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AMANAC

Advanced Materials and Nanotechnology Cluster

D3.4 – Report with training material from thematic workshops organized during M1-M12

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PP	Restricted to other programme participants (including the Commission Services)	
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CO	Confidential, only for members of the consortium (including the Commission Services)	

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Executive summary

A number of Thematic workshops have been held in 2015 (M1-M12 of the project) under the AMANAC umbrella that the CSA has helped organize to facilitate discussions on areas of common interest to all AMANAC projects and to increase the visibility and interaction of AMANAC project outcomes with key stakeholders in the building and construction industry sector in Europe.

These workshops provide a good avenue for horizontal integration of potential results from AMANAC projects. Some of these workshops also provide an avenue to encourage dialogue and access to key stakeholders from the building and construction industry sector and to create better awareness of exploitable results from the projects with these stakeholders. The discussion of key topics like fire safety, LCA and eco-labelling, and standardization and regulatory aspects provides a unified and harmonized understanding of the challenges and opportunities in introducing new materials to Europe's building industry.

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1. Introduction

A number of Thematic workshops have been held in 2015 (M1-M12 of the project) under the AMANAC umbrella that the CSA has helped organize to facilitate discussions on areas of common interest to all AMANAC projects and to increase the visibility and interaction of AMANAC project outcomes with key stakeholders in the building and construction industry sector in Europe.

All AMANAC projects are categorized into six main Thematics, as shown in Figure 1 below. The workshops conducted in 2015 covered key topic areas of interest to all AMANAC projects, thematic level workshops, as well as joint stakeholder workshops held by AMANAC projects from different thematics.



Figure 1: AMANAC Thematic Groups

2. Topical Workshops

Topical Workshops on key areas were organized to foster dissemination and know-how on key topic areas of importance for commercial uptake of novel materials and building components being developed under AMANAC projects. These include topics such as standardization and CE Marking, fire safety, and financial opportunities for upscaling and commercialization of development outcomes from the projects). The specific workshops organized include:

- AMANAC Fire Workshop, organized by Tecnia, in San Sebastian, Spain on May 28, 2015
- Financial Opportunities Workshop, organized by NTUA with support of the European Commission, in Brussels, on Nov 5, 2015
- Standardization Workshop, organized by Fraunhofer with support from TWI, in Brussels, on Nov 6, 2015

A short summary of the impact of each activity is summarized below.

2.1. AMANAC Fire Workshop - May 28, 2015

The AMANAC Fire Workshop was organized in the frame of the seventh International Congress on Architectural Envelopes (ICAE 2015) on May 28th, 2015 at the Kursaal Congress Center at Donostia-San Sebastian (Spain). The workshop had contributions from 3 AMANAC cluster projects (AEROCOINS, ELISSA, NANOCOOL) and provided an opportunity for exchanging experiences and knowledge in the field of Fire Engineering and Fire Safety, specifically in the context of the building and construction industry. Four speakers, Professor Alberto Fina (Politecnico di Torino, Italy), Dr. Aitor Barrio (Tecnalia Research & Innovation, Spain), Professor Michael Delichatsios (FIRESERT - Ulster University, UK) and Dr. Dionysis Kolaitis (National Technical University of Athens, Greece) shared with the audience their knowledge in new trends in fire retardant materials, an overview of fire characterization of materials, the state-of-the art and the future needs for façade fire testing as well as computational tools for fire research.



Figure 5: AMANAC Fire Workshop, San Sebastian, Spain, May 2015

More than 50 participants attended the event. The presentations of the Workshop can be accessed via the AMANAC-CSA project website: <http://amanac.eu/achievements/fire-safety/>

2.2. Financial Opportunities Workshop, November 5th, 2015

Financial Opportunities Workshop was aimed to present funding opportunities for final stage or just finished AMANAC projects. Presentations on the following topics were made at the workshop, providing attendees with a thorough understanding of the options, coaching, and various financing schemes which European Commission or Europe Enterprise Network can offer:

- General presentation on the AMANAC-CSA and its role and impact.
- Strategic Energy Technology (SET) Plan 2015, 'Smart Finance for Smart Buildings Initiative' and 'Project Development Assistance under H2020'.
- Fast track to Innovation (FTI) and SME instrument.
- InnovFin - EU Finance for Innovators.
- Regional programmes - The European Structural and Investment Funds (ESIF), Smart Specialisation Strategies & Synergies with Horizon 2020.
- The INCOMERA project.

Over 40 people attended the workshop, with a large interest from SMEs from AMANAC project consortia.

The presentations of the Workshop can be accessed via the AMANAC-CSA project website: <http://amanac.eu/achievements/financial-opportunities>.



Figure 6 Financial Opportunities Workshop, Brussels, November 2015

2.3. Standardization Workshop, November 6th, 2015

In November 2015, two events were organized at the BIP for Rent building in Brussels by FhG-ICT, TWI and FASADA in collaboration with EeB-CA2 CSA to cover topics related to standardization and training on CE marking and the European Technical Assessment (ETA) process. The presentations and discussions provided a good overview of these topics that are critical for introducing new materials to the building industry in Europe, both for retrofits and new building applications.



Figure 7: AMANAC Standardization Workshop, Brussels, November 2015
 (Left: Peter Schellinck, EOTA, introducing EOTA and
 Right: Jacek Nurzynski, ITB, on “Thermal Resistance correlated with sound insulation”)

The Standardization Workshop was held on the morning of November 6, 2015. AMANAC-CSA organized the Standardisation Workshop to facilitate the discussion between key personnel from the various AMANAC projects and institutes involved in standards and certifications. The workshop focused on the perspective of end-users on the challenges of standardisation and certification.

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The training on European Technical Assessment was held in collaboration with the EOTA on the afternoon of November 6, 2015. Attendees got information on how to obtain ETA for novel materials being developed within the various AMANAC projects. (The ETA is a document providing information about the performance of a construction product, following the definitions provided in the new Construction Products Regulation (EU/305/2011) in force since 1st of July 2013 in all European Members States and in the European Economic Area.)

Thus, the discussions gave insights into standards and requirements for buildings in Europe, and provide detailed information on certification, testing and CE marking for construction products. A feedback questionnaire was collected using the online tool kwiksurveys. The overall results of the feedback questionnaire showed that the Workshop was a success and that for most participants at large extend or even all of the content was relevant for their work. The overall impression reached a score of 4.27/5 and especially the presentations from official representatives of EC and EOTA had an added value for the participants.

The presentations of the Workshop can be accessed via the AMANAC-CSA project website: <http://amanac.eu/achievements/standardization>.

3. Thematic Workshops

A number of Thematic and inter-thematic joint workshops were held in 2015 (M1-M12 of the CSA project) under the AMANAC umbrella. These include:

- Joint Stakeholder Workshop organized by HIPIN and ECO-SEE projects in Turin, Italy on March 10th 2015.
- LCA Workshop, organized by SESBE and H-HOUSE projects, in Stockholm, Sweden on March 27, 2015
- AMANAC-CSA presentation at the EeB PPP Workshop, attended by the CSA coordinator, NTUA in Brussels, Belgium on April 27-28, 2015
- Low Embodied Energy Thematic Workshop organized by CETMA, in Brindisi, Italy on December 3, 2015.

Further details about each workshop are provided below.

3.1. Joint Stakeholder Workshop, HIPIN & ECO-SEE - March 10, 2015

A joint stakeholder workshop was held by HIPIN and ECO-SEE projects from the AMANAC cluster on 10 March 2015 at Envipark in Turin (site of the HIPIN demonstrators) to disseminate the results of the projects to stakeholders in the building industry.

The HIPIN (High Performance Insulation Based on Nanostructured Encapsulation of Air) project aims to develop a sustainable, energy efficient and cost-effective technology to produce a nanostructured aerogel that can be incorporated into paint, plaster and panel applications, which can be used in both retrofit and new constructions. The ECO-SEE (Eco-innovative, Safe and Energy Efficient wall panels and materials for a healthier indoor environment) project aims to develop eco-materials and low carbon wall panels to address emerging health problems associated with modern air-tight buildings.

The workshop presented the scientific and technical achievements of both projects, and provided a unique opportunity to meet the two project teams and view HIPIN project demonstrators at the Environment Park in Turin. The workshop also provided a forum for active discussion about any areas of interest in relation to the technologies and provided a broad overview of development

results from two major EU Public Private Partnership funded projects developing novel building materials and components for future energy efficient and healthy buildings.

In addition to the consortium partners, about 25 key stakeholders from various companies and institutes across Europe attended the workshop. There was good engagement and interest in terms of the cost and performance of the aerogel based building materials developed in HIPIN as well as interest in the bio-derived low-carbon panels being developed in ECO-SEE for improved indoor environment quality.

The HIPIN project ended on March 31, 2015 and a final project presentation outlining key developments of the project can be found at the HIPIN website: <http://www.hipin.eu>. The ECO-SEE project is ongoing and project updates can be found via the project website: <http://www.eco-see.eu/>.

3.2. AMANAC Lightweight Components LCA Workshop - March 27, 2015

Under the frame of dissemination and cross-linking of each participating project in the AMANAC Cluster, a thematic workshop was organized by CBI in Stockholm within the area “Lightweight Components” of the AMANAC cluster and attended by project partners from SESBE and H-HOUSE projects. The workshop gathered the LCA experts from each project within the thematic area to discuss the goal, framework and characterization models with the aim of unifying efforts, including sharing of deliverables and development of databases. Some of the main hurdles identified were the lack of updated information given the early stage of technological development of some of the materials and components.



Figure 8: Workshop on LCA, Stockholm, March 2015

Project updates for both SESBE and H-HOUSE projects can be found via the respective project websites: <http://www.sesbe.eu> and <http://www.h-house-project.eu>.

3.3. AMANAC at EeB PPP Workshop - April 27-28, 2015

The AMANAC CSA and various AMANAC projects participated in the EeB cPPP Impact Workshop organized by the EC with the EeB project representatives on 27-28 April 2015 (information and report available at the ECTP website:

http://www.ectp.org/enewsportal/index.php?option=com_content&view=article&id=298:workshop-on-impact-of-the-energy-efficient-buildings-ppp-brussels-27-28-april-2015&catid=59&Itemid=104

AMANAC was presented in the impact workshop under Session 1, covering all projects related to Nanotechnologies and Advanced Materials for the EeB-PPP. During the Session, 27 projects that participate in AMANAC, grouped in six thematic areas, discussed actions that could improve the technological and commercial impact of their project's developments. The benefits of clustering were highlighted by the CSA. It was recognized that project clustering sets a new level of communication not only between the 29 projects but also for harmonization of approaches to engage with key stakeholders of the building industry. Projects that participate in AMANAC increase the visibility of their results and achievements and learn to “share” and “listen”. Advantages such as shared costs for participation in big events and harmonized approaches to

key issues (LCA/LCC, safety, and standardization) were also highlighted. All projects can also get access to AMANAC databases and committees, training events and related material and to new tools being developed by the CSA like the AMANAC Wiki, web exchange platform, and product gallery.



Figure 9: EeB PPP Impact Workshop, Brussels, April 2015

3.4. AMANAC Low Embodied Energy Thematic Workshop - December 3, 2015

The Thematic Workshop entitled “*Towards greener and more energy efficient buildings: novel construction materials and processes*” was organized by CETMA and held at Palazzo Granafei-Nervegna in Brindisi, on 3rd December 2015, with the support of Municipality of Brindisi and the Order of Engineer of Lecce Province. The workshop presented developments in the area of “Low Embodied Energy materials and Energy Efficient Buildings”, produced by projects under the financing of EU in the frame of FP7 and Horizon 2020. Exploiting the opportunity of the conclusion of the SUS-CON project in December 2015, the results of the SUS-CON project on the production of novel green, lightweight, cost-effective and energy efficient building materials based on 100% wastes, suitable for ready-mixed and pre-cast applications were presented. Apart from the SUS-CON project results, the developments of other EU-funded projects in the area of low embodied materials for buildings (LEEMA, ISOBIO, and ECOBinder) were communicated, providing the participants the opportunity to catch a first glimpse on the new generation of construction materials and an opportunity for discussions about all the new developments from the four projects. An exhibition area was arranged to showcase materials from the projects and further highlight project information via roll-up posters and flyers and the AMANAC-CSA newsletters.

The presentations of the Workshop can be accessed via the AMANAC-CSA project website: <http://amanac.eu/workshops/embodied-energy-workshop/>.



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EFFICIENZA ENERGETICA OGGI SARANNO PRESENTATI GLI ESITI DEI PROGETTI

Workshop su «edilizia verde» calcestruzzo prodotto dai rifiuti

• Efficienza energetica in edilizia: saranno presentati oggi - nell'ambito del workshop "Towards greener and more energy efficient building: novel construction materials and processes, in programma a Palazzo Nervi (ore 9.15) - gli esiti dei principali progetti sostenuti in tale settore dall'Unione Europea.

progetto (che terminerà a dicembre dopo quattro anni di attività) ha avuto come principale finalità lo sviluppo di nuove tecnologie per l'integrazione dei rifiuti (cosiddette "materie prime seconde") nel processo di produzione del calcestruzzo, sviluppando componenti per l'edilizia ad elevata efficienza energetica, come blocchi e pannelli, res-

Figure 10: Low Embodied Energy Thematic Workshop, Brindisi, Italy, December 2015

4. Conclusions and Plans for 2016

These workshops provide a good avenue for horizontal integration of potential results from AMANAC projects. Some of these workshops also provide an avenue to encourage dialogue and access to key stakeholders from the building and construction industry sector and to create better awareness of exploitable results from the projects with these stakeholders. The discussion of key topics like fire safety, LCA and eco-labelling, and standardization and regulatory aspects provides a unified and harmonized understanding of the challenges and opportunities in introducing new materials to Europe's building industry.

A number of other workshops, including a Thematic level workshop on Indoor Air Quality as well as a LCA workshop for all AMANAC projects are being planned for 2016.

5. Acknowledgements

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