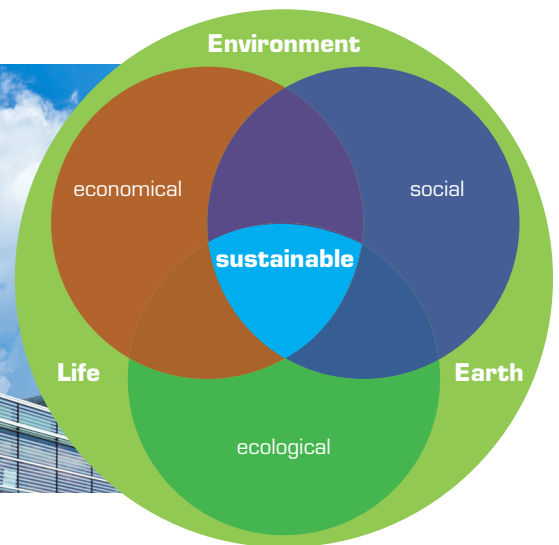# Sustainability at HLRS

Project "Sustainability in HPC Centers"

The HLRS started the project "Sustainability in HPC-Centers" in May 2014. It is supported by the Ministry for Science, Research and Arts Baden-Württemberg for a period of three years.

Objectives

- Develop a concept for sustainability at HLRS
- Establish a management system for sustainability
- Publish a sustainability report regularly
- Raise the employees' awarenes for sustainability issues

Energy policy

For the sustainable development of our High Performance Computer Center Stuttgart, it is our responsibility to provide our services with minimal energy consumption within the bounds of technical and economic possibilities. Continuous improvement of energy efficiency is a precondition for this purpose.

- We implement an energy management system and define strategic and operational targets to optimize our energy balance and measures to achieve them. The adherence to energy targets will be regularly checked and documented based on the energy performance indicators.
- The achievement of the energy management system targets will be obtained by transparent information and the provision of resources (manpower, special skills, technical and financial means).
- We pay attention to economical energy consumption for the operation and purchase of devices, especially of high performance computers and cooling facilities and for the provision of services.
- We actively involve our employees in our energy management system. They are informed regularly about targets and measures of the energy management system and its achievements. The employees have the possibility to advance new ideas for saving energy.
- We train our employees regularly in energy-conscious behavior and encourage them to carry these goals out.

Board resolution of June 14, 2016

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Sustainability at HLRS

Sustainability concept at HLRS

The Eco-Management and Audit Scheme (EMAS) was chosen as a basis for the sustainability concept at HLRS. We plan to introduce an energy management system according to ISO 50001 in addition to EMAS. The first HLRS Sustainability Report was published in September 2016. Sustainability and energy guidelines for the HLRS were developed and adopted:

Sustainability Policy of HLRS

Corporate Responsibility for Sustainable Action

The HLRS of the University of Stuttgart, as a service center, is dedicated to sustainable developement:

- We are committed to continuous improvement of environmental and climate protection.
  Therefore, we want to ensure compliance with the relevant legal requirements.
- We are in the process of defining sustainability targets and measures.
- We plan to establish and maintain a documented management system for sustainability and monitor the status of our sustainability and environmental performance regularly.

Responsible Handling of Resources
and Prevention of Pollution

- We want to focus on economical and efficient use of all resources.
- We intend to use the best available technology to optimize
  the cooling and power supply of the high performance computer as long as it is economical.
- We want to use the waste heat economically and ecologically.
- We aim to make sure that the technology implemented is re-useable and recyclable.
- We place importance on sustainable purchasing and waste management.
- We try to reduce negative impacts on the environment and health.
- Within the scope of our influence, we want to use environment-friendly materials
  for new buildings and renovation projects.
- We want to create good conditions for the fauna and flora in our green area.

Research and Teaching

- High-performance computing facilitates the saving of energy and resources.
- We want to redouble our efforts to get more orders and research projects focused on sustainability.
- We intend to support simulation research in the fields of energy, health, mobility and environment
  and contribute to these fields.
- We want to transfer our knowledge and experience in the field of sustainability through academic teaching.
- We plan to, in particular, transfer our knowledge of the energy-efficient use of computing systems.

Sensitization and Involvement of the Employees

- We want to promote a way of thinking and acting that is sustainable and contributes
  to environmental protection at the HLRS.
- We place particular emphasis on the teaching of sustainability issues as part
  of our internal and external training and development measures.
- We involve our employees in the identification of our sustainability targets.

Working Situation and Health Protection

- We plan to increase the healthiness of our employees through the health program of the University of Stuttgart.
- We want to create a family-friendly working environment.
- We intend to ensure stable and long-term employment for our employees.

Role Model Function and Regular Information

- We intend to act as a role model for other high- performance computer centers with our commitment to sustainability.
- We want to maintain an open dialog with our stakeholders. Therefore, we want to publish a sustainability report regularly.

Board resolution of August 5, 2015