

Sustainable DataCentres: energy efficiency is no longer enough. Let's stop scrambling for PUE !

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France, February 8th, 2010. If we are to reach beyond the limits of eco-responsibility and truly embrace the notion of sustainable development, DataCentres must be designed taking into account their effect on society and therefore should be designed to operate for twice their current lifespan.

In 2020, DataCentres worldwide will consume about 450 billion kWh and their CO² emissions (at about 330 million tones) will be equal to those of Portugal, Switzerland, Greece and Sweden combined. Their electricity bills will amount to nearly \$45 billion. Faced with these astronomical figures, together with an unavoidable increase in the cost of electricity and the inevitable consequences of climate change, data centre operators are improving the energy efficiency of their facilities to cut their running costs and reduce damage to the environment.

By reducing their energy needs, and particularly those due to server cooling, data center operators are looking to reach an average PUE of 1.5, compared with the current 2.5. Although this scramble for PUE is essential in the short term, it is far from enough in the long run. It does not significantly reduce the carbon footprint resulting from data center construction and energy consumption, however low this may be. If pollutants are to be effectively reduced and a guarantee given for low running costs over the next 10 years, data centre lifespan will have to double, or even triple, from the current average of 5 to 7 years to 10 or 15 years, and they will have to be integrated into their urban surroundings.

Doubling a data centre's lifespan cuts the environmental impact of its construction by half. From an operational viewpoint, the sustainability of a data center is directly related to its flexibility. How can the density of computer rooms ultimately be multiplied fivefold, without investing today in the solutions necessary for tomorrow? Basically: by better design.

For example, no cables run through the raised floor at our new Etix DataCenter, meaning that we can add an ice-water cooling system if necessary. This flexibility ensures that our customers will not have to move their servers 5 years hence because of a lack of cooling capacity. This also means that a customer with 400 m² of space will save €30 million in migration costs.

If we are sustainable in reducing ecological and financial running costs, we will also need to work on integrating DataCentres within their ecosystem. What services can the data centre provide for its immediate surroundings? To start with, we can «depollute» 70% of our operations by putting our waste energy to good use. For instance, we are working with the town of Bobigny in France to supply 40,000 homes in a nearby green neighborhood with heating and hot water. The energy for this is derived from the heat generated by our servers. If unused, this energy is essentially a needless environmental and financial cost. In other words, a luxury we can no longer afford in a truly society-based approach.

Ultimately, by working on the long-term flexibility of our facilities, and by integrating our DataCentre into its urban surroundings, we arrive at running costs similar to those of a facility which, although it has already optimized its energy efficiency, is still 70% more polluting.

In addition to more stable running costs in the long term, efforts made to improve the sustainability of our facilities guarantees their longer lifespan for our customers and less exposure to risks arising from future environmental regulations.

As shown by the example of our Etix DataCenter, lifespan and social aspects must be taken into account when planning a data centre if sustainable progress is to be made.

Founded in 2009, Etix DataCenter is Carinae Group's new tier 4-designed eco-friendly hosting center. Located in Pantin with immediate proximity to Paris, its 10,000m² of Premium hosting is split into 16 private or shared areas. Designed to blend eco-friendliness with high performance, its technological solutions and the specifications its customers are asked to observe ensure a PUE of less than 1.5. With its Free Cooling system and Cold Corridors, Etix DataCenter provides best-in-class hosting technologies and can house the most critical IT resources for the world's leading corporations. Etix DataCenter is paving the way for a new generation of hosting centers.