EPIC-ICT

Midterm Meeting

(short version)

Brussels

05 July 2005

IKP, University of Stuttgart

Content

- **Introduction and status of project**
- **Next steps**
  - Case study
  - Performance indicator development,
  - Stakeholder involvement

8.1 Policy oriented research

Scientific Support to Policies (SSP)

1*.5 Environmental assessment*

(Task 6) Assessment of the impact on the environment of selected electrical and electronic equipment in order to develop environmental performance indicators, for personal computers and examine their applicability for other products in the Information & Communication Technology sector.

EPIC-ICT

Development of Environmental Performance Indicators for ICT Products on the example of Personal Computer

Main objective

Development of a **method** to define
environmental performance **indicators** for ICT products
based on a **life cycle approach**
on the example of **personal computers**

Key methodologies used in EPIC-ICT

- Life Cycle Assessment (LCA) - environmental impacts over the life cycle of products
- Quality function deployment (QFD) – translation of customer interests into technical specifications
- Generic Modules – parameterized flexible and reliable partial LCA models

Objectives of the first period

- Building up knowledge on environmental indication of PCs
- Drawing conclusions on results of an LCA of a (simplified model of a) PC
- Identify product related specifics: technical functions, customer demands, components etc.
- Setting up a methodological framework for an environmental indication of products
- Start modelling the life cycle of a PC
- Defining modelling an improving Generic Modules for a PC
- Conducting a work shop for stakeholder involvement

Main achievements

- Carried out LCA of a simplified model of a PC
- Conducted workshop
- Set the framework for the EPIC-ICT methodology
- Defined and set up Generic Modules of a PC

Advisory board

AMBIENTE ITALIA

IKP GaBi
Universität Stuttgart
Institut für Kunststoffprüfung und Kunststoffkunde

PE CONSULTING GROUP
Life Cycle Engineering

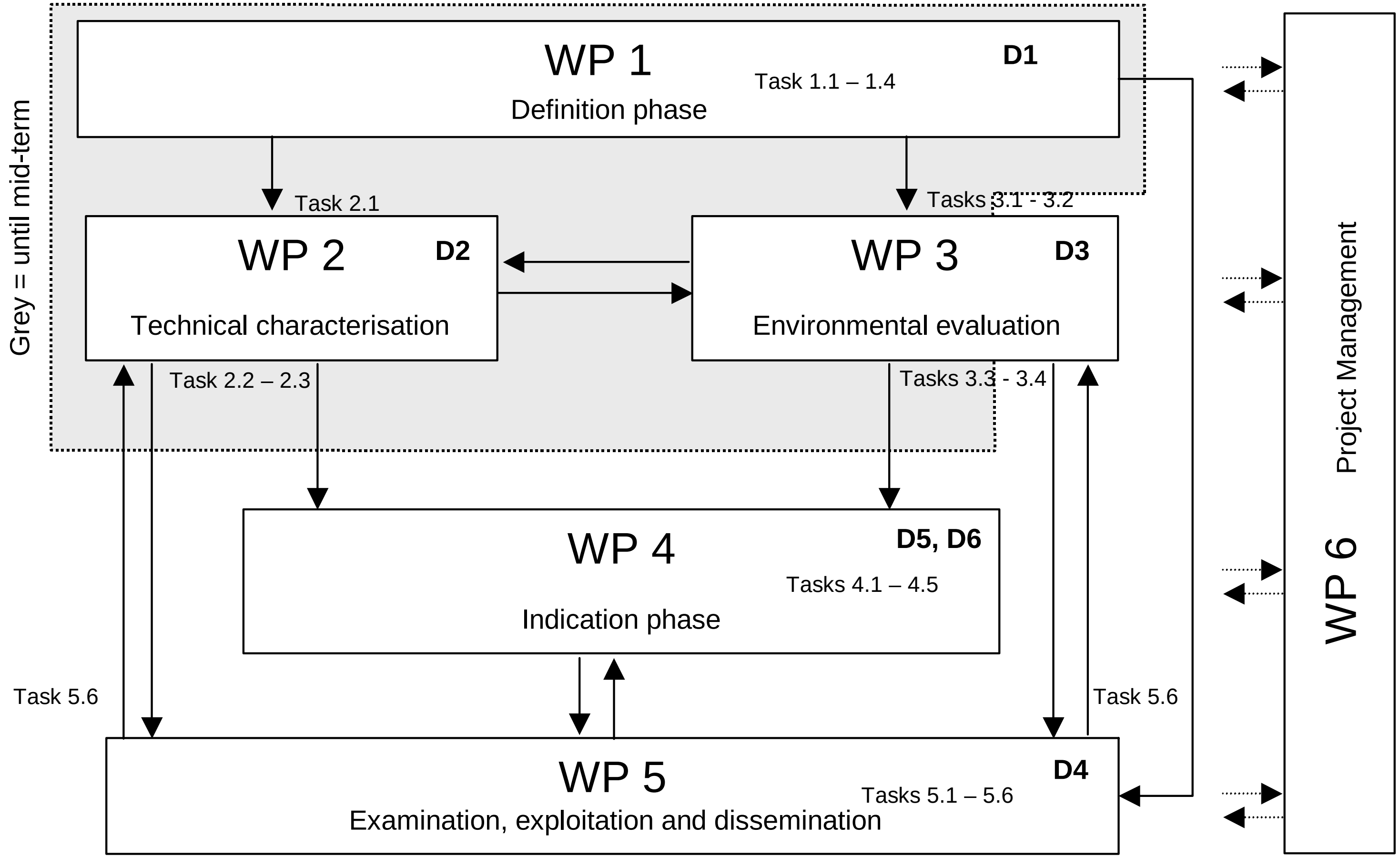
PHILIPS

MOTOROLA

DELL

Consortium

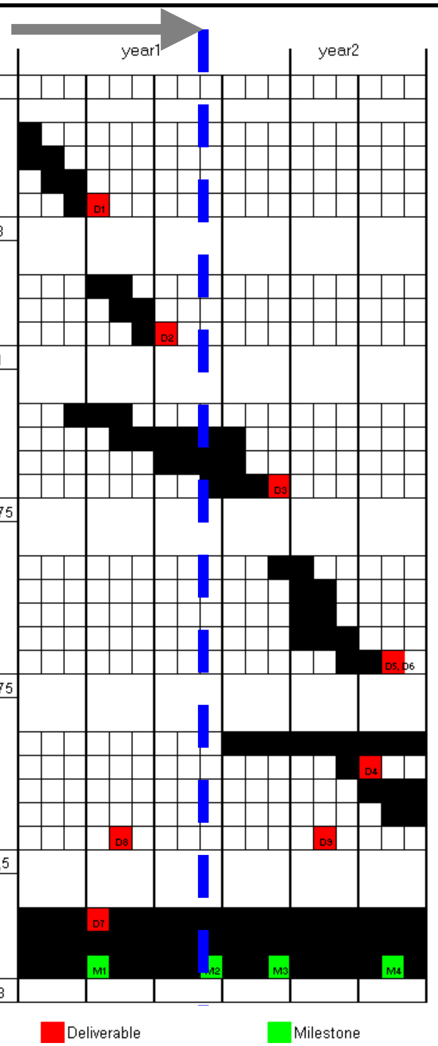
Project work plan, work packages



Status of project
Project planning and timetable

Development of Environmental Performance Indicators for Personal Computers and other ICT Products (EPIC-ICT)

(numbers in ManMonth)		IKP	Mot	Philips	Ambit	Dell	PE		Total	
		32	18	2,3	20	6	15		93,3	
WP 1	**Definition phase**									
Task 1.1	Identification of suitable studies refering to PCs	1	1	0	1	0,5	0,5			
Task 1.2	LCA calculation of a simplified PC as information base	1	0,5	0	1	0	0,5			
Task 1.3	Definition of technical functions and customer demands to be considered	0	0,5	0	0	1	0			
Task 1.4	Definition of components and Life Cycle proporties	1	1	0	1	1,5	0			
		3	3	0	3	3	1			13
WP 2	**Technical characterisation phase**									
Task 2.1	Adapt a methodology to translate definitions from WP1 to technical characteristics (QFD)	0	1	0	0	0	2			
Task 2.2	Define and apply QFD from functions/customer demand to technical characterisation	0	1	0	0	1	3			
Task 2.3	Implementation/handling of technology shifts	1	1	0	0	0	1			
		1	3	0	0	1	6			11
WP 3	**Environmental evaluation phase**									
Task 3.1	Data needs and data collection	1,5	1	0,25	1	0,5	1			
Task 3.2	Define, setup and improve available and new Generic Modules	4	0,5	0,5	2	0	1			
Task 3.3	Define appropriate environmental impacts, impact assessment and weighting	1	1	0	1	0	0,5			
Task 3.4	Environmental interpretation and evaluation	2	1,5	0	2	0	0,5			
		8,5	4	0,75	6	0,5	3			22,75
WP 4	**Indication phase**									
Task 4.1	Environmental ranking of components, sub-assemblies and life cycle phases of assessed PC's	2	0,5	0,25	1	0	1			
Task 4.2	Environmental aspects of variation in definition phase and technology shift	2	0,5	0	1	0	0			
Task 4.3	Environmental aspects of variation of technical charaterisation	2	0,5	0	1	0	0			
Task 4.4	Environmental aspects of variation of Generic Modules	1,5	0,5	0	1	0	1			
Task 4.5	Derive environmental indicators (as resonable number of parameters for feasible assessment of a PC)	2	2	0,5	2	0,5	1			
		9,5	4	0,75	6	0,5	3			23,75
WP 5	**Examination, evaluation and dissemination of results**									
Task 5.1	Exploitation and dissemination to industry (Workshops, Papers)	1	1	0	1	0	0			
Task 5.2	Examination of required efforts and data demands	1	0,5	0,5	0	0,5	0			
Task 5.3	Transfer of method to other ICT and related products	1	1	0	2	0	0,5			
Task 5.4	Report composition for scientific technical reference paper	1	0,5	0	1	0	0,5			
Task 5.5	Workshops with interested stakeholders	2	0,5	0	0,5	0	0,5			
		6	3,5	0,5	4,5	0,5	1,5			16,5
WP 6	**Project Management**									
Task 6.1	Co-ordination of project group/project management	3	0	0	0	0	0			
Task 6.2	Reporting	0,5	0,25	0,15	0,25	0,25	0,25			
Task 6.3	Controlling of results	0,5	0,25	0,15	0,25	0,25	0,25			
		4	0,5	0,3	0,5	0,5	0,5			6,3



Status of project
Reporting schedule

Intermediate management report	Periodic reports + cost statements	Mid-term report (Periodic activity report)	Final Report and Final Plan for Using and Dis-seminating Knowledge
• 31/03/2005 ✓	• 30/07/2005		
• 31/12/2005	• 30/04/2006	• 30/06/2005 ✓	• 30/04/2006

Deliverables (included in the next scheduled report if applicable):

D1 (Tasks 1.1 to 1.4)	*03/2005* ✓	*D5/D6 (Tasks 4.1 to 4.5)*	*03/2006*
D2 (Tasks 2.1 to 2.3)	*05/2005* ✓	*D7 (Website)*	*02/2005* ✓
D3 (Tasks 3.1 to 3.4)	*10/2005*	*D8 (Workshop #1)*	*04/2005* ✓
D4 (Task 5.2)	*02/2006*	*D9 (Workshop #2)*	*01/2006*

Reporting, Deliverables

D1 (Report)	Definition of functions, customer demands, components and life cycle properties, LCA of a PC
D2 (Report)	Methodology to translate definitions to technical characteristics, application of QFD to technical characterisation, Implementation/handling of technology shifts
D3 (Report)	Data needs and data collection, Generic Modules, environmental impacts, impact assessment and weighting, environmental interpretation and evaluation
D4 (Report)	Required efforts and data demands. Pre-requirements for the application of developed indicators: feasibility, efforts and costs, practicability
D5 (Report)	Technical report on methodology. Comprehensive report on how to apply the method of D2
D6 (Report)	Technical report samples and case studies. Demonstration of applicability and feasibility of the indicators in reference to D4
D7	Project website, Newsletter
D8/D9 (Report)	Report on workshop No.1 & No.2

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- **Next steps**
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Next steps

Next tasks and time planning

WP 3	**Environmental evaluation phase**
Task 3.1	Data needs and data collection
Task 3.2	Define, setup and improve available and new Generic Modules
Task 3.3	Define appropriate environmental impacts, impact assessment and weighting
Task 3.4	Environmental interpretation and evaluation
WP 4	**Indication phase**
Task 4.1	Environmental ranking of components, sub-assemblies and life cycle phases of assessed PC's
Task 4.2	Environmental aspects of variation in definition phase and technology shift
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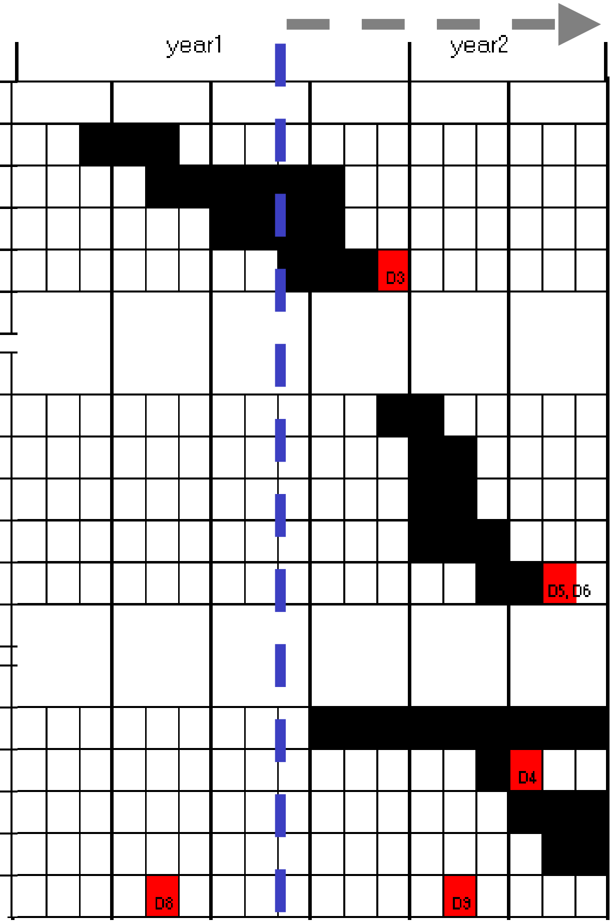
WP 5	**Examination, evaluation and dissemination of results**
Task 5.1	Exploitation and dissemination to industry (Workshops, Papers)
Task 5.2	Examination of required efforts and data demands
Task 5.3	Transfer of method to other ICT and related products
Task 5.4	Report composition for scientific technical reference paper
Task 5.5	Workshops with interested stakeholders



Next major tasks in Environmental Indication phase (WP3)

- Define environmental impacts, impact assessment methods and weighting
- Conduct Life cycle interpretation: Analyse results, identify significant issues based on inventory and impact assessment with regards to product characteristics

- Report on Deliverable 3: Data needs and collection, Generic Modules and impact assessment

Major tasks in Indication phase (WP4)

➢ Application of the EPIC-ICT Method - Case study Personal Computer

Derive environmental ranking of components

Examine variation of product definition, product specifics and Generic Modules

Derive Life cycle indicators of PCs

❖Report on Deliverable 5: Technical report on EPIC-ICT Method

❖Report on Deliverable 6: Demonstration of applicability and feasibility of indicators

Major tasks in Examination, evaluation and dissemination of results (WP5)

- Exploitation and dissemination of results to industry
- Examine required efforts and data demands
- Workshop No. 2 with stakeholders in January / February 2006
- Transfer of method to other ICT and related products

- Report on Deliverable 4: Efforts and data demand, Pre-requirements for application of indicators
- Report on Workshop No. 2

Past …

- Workshop No. 1 at CeBIT in March 2005
- Meetings with Siemens, Fujitsu-Siemens, IBM, AMD and conference calls with Intel for data exchange discussions and participation in project
- Presentation on ISEE symposium
- Exchange with other LCA experts (e.g. ETHZ)

… and future stakeholder involvement

- Papers in scientific journals
- Presentation on conferences (e.g. LCA conference in November 2005)
- Workshop No. 2 in January / February 2006
- Meetings with interested stakeholders