

Workshop on additive and advanced manufacturing technologies and digitalisation of production in Albania

PROEKSPORT ALBANIA ASSOCIATION, Tirana, Albania - 26th of November 2024

9h30 Registration of participants	
Welcome greetings	
10h00	Welcome greetings, PROEKSPORT ALBANIA ASSOCIATION - Mr. Blendi Gonxhja, Minister of Economy, Culture, and Innovation. - Mrs. Laura Saro, Albanian Investment Development Agency
SESSION 1	
10h30	Potential of AMTECH
Contents and inputs	Project partners' introduction of their objective and motivation for participating in the project consortium (IMAST, PEA, IEC TEHNOPOLIS, SIMOLISE).
Expected Output	Participants are familiar with consortium potential and motivation to bring the change through project implementation in the region.
SESSION 2	
11h00	Enhancing SMEs Competitiveness in Additive Manufacturing: main challenges and opportunities, Prof. Ermira Shehi, Head of Textile and Fashion Department of Polytechnic University of Tirana
Contents and Inputs	Interactive lecture and discussion about the challenges and opportunities of AM technologies, targeting SMEs that want to replace traditional manufacturing approaches in order to increase their competitiveness level by means of a sustainable growth.
Expected Output	Participants will get information from Academia point of view on technical challenges, advantages and opportunities of AM processes.
11h30-11h50 COFFEE BREAK	
SESSION 3	
11h50	Generative design and additive manufacturing in automotive industry, Greg Andoni, Lecturer, POLIS University Department of Art and Design Tirana and Owner of GrAnD creative industries.
Contents and inputs	The presentation will cover the combination of generative design and additive manufacturing, which are transformative technologies in the automotive industry, each playing a crucial role in enhancing design, production efficiency and performance.
Expected output	Participants will understand the integration of generative design and additive manufacturing in the automotive industry, which is expected to yield several significant outputs and benefits.
SESSION 4	
12h20	The Additive Manufacturing in TIMAK SHPK GROUP, Mrs. Arjeta Puca, CEO of TIMAK GROUP
Contents and inputs	The presentation will deal with the SHOTA MRAP (Mine-Resistant Ambush Protected) vehicle, which is engineered for maximum safety in high-threat environments, featuring a V-hull chassis to deflect blasts and advanced armor for ballistic protection. Equipped with state-of-the-art communication and navigation systems, it ensures operational efficiency and coordination in combat zones.
Expected output	Development of functional prototypes. These outputs demonstrate how additive manufacturing can enhance the SHOTA MRAP's development, offering innovative solutions and efficiencies throughout its lifecycle.

SESSION 5	
12h50	Kinemorph in additive manufacturing, Mr.Denis Hado - Mr.Fulvio Papadhopuli
Contents and inputs	"Kinemorph" in the context of additive manufacturing refers to designs that incorporate movement or transformation within the 3D-printed structures. This concept is increasingly relevant as AM technology evolves, allowing for more complex geometries and functionalities. This concept is increasingly relevant as AM technology evolves, allowing for more complex geometries and functionalities
Expected output	The speaker will raise awareness of participants on the potential of additive manufacturing technologies in Kinemorph. Kinemorph designs can include integrated mechanisms, such as hinges, joints, or linkages, that allow parts to move without the need for assembly. This can lead to reduced assembly time and increased reliability. Some designs can change shape or configuration in response to external stimuli (like heat or light), creating adaptive components that can optimize performance in varying conditions. By designing components that can adjust their form, kinemorphic structures can enhance functionality—such as improving aerodynamics in aerospace applications or providing flexible interfaces in robotics. Kinemorphic designs can often minimize material usage by creating complex shapes that serve multiple functions, which is particularly advantageous in additive manufacturing where material costs can be significant and mimicking biological systems that exhibit flexibility and adaptability, which can lead to more efficient and innovative solutions.
13h20-14h10 LUNCH BREAK	
SESSION 6	
14h10	Combination of AM with renewable energy structures, Mr. Albi Alliaj, Lecturer, Structural Engineer - POLIS University
Contents and inputs	Overview on how combining additive manufacturing (AM) with renewable energy structures presents exciting possibilities for innovative designs and improved efficiency.
Expected output	The speaker will raise awareness of participants on the potential of additive manufacturing technologies and the expected output from combining additive manufacturing with renewable energy structures can be multifaceted, impacting various aspects of design, production, and sustainability. Tailored parts for solar panels, wind turbines, and hydroelectric systems that optimize performance and fit specific site requirements. In the end of presentation potential partners and participant can understanding the combination of additive manufacturing and renewable energy structures can significantly advance the field of sustainable energy, driving innovation and efficiency in the transition to a cleaner energy future.
SESSION 7	
14h40	How additive manufacturing can change supply charge from China to Europe, to Western Balkan to Eu, Neurent Lumshi, Co-Founder of XEON shpk and other company in additive Manufacturing.
Contents and inputs	Additive manufacturing has the potential to significantly alter supply chains, particularly in the context of shifting production and distribution from China to Europe and the Western Balkans.
Expected output	The speaker will raise awareness of participants on the industrial impact of additive manufacturing technologies. A clearer understanding of how AM enables production closer to consumers in Europe and the Western Balkans, reducing reliance on Chinese manufacturing. Reduced transportation costs; A breakdown of potential savings on logistics and shipping by producing locally with AM. Insights on how AM can lead to lower inventory holding costs through just-in-time production. Supply chain resilience and Flexibility and responsiveness: Demonstrated improvements in supply chain agility and the ability to respond to market changes rapidly.

SESSION 8	
15h10	The first drone designed and built entirely in Albania, Arbi Bamllari, Co-Founder of SKAITECH
Contents and inputs	Creating the first drone designed and built in Albania involves several key contents and inputs. It is a case study in Albania that can create bridges of collaboration between Cross Boarder Partners.
Expected output	By the end of the presentation, participants will understand the step-by-step process, gain insights into practical challenges and solutions through a real-life example, and learn about the necessary inputs and resources. One of the aim is the identification of advanced applications of additive manufacturing technologies in the production process.
SESSION 9	
15h40	The potential of additive technologies for the product development and improvement in fashion and textiles industry, Lucio Ferranti, CEO of Energy Group Srl
Contents and inputs	The speaker will illustrate how the applications of additive manufacturing can support the growth of the Albanian community, since Energy Group can count on over twenty-five years of experience in the world of 3D design, product development and optimization for various sectors, ranging from manufacturing to medical, educational or industrial. By mean of tangible test cases, the presentation will deepen the main phases of the product development, starting from the design, through the fabrication process development and up to the part manufacturing and finishing, with focus on textiles industry.
Expected output	The speaker will raise awareness of participants on the potential of additive manufacturing technologies in traditional sectors, in particular the opportunities available in fashion and textile industry. On the one hand the speaker will provide to the audience higher confidence on the introduction of new processes within their organizations to develop new products or to optimize existing ones or, alternatively, he will aim to give more confidence to companies that want to invest or establish cooperation with organizations operating in Italy, in particular in Apulia region.
SESSION 10	
16h10	The Additive Manufacturing in DBS Group in Albania, Mr. Elidon Avrami, Vice CEO of DBS GROUP
Contents and inputs	This group typically collaborates on research, development, and implementation of additive manufacturing processes, catering to various industries.Types of additive manufacturing technologies used (e.g., FDM, SLA, SLS). Materials utilized (e.g., plastics, metals, composites).
Expected output	Development of functional prototypes for various industries, showcasing the capabilities of additive manufacturing. Tailored solutions for clients, allowing for personalized designs and specifications in sectors like healthcare and automotive. Establishment of new collaborations with industry leaders and academic institutions, enhancing research and development efforts.
SESSION 11	
16h40	“Questions & Answers”, PROEKSPORT ALBANIA ASSOCIATION
Contents and inputs	During “questions and answers” of the last session, open-ended questions will be encouraged to increase the level of awareness of participants for what concerns the opportunities to introduce additive manufacturing in their organization.
Expected output	Participants will get useful information on benefits and drawbacks of additive manufacturing applications. Furthermore, it is expected to identify some needs of the region for establishing the bases for the joint cooperation actions among different regions.
17h00-17h10 Closing remarks	
17h10 End of the meeting	