



HORIZON 2020

LE PROGRAMME DE RECHERCHE ET
D'INNOVATION DE L'UNION EUROPÉENNE

INFO DAY
SMART & SAFE – ENERGY & MOBILITY

20/06/2019 – MESRI



L'équipe PCN TIC

| | | |
|---|--|--|
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ICT-36-2020: Disruptive photonics technologies

Deadline 22/04/2020

Specific Challenge:

The challenge is the development of advanced photonics technologies which have the potential to revolutionise an existing application sector or to create completely new applications and markets.

Theme/Sub-Topic: Research and Innovation Actions (RIA)

ii. **Light to Fuel:** Development of photonics devices at TRL level 5-6 for the direct and efficient (>5%) **conversion of solar energy into chemical fuel**. Actions may also include R&D into catalyst development and disruptive material and device concepts where appropriate. Actions should demonstrate technical and economic feasibility.

| Topic | Themes/Sub-Topics | Global budget allocation M€ 4750 |
|-------------|-------------------|-----------------------------------|
| ICT-36-2020 | ii. Light to Fuel | 3 to 6 M€ available /per proposal |



ICT-37-2020: Advancing photonics technologies and application driven photonics components and the innovation ecosystem

22/04/2020

AAP → A analyser
= Use-case
« reducing energy consumption »

Specific Challenge:

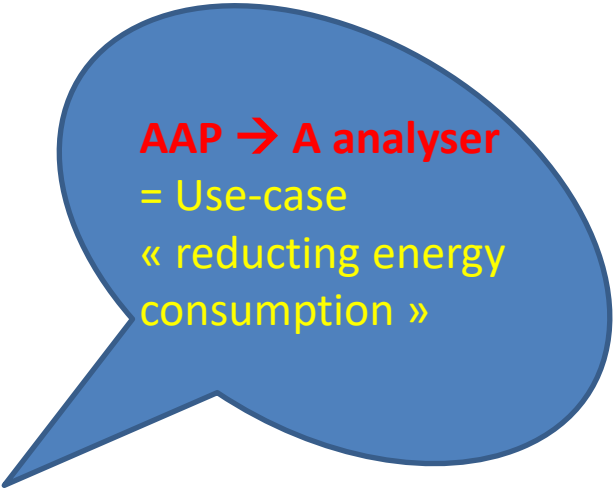
The advancement of photonics depends on core photonics technology which can be applied in many different application areas. The challenge is to develop and apply core photonics technology for the next generation of devices (including components, modules and subsystems) in order to drive innovation in key application areas, which are significant current or future markets and where photonics can bring a key competitive advantage. Innovative photonic sensing solutions can contribute to reducing food production losses and food wastes, estimated in Europe at about 300 kg per capita, and to increasing food safety for the end consumer along the food production chain from farm to fork.

Theme/Sub-Topic: Research and Innovation Actions (RIA)

ii. **Novel Photonics Integrated Circuit (PIC) Technology building blocks:** Major advances in photonic integrated circuit technology through the development of building blocks with significantly enhanced or novel functions. **These should form part of comprehensive integration platforms for established or new important application fields, enabling the platform to meet the demands of application roadmaps concerning relevant features like sensitivity, energy efficiency, speed and chip density.** Developments should be based on a generic platform approach, i.e. support the single-chip integration of complex functions through a design flow based on generic building blocks separated from production. Actions should include a validation of results with fabricated PIC prototypes.



ICT-50-2020: Software Technologies



AAP → A analyser
= Use-case
« reducing energy
consumption »

Specific Challenge:

The increased complexity of present and emerging ICT systems poses several challenges at software and hardware level including new requirements in terms of integration and cybersecurity. Users require seamless connectivity, abundant computing power and unlimited access to data independently of the underlying infrastructure. Increased levels of adaptability is becoming more and more essential in modern ICT systems in order to manage the needs of highly complex and dynamic environments pushing for continued development and operation (DevOps). Increasing trust, security, reliability while **keeping system performance** and **reducing energy consumption** has become non trivial, in a world where billions of devices processing zettabytes of data have to be managed and increased transparency in algorithmic decision making is required.



ICT-54-2020: Blockchain for the Next Generation Internet

Deadline 16/01/2020

Specific Challenge:

The Next Generation Internet initiative aims at developing a more humancentric Internet supporting values of openness, decentralisation, inclusiveness and protection of privacy and giving the control back to the end-users, in particular of their data. It should provide more transparent and accessible services, more intelligence, greater involvement and participation, leading towards an Internet that is a true engine of growth and social progress. Blockchain and distributed ledger technologies (DLT) have the potential to enable more decentralised, trusted, user-centric digital services, and stimulate new business models benefiting society and the economy as stressed by the European Parliament resolution on the topic. The challenge is the development of advanced photonics technologies which have the potential to revolutionise an existing application sector or to create completely new applications and markets.

Theme/Sub-Topic: Research and Innovation Actions (RIA)

i. Advancing research on Blockchain and Distributed Ledger Technologies: Conducting research, proofs of concepts, piloting, testing and benchmarks to improve and further develop advanced blockchain technologies, for example regarding **energy efficiency and sustainability**, consensus protocols, a priori usage control, scalability and throughput, security, privacy, robustness, interoperability, cryptography, smart contracts, governance, compliance to regulatory frameworks. This action should contribute to standardisation activities.

| Topic | Themes/Sub-Topics | Global budget allocation M€ 20 |
|-------------|---|-----------------------------------|
| ICT-54-2020 | i. Advancing research on Blockchain and Distributed Ledger Technologies | 8 M€ available /per proposal |



ICT-56-2020: Next Generation Internet of Things

AAP → A analyser
= Use-case
« reducing energy consumption »

Scope: to develop and demonstrate novel IoT concepts and solutions to underpin the NGI vision and make provision for predicting future events, trigger actions and moving decisions to the point of interest in order to better serve the end-user

Theme/Sub-Topic: Research and Innovation Actions (RIA)

Proposals must provide reference implementations in terms of a dynamically configured infrastructure and integration schemes for smart devices into self-adaptive, robust, safe, intuitive, secure and interconnected smart network and service platforms.

Reference implementations should include proof-of-concept, demonstrations and validation, driven by realistic use cases with advanced needs in areas such as wearables, transportation, agriculture, homes, health, **energy**, and manufacturing.



FUTURE & EMERGING TECHNOLOGIES – FET Open

Towards the next Framework Programme for Research and Innovation European:
Innovation Council (EIC) pilot “Pathfinder”

Qu'est-ce que c'est ?

- Eligible à tous les domaines technologiques
- (RIA) Recherche interdisciplinaire de pointe à haut risque et à fort impact
- Critères de notation : Excellence 60, Impact 20, Implémentation 20 sur un total de 100
- Durée du projet : jusqu'à 36 mois
- Consortium : 3 à 5 entités issues d'au moins 3 pays membres de H2020 ou associés

Quels financements ?

- Taux de financement similaire aux taux H2020 : **100 % (tous participants)**
- Subvention jusqu'à **3 M€** par projet

Quand candidater ?

- 1 cut-off 2020 (Allocation budget global M€ 135)
- **Clôture 2020** : 13 Mai



Les Principaux Appels à Projets Européens dédiés aux PME



INSTRUMENT PME

Towards the next Framework Programme for Research and Innovation : European Innovation Council (EIC) pilot “Accelerator”

Qu'est-ce que c'est ?

- **Cible : PME très innovante souhaitant s'internationaliser**
- 3 phases indépendantes : étude de faisabilité / prototypage / soutien à la commercialisation
- Financement exclusif des **phases de GO TO MARKET à hauteur de 70%** (sauf exception: santé 100%)
- Possibilité de se présenter **seul ou en consortium**
- **Lien : <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/eic-smeinst-2018-2020.html>**

Quel financement ?

- *Phase 2* : démonstration d'un potentiel commercial. Durée : **1 à 2 ans**, subvention de **0,5 à 2,5 M€**
- *Phase 3* : (**uniquement suite à une phase 2**) lancement sur le marché, pas de financement direct mais **coaching et soutien pour l'accès à du capital-risque** par des experts du réseau EEN – Enterprise Europe Network

Quand candidater ?

- **Clôtures 2020 : 4 Cut-off en phase 2**
- **Phase 2** : 8 janvier / 18 mars / 19 mai / 7 octobre



FAST TRACK TO INNOVATION

Towards the next Framework Programme for Research and Innovation : European Innovation Council (EIC) pilot “Accelerator”

Qu’est-ce que c’est ?

- Eligible à tous les domaines technologiques
- **Approche « bottom-up »** : pas de thématiques imposées
- Phase de développement de 1 à 2 ans
- **Commercialisation rapide : dans les 3 ans suivant le début du projet**
- Consortium : 3 à 5 entités issues d’au moins 3 pays membres de H2020 ou associés

Quels financements ?

- Taux de financement similaire aux taux H2020 : **70% pour les entreprises**
- **Composante industrielle primordiale** : les industriels doivent composer plus de la moitié des partenaires, ou bénéficier d’au moins 60% du budget
- Subvention de **1 à 3 M€** par projet
- Délai de paiement réduit à 6 mois.

Quand candidater ?

- 3 cut-off par an
- **Clôtures 2020** : 19 février / 9 juin / 27 octobre

Qu'est-ce que c'est ?

- Cible: PME innovante à fort potentiel de croissance investissant dans la R&D (**10% CA ou effectifs dédiés à la R&D**)
- **Approche « bottom-up »** : **tous domaines technologiques**, produits, procédés et les services clairement orientés marché
- **Consortium : 2 partenaires minimum** issus de 2 pays membres d'Eurostars
- Phase de développement **de 3 ans maximum**
- Commercialisation **dans les 2 ans suivant la fin du projet**
- Lien : <https://www.eurostars-eureka.eu/>

Quels financements ?

- **40% pour les R&D Performing SME porteuses du projet (Notion européenne = 250 salariés)**
- 40 % plafonnés à 100 000€ pour les laboratoires et universités
- **30% pour les PME partenaires** et les entreprises entre 250 et 2000 salariés
- Financement décentralisé : géré en France par Bpifrance

Quand candidater ?

- 2 appels à propositions par an
- **Clôtures 2020 : dates non fixées (prévoir fin février et mi-septembre)**



Merci de votre attention

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