

RESOURCE
ACQUISITION

MANUFACTURE

PACKAGING AND
TRANSPORTATION

USE

END-OF-LIFE



OVERVIEW AND RESULTS OF LCA/LCC ACTIVITIES IN AMANAC CSA PROJECTS



Dr. Marianna Stamatiadou (NTUA)



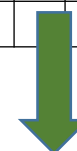
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According to DoW

Task 2.4: Approaches on LCA, LCC (M12-M18)

		2015												2016											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
WP2	Cooperation priorities mapping and Joint action activities																								
T2.1	Joint Action Plan																								
T2.2	Integration of project outcomes																								
T2.3	Standardisation activities																								
T2.4	LCA, TCC, TCO																								
T2.5	Nanosafety aspects																								
T2.6	Long-lasting activities of cluster																								



Task Leader: NTUA

Contributors: Cluster Project
Partners via their coordinator



Athens, 19th May 2016





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According to DoW

Objective

- ❑ The objective of this task is to provide adequate and good quality environmental information about the new nanotechnology and advanced materials solutions developed within the Cluster projects.
- ❑ The work of the LCA and LCC committee will target the development of an appropriate database allowing transparent and reliable evaluations of the building whole lifecycle. Results will be presented in the project's Wiki.



D2.5 Database for LCA/LCC of advanced materials based on project developments





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Approach

Steps Done before M12:

- Contacting the PCs of 29 Projects of the AMANAC Cluster, in order to provide/update information of LCA Experts for each project. (Sep2015)
 - 19 PCs answered back
 - 2 Projects without LCA/LCC Approach (Ene-HVAC & CETIEB)
 - Some projects ended (HIPIN, AEROCOINs, VIP4ALL, BioBuild)
- Contacting 27 LCA experts Projects of the AMANAC Cluster. (Oct2015)
 - LCA experts answered, providing the information/data required
 - Two finished projects declined further collaboration
- Registering all materials that are examined in LCA/LCC of each project. Focus on advanced and nano- materials.
- Started creating the database of D2.5.
- Communication with Helen Cornwell (UBath) regarding the organization of the AMANAC LCA Workshop, that will take place in May2016





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Approach

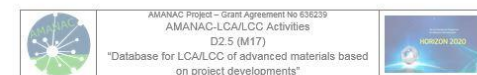
Activities (M12-M18):

- Further collaboration with LCA experts, in order to proceed with the LCA database.
- Questionnaire sent to LCA Experts of all AMANAC Projects.
- Filled questionnaire: 14/22



Issues to be answered	Your Comments	Indicative Answer
Material under Examination in your project		(aerogels)
Is this material manufactured in the frame of your project?		(YES)
If yes, please write the Company/Institution responsible		(Company Name)
Framework of the LCA		(ISOs, ENs, ILCD Handbook, other? Etc.)
Databases/Software		(Ecoinvent? SimaPro, Gabi, Athena, other? Etc.)
Goal of the analysis		(Quantification? Comparative analysis? Multi-criteria? Etc.)
System Boundaries		(Cradle-to-gate? Cradle-to-grave? etc.)
Functional Unit		(building? 1m ³ heated area? 1m ² panel area 1m ² of material? Please be specific.) (primary/secondary?) Literature? Please comment on the availability of data: was it easy to gather information? What about electricity mix?
Data for LCA		

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Data for LCC		(Sources for cost data, local market? EU?)
Data provided by manufacturer for the project's needs?		(yes or no e.g. yes for LCA, no for LCC – if applicable)
Characterization Model		(EPD? Cumulative Energy? Other?)
Problems encountered during LCA/LCC analyses		(scale up? Allocation issues? Please elaborate...)
Corresponding Deliverable in the Project and its status (public or confidential)		(D2.5 CO)
Deliverable attached in the email		(yes or no) Please check with project's coordinator first. If possible please attach the deliverable.
In case the deliverable is not available, would you be willing to send final results of LCA/LCC for the material?		(yes or no) Please check with project's coordinator first. If possible please attach a table stating the final results of your analysis.
Participating in the LCA Workshop?		(yes, no, maybe)

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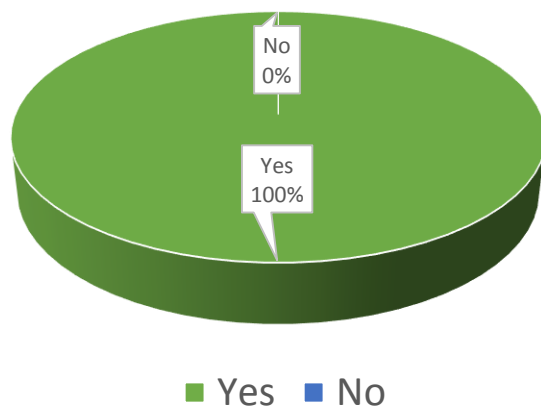


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Questionnaire statistics

Product Manufactured in Project



Advanced Products in AMANAC-CSA

- Aerogels
- Glass Membranes
- Concrete additives
- Intumescent paints
- Coatings
- Etc...

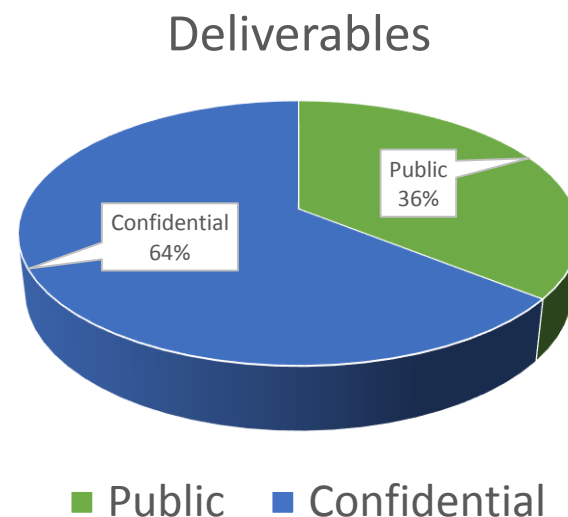
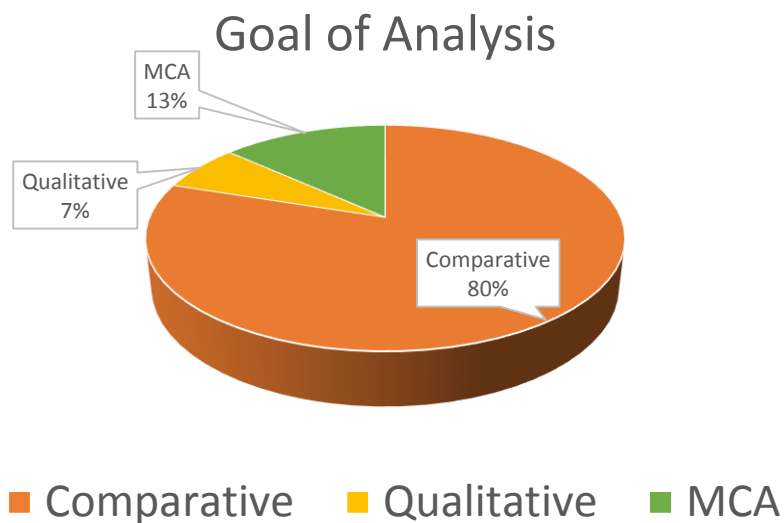




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Questionnaire statistics



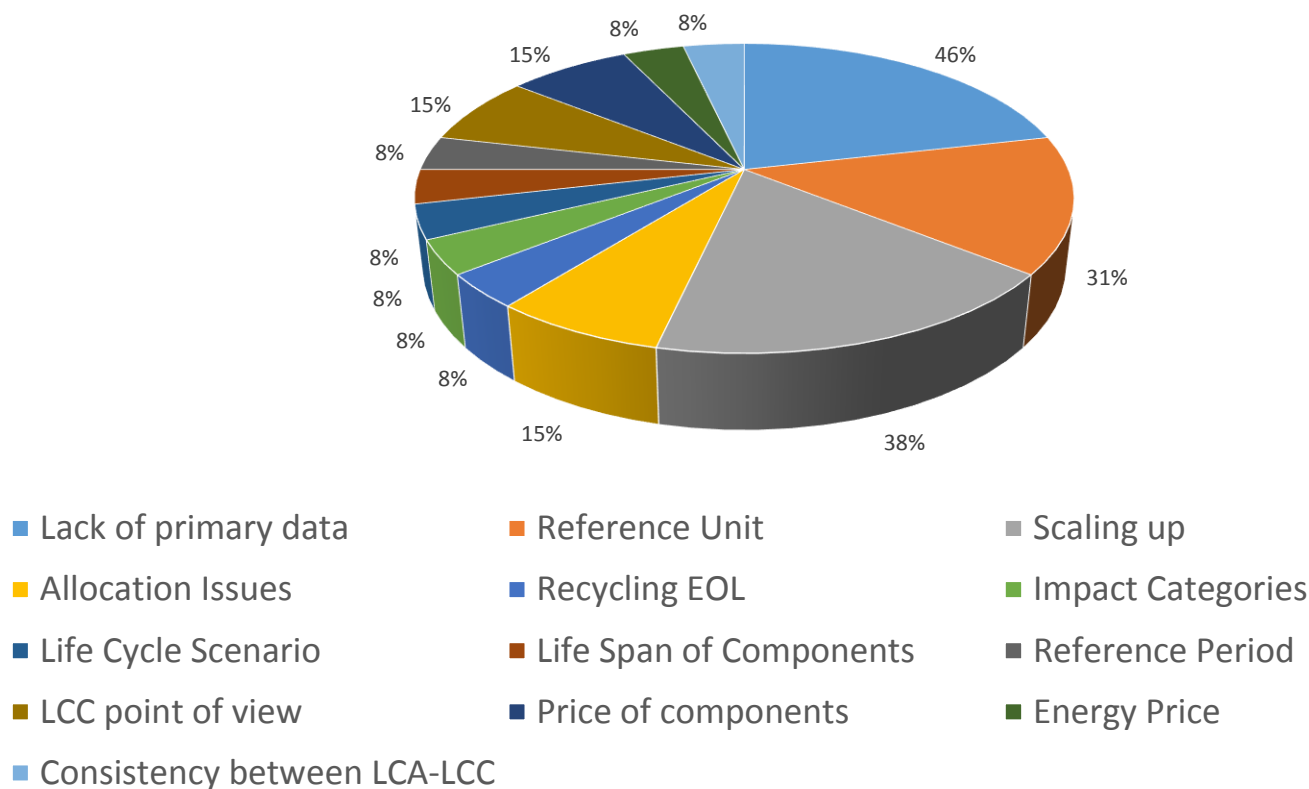


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Questionnaire statistics

Difficulties encountered in LCA/LCC Analysis





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Input for LCA/LCC Database?

Problems

- 1/3 projects' LCA/LCC deliverables are Public
- Confidentiality issues with manufacturers
- Advanced material, not enough data
- Data available only for lab specimen

Positive Thinking

- Few LCA Deliverables are Public
 - will be included in D2.5
- Deliverable is CO, but papers regarding the same work is available
- Results from Round-table discussions in LCA Workshop
- Projects ending in 2016 and 2017 with PU Deliverables





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Deliverable

D2.5 Database for LCA/LCC of advanced materials based on project developments

Contents

1. Introduction

- Goal and Scope

2. Methodology followed

- Approach of AMANAC Partners
- Questionnaire – Sent to LCA Experts of each project
- Analysis of input received

3. Database for LCA/LCC of advanced materials

- LCA/LCC Data from questionnaire
- Workshop Results

4. Guidelines and Good Practices on LCA/LCC followed by AMANAC Projects

5. Conclusions

DRAFT



Annex: Files/Deliverables shared by LCA Experts

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Deliverable

D2.5 Database for LCA/LCC of advanced materials based on project developments

Schedule

- **19th May 2016**
Deliverable in draft version (missing input)
- **15th June 2016**
First complete draft
- **30th June 2016**
Final Version, available in internal website

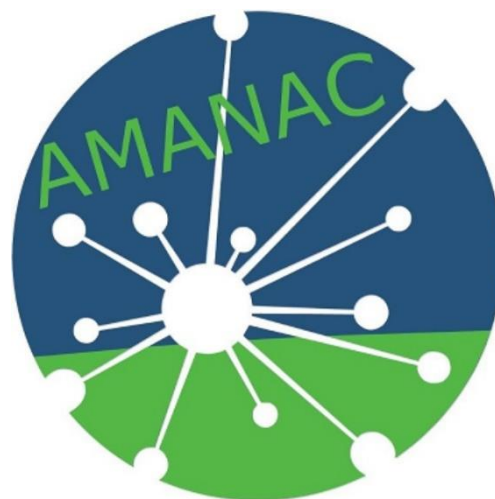




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Thank you for
your attention!



Athens, 19th May 2016

