



Swiss National Supercomputing Centre

# ***CSCS latest developments*** ***Chipp Computing Board*** ***Sept. 15th, 2004***



# *Re-positioning of the CSCS*

- operating and maintaining a set of well balanced architectures;
- computational environment that ensures reliable, effective utilization (performance!) for scientific discovery in a wide range of disciplines;
- communication network and data management infrastructure;
- leading experts in IT integration, management, development and performance acceleration.



# Prinzipien

CSCS als autonome Einheit innerhalb der ETH Zürich

- operative Freiheit des CSCS Managements
- Strategische Führung durch das Steering Board (mit Vertretern der Schulleitung der ETH Zürich und des ETH-Rats) über Leistungsvereinbarung
- Administrative Einbettung in die ETH Zürich

*Umsetzung der Autonomie ist Bestandteil der Zielvereinbarung zwischen ETH Zürich und ETH-Rat*



# Different collaborative models

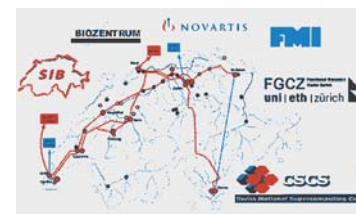
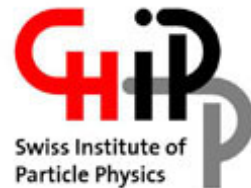
- To maintain and implement services for a large community at a sustainable cost

Large User Projects

(more than 150 refereed papers quoted)



- Partnership models for development, education and new technologies



CHIPP\_CB.15.04- M.-C. S



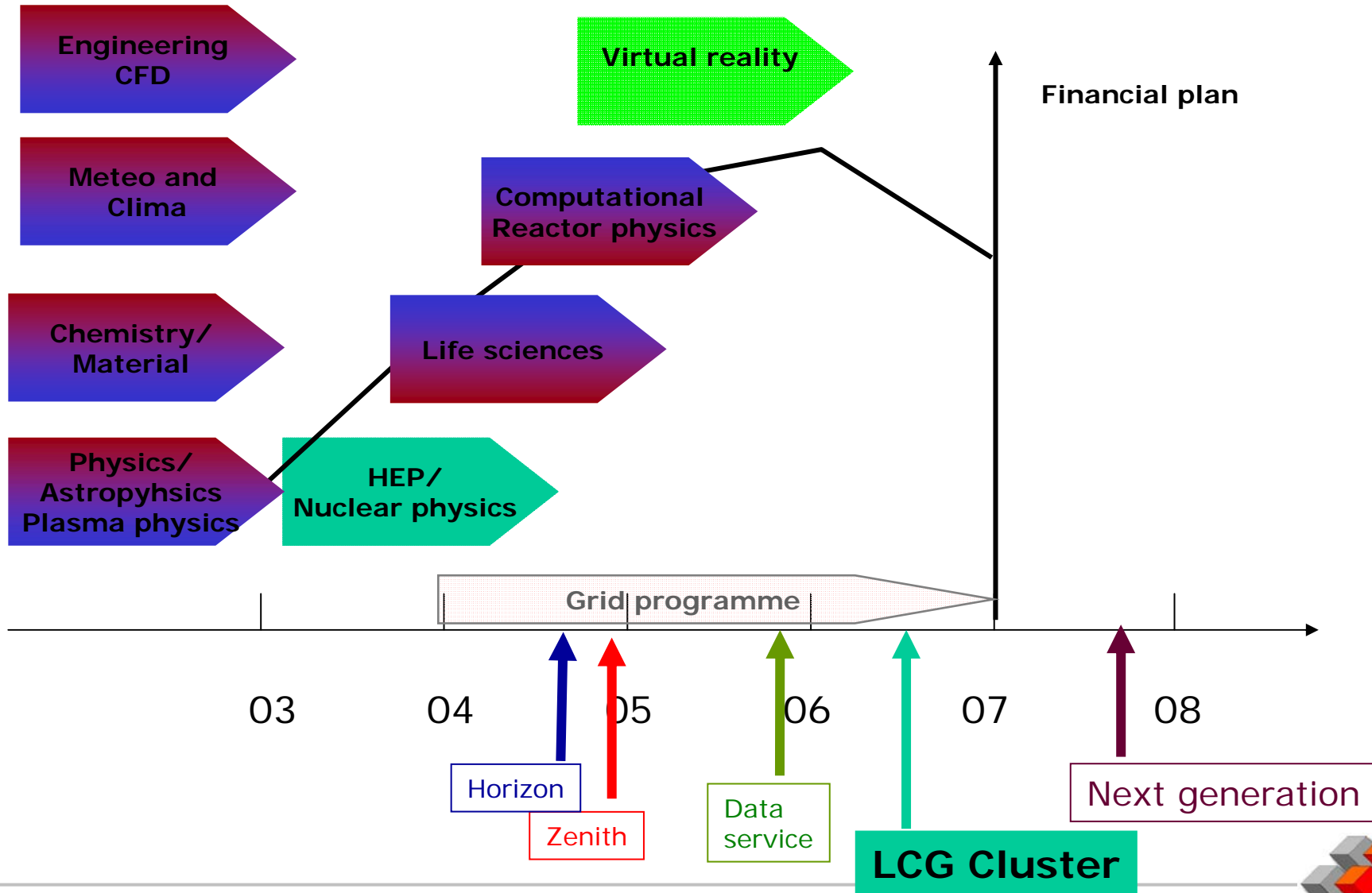
# Autonomie

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- Wahl der wissenschaftlichen und technischen Schwerpunkte
- Bewirtschaftung der Ressourcen:
  - Finanzen
  - Investitionen
  - Personal
- Geschäftsmodelle
- Messung der Zielerreichung über Leistungsindikatoren



# Roadmap



# Commitment

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“The CSCS is committed to build a strong partnership with CHIPP for developing a powerful, reliable and sustainable IT platform for capability computing for particle and nuclear physicists of Switzerland. The centre will propose a sustainable path for maintaining at the required level of service and extend this national facility. It will team up with CHIPP for extending the breadth and the depth of the funding sources”

M.-C. Sawley, General Manager CSCS



## ***In principle, the partnership is proposed to work as such:***

- -CHIPP prepares the requirements on the strategic and scientific level; the CSCS manager can participate to the CHIPP meetings on invitation, depending on the topics
- -CHIPP Computing Board, of which CSCS is a full member, describes and validates the technical requirements.
- -according to the requirements (HW, SW, service and evolution), the CSCS proposes a set of solutions to CHIPP, who votes, and once agreement is reached, acts as the main IT partner for implementation, operations and evolution
- -each and every phase requires an amendment to the general MoU in which all financial aspects, contributions and commitments are described and becomes binding as signed.
- -in principle, responsibility for ensuring funding for new investments for IT, with the exception of the network connecting the sites, is being borne by CHIPP. In principle, operations, integration, HR on site, and networking evolution will be the responsibility of the CSCS, who can work with subcontractors.
- -representation in relevant IT groups and boards of the LHC Computing Grid in IT Boards, especially for the Infrastructure is in principle ensured by CSCS
- -the CSCS will work with the IT representative of each member of CHIPP to achieve the level of integration needed, this encompasses the coordination between the CH Tier 2 and the regional Tier 3.



# *Responsibilities of the CSCS*

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- middleware deployment
- authentication and security over the Grid
- management tools for accessing the resources and clearing
- compute and data grid, by making part its resource available and hosting part of the IT systems
- knowledge management, by exploring, testing and validating the tools, integrated into a portal for CHIPP members



## 2 phases

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1: bootstrap phase, during which the present cluster will be replaced by a new system fulfilling the requirements up to 2004-2005. We expect to put this in full operation by the end of the year and to use it as showcase.

2: full fledged configuration, that will replace or complement the “bootstrap”, for which a full WTO tender will be prepared.



# Switzerland in the world wide concert about LCG grid

Status for Resource Broker CERN\_lxn1188: Thu Sep 2 22:45:17 BST 2004



# Switzerland will participate in EGEE

European Grid Infrastructure for Enabling E-science

Teaming up with the D- Grid

CH main representant: CSCS



# *Towards e-science?*

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This Swiss HPCN Grid programme plans to make a substantial effort for the curation and preservation of the data, namely in:

- Raw data: particle and nuclear physics, meteo and climatology, biology, etc...
- Cluster computing and benchmarking: collecting the existing experience
- Publication and documents





***Thank you for your attention***

