Hogeschool van Amsterdam

RAAK PRO: FUTURE PLANS

Robert van den Hoed
Bo Merkus
Eric Hoekstra

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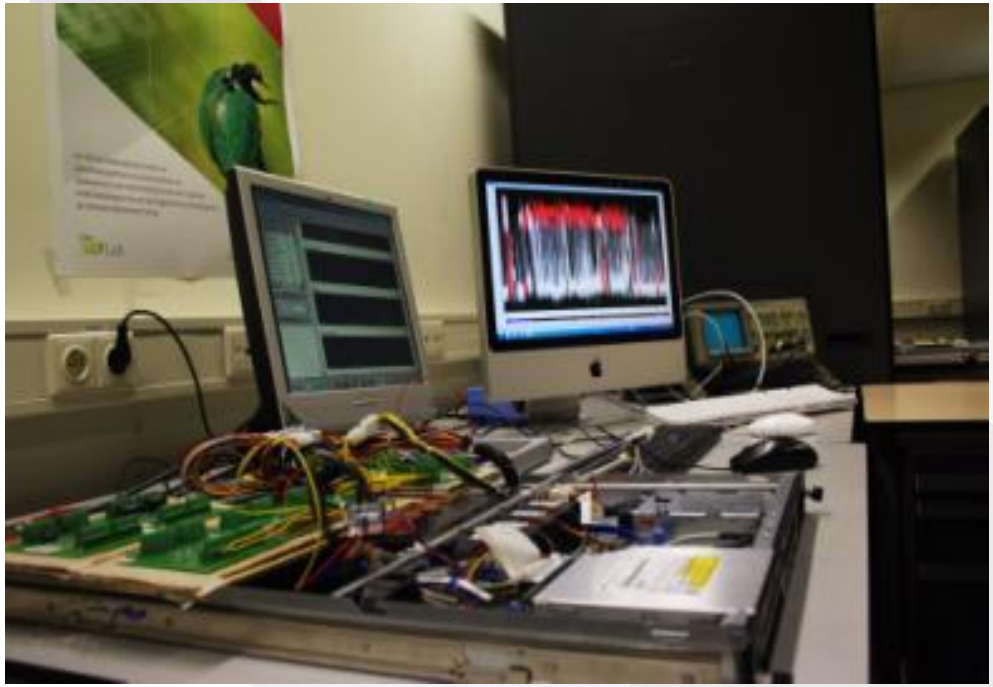
CREATING TOMORROW

SEFLAB: FUTURE PLANS



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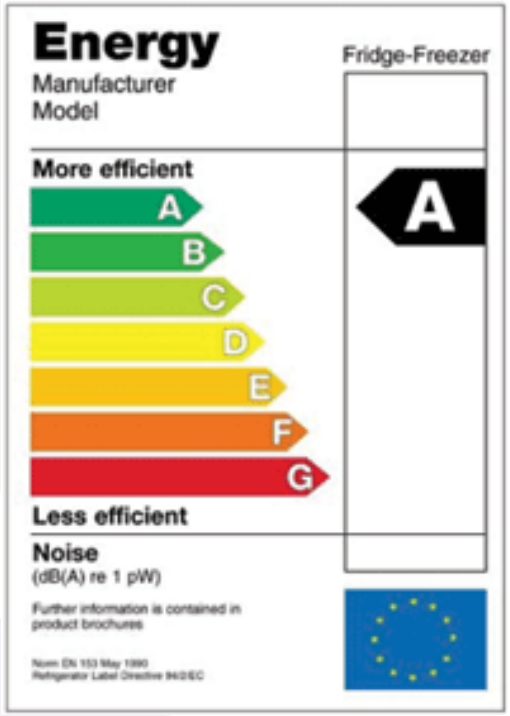

SEFLAB: FUTURE PLANS

- Based on energy profiles of software, several options:
  - Public register of software energy footprints
  - Economic consequences for users
  - Carbon consequences for users
  - Compare all kinds of applications…
  - Energy labels
  - …
- Subsidy proposal to bring SEFLab further: (RAAK PRO)
  - Applied science (HBO)
  - Focus on needs of practitioners
  - Bring stakeholders together (datacenters, end users, software developers)

QUESTIONS FROM PRACTICE

End users:

- What is the contribution of SW to total ICT energy usage?
- What are financial and ecological consequences?
- Would it be possible to choose SW applications also on energy consumption?

IT Outsourcing / Hosting companies:

- What is the contribution of SW in the total energy usage of ICT services?
- Can we provide additional (green) services to clients using Software Energy Footprint information?

Software developers

- What are design rules that may facilitate green software development?
- How can software profiling tools be upgraded with info from SEFLab?

SEFLAB: PROJECT OBJECTIVES

Objective of this project is to contribute to the development and procurement of green software, by developing in-depth knowledge about energy footprints of software applications.

Three project phases:

1. Developing a validated testfacility (extend SEFLab to multi-server set up) (measuring)
2. Develop and validate a more generic model for predicting software energy footprints (modeling)
3. Translate to valuable concepts for industry (valorization)

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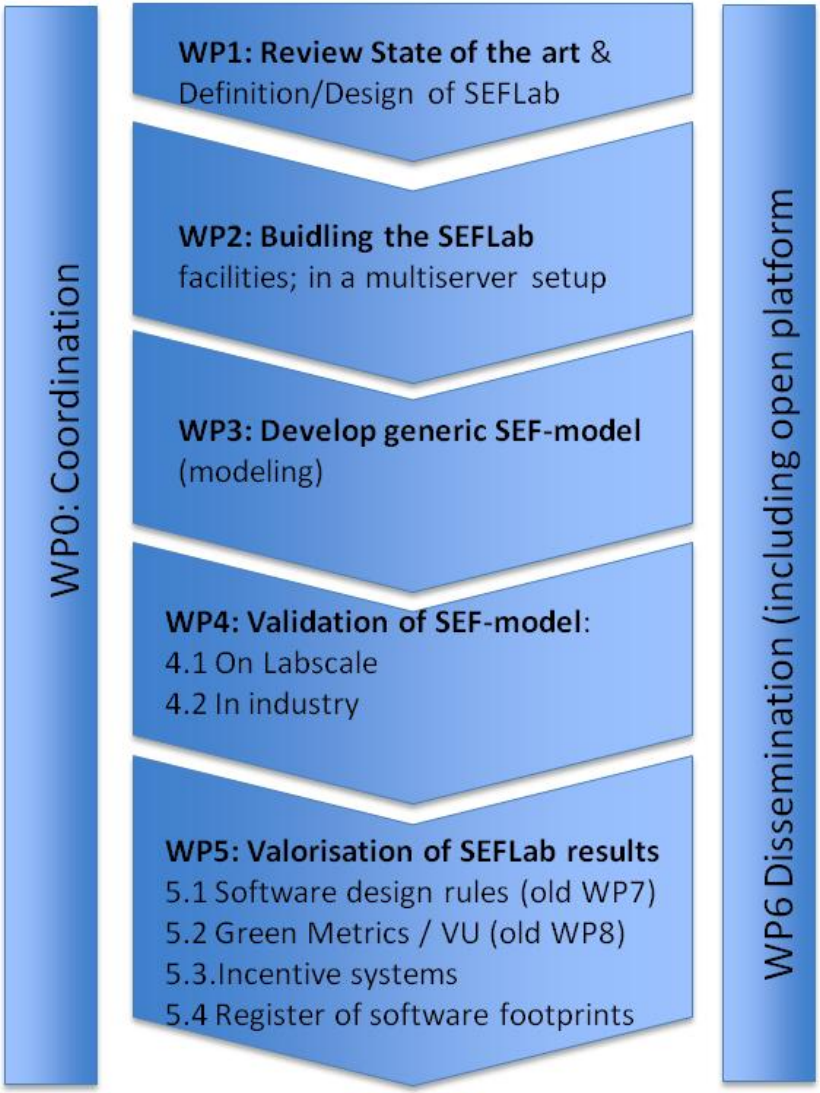
STRUCTURE OF PROJECT



SEFLAB: INTENDED RESULTS

- A database/register of software energy footprints (100+) (selection by industry)
- Benchmarks between competing software applications (where possible)
- Analyse options for incentive systems from stakeholder perspective
- Feasibility study for energy labels
- Develop a toolset for green software design rules
- Provide functionality for SW developers to upload software, to be tested in lab

SEFLAB: REQUIREMENTS

From the current SEFLab, this project intends to:

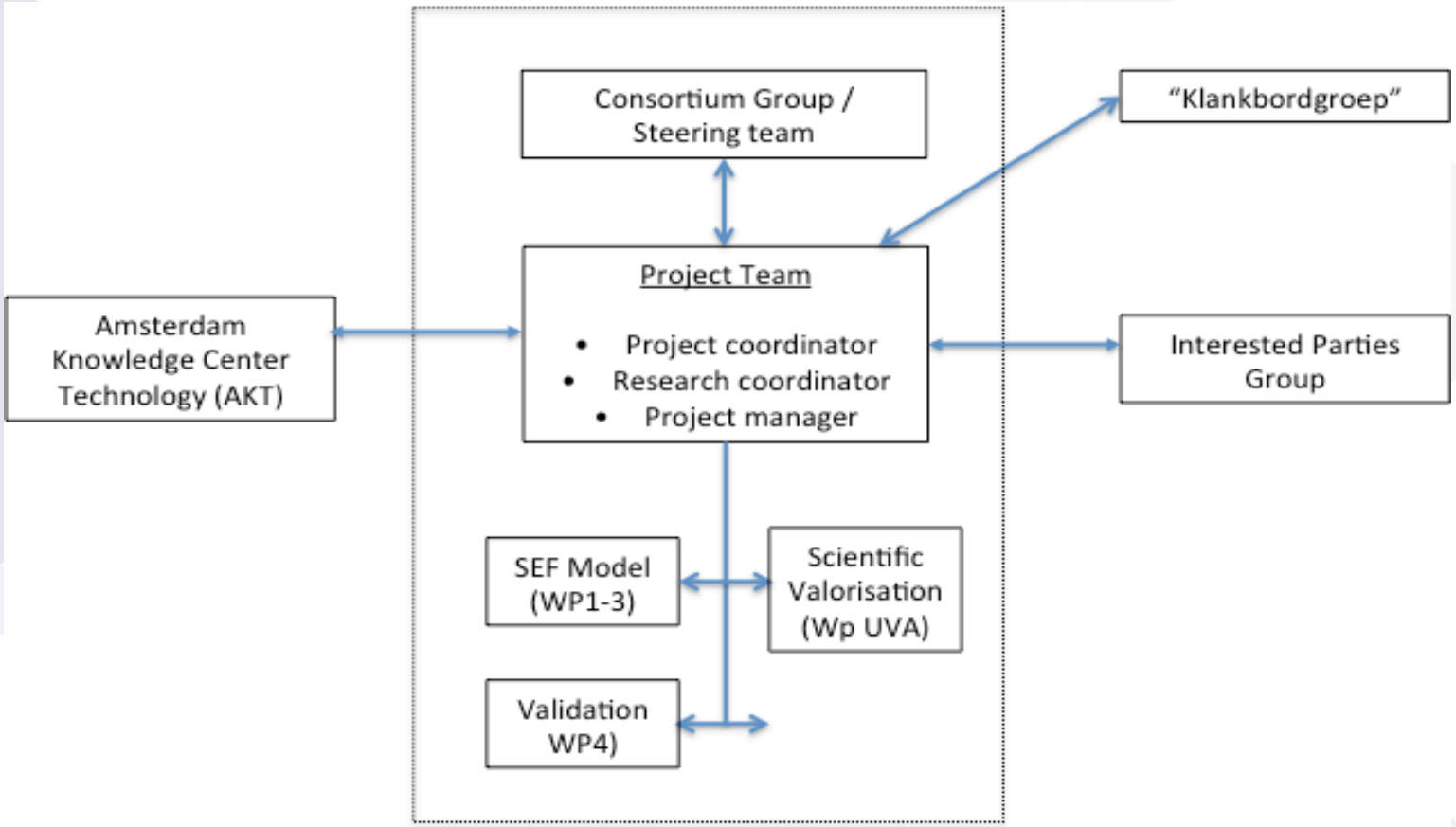
- to develop a multi-server setup → generic model
- to professionalize the SEFLab (protocols, instruments, validation)
- to deepen the theoretical basis; by involving VU and UvA
- to facilitate active participation of both students and companies
- to develop into an open platform (that allows software developers to online evaluate energy performance of developed software), and
- to leverage SEFLab results, translating them into economic and environmental metrics and incentive systems.

SEFLAB: PROJECT PARTNERS

- Hogeschool van Amsterdam
- Software Improvement Group
- VU University
- University of Amsterdam
- GreenIT Consortium Amsterdam

- Schuberg Philis
- Evoswitch
- ES Saver

SEFLAB: PROJECT OVERVIEW



QUESTIONS

- Added value
- Interesting tests
- Intended results