

What?

The JePPIX Pilot Line offers design, manufacturing and testing services to take your indium phosphide (InP) photonic integrated circuits (PICs) based prototype into production. We are **now hosting an open call for participation in the demonstrator program**. The objective of this initiative is to provide support to innovative businesses and catalyze their transition to industrial prototyping and pre-commercial production of high-performance InP PICs. To maximize the impact, the JePPIX Pilot Line will demonstrate and showcase its capabilities through the success-stories of the demonstrator call participants. This helps to increase market awareness of the European-based InP technology and gain traction in new, as well as established, market segments.

Applications can be submitted at various initial technology readiness level (TRL) stages of the product or application but should present a credible and feasible business and product development plan towards pre-production within the project period, and how the Pilot Line contributes there by assessing the feasibility of manufacturability. The JePPIX Pilot Line will serve 15 selected projects with a total budget of up to 1.2M€. The types of activities that qualify for receiving technical support must be related to adoption of new products, services and business models enabled by and containing InP photonic integrated circuits.

Specifically, applicants should address the objective of transitioning their PIC-based projects / R&D projects up to pre-industrial prototype readiness level (TRL7), i.e., showing manufacturability, in any market segment.

Please take a note of the following:

- *Pure research activity and development of a proof of concept only will not be supported by JePPIX Pilot Line open call.*
- *One product prototype per one applicant can only receive support once.*

Who?

While the JePPIX pilot line is open to any organisation, selection for the open call is based on specific eligibility criteria. The call is open to:

- EU-based companies of any size. (Please check the list of EU-based countries in appendix 1.¹)
- Applicants who are currently exploring InP PIC technology and are ready to scale-up their internal programs to perform product development towards TRL7² in any market segment.
- Companies who are willing to share high-level information about the use of PICs, applications, etc. to be used as (successful) user demonstrator cases, for further exploitation of the Pilot Line. The terms and conditions of dissemination of information regarding a demonstrator case are to be agreed in the Service Delivery Agreement. Name and purpose of the demonstrator case must be always publicly disclosed. To see examples of dissemination options, please see appendix 5.

¹ **For the UK based companies:** *The UK left the EU on 31 January 2020. There is now a transition period until the end of 2020 while the UK and EU negotiate additional arrangements. UK participants will continue to receive EU grant funding for the lifetime of individual Horizon 2020 projects, including projects finishing after the transition period ends at the end of 2020. European Commission's general notice for UK applicants: "In conformity with the EU-UK Withdrawal Agreement[1], the UK and persons or entities established in the UK continue to be eligible to receive Union funds under actions carried out in direct, indirect or shared management, which implement Union programmes and activities committed under the MFF 2014-2020 until the closure of those Union programmes and activities. Restrictions may, however, apply for security-related reasons or concerning financial instruments. When such restrictions apply, these will be clearly specified in the call for proposals." For more information, please check the links below: <https://www.gov.uk/government/publications/continued-uk-participation-in-eu-programmes/eu-funded-programmes-under-the-withdrawal-agreement>; <https://www.ukri.org/research/international/ukri-europe/>.*

² See definition of TRL in Appendix 4

When?

The call is open from continuously and applicants can apply anytime until the resources have been used up. Any submitted application will be evaluated in the nearest cut-off date. Information on cut-off deadline will be provided by scouts. 1 month after cut-off applicants will be notified with an evaluation.

Why?

Europe has pioneered the concept of multi-project wafer (MPW) runs for Indium phosphide (InP) photonic integrated circuits (PICs) over the last 15 years. By sharing process development and fabrication costs, a versatile technology platform has been created for proof-of-concept and prototype-level research and development. The JePPIX Pilot Line now targets to bridge the gap towards commercialization of InP PIC-based products, by showing manufacturability aligning the full supply chain from design and software solutions to testing and verification. Efforts within the Pilot line are targeted to establish a seamless product development environment for PIC-based products:

- offering expert support and consultation to educate and bridge potential knowledge gaps
- establishing data and design standards to support the interoperability of services
- introduction of manufacturing grade PDKs with specified metrics
- increase stability of PIC manufacturing processes to accelerate and scale production
- development of automated testing routines and facilities for performance validation

In this regard, the Jeppix Pilot line is much more than a fabrication process; it offers an ecosystem formed by experienced partners covering design, characterization, expert consultancy, and software support among others. The use of a generic fabrication process means that process development up to TRL7 has already been done, and extensive test data have been obtained to support design tools through a manufacturing-grade process-design kit. This means that you accelerate your time to market, and lower your development costs. Moreover, your runs - combined with the other customers' runs - keep generating data, so the process keeps on getting more robust and reliable.

The JePPIX Pilot Line is looking for innovative partners who are interested in and motivated for bringing a PIC-based product to the market, thereby demonstrating the capabilities of InP technologies made in Europe and showcase the competences available in the InP PIC ecosystem. Success stories by these partners should help us open up new markets or market segments. Participation in the demonstrator program is accessible through this open call. Partial project funding will be available to selected participants to lower business risk by reducing project costs. Prioritization of funding will focus on projects showing high potential for exploitation of results. This includes but is not limited to projected traction in the target market, competitiveness and innovation potential.

Applicants will be selected to join the demonstrator programme, receiving:

- Access to industrial prototyping and pre-commercial manufacturing services of InP photonic integrated circuits technology.
- Benefit from pilot line marketing and dissemination activities featuring the demonstrator activities and results.
- Customized support (based on their needs) to:
 - Design their own PICs
 - Have their pre-commercial run of PICs delivered
 - Testing
- **160k€** (max.) worth of technical services delivered directly by JePPIX Pilot Line – software, design, foundry and/or testing services.
 - *Please note that the financial support (max 160k€ per applicant of the demonstrator program) can only cover 75% maximum of the total **price** of the technical service package **from the JePPIX***

pilot line. A minimum of 25% of the technical service package price is paid by the customer. E.g., the cost of project will be 213k€, then 160k€ will be funded by JePPIX Pilot line and 53k€ will be covered by applicant.

How?

If you are interested in applying to the Demonstrator Open Call, please follow the steps listed below before submitting your application.

1. Check out the JePPIX Pilot Line [website](#) for information about the technology and possibilities
2. Read information on Open Call
 - a. Details and Criteria
 - b. Application Guidelines
3. Make sure that you satisfy eligibility criteria
4. Register through the registration portal
5. Download Application Form on the [registration portal](#)
6. **Complete the Application Form, save it as a PDF file, uploaded it and submit it through the portal.**

Applications will be accepted only in English language.

Process (Evaluation criteria & Selection & Timing)

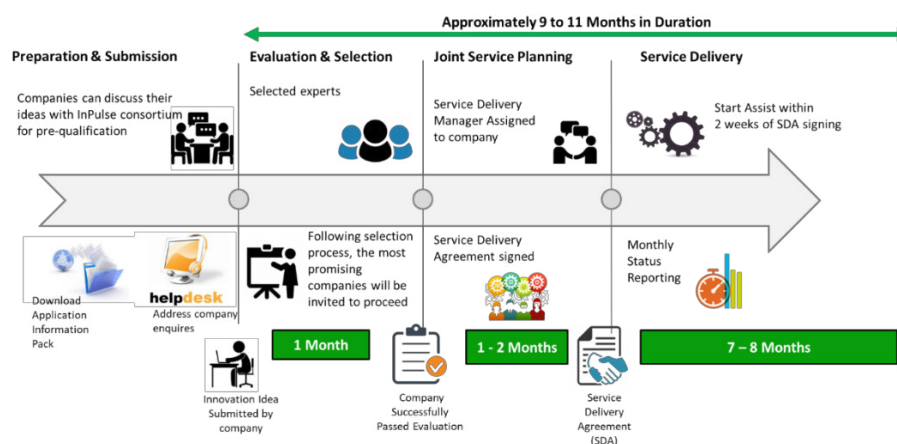


Figure 1: All steps of the Demonstrator Open Call program

Any submitted demonstrator program application will be evaluated in the nearest future cut-off by the Evaluation Panel composed of 4 evaluators. You may request up to four JePPIX partners to be excluded as reviewers in the evaluation of your proposal.

All submitted demonstrator program applications will be evaluated (scores ranging from 0 to 5) according to the following criteria:

- Concept
- Implementation
- Impact

The maximum overall score is 15. The standard threshold for individual criteria is 3, and the standard overall threshold, applying to the sum of the three individual scores, is 9. The average of the 4 scores given by evaluators per section and total will be calculated for each application. Application failing to achieve the threshold score per individual criteria and the overall threshold will be rejected. Applications will be ranked according to the overall scores in descending order.

The most successful applications, having passed the evaluation, will be offered the chance to negotiate and sign the Service Delivery Agreement (SDA) with the Service Delivery Manager assigned by the JePPIX Pilot Line. Evaluation will be returned approximately 4 weeks from submission deadline. The entire process from application submission until the end of service delivery, i.e., delivering the (tested) PICs, will take 9 to 11 months.

Documents

- Application Guidelines (The full document is available <https://www.jeppix.eu/jeppix-pilot-line/demonstrator-open-call/> or in appendix 2)
- Application Form (can be found here - <https://applyinpulse.amidev.eu/user/login/> or in appendix 3)

Communication with applicants

If you need assistance in applying to the Call, or explanations about technology offerings and your possibilities with the JePPIX Pilot Line, please send us your enquiries by phone to: +420 226 217 422 or by email to helpdesk@jeppix.eu. The helpdesk will be active Monday - Friday from 9 a.m. to 17.00 p.m. CET. We will be happy to help you.

Complaints procedure

Upon reception of the feedback, applicants will have the possibility to submit complaints related to decisions of application evaluation and selection to the JePPIX Pilot Line Evaluation Panel, if there is an indication that there has been a shortcoming in the way application has been evaluated. The complaint procedure is not meant to call into question the judgement made by the evaluators; rather to improve and correct procedural shortcomings and – in rare cases – factual errors.

Such complaint requests should be raised within 7 working days from the date of the evaluation feedback sent by the JePPIX Pilot Line Helpdesk. If a complaint is submitted after that deadline it will be rejected without further examination.

Complaint requests sent by applicants must be:

- related to the evaluation process;
- sent by email to the JePPIX Pilot Line Helpdesk;
- received within the specified time limit.

An initial reply will be sent to complainants no later than two weeks after the deadline for complaint requests. This initial reply will indicate when a definitive reply will be provided. A complaint committee may be convened to examine the peer review evaluation process for the case in question. The committee's role is to ensure a coherent interpretation of requests and equal treatment of applicants. The complaint committee itself, however, will not re-evaluate the application, but it will examine the admissibility of the complaints, the legality of the actions against which the complaints are launched and factual arguments and claims of the complaints. Depending on the nature of the complaint, the committee may review the evaluation report and individual comments. In the light of its review, the committee will recommend a course of action. If there is clear evidence of a shortcoming that could affect the eventual funding decision, it is possible that all or part of the application will be re-evaluated. Unless there is clear evidence of a shortcoming there will be no follow-up, or re-evaluation.

Please note:

- This procedure is concerned with the evaluation process.
- The committee will not call into question the judgment of the individual evaluators.
- A re-evaluation will only be carried out if there is evidence of a shortcoming that affects the quality assessment of application. This means, for example, that a problem relating to one evaluation criterion will not lead to a re-evaluation if an application has failed anyway on the other criteria.
- The evaluation score following any re-evaluation will be regarded as definitive. It may be lower than the original score.

- Only one complaint request per application experiment will be considered by the committee.
- All complaint requests will be treated

1. Conclusions

This document defines the text of competitive open call, including call criteria and evaluation process. It gives details of the following sections that the Text of the Call is comprised of:

- What? General information, clear and exhaustive list of activities that qualify for receiving financial support and outcomes of the demonstrator program applications
- Who? Eligible applicants (EU based companies of any size)
- When? Cut-off dates and timing
- Why? Budget aspects/Benefits Pioneer fund
- How? Application process (registration through registration portal, submission of AF)
- Evaluation and selection process (criteria, ranking list, selection)
- Documents (AF, application guidelines)
- Communication with applicants
 - Contacts (Helpdesk)
 - Complaints procedure, data protection and confidentiality.

The Call will be published on 3 February 2021 (three months before the cut-off date expiry) on project website <https://www.jeppix.eu/jeppix-pilot-line/demonstrator-open-call/> and social media. The Call will also be publicized by all partners at different events.

2. Degree of Progress

The deliverable is 100% fulfilled. The document was updated on 1 February 2023.

3. Dissemination Level

D9.2 is public.

Appendix 1

HORIZON 2020 – WORK PROGRAMME 2016-2017
General Annexes

A. List of countries eligible for funding

1. Legal entities established in the following countries and territories will be eligible to receive funding through Horizon 2020 grants:

- The Member States (MS) of the European Union (EU), including their outermost regions;
- The Overseas Countries and Territories (OCT) linked to the Member States¹:
 Anguilla, Aruba, Bermuda, British Antarctic Territory, British Indian Ocean Territory, British Virgin Islands, Cayman Islands, Falkland Islands, French Polynesia, French Southern and Antarctic Territories, Greenland, Montserrat, Netherlands Antilles (Bonaire, Curaçao, Saba, Sint Eustatius, Sint Maarten), New Caledonia, Pitcairn Islands, Saint Barthélemy, Saint Helena, Saint Pierre and Miquelon, South Georgia and the South Sandwich Islands, Turks and Caicos Islands, Wallis and Futuna.
- The associated countries (AC): the latest information on which countries are associated, or in the process of association to Horizon 2020 can be found in the online manual².
- The following countries, except where this is explicitly excluded in the call text³:
 Afghanistan, Algeria, American Samoa, Angola, Argentina, Azerbaijan, Bangladesh, Belarus, Belize, Benin, Bhutan, Bolivia, Botswana, Burkina Faso, Burundi, Cambodia, Cameroon, Cape Verde, Central African Republic, Chad, Chile, Colombia, Comoros, Congo (Democratic People's Republic), Congo (Republic), Costa Rica, Côte d'Ivoire, Cuba, Djibouti, Democratic People's Republic of Korea, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Eritrea, Ethiopia, Fiji, Gabon, Gambia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Indonesia, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Kosovo*, Kyrgyz Republic, Lao, Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands, Mauritania, Mauritius, Micronesia, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Pakistan, Palau, Palestine**, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Rwanda, Samoa, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Swaziland, Syrian Arab Republic, Tajikistan, Tanzania, Thailand,

¹ Entities from Overseas Countries and Territories (OCT) are eligible for funding under the same conditions as entities from the Member States to which the OCT in question is linked

² http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/international-cooperation_en.htm

³ Provided that natural or legal persons, groups or non-State entities are not covered by the Council sanctions in force. Please see: the consolidated list of persons, groups and entities subject to EU financial sanctions, available at http://ec.europa.eu/cfsp/sanctions/consol-list_en.htm.

HORIZON 2020 – WORK PROGRAMME 2016-2017
General Annexes

Timor-Leste, Togo, Tonga, Turkmenistan, Tuvalu, Uganda, Uruguay, Uzbekistan, Vanuatu, Venezuela, Vietnam, Yemen, Zambia, Zimbabwe.

Appendix 2

DEMONSTRATOR PROGRAM APPLICATION GUIDELINES

Demonstrator program application guideline provides detailed information on how to fill three main sections - Concept, Implementation, and Impact of the application form. Application form needs to be downloaded, filled in and submitted through the online portal.

If you are interested in applying to the Demonstrator Open Call, please follow the steps listed below:

1. Check out the [JePPIX Pilot Line website](#) for information about the technology & possibilities & services.
2. Read Details and Criteria of Open Call ([Text of the Call](#) – What, Who, When, Why and Process?)
3. Make sure that you satisfy eligibility criteria (Text of the call – part “WHO”?)
4. Register through the online registration portal ([HERE](#))
5. Download the application form on the registration portal
6. Fill all sections of the Application form. Once complete, save the file as a PDF document (respecting the **total limit of 5 pages (10MB) for the whole application**). The reference font for the body text of the proposal is Times New Roman (Windows platforms). The minimum font size allowed is 11 points. Standard character spacing and a minimum of single line spacing has to be used. The page size is A4, and all margins (top, bottom, left and right) should be at least 20 mm. In addition, figures, schemes and photos are encouraged to be provided to make clearer the aim of the proposal taking into account its final length (max. 5 pages).
7. Upload and submit it through the portal within deadline ([HERE](#))- You can save your proposal and return to it as many times as you wish until you are satisfied with it and decide to submit. Please note that you will no longer be able to change your application form once you click on Submit.

Please provide information in your demonstrator program application form in English. Applications submitted in any other language will not be evaluated!

PROJECT DETAILS IN APPLICATION FORM

Project full name: Name of your application you want to apply with in demonstrator program

Summary (Do not disclose any Intellectual Property Rights): Please provide a concise summary of the content and objectives of your proposed project. Please only include relevant information, including:

- What is the product you would like to develop?
- Which market segment?
- What are the business and market need to further develop it?
- How JePPIX Pilot Line support can help leverage the impact of your project? (Refer to the [JePPIX Pilot Line website](#) for information about the technology & possibilities & services.)

You may request up to four JePPIX partners to be excluded as reviewers in the evaluation of your proposal.

List of the organisations that may act as reviewers:

- TECHNISCHE UNIVERSITEIT EINDHOVEN (TUE)
- III-V LAB (IIIV)
- VPI PHOTONICS GMBH (VPI)
- SMART PHOTONICS BV (SPH)
- FICONTEC SERVICE GMBH (FIC)
- FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (HHI)
- PHOTON DESIGN LIMITED (PHOD)
- PHOENIX BV (PHX)

Appendix 3

APPLICATION FORM

Please consult **DEMONSTRATOR PROGRAM APPLICATION GUIDELINES** provided which contains basic information needed to guide you in preparing your proposal for submission to the JePPIX Pilot Line Open Call. It will provide a guideline on how to structure your response and provide the criteria on which it will be evaluated. Please provide your submission in English. Proposals submitted in any other language will not be evaluated! Please fill all sections of the Application Form, save it as a pdf document, (MAX 5 pages), uploaded it and submit it through the registration portal. Please contact helpdesk@jeppix.eu in case of further questions.

PROJECT FULL NAME:

COMPANY INFORMATION

Registered Company Name:

Company Registration Number:

Date of Registration:

Size (employees):

Annual turnover (in €):

Type of organization:

Specify your industry:

APPLICANT CONTACT DETAILS

Contact Name:

Position in Company:

Telephone Number:

Email Address:

IS THIS THE FIRST TIME THAT YOU SUBMIT YOUR PROPOSAL?

1st Submission YES/NO

Re-submission YES/NO

SUMMARY (DO NOT DISCLOSE ANY INTELLECTUAL PROPERTY RIGHTS)

Please provide a concise summary of the content and objectives of your proposed project.

(Maximum ½ page)

CONCEPT (ALIGNMENT, NEEDS & CHALLENGES, MARKET OPPORTUNITY AND INNOVATION)

Please describe how your project aligns to the JePPIX Pilot Line, the business needs, technological challenge identified, the potential market opportunity and your approach to innovation.

(Maximum 1 ½ page)

IMPLEMENTATION (ACTIVITIES, RESOURCES AND RISKS)

Please provide details of your company, resources and provide a draft outline of work activities and any risks identified.

(Maximum 1 ½ page)

IMPACT (OUTCOMES, WIDER IMPACTS AND SUSTAINABILITY)

Please describe the key outcomes of your project and the impact that it will have on the market.

(Maximum 1 ½ page)

Appendix 4

TRL Scale as a Research & Innovation Policy Tool, EARTO Recommendations (2014)			
Cluster	Readiness Level	TRL Definition	Definition and description
Invention	TRL 1	Basic principles observed	Basic scientific research is translated into potential new basic principles that can be used in new technologies
	TRL 2	Technology concept formulated	Potential application of the basic (technological) principles are identifies including their technological concept. Also, the first manufacturing principles are explored, as well as possible markets identifies. A small research team is established to facilitate assessment technological feasibility.
Concept validation	TRL 3	First assessment of feasibility of the concept and technologies	Based on preliminary study, now actual research is conducted to assess technical and market feasibility of the concept. this includes active R&D on a laboratory scale and first discussions with potential clients. The research team is further expanded and early market feasibility assessed.
	TRL 4	Validation of integrated prototype in a laboratory	Basic technological components are integrated to assess early feasibility by testing in a laboratory environment. Manufacturing is actively researched, identifying the main production principles. Lead markets are engaged to ensure connection with demand. Organisation is prepared to enter into scale up, possible services prepared and full market analysis conducted.
Prototyping and incubation	TRL 5	Testing of the prototype in a user environment	The system is tested in a user environment, conducted to the broader technological infrastructure. Actual use is tested and validated. manufacturing is prepared and tested in a laboratory environment and lead markets can test pre-production products. First activities within the organisation are established to further scale up to pilot production and marketing.
Pilot production and demonstration	TRL 6	Pre-production of the product, including testing in a user environment	Product and manufacturing technologies are now fully integrated in a pilot line or pilot plant (low-rate manufacturing). The interaction between the product and manufacturing technologies are assessed and fine-tuned, including additional R&D. Lead markets test these early products and manufacturing process and the organisation of production is made operational (including marketing, logistics, production and others).
	TRL 7	Low scale pilot production demonstrated	Manufacturing of the product is now fully operational at low rate, producing actual commercial products. Lead markets test these final products and organisational implementation is finalised (full market established, as well as all other production activities fully organized). The product is formally launched into first early adaptor markets.

Appendix 5

For example, the dissemination on a demonstrator case can take form of one/or combination of the following options:

- Slide in the JePPIX sales deck for use at conferences, scouting meetings by JePPIX partners
- Promotional video with customer showing the interaction with pilot line and promoting own product plans
- Extensive functional data sharing with supply chain partners for process optimisation purposes
- Contribution to relevant publications such as JePPIX roadmap, application notes and white papers
- Interviews at EPIF and online webinars with pre-agreed questions