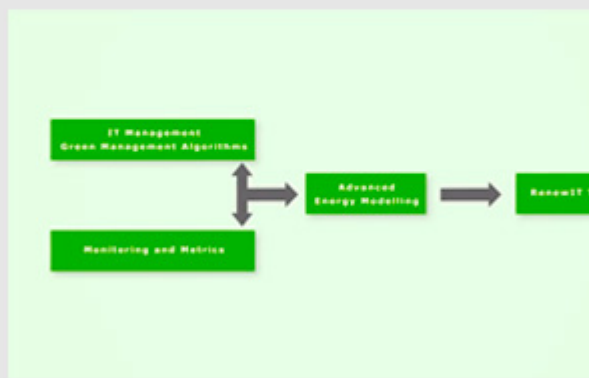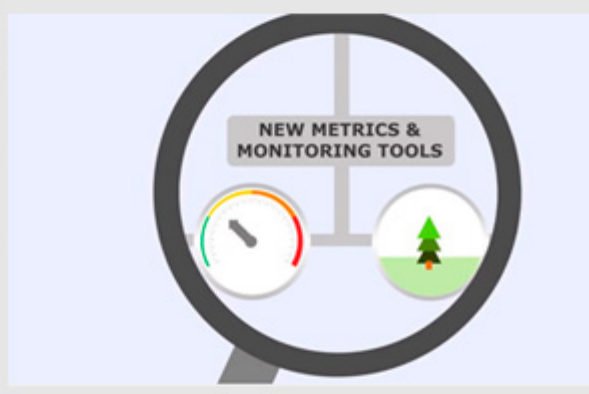Inicio > BSC contributes advanced management algorithms and power-aware models to develop a tool aimed at helping data centres integrate renewable energy sources

BSC contributes advanced management algorithms and power-aware models to develop a tool aimed at helping data centres integrate renewable energy sources

The European project [RenewIT](#) has released an [in-depth video](#) setting out the main software tools and research resulting from the three-year project, which is due to end in September 2016. The main objective of RenewIT is to develop advanced energy simulation tools to promote the integration of renewable energy sources in IT data centres.

The project has developed a simulation tool to evaluate the energy performance of different technical solutions integrating renewable energy sources in several European climate regions. The public RenewIT tool is implemented in a user-friendly web interface, helping stakeholders from both the energy and IT sectors to reduce the carbon footprint of planned data centres with a view to meeting the objectives of the [2030 EU Energy Strategy](#). The tool is based on selected meta-models extracted from advanced dynamic simulation models of challenging energy concepts for supplying data centres with renewable energy.

As BSC senior researcher **Mauro Canuto** explains in the video, this project is remarkable because "it allows workload management to be combined with green energy inputs. The combination of these two aspects requires the development of advanced management algorithms and power-aware models in order to optimise workload scheduling while adapting the IT load to the availability of green energy".

The RenewIT project brings together three different areas of renewable energy, data centres and smart cities and helps to understand the interactions between those three systems.

About   RenewIT

RenewIT, which began on 1st October 2013, is made up of both commercial and scientific organisations led by not-for-profit energy research centre Catalonia Institute for Energy Research (IREC). The other members are 451 Research, Barcelona Supercomputing Center (BSC), Loccioni Group of Italy, AIGUASOL energy consulting and modelling specialists, Amsterdam-based sustainable engineering and data centre design specialist Deerns, and Technical University of Chemnitz Professorship in Technical Thermodynamics. The organisations bring a range of expertise to the project including green IT (IREC), renewable energy Systems (AIGUASOL) and energy storage (Technical University of Chemnitz), data centre monitoring (Loccioni Group), workload and application energy management (BSC) and energy efficient data centre design (Deerns).

RenewIT is one of six related energy efficient data centre research projects funded by the EU under its Framework Programme 7 (FP7) initiative.

www.renewit-project.eu | www.linkedin.com/groups/7428800/profile | www.twitter.com/EURenewIT

About BSC

Barcelona Supercomputing Center (BSC) is the leading supercomputing in Spain. It specialises in High Performance Computing (HPC and its mission is two-fold: to provide infrastructure and supercomputing services to European scientists, and to generate knowledge and technology to transfer to business and society.

BSC is a Severo Ochoa Center of Excellence and a first level hosting member of the European research infrastructure PRACE (Partnership for Advanced Computing in Europe). BSC also manages the Spanish Supercomputing Network (RES).

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