

# 1. PUBLISHABLE SUMMARY

## **Summary of the context and overall objectives of the project (For the final period, include the conclusions of the action)**

The PIMAP Partnership is a European project led by four clusters to support the adoption of photonics and microwaves technologies for the development of advanced manufacturing and related industrial applications. The project will provide a springboard for cluster SMEs to internationalise towards the United-States and Canada and support regional actions through the leverage of photonic technologies in Key Enabling Technologies. This cross sectoral activity drives the industrial modernisation process in Europe and supports regional actions through the leverage of photonic technologies in key emerging industries. The inter-clustering actions helps match photonics/technology solutions with market applications to ensure cluster ecosystems linkages are strengthened.

The objectives of the projects are:

- 1) Defining the thematic areas and value chains that may offer the greatest potential for cross sectoral collaboration between Photonics and Advanced Manufacturing technologies and Industrial Applications. The international market trends of the key domains will be examined individually to position, within each sector, targeted applications. Photonics Europe estimates that the following examples of potential applications (materials technology, instrumentation and sensors) represent some 40% of the European photonics market:
- 2) Identify the SME needs to support cross border collaboration and internationalisation and review previous cluster internationalisation support actions and good practices.
- 3) Focusing and testing with two targeted countries (USA/Canada) that may offer the greater potential for the exploitation and deployment of Photonic enabled industrial applications including the identification of the relevant local actors and partners. Additionally, identify other potential third countries targets with market potential.
- 4) Testing the PIMAP market positioning through the organization of two Third Country Missions and through reinforced European level inter-regional collaboration.
- 5) Finding the complementarities between the cluster members/SMEs and systems integrators to present complete and consolidated PIMAP value chains and assessing the export potential based on the long-term plans and internal capabilities to perform exports.
- 6) Reinforcing the positioning of Photonics led cross fertilisation into the regional development schemes and influence regional policy makers and related stakeholders regarding the Smart Specialisation Strategies and Industrial Modernisation policies.
- 7) Elaboration of a comprehensive KPI performance monitoring system.
- 8) Collaborating with other programmes and actors dealing with SMEs international and business deployment end.
- 9) Implementation of an innovative communication strategy that puts the SMEs at the heart of the process and gives a high prominence to the ECCP Platform. Actively disseminate the PIMAP project and best practices for SME internationalisation support and cross-border inter-cluster collaboration.
- 10) Strengthening the action of the PIMAP ESCP with the creation of a partnership agreement that will give a legal framework to the action plan implementation.
- 11) Building a roadmap for short and mid-term actions to be undertaken in the internationalisation plan, including the identification of new cluster partners and country targets.
- 12) Implementation of PIMAP visual identity and branding as part of the project sustainability actions.

**Work performed from the beginning of the project to the end of the period covered by the report and main results achieved so far (For the final period please include an overview of the results and their exploitation and dissemination)**

The PIMAP is a voluntary, open alliance of complementary clusters and supporting organisations (meta cluster) interested in inter-cluster, cross boarder and cross sectoral collaboration for internationalization, growth and global competitiveness of European SME's in deep tech photonics and photonic applications. With the signature of a partnership agreement, The PIMAP partnership engages PIMAP Partnership members and commits the project partners to working together towards SME internationalisation in countries beyond Europe.

**WP1**

The key results and achievements on cross-sectoral cooperation workshops between cluster organisations and SMEs are:

- A better understanding of each cluster ecosystem, sector and market segments
- Strengthened of intercluster cooperation
- Communication and dissemination about the PIMAP Partnership activities
- Awareness raising on internationalisation and cross-sectoral cooperation
- SME engagement in the project activities
- The identification of SME needs, expectations and barriers with regards to internationalisation and cross-sectoral cooperation
- The identification of the grounds for the internationalisation strategy, implementation roadmap and partnership agreement

**WP2**

The missions developed to the United-States and Canada as well as the conclusions on its contribution towards PIMAP objectives, provided grounds of evidence of their relevance in:

- Supporting market intelligence actions and exploration of opportunities and synergies, for both clusters and their SMEs, e.g. as clearly results from the mission to the US by the occasion of the Photonics West fair;
- The establishment of contacts with key stakeholders towards the deployment of future actions, e.g. as it occurred with New York Photonics and the organization of a back-to-back mission to the neighbour state of New York, USA, in articulation with the EU-Canada cluster matchmaking, held in Toronto, Ontario, Canada;
- Fostering the signature of memorandum of understanding with 3rd country organizations providing means for effective collaborations between the ecosystems' stakeholders and the launch of joint initiatives (with US and Canadian clusters), and notably the ones signed during the Munich's Laser World of Photonics, held from the 24th till the 27th June, with Arizona Technology Council Optics Valley (US) and OPTONIQUE (Canada);
- Supporting awareness and establishment of contacts between ecosystems' entities and SMEs;
- Leveraging visibility of the clusters' initiatives and stakeholders;
- The identification of local stakeholders that would be key partners for deploying support services, e.g. soft-landing services, organization of business missions, etc.

**WP3**

The key results and achievements in terms of communication and dissemination are:

- A broad visibility of the project activities thanks to the active use of the ECCP
- The design of a common identity and branding for promotion and cooperation purposes

**WP4**

The key results and achievements of the joint internationalisation strategy are:

- The formalisation of the cooperation between the project partners thanks to a partnership agreement
- The work package has developed a clear strategy on how to continue the work after that the PIMAP project has ended
- Strategic documents showing how to continue and implement activities after the end of the PIMAP projects have been created together with a partnership agreement for future use
- The identification of a set of actions to be implemented in the next three years with an indicative timeline
- The identification of means to sustain the PIMAP Partnership
- The establishment of a long-term strategy

**Progress beyond the state of the art, expected results until the end of the project and potential impacts (including the socio-economic impact and the wider societal implications of the project so far)**

Throughout the two years, ALPHA-RLH TRIPLE STEELIX, PRODUTECH and BUSINESS JOENSUU have been working together to enhance the innovation and internationalisation capacities of their SMEs. This collaborative initiative highlighted a number of synergies between the project partners, both in terms of sectoral focus and countries targeted for internationalisation. The exchanges between the project partners highlighted the complementarities in terms of sectors, between photonics, microwaves and advanced manufacturing. The SMEs operating in those sectors are very dynamic and willing to expend their activities towards international markets. The SMEs involved in the project had the opportunity to meet at several occasions, for instance at SME workshops organised in each cluster ecosystem or during international business missions.

The need for SMEs working in the fields of photonics, advanced manufacturing, metalworking and aerospace industry for going international was strongly expressed. By joining their forces, the project partners represented over 900 SMEs, thus giving both visibility and credibility to the initiative. The positioning of the project, photonics for the industry 4.0 for North America was confirmed by the market study conducted in the framework of the project. The study highlighted the high market potential in the United-States and Canada, as well as opportunities in the Asian market. The partnership took advantage of the project to test its concept in the North American market with the organisation of two business missions with the participation of companies from the consortium. Dialog was engaged with both American and Canadian partners. Two Memorandum of Understandings were signed in the framework of the project, one with Arizona Photonics, based in the United-States and one with Optonique in Canada. The project partners acknowledged the benefits of working together and formalised their intention by developing a joint internationalisation strategy, an implementation roadmap and a partnership agreement. They engaged themselves to strengthen the support for SME internationalisation as well increasing the impact of their action by including additional partners to the partnership and including new target countries.

Following the signature of two memoranda of understanding in the framework of the PIMAP Partnership, the consortium will further collaborate with international partners. In particular, the existing connections with Arizona Photonics in the United-States and Optonique in Canada will be exploited. As part of a long-term strategy, the PIMAP+ consortium wishes to deepen its engagement with international stakeholders which can act as facilitators to support SME internationalisation. Four key markers have been identified by the consortium for their relevance with regards to market potential and SME interests.

By reinforcing cluster and business network cooperation and supporting the shaping of a European Metacluster, the PIMAP project helped European SMEs access new global value chains and take a leading position globally.

**Address (URL) of the project's public website**

<https://www.clustercollaboration.eu/escp-profiles/pimap-partnership>

PIMAP logo



**Photonics  
For Advanced  
Manufacturing**  
By PIMAP Partnership