

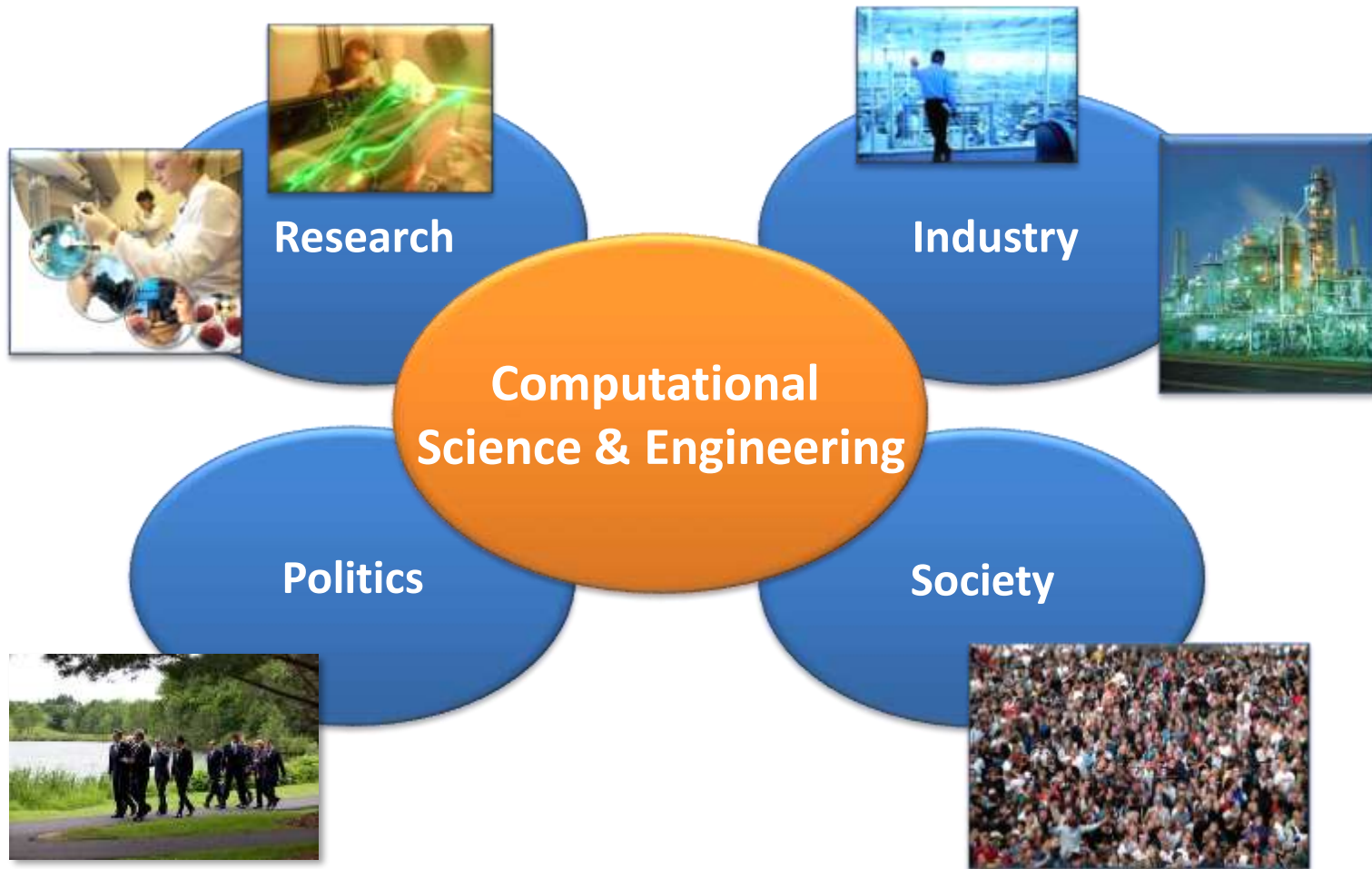
Update on HLRS

Bastian Koller, University of Stuttgart

High Performance Computing Center / Höchstleistungsrechenzentrum Stuttgart (HLRS)

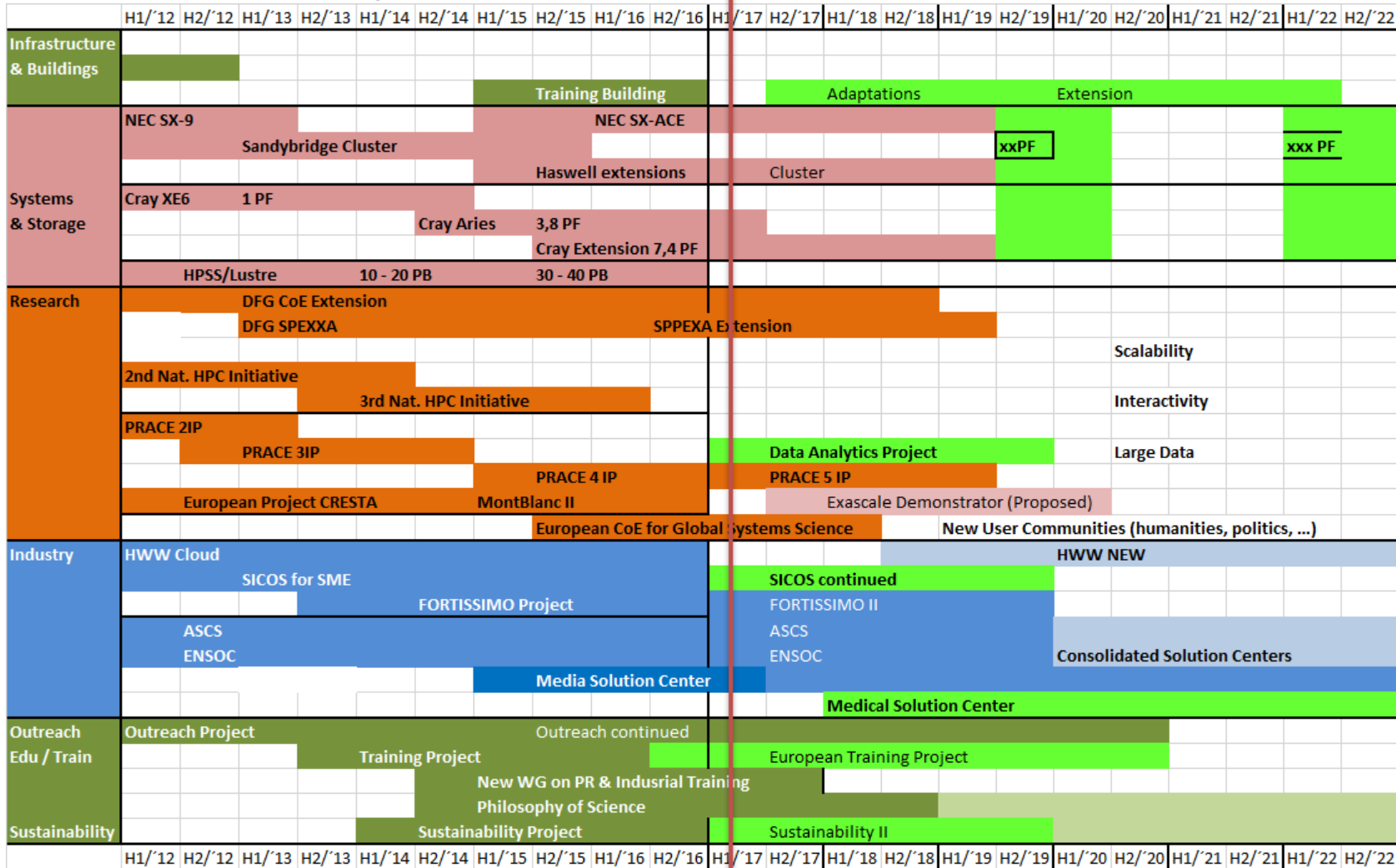


Mission and Vision of HLRS



OVERVIEW

HLRS Roadmap



SITUATION

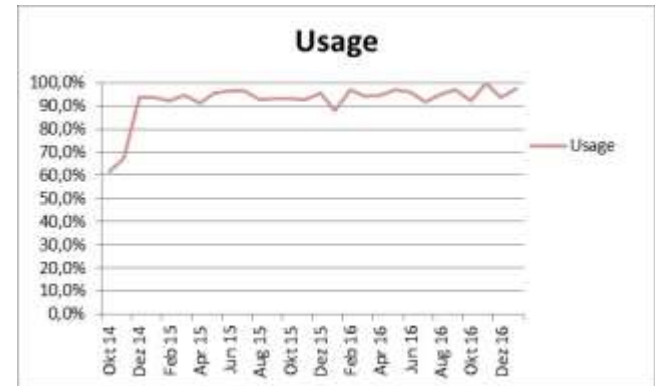
Basic Numbers of HLRS

- Staff
 - 27.5 Tenured Positions (Adm. 7, Op. 7, User Support 13,5)
 - ~65 Project Staff
 - ~20 Research Assistants
- Budget (2017):
 - 11.2 M€ annual budget
 - 3.4 M€ State Funding (maintenance, ...)
 - 0.5 M€ University Funding
 - 4.4 M€ Project Funding (research)
 - 2.8 M€ Industrial Income (reinvest)
 - Power/Cooling covered by University and Federal Government
 - Investment covered by national programs (see later)

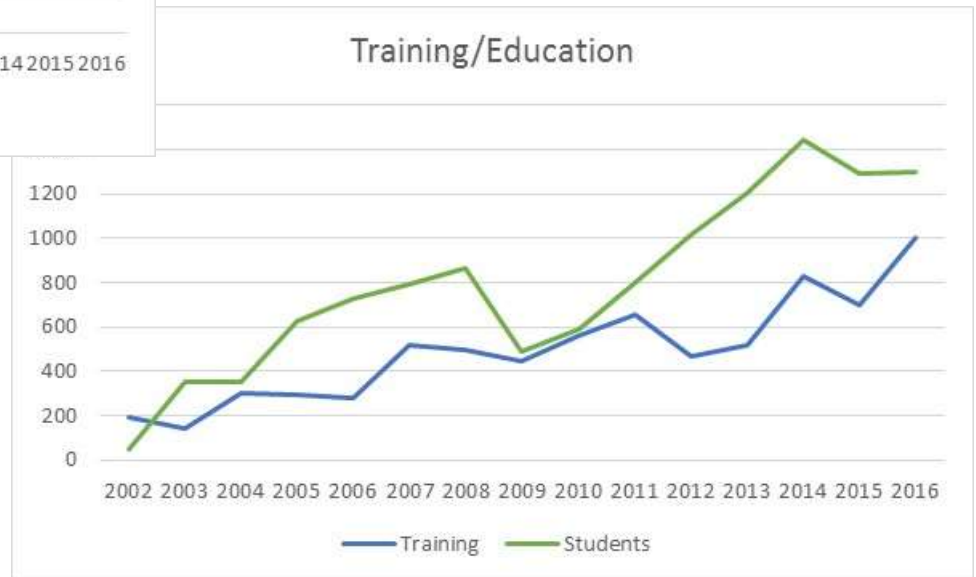
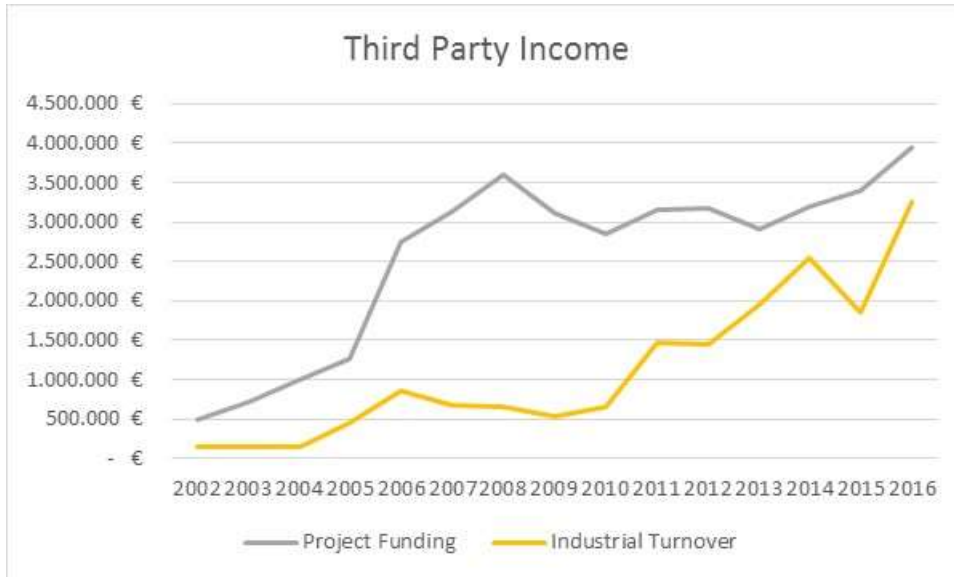


HLRS Flagship System “Hazelhen”

- Cray XC40
 - 185.376 cores Intel Haswell
 - 7,42 PetaFlops Peak
 - >1 PetaFlops Sustained
 - ~1 PetaByte Main Mem.
 - ~12 PetaByte Disk
- Rankings
 - #2 HPGMG
 - #12 HPCG
 - #14 TOP500



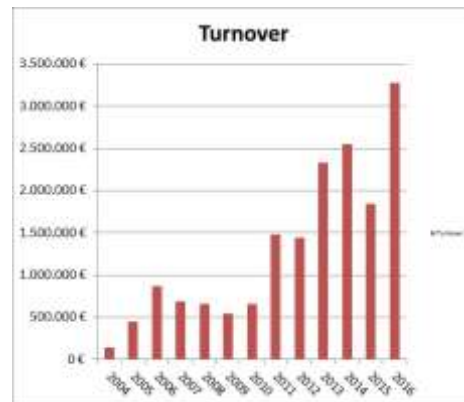
Key Performance Indicators



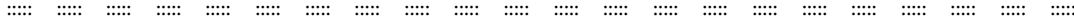
Customers (examples)



PORSCHE



- 113 Mio core-hours (2016)
- 120 Mio core-hours (2017)

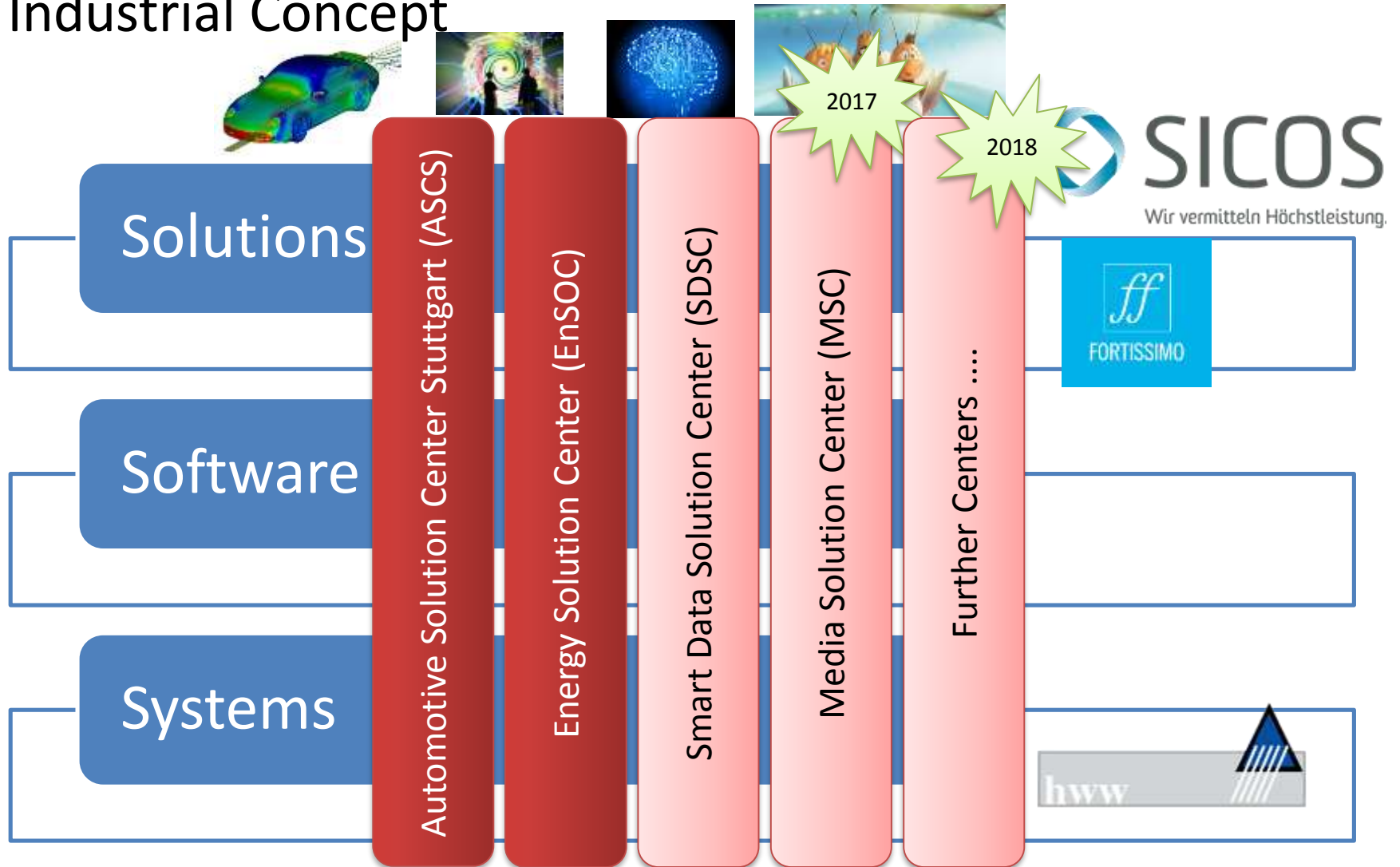


FUTURE

Next System(s)

- Part of the project SiVeGCS
- HLRS Installations: 2019/2023
 - Public Budget (covering: investment, power/cooling, maintenance. other costs): 153 M€
 - 50% State Government of Baden-Württemberg
 - 50% German Federal Government
 - Expected income by industry: 20 M€
 - Total Budget: ~ 173 M€
- Focus
 - Sustained Performance for Engineering and Global Systems Science
 - Integrated Scientific User Support (8 M€)

Industrial Concept



Education / Training Future



Thank you - Questions

