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Future project

The EISTER consortium plans to develop a European Master of Science course. We look for:

- Partners
- Funding

Please join us on

<http://portal.ou.nl/web/green-sustainable-data-centres>

Sustainable IT

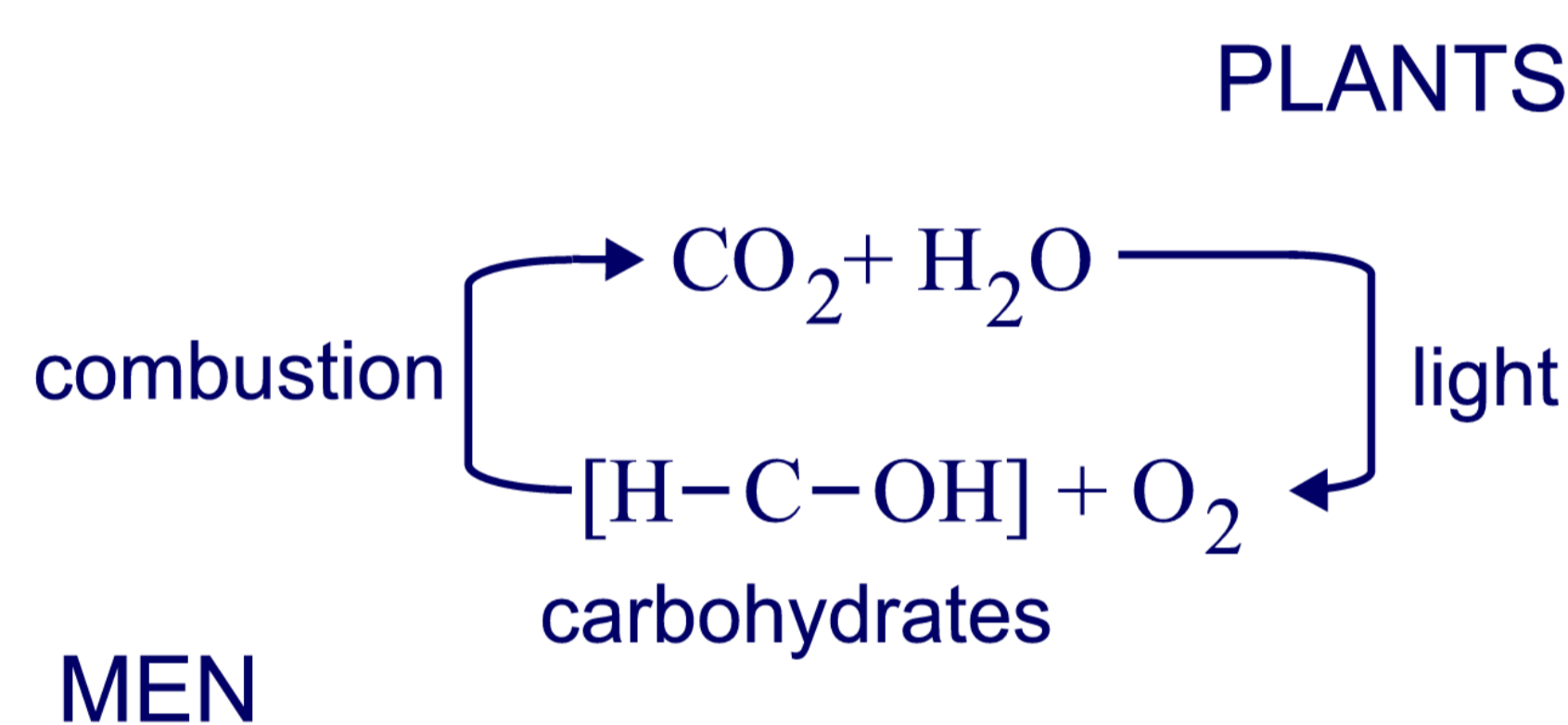
Brundtland 1987:

Sustainable development is a pattern of **economic** growth in which resource use aims to meet **human needs** while preserving the **environment** so that these needs can be met not only in the present, but also for generations to come.

PPP by CSR

People, Planet, Profit by Corporate Social Responsibility

Equilibrium: keep the cycles closed



E-Infranet

E-Science support
Integration of the European Research Area

Areas of special interest:

- Environment and Green Computing
- Cloud Computing
- Openness

Need for education and training

Introductory course

Characteristics

- Open Education Resources
- Free downloadable
- Suitable for self study
- Suitable for blended learning

Overall learning outcomes

- EU Code of Conduct on data centres is framework of course
- Audit of a data centre, following the procedure of the Code of Conduct
- Recommendations for improvement measures

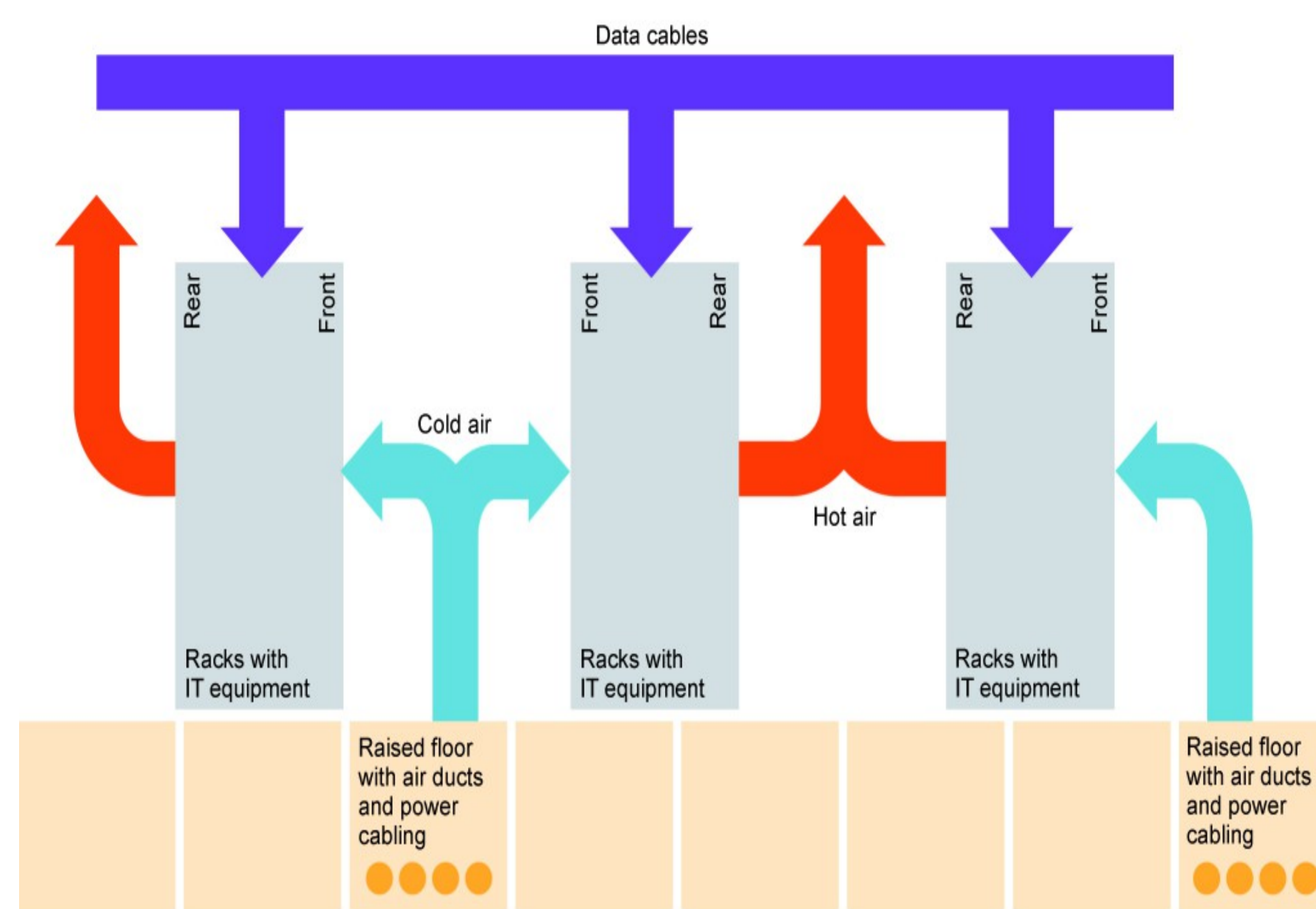
Method to develop the course

Back casting

- Learning outcomes
- Framework
- Homework → Course Project
- Content of the chapters

Active learning for distance education

- Reflection questions
- Self-assessment questions
- Margin text



Greening of IT

IT Life cycle: manufacture, use, disposal

- Global CO₂ emission of IT equal to aviation industry
- E-waste
 - > Hazardous substances
 - > Use of scarce and nonrenewable resources

Greening by IT

Using IT to improve sustainability of human activities

Topic	Author	University
Introduction to programme	Anda Counotte Colin Pattinson	Open Universiteit (The Netherlands) Leeds Metropolitan University (UK)
Introduction to Green IT	Colin Pattinson Ah-Lian Kor	Leeds Metropolitan University (UK)
Data Centre Facilities	Joona Toolonen	Kajaani University of Applied Sciences (Finland)
IT Equipment	Johan De Gelas	University College of West Flanders (Belgium)
Operating Systems & Virtualisation	Johan De Gelas	University College of West Flanders (Belgium)
Measurement and Control	Damian Dalton	University College Dublin (Ireland)
Data Centre Infrastructure Management	Damian Dalton	University College Dublin (Ireland)
Checklist Data Centre Visit	Cesar Gomez Martin	CenitS (Centro Extremeno de iNvestigacion Innovacion Tecnologica y Supercomputacion) and University of Extremadura (Spain)
Legal and Regulatory Framework	Colin Pattinson Ah-Lian Kor	Leeds Metropolitan University (UK)
Greening by IT	Paulo Carreira Carlos A. Silva	IST, Universidade de Lisboa (Portugal)
Course Project	Ilmars Slaidins	Riga Technical University (Latvia)



The project team visits the CenitS Data Centre