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03/03/2022

Joint call for proposals for Franco-German innovation projects on “Private 5G Networks for the Industry”

Coordinated jointly by Bpifrance, Banque Publique d'Investissement and DLR Project Management Agency

Opening Date: 03/03/2022

Closing Date: 14/06/2022 at 12pm (noon)

Closing Date for Expressions of Interest (voluntary) 08/04/2022

Link to the call on the websites:

[France] : <https://www.bpifrance.fr/nos-appels-a-projets-concours/appel-a-projets-conjoint-entre-la-france-et-lallemagne-pour-des-projets-sur-les-reseaux-privés-5g-pour-lindustrie>

and

[Germany]:

https://www.digitaletechnologien.de/DT/Navigation/DE/Foerderungaufufe/InternationaleKooperationen/intern_kooperationen.html

Contacts:

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and

[Germany]: Dr. André Bergmann at DLR-PT, int-kooperationsprojekte-PT@dlr.de

1 - Context

As laid down in the Treaty of Aachen¹ and in the Franco-German Dialogue on Technology (October 13, 2020)², France and Germany committed to strengthen their collaborations notably on 5G.

This commitment was materialized by a first joint call for proposals launched for “Franco-German innovation projects on technical developments and application ecosystems for private 5G networks”. The call for proposals was launched in May 2021 and closed in September 2021. 4 projects were selected, and 34 French and German entities are supported.

This call for projects follows the previous Franco-German call for proposals. The scope is modified to target 5G industrial applications.

[France]

France has launched its national strategy on 5G and future telecommunications networks in July 2021. France commits to mobilise 480 million euros of public funding to support priority projects by 2022 and up to 735 million euros by 2025. The objective of the strategy is to strengthen the 5G/6G technological and industrial ecosystems via 4 axes: (1) to accelerate the development of 5G uses (2) to develop French and European solutions that guarantee our sovereignty over telecom networks (3) to support cutting-edge R&D and (4) to reinforce the education and training programmes on future telecoms networks.

Under the first axis, the French government launched a dedicated “Mission on Industrial 5G” to identify concrete actions to accelerate the deployment of 5G use cases in the French industry through a large consultation of the French and German ecosystem.

¹ <https://www.elysee.fr/emmanuel-macron/traite-franco-allemand-aix-la-chapelle>

² <https://www.elysee.fr/emmanuel-macron/2020/10/13/dialogue-franco-allemand-sur-la-technologie>

The present call for projects is aligned with the objectives 1) and 2) of the French strategy on 5G and future telecommunications networks and the recommendations of the “Mission on Industrial 5G”.

[Germany]

As described in the Economic stimulus package, Article 45, Germany intends to play a leading role as a technology provider in future communications technologies 5G and, in the long term, 6G. Germany wants to facilitate market entry for innovative network technologies and to promote the rapid development and implementation of open standards at European level.

This call for proposals is complementary to the already launched funding program for 5G campus networks (“CampusOS”³) which aims at promoting developments for private 5G networks in the German industry. For a broad impact of the deployment and integration of 5G solutions, the ecosystem for providers of 5G communication technologies shall be extended on the basis of mutual synergies through this call.

The planned cooperation aims to develop innovative solutions for 5G private networks. The common political goal of France and Germany is to foster the European sovereignty in this area and to strengthen a lively 5G ecosystem of European partners. 5G private networks will contribute to increase productivity and contribute to the implementation and use of flexible and sustainable solutions in the industry.

2 - Rationale

The performance introduced by 5G can be a key factor of competitiveness for the industry in France and Germany. 5G allows the connection of a very large number of objects and the massive transfer of information. These features find concrete applications in industry: 5G is an opportunity to enhance production and logistics efficiency, workers’ safety, and to allow the generalisation of predictive maintenance. Other communications protocols such as Wifi, LoRaWAN, or LTE do not allow the same level of performance of 5G in terms of throughput, latency or reliability. Therefore, 5G and its effective adoption is a crucial issue for the conversion of French and German industries to “industry 4.0”. The market outlook is important: a recent study estimated the impact of 5G in terms of additional revenue for the European manufacturing sector at up to 458 billion euros⁴.

However, the adoption of 5G is still slow in Europe as compared to other geographies. Several factors can explain the low penetration rate of 5G among European companies: uncertainties regarding the use cases enabled by 5G, security issues, and the associated business models could be obstacles. Hence, there is a need for industrial players to harness the technology. In addition to public 5G-based networks, private networks are expected to enable the development of specific uses for the industrial field.

France and Germany have important industrial capacities. The industrial relationship between the two countries will be a favourable ground for accelerating 5G deployment and adoption.

3 - Objectives and main features

3.1 Objectives

The Franco-German joint call for projects on industrial 5G has two intertwined objectives:

- Encourage French and German industrial companies to deploy use cases for 5G private networks and adopt the technology within their factories;
- Encourage the development of French and German 5G solutions for the manufacturing sector. These solutions cover all telecoms network equipment (RAN, core, devices...) and services (integration, data management and security...).

This call for projects aims to support collaborative projects of significant scale, allowing the creation of value on a French and German scale. The projects must go beyond the current state of the art and must demonstrate meaningful approaches for the development, implementation, testing and evaluation of innovative products,

³ https://www.digitale-technologien.de/DT/Navigation/DE/Foerderung/5G_CampusOS/5g_campus_os.html

⁴ Accenture, The Impact of 5G on the European Economy, February 2021. Available at: <https://www.accenture.com/acnmedia/PDF-144/Accenture-5G-WP-EU-Feb26.pdf>

technological processes or services on an industrial scale. The solutions implemented by the projects should be based on available standards and meet industry safety and security requirements.

Only multi-partner projects will be considered.

The aim of the call is to promote the flexible use of 5G network components from Germany, France and Europe and to strengthen a lively ecosystem of providers.

3.2 Expected projects

3.2.1 Nature of the consortium

The projects should be carried out by a consortium with a "lead" company that brings together industrial partners and/or research partners. Research institutions and technical centres cannot be project leaders.

- The project leader is an industrial company with a need for 5G connectivity that will be used to deploy 5G use cases within the project;
- Consortiums shall include at least one telecom actor and/or appropriate technological partners for the deployment of the 5G use cases.
- An applied research institution, a technical center or a university from either Germany or France should support the project with scientific and technical know-how.

The consortium should involve partners from Germany and France. Several scenarios can be considered: (i) the project is led by an industrial company with factories both in Germany and in France, (ii) the project is led by an industrial company only located in France or in Germany but the consortium involves technological partners from the other country or (iii) the consortium involves two independent industrial companies each located in one of the two countries (the project in this case is managed jointly).

All activities must be carried out in France and/or in Germany.

The projects are encouraged to cooperate closely with the existing main project or demonstration projects of the first call of the program and with national initiatives in both countries.

3.2.2 Nature of the project

The project should focus on the deployment of at least one 5G use case in an industrial context and the design and deployment of the adapted telecom infrastructures. The focus is on managing and running private 5G networks operated by the industry partner or its service provider. The project can be an experimentation, and the use case shall be deployed in a factory or a similar production site. The end-user should demonstrate the ambition to scale up the experimentation after the project.

The projects must:

- Address a concrete need for connectivity expressed by a French and/or a German industrial company. The need for connectivity as well as the associated technological challenges should be clearly detailed;
- Contribute to the development of a European solution in terms of telecoms networks for industry 4.0: the end-to-end 5G infrastructure must be provided by European companies⁵;
- Contribute to the development of business cases and sustainable business models on 5G for industry;
- Detail the degree of technological innovation with respect to the state of the art and the competitors;
- Specify the economic, social and environmental impacts of the work undertaken and the possible contributions in terms of intellectual property.
- Contribute to the exchange of best practices on results and challenges within the Franco-German ecosystem in deploying 5G private networks⁶

Involving SMEs from both countries will be at an advantage in the evaluation process.

The projects could rely on the developments from the projects supported within the first Franco-German joint call for proposal, the French national strategy or German initiatives.

⁵ A European company is understood as a company whose headquarters are located in a country of the European Union.

⁶ <https://presse.economie.gouv.fr/1923-la-france-et-lallemagne-soutiennent-conjointement-4-projets-collaboratifs-sur-les-applications-5g-pour-les-reseaux-privés/>

4 - Eligibility criteria

The project proposal must fulfil the eligibility criteria common to the two funding agencies, as well as the criteria specific to each agency⁷. Project proposals that do not meet the eligibility criteria, whether common to the two agencies or unique to each, cannot be funded.

- The project proposal should be in conformity with the criteria regarding the nature of the consortium as described in 3.2.1.
- The project proposal should provide an answer to the challenges identified in 3.2.2.
- The project proposal must be submitted by the deadline by a binational consortium
- Each of the two agencies must receive a complete application.
- The project must be scheduled to run for up to 3 years.
- No company of the consortium may be in difficulty within the meaning of the European Regulation (AGVO (EC) no. 651/2014, article 2 paragraph 18, 17 June 2014).
- The project proposal must present a budget that has not already benefited from funding from the respective State, the territorial authorities, the European Union or their agencies, outside this call.
- The project proposal must list the related R&D projects led by each partner and supported by a public authority (national, local or European), specifying the budgets of the R&D programmes and the amount received in grants so that the financial capacity of the partners to conduct the project can be evaluated.
- Each consortium member must provide a letter of intent to collaborate within the consortium.
- Funding recipients cannot be partners outside of Germany and France, but partners from other EU Member States can also contribute as associated partners (non-funded partners).
- The project must have a significant size (budget above 1 M€) in each country. The total budget should be above 2 M€.

5 - Evaluation

A Panel of Experts (PoE) will evaluate each eligible proposal. They will then make recommendations to the funding agencies. Members of the Panel of Experts (PoE) cannot be involved in any way in the project proposals submitted in response to the call. Common evaluation criteria are:

- **Idea, level of innovation and added value of the project** (innovative content and originality of the approach, scientific and technical quality);
- **Compliance with the programme scope, capability of running activities on the national level of both countries;**
- **Strategic nature for France and Germany** (level of impact, strategic nature of the project for the leading partner, ability for SMEs to integrate new technologies);
- **Feasibility** (technical feasibility, management of technical and economic risks);
- **Quality of the consortium** (completeness, complementarity and suitability of the consortium);
- **Market and application potential** (quality of the use case concept, including presentation of the economic potential, market positioning and commercial feasibility, contribution to enhancing the innovative strength of companies).
- **Social impact** (short-term creation of activity and jobs for each of the partners).
- **Environmental conditions** (projects should demonstrate how objectives and measures of the project related to climate and environmental protection are considered).
- **Contribution in terms of intellectual property** (considering the issue of the protection of scientific and technical potential).
- **Contribution to the advancement of a sovereign solution on telecommunications networks.**

6 - Process of selection and funding

6.1 Selection process

The process will encompass the following steps (see “8- Schedule”):

- Step 1: French and German **industrial companies** will be invited to express their interests with a short presentation of their objectives and needs in terms of cooperation and technical support for the deployment of 5G use cases. Those industrial companies will be invited to a matchmaking event to pitch their objectives to solutions providers, which will also be invited to the event.

⁷ The specific national eligibility criteria of Germany can be downloaded [here](#): (« Förderrahmen »)

Industrial companies that did not participate at the matchmaking event will still have the opportunity to submit a project.

- Step 2: Industrial companies and solutions providers will be invited to form a consortia and provide a technical project proposal in written form (“overall description”; a template will be provided). Industrial companies will act as project leaders, and solutions providers as project partners.
- Step 3: On the basis of the overall project description, promising proposals will be invited to an expert hearing as a basis for the project selection. Subsequently, the selected Franco-German consortia are requested to submit more application material needed for the approval of the project (including documents for individual participation of the partners in the project/administrative forms).

Interested parties from Germany and France can submit their Expression of Interest (Eoi) in English to: int-kooperationsprojekte-pt@dlr.de and strategie-acceleration-5g.dge@finances.gouv.fr. To your support, a form for the Eoi is provided via the websites mentioned above.

The overall project description must be provided jointly in English. In addition, German partners have to provide the description of their individual participation in the project (“Teilvorhabensbeschreibung” - TVB, in German) as well as a formal grant application (AZA/AZK). For French partners, the project proposal application is required (“Dossier de candidature détaillé”). Administrative forms should be submitted in the respective national language. Projects can only be funded if both funding authorities agree on funding.

The project proposals are evaluated according to the evaluation criteria (see 5) and the best will be selected with the involvement of independent experts, followed by a funding decision.

6.2 Quality assessment

Depending on the quality of the proposals (overall description) received, the intention is to select a set of projects for funding and to cover all intended industrial application areas. According to the national funding framework, projects should be binational with a total of up to five partners (per country). Approval of grant applications is subject to the budgetary situation in both Germany and France. The German budget 2022 has to be approved by parliament in mid-2022.

7 - Further requirements

Each partner reports to his/her respective funding agency in accordance with specific national rules. A final report is requested in order to collect the results and impacts of funded projects. This report is to be written in English. Kick-off and final review meetings of all funded projects will be organised by the consortium leaders in cooperation with the project management agencies. The participation of each consortium at cross-project meetings is mandatory and funds should be budgeted for this.

8 - Financial contributions:

The intended cumulated funding budget is of €19 million in France and Germany.

9 - Schedule

- Publication of the call: **03.03.2022**
- Deadline for submission of expression of interests of industrial companies: **08.04.2022**
- Matchmaking event: **21.04.2022**
- Deadline for submission of “overall project descriptions” **14.06.2022**
- Hearings of pre-selected projects: **04.07.2022**
- Deadline for submission of further documents for approval in Germany (TVB, AZA/AZK): **22.07.2022**
- Deadline for submission of further documents for approval in France (Dossier de candidature détaillé): **06.09.2022**
- Funding notice and start of projects: **November 2022**