts such as strain on infrastructure associated with increases in energy consumption are mitigated.

2- Call to action:

In order to comply with the Kyoto protocol and maximize Energy Efficiency in Data Centres without compromising with availability we suggest to measure the global Power Usage Effectiveness (PUE) of the Data Centre on a long term basis.

To do so we recommend the 6 following steps:

- Define and harmonize global measurements and metrics building upon the works achieved by The Green Grid consortium
- Standardize these metrics on a global basis through the European and International standardization bodies such as CEN, CENELEC, ETSI IN Europe and ISO,IEC, ITU at the international level
- Start to measure the PUE and work on 3 directions to improve measurement and therefore Energy Efficiency:
  - point of measurement
  - frequency of measurement
  - duration of measurement

- Report data on a regular basis in a European data base that must guarantee data integrity and confidentiality
- Implement best practices in order to go lean and efficient without compromising with the availability of data
- Authorize a European focused study conducted by the Commission in collaboration with the European based ICT industry quantifying projections of energy consumption of data centres and offering recommendations on how to improve projected growth through energy efficiency. Such a study will pave the way for notable improvements in productivity and reduced industrial consumption. A study analyzing and making recommendations on the energy efficiency of data centres in Europe is being considered in the European Parliament's Committee on Industry, Research and Energy as that Committee reviews the Energy Efficiency of the Action Plan.

3- Challenges / Opportunities:

Some programs of this type are already in place in Europe (Code of Conduct) or in few countries.
Implementation of these programs is however limited since their adoption and compliance are done on a voluntary basis.

In order to develop a better participation we recommend the development or incentives programs or tax rebates particularly in the following fields:

- Development of measurement methods with investment in monitoring or metering devices
- Regular reporting and tracking of Energy Efficiency improvements
- Replacement of legacy products by new and more efficient products both on the infrastructure and IT side. Products complying with Energy Star program or Code of Conducts as developed by the EC/JRC would be favorably considered and go efficient
- Implementation of best practices preventing from useless redundancy and go lean

(1) European Code of Conduct on Data Centers

4- Conclusion

The Belgian FPS of FINANCE is taking the opportunity here to thank all the speakers of the conference especially the members of Oasis and all those who participated in putting together this recommendations plan.