



OIP4NWE Vouchers – the most frequently asked questions!

The OIP4NWE project aims at establishing an open innovation pilot line for the development of generic photonic integration technology. Equipment manufacturers, a pure-play foundry and researchers collaborate to establish the infrastructure and processes dedicated to the pilot production of photonic integrated circuits (PICs) based on Indium Phosphide. The capabilities will include packaging and external optics as well.

Be one of the first companies to test the PIC pilot line. After the pilot line has been set up and validated, a voucher scheme for 7 small and medium-sized enterprises will be set up to lift

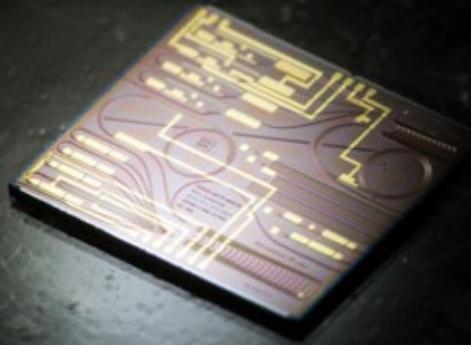
the technology readiness level (TRL) of their products from 4 to 7.

What is covered by the vouchers?

The voucher will enable access to the OIP4NWE pilot line for SMEs which want to upscale production of PICs to a trial series, beyond proof-of-concept demonstration

The voucher will cover:

- Design verification to check compatibility of the PIC design with the OIP4NWE pilot line
- Manufacturing of the PICs, external optics and packaging



What is the value of the voucher?

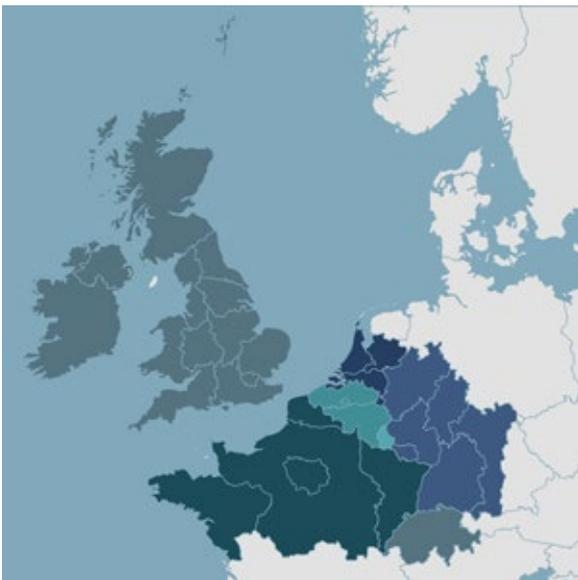
The voucher will have a value of max. 50k€; we will ask a 20% contribution from the SME on the total project cost and 100% for anything above the 50k€ max support. This means a contribution of 20% of the cost up to a project cost of 62.5k€ (in this case the max. support of 50k€ is reached) and 100% of the cost above 62.5k€.

What are the requirements for voucher eligibility?

In order to be eligible to apply for a voucher, the following requirements should be fulfilled:

The applicant

- should be a small or medium-sized enterprise (SME), according to the European definition, which can be found at <https://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition>
- should be based in the North-West Europe region



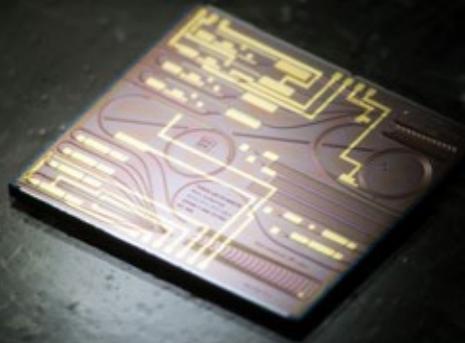
<https://www.nweurope.eu/about-the-programme/the-nwe-area/>

- should have demonstrated the technical feasibility of their application proposal, i.e. the applicant should have a PIC design ready and preferably a validated prototype. This means that the technology readiness level (TRL) of their current PIC should be 4 or higher. Proposals for proof-of-concept type demonstrators are not eligible.
- should demonstrate a business case for scale-up to volume production and/or how the funded project will positively impact their future business, either through increased revenues or through the creation of new jobs.
- should comply with the minimis criterion for state aid and provide a self-declaration to that end. A “De Minimis” award letter will be issued by the OIP4NWE consortium when complying.
- should submit a fully completed “Voucher application form” and should sign a “Proxy NDA” to allow evaluation of the proposal by the OIP4NWE voucher selection committee.
- should agree to collaborate on documenting their use case. This is to be used as dissemination material to attract other users of the pilot line, during as well as after the project.

What is the timing for the voucher call?

The call for voucher applications will open in January 2021 and applicants will have until 30/09/2021 to apply. The evaluation of the applications will start in October 2021 and the outcome will be announced in November 2021.

If there was insufficient interest or an insufficient amount of high-quality applications, a 2nd call for vouchers will be launched later on.



How will the voucher applications be evaluated?

The selection committee will evaluate the voucher applications based on the “voucher application form” filled out by the candidate SMEs.

First of all, the selection committee will check the eligibility of the application by checking if the applicant SME complies with the requirements set out in Section 5 of this deliverable report. With respect to requirement criterion (3): the selection committee will give strong preference to applications at TRL 4 or higher, but in exceptional circumstances this requirement may be relaxed for new entrants that want to make use of the unique added value offered by OIP4NWE (e.g. need for external optics or microfluidics to be added to the PIC), or in case there would be an insufficient amount of applicants. With respect to requirement criterion (5): if the applicant complies with the minimis criterion for state aid, a “De Minimis” award letter will be issued by the selection committee.

If the application is eligible, it will be evaluated according to the criteria defined below. Each criterion is scored with a value from 0 (strongly underperforming) to 5 (excellent). Each criterion has a certain weight associated to it. The score is multiplied with this weight. The individual score of each criterion should be at least 2,5. The total score should be at least 20/30.

Evaluation criteria and associated weight:

- The innovative character of the project (weight 1)
- Technical feasibility and quality of the project plan (weight 1)
- Credibility and level of commitment of the company (weight 2)
- Added value on the business case and potential impact (weight 2)

The selection committee will also take into account geographical distribution in the NWE region as well as distribution over different application sectors of the voucher grantees.

How many chips can be provided? (chip only, fully packaged, ...)

- Tyndall as a research partner can provide packaging for less than 5 (A project should package a first device to determine if the process meets the user requirements and only then proceed to complete remaining devices)
- PICs must be pre-tested prior to packaging

Which packaging aspects are included?

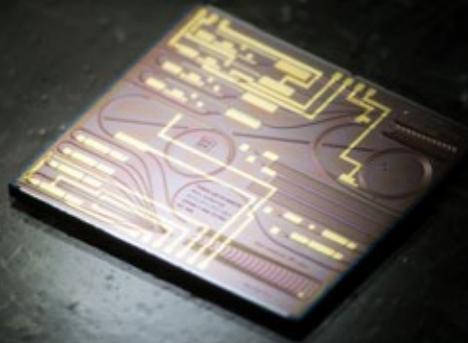
- Packaging design* (optical, electrical and mechanical design),
- Fibre attach to PICs (single and fibre arrays)
- Flip-chip of electronic ICs (including gold stud bumping and solder sphere jetting)

How many optical ports can the chip have?

Ideally 1 to 12 optical ports (higher port numbers are possible with prior agreement)

What if an SME doesn't require the entire value chain (chip – external optics – packaging), e.g. only packaging is requested?

It is not necessary that the voucher request makes use of the entire pilot line, so it is perfectly possible to only request a selection of the offered services. The requests which require the full pilot line will however be scored higher on the aspect “Technical feasibility and quality of the project plan”



It is critical the SME follows packaging design rules and this can be part of the design service activity.

Can the design of external optics be provided as a part of the voucher offer? Who can take care of this?

In principle, the requirements state that the applicant should have a design ready and a validated prototype. If a PIC design is available, but interfacing of the PIC with the outside world through external optics is requested, VUB can perform the design of the optics (in addition to the fabrication thereof).

In principle, Tyndall can provide packaging of micro-optics to PICs but this will need to be evaluated on a case by case basis to determine if the packaging process is feasible.

How can I get into contact for further questions or a voucher application?

Please contact the leader of the OIP4NWE voucher scheme workpackage:

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The Interreg NWE-Project "OIP4NWE" aims at establishing an open innovation pilot line for the development of a generic photonic integration technology for the production of Indium Phosphide Photonic Integrated Circuits (PICs). Integrated photonics is the emerging technology where the manipulation of light takes place on a chip, making the components an order of magnitude cheaper, smaller and more energyefficient compared to today's solutions. By providing these services to SMEs across Europe, the project reduces PIC access barriers and strengthens the competitiveness and innovativeness of European SME sustainably on the global markets.

Current generic PIC facilities are of a laboratory nature and inadequate for manufacturing and packaging

PICs with cost-efficiency, speed and reliable quality. There is a strong need to increase the technology readiness level (TRL) from the current 4 to 7. The equipment for PIC manufacturing and packaging is of an innovative, specialised nature that cannot be obtained from a single country. As application of PICs grows, North-West Europe needs to stay ahead. Therefore, intense collaboration between innovation stakeholders at transnational level is an important goal of the project.

The project is funded by the Interreg North-West Europe programme, which fosters transnational cooperation to make North-West Europe a key economic player and an attractive place to work and live, with high levels of innovation, sustainability and cohesion.

www.nweurope.eu/oip4nwe