Royal Higher Institute for Defence

Next Generation Combat Aircraft Technologies Research and Development – Call for proposals (2024)

Information document including submission and evaluation guidelines and budget rules

Important dates:
Information session: 7 May 2024 from 13h30 to 17h00
Deadline Expressions of interest: 7 June 2024 at 14h00
Deadline Full proposals: 25 September 2024 at 14h00

For more information on the programme, please visit https://www.belspo.be/defra

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1. SCIENTIFIC AND TECHNOLOGICAL RESEARCH OF THE MINISTRY OF DEFENCE

1.1. CONTEXT

Belgium acknowledges the need for developing and consolidating a performant Belgian Defence Technological and Industrial Base (BDTIB) within the European framework.

The Belgian Defence, Industry and Research Strategy (DIRS) is more relevant than ever and is in line with the Treaty of Versailles, the ambitions of the EU Strategic Compass for Security and Defence and the policy orientations set out in the National Security Strategy, but also with the updated EU industrial strategy, the federal government's projects within the framework of the European Recovery and Resilience Facility and the regional recovery plans.

The Belgian Defence, Industry and Research Strategy aims at developing and consolidating a Belgian Defence Technological and Industrial Base that:
- contributes to supporting the national security and defence policy and strengthening the EU's open strategic autonomy;
- positions Belgium as a relevant, reliable and competitive technological partner in European and trans-Atlantic capability development;
- guarantees the degree of national autonomy required in critical fields as regards scientific research, technological expertise and industrial capacity;
- generates the necessary economic and social return in the form of knowledge, technology, and employment.

The DIRS seeks to establish robust defence related and dual-use value chains that reinforce the defence related technological and industrial base, advance military capabilities while boosting the economic and social landscape.

One effective approach to create value chains is to invest upstream and for the long term through participation in multinational capability development programmes at European and trans-Atlantic level.

Recognizing the importance of air combat capabilities in the context of fostering a European strategic autonomy and considering the strong position of the BDTIB in the aeronautical sector, Belgium has prioritized investment in Next Generation Combat Aircraft Technologies as one of its 15 strategic technological domains under DIRS.

In alignment with this strategy, the Belgian Government is exploring to participate in the German, French, Spanish Next Generation Weapon System / Future Air Combat System (NGWS/FCAS) development programme.

To effectively position the BDTIB for these collaborative development opportunities the Royal Higher Institute for Defence (RHID), in cooperation with the Belgian Science Policy Office (BELSPO), launches a thematic call for research and development proposals in the field of Next Generation Combat Air Technologies (NGCAT).

This thematic NGCAT call aims to provide Belgian industrial stakeholders, in collaboration with academic institutions and small innovative companies, the opportunity to deepen the fundamental and technological knowledge base, to explore and develop technologies that could add value to the development of next-generation air combat capabilities in general, and to the German, French, and Spanish NGWS/FCAS programme in particular.

1.2. ROLE OF THE ROYAL HIGHER INSTITUTE FOR DEFENCE - RHID

The Royal Higher Institute for Defence (RHID) is the main actor for the development and implementation of the Belgian Defence, Industry and Research Strategy (DIRS).

Within this context the RHID is responsible for the definition of the Belgian Research, Development and Innovation policy and its implementation acting as "smart hub" and "honest broker".

More information on the institute and its activities can be found on the website: https://www.defence-institute.be/en/accueil-english/.

1.3. COLLABORATION WITH THE BELGIAN FEDERAL SCIENCE POLICY - BELSPO

For organising and managing the calls for proposals in the frame of the Defence-related Research Action (DEFRA), a long-term collaboration agreement has been signed on 13 December 2021 between the Ministry of Defence and the Federal Science Policy (BELSPO). BELSPO will manage these calls for proposals on behalf of the Ministry of Defence. For the selected projects, funding is granted by, and contracts will be concluded with the Ministry of Defence.

1.4. OBJECTIVES OF THE DEFENCE-RELATED RESEARCH ACTION – DEFRA

Through the funding of research projects based on scientific excellence, the DEFRA programme allows meeting the scientific knowledge needs of the Belgian Defence.

The general objectives of the programme are the following:

- Support and strengthen scientific excellence.
- Develop and realise a critical research mass on themes considered to be a priority for Belgian Defence in order to:
  - contribute to short- and long-term capacity development, in line with the Integrated Capability Development Plan (ICDP) and the Strategic Vision for Defence.
  - contribute to the culture of innovation planned within Defence, both in terms of technology and process improvement.
  - foster employment for Defence.
  - contribute, in accordance with the Defence, Industry and Research Strategy (DIRS), to the development of a competitive and credible national industrial and technological base in the field of security and defence.
- Encourage the participation of highly qualified Belgian research institutes and industry in Defence and security related research activities.
- Promote systemic, multidisciplinary/interdisciplinary and integrative approaches.
- Strengthen transdisciplinary research in order to enable potential users to make better use of the research achievements.

1.5. THE NGCAT R&D CALL WITHIN DEFRA

This thematic NGCAT call perfectly fits in the Defence-related Research Action (DEFRA) approach while it aims to give the Belgian industry, in collaboration with knowledge institutions and small innovative companies, the

opportunity to deepen the fundamental and technological knowledge base[1], to explore and develop technologies that could be of added value for the next generation of air combat capabilities in general, and for the German-French-Spanish NGWS/FCAS development programme in particular.

2. THEMATIC NGCAT CALL INFORMATION

2.1. DOCUMENTATION RELATED TO THIS CALL

2.1.1. DEFRA WEBSITE

The following documents are available on the **DEFRA website** (https://www.belspo.be/defra):

● Information document, including submission and evaluation guidelines and budget rules: general information on the programme and the call, overview proposal content and corresponding evaluation criteria for the applicants and the evaluators (the present document)
● Evaluation matrix for full proposals: overview of the evaluation ratings for the full proposals
● Platform Submission guidelines: information for the applicants on the use of the submission platform
● FAQ
● Full Proposal structure (pdf - word-file available on online platform)
● Annexe II – general conditions applicable to the NGCAT 2024 contract

2.1.2. NGCAT SUBMISSION PLATFORM

It is compulsory to use the **NGCAT online SUBMISSION platform** (https://ngcat.belspo.be) to submit the Expression of Interest as well as the Full proposal.

The information for the Expression of Interest must be completed directly in the platform and the extracts of the UBO register must be uploaded.

For the full proposal phase, the following templates will be made available on the NGCAT online SUBMISSION platform and must be used compulsorily. Applicants must log in to the platform in order to access them:

• Full Proposal template (Word file)
• Gantt chart (Excel file)
• Budget file (Excel file)

2.1.3. INFORMATION SESSION

To inform potential applicants about the context, scope and modalities of this call, a physical information session will be held on **7 May 2024 from 13h30 to 17h00 at the Royal Military Academy.**

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[1] This term is to be interpreted in a broad context, encompassing the foundational theories, principles, skills, and tools that are essential for understanding and advancing technology. It integrates both the fundamental knowledge base with its theoretical foundations, principles and concepts to provide a framework for understanding how things work and the applied knowledge referring to the practical application (design, build and maintain) as well as the associated technical skills and competencies required.

Registration prior to the event is required.

More details are announced through the **DEFRA-website** and the website of the RHID as well as through social media.

2.2. INDICATIVE CALENDAR OF THE CALL

	Date	At / via
Information session	7 May 2024 from 13h30 to 17h00	RMA, building I, meeting room Frank De Winne
Deadline Expression of Interest	7 June 2024 at 14h00	Online submission platform
Communication of eligibility check	28 June 2024	Mail
Deadline Full proposals	25 September 2024 at 14h00	Online submission platform
Remote evaluation	1 October – 30 October 2024	Online evaluation platform
Consensus reporting	4 November – 15 November	Online evaluation platform
Feedback to applicants in preparation of panel meeting (consensus reports and questions to applicants)	20 November 2024	Mail
Written feedback by applicants (answers)	29 November 2024	Mail
Experts Committee evaluation, incl. interviews with the applicants	4 December – 20 December 2024	RHID
NGCAT Programme Selection committee	January 2025	RHID
Final selection of proposals by the board of directors of the RHID	February 2025	NA
Communication of results to applicants	February 2025	Mail
Signature of contracts and start of activities	March 2025	Online E-sign platform

2.3. RESEARCH THEMES AND INDICATIVE BUDGET OF THIS CALL

The present call covers the following research themes, with their indicative budget:

	Max TRL	Indicative budget (M€)	
Theme 1 - Structures and associated subsystems	6	12	
Theme 2 - Propulsion and accessories	6	6	
Theme 3 - Communication, cyber, avionics, embedded sensors and networks	6	10	24
Theme 4 - Transversal disruptive enabling technologies	7	8	
TOTAL 60 M€		**36**	**24**

A budget of 60M€ is allocated for this call. Specifically, 36M€ are earmarked for the four themes. The remaining 24M€ will be distributed across the themes in function of the selection of the projects. Budget transfers between the themes are possible.

There is no set maximum budget per project. However, applicants are advised to take into consideration the budget allocated for each theme.

The quantity of projects that will be funded per theme will be determined by the evaluation of the proposals and their respective budgets requests. The intention is to finance several projects under each theme.

Applicants are required to select a single, specific theme for their proposal submission. It is not permissible to submit a similar proposal under a different theme.

2.3.1. THEME 1 - STRUCTURES AND ASSOCIATED SUBSYSTEMS

Next generation aircraft platforms (both next generation fighter and remote carrier types) rely on new technologies such as high-precision manufacturing, smart surfaces technologies, light-weight design and manufacturing techniques.
Complete wing like structures and sections will include the electrification of the actuation system for high-lift and control surfaces, ensuring high-performance, lower weight and increased reliability, with health monitoring for predictive maintenance and self-tests, complexity reduction and Line Replaceable Unit/Modules approach for fast replacement. The aerodynamical surfaces will consider smart surfaces technology, with multi-materials, structural health monitoring and damage-tolerant design.
Innovative approaches for thermal management to ensure the complete temperature control of the equipment and body surface temperature control for reduced IR signature and advanced technologies for structural integration of battery packs and active flow control (to support manoeuvring with reduction of the radar signature) are of interest.

Technology focus areas are:
- Improving low observability (stealth) aspects, including high precision manufacturing techniques;
- Aerodynamical performances;
- Energy efficiency & thermal management;
- Supersonic research related to aerodynamic stability, shock waves and sonic booms;
- Advanced materials and structural designs, such as composites, high strength steels, hybrid and smart materials;
- Internal system layout design;
- External coatings to reduce radar and infrared reflections / emissions;
- Engineering of innovative system sustainment (concept & tooling);
- Electro-mechanical actuators for high-lift control surfaces;
- Increasing European technological autonomy.

2.3.2. THEME 2 – PROPULSION AND ACCESSORIES

Future Integrated Propulsion System will be able to deliver propulsive and non-propulsive energy. For propulsive energy, the challenge is on the one hand to be able to deliver a high thrust for interception missions and on the other hand, to have a low fuel consumption in order to allow endurance flight for loitering missions or extended range for penetration missions. For the non-propulsive energy (mainly electricity produced by electrical generators), the challenge is the ability to deliver variable amount of energy without any impact on the delivery of thrust or the engine's operability.

Hereafter is a short list of the main coming challenges in propulsion and accessories for which the Belgian industry is in a strong position to bring added value:

- Variable cycle engine: allowing alternatively high thrust for interception missions and reduced fuel consumption for long mission;
- Energy consumption: increasing energetic efficiency and decreasing dry weight;
- Test capabilities: be able to test compressors and critical components in altitude conditions, and thrust vectoring and power extraction on ground test facilities;
- Thermal Management: higher compactness and increasing electrification will require improved Heat Exchangers.
- Here are different strains of technology roadmaps for which the Belgian industry is able to bring added value in order to address the challenges defined previously.

Technology focus areas are:

- System architecture & integration modelling;
- Advanced high operability, high efficiency compressors;
- Inspections & repairs advanced technologies;
- Engine thrust vectoring measurement systems;
- Test equipment able to capture electrical power and to reinject it afterwards;
- Thermal management and associated simulation;
- Advanced high compactness, high efficiency heat exchangers;
- Propulsion system miniaturization;
- Electrification and more electrical equipment;
- Increasing European technological autonomy.

2.3.3. THEME 3 – COMMUNICATION, CYBER, AVIONICS, EMBEDDED SENSORS AND NETWORKS

Cloud Combat and C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance) are critical domains in the modern battlefield. In recent years, advances in technology have led to the development of Cloud Combat Platforms, which are designed to enhance the situational awareness and decision-making capabilities of military personnel. These platforms leverage cloud computing, big data, distributed computing, advanced communications, and autonomous and collaborative operations to provide real-time insights and analysis.

In today's interconnected world, the aviation industry is experiencing rapid technological advancements aimed at enhancing efficiency, safety and situational awareness. However, this progress also brings forth a myriad of challenges in fields such as cybersecurity, communication, on-board computing power, big-data management, sensor fusion, visualization technologies etc. In an interconnected environment with multiple manned and unmanned assets, enhanced manned-unmanned teaming is paramount to operational success.

As the boundaries between the digital and physical world blur, the need to prioritize and strengthen cybersecurity in aviation becomes paramount. Next-generation combat aircraft technologies are continuously evolving to meet the increasing demands of modern warfare. Nonetheless, these advancements also introduce new cybersecurity challenges that must be addressed to ensure the safety, reliability, and effectiveness of these systems.

Technology focus areas are:

- Design, development, manufacturing and qualification of avionics, sensors and effectors;
- Integration of systems;
- Large, redundant avionic display devices;
- Airborne computers able to cope with the increased demand for computing power, big data handling etc;

- Information systems and complex computing solutions;
- Airborne and ground communications, including cyber;
- Electro-optical and infrared systems, with focus on miniaturization and cost-reduction;
- Enhanced computer vision;
- Effectors and related technologies;
- Enhanced pilot interfaces and interaction for high performance cockpits;
- Increasing European technological autonomy.

2.3.4. THEME 4 – TRANSVERSAL DISRUPTIVE ENABLING TECHNOLOGIES

Transversal disruptive technologies, such as Artificial Intelligence, Advanced Materials, Internet of Things (IoT), Additive Manufacturing, Energy Management, along with Advanced Modelling, Digital Twins and Digital Threads, Cloud Computing and Big Data Analytics, are revolutionizing all the subdomains of Structures and Subsystems, Propulsion and Accessories, and Communication, Cyber, Avionics, and Networks in the defence and aviation sectors. These technologies enable smarter, more efficient, and secure operations, enhancing everything from design, engineering, manufacturing and in service support and are essential for increasing European technological autonomy.

2.4. PROJECT DURATION

The projects will have a duration of **minimum 24 to maximum 30 months**.

2.5. PROJECT PARTNERS AND PARTNERSHIP

2.5.1. ELIGIBILITY CRITERIA FOR PROJECT PARTNERS

This call is open to Belgian entities from the public and private non-profit research sector as well as economic operators from the private sector.

The following eligibility criteria apply for the project partners:

- from the **public research sector**: all Belgian universities, colleges of higher education, federal scientific institutions, defence research institutes and other public research institutes are eligible partners.

- from the **private non-profit sector:** entities must have relevant operational and/or research activities in Belgium. They must have legal personality and their registered office in Belgium.

- from the **private sector**:
  - have a legal personality and its registered office in Belgium. The legal personality is required when providing the extract of the UBO register with the submission of the Expression of Interest;
  - be actively engaged in relevant operational and/or research and development activities on the Belgian territory;

- hold the intellectual property rights for the R&D activities they are engaged in. This criterion is to ensure that the applicant has the legal right and authority to use and valorise the research and innovations for commercial or non-commercial purposes;
- have fulfilled its obligations to pay its taxes and social security contributions at the moment of signing the contract.

Every applicant must either already hold a **security clearance** or apply for one to the National Security Authority. Applicants without security clearance can receive, upon a positive security verification by RHID, "a need to know" document required to initiate the security clearance application with the National Security Authority. If the applicant requires such "need to know" document he has to tick the appropriate box in the online submission platform with the submission of the Expression of Interest.

As foreseen in the law of 18 September 2017, **companies, a(i)sbl and foundations** must have submitted accurate and current information on their beneficial owners to the UBO (Ultimate Beneficial Owner) register of the FPS Finances. **The delivery of an extract of the UBO register is a formal requirement for a valid application for the call and shall be provided together with the Expression of Interest.**

The security clearance information and the extract of the UBO register are submitted to the General Intelligence and Security Service (GISS) which will examine them in accordance with its missions and legal powers as defined in the law of November 30, 1998 governing intelligence and security services. The security screening from the GISS is binding and a negative evaluation will result in the non-eligibility of the concerned project partner.

The project partnership must be in a triple helix framework where research institutes and two or more economic operators from the private sector work together. For partnership eligibility criteria see section 2.5.2.

2.5.2. THE PARTNERSHIP

For all themes, proposals must be submitted by a **network** composed of **at least 4 partners bringing value to the project:**
- **at least one research institute** (public or private non-profit),
- **at least one innovative small private company**,
- **at least one large or midsize private company**.

The total budget allocated to research entities and small private companies is at least 30% of the proposed project cost.

Belgian Defence research institutes (Royal Military Academy (RMA), Military Hospital Queen Astrid (MHQA) and the Defence Laboratories (DLD)) can be a partner in the network. It is not mandatory to have one of these institutes as a partner. Their involvement will not impact the evaluation outcome positively or negatively (no bonus effect).
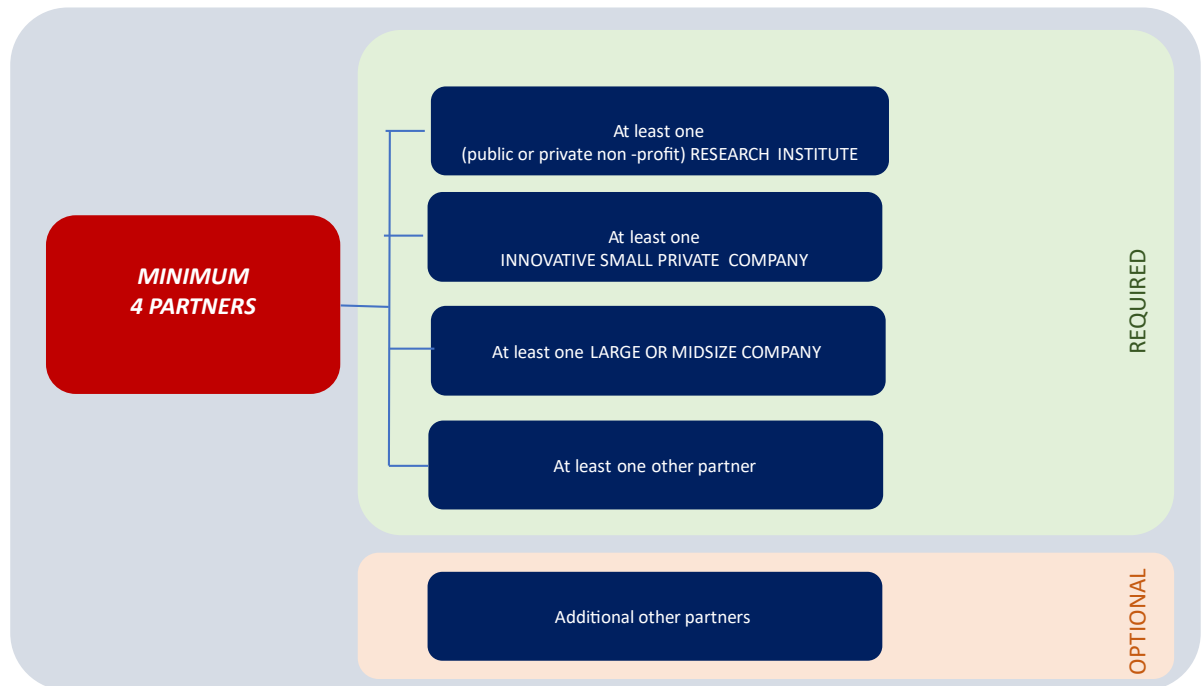
2.5.3. ROLES AND RESPONSIBILITIES WITHIN THE PROJECT

Project partners all have obligations and responsibilities during the implementation of the project. The project should be fairly balanced, even if different partners may have different tasks and subsequently different budgets.

Each proposal requires the appointment of **a Coordinator** for the network, and this role can be assumed by any partner within the network.

For each project, a Project **Steering Committee** shall be established at the start of the project to act as the governing body (see section 5.3.).

ROLE OF THE COORDINATOR

The coordinator is responsible for the overall project management and coordination. He/she shall:

● Coordinate all activities to be carried out in the framework of the project.
● Submit any information or request for permission on behalf of the network, including requests for amendments to the contract to Belgian Defence.
● Liaise between the network and the Belgian Defence.
● Organise the internal meetings between the network partners.
● Organise and chair all meetings of the Project Steering Committee, unless decided otherwise by the Project Steering Committee.
● Coordinate the production of the required project reports intended for Belgian Defence as described in section 5.4.
● Inform the Project Steering Committee and the RHID of any problems that might hinder the implementation of the project.
● Be responsible for budget management and management of financial resources.

SUBCONTRACTORS

The project may require specific or punctual expertise, which can be delivered in the form of **subcontracting**. It is the responsibility of the project team to ensure that the rules and practices of the subcontractor, and in particular the ownership and valorisation of research results, publications and communications, are compatible with the rules governing the call. The project team takes full responsibility for the final result of the subcontracted work.

2.6. RESEARCH ETHICS

The first code of ethics for scientific research in Belgium was drawn up in 2009 (see http://www.belspo.be/belspo/organisation/publ/pub_ostc/Eth_code/ethcode_en.pdf).

The "Code of Ethics for Scientific Research in Belgium" is a joint initiative of the Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique, the Académie Royale de Médecine de Belgique, the Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten and the Koninklijke Academie voor Geneeskunde van België, with the support of BELSPO.

All projects must take this code of ethics into account in their research. If applicable, **it is the responsibility of the applicants to consult the relevant Ethical Board for their organisation before submitting a proposal.**

2.7. PROJECT BUDGET RULES

A cost template (budget file) is available on the online submission platform and must be completed with all details about the budget that is needed for the project.

The project budget is reserved exclusively for the project activities. The different categories of expenditure financed by Defence are:

Staff: Pre-tax wages associated with increases in the cost of living, employers' social security and statutory insurance contributions, as well as any other compensation or allowance due by law and secondary to the salary itself. Defence does not allow cumulative wages for staff. Staff members bound contractually to a public institution - full time or part time - cannot apply for him/herself for Defence staff budget for that part.

The RHID only accepts staff to be hired under a labour contract. Tax-free doctoral or post-doctoral scholarships are not accepted.

General operating costs: this includes daily/usual supplies and products for the laboratory, workshop and office, documentation, consignments, use of daily software and IT facilities, organisation of internal meetings, etc. The general operating budget may not exceed 10% of the overall project staff budget. The amounts claimed must correspond to actual expenditures strictly related to the project, even if supporting documents are not requested. Although no detailed justification is required for these costs, the administration of the concerned partner must keep these invoices in its accounts in the event of an audit.

Specific operating costs: this includes a list of operating costs specific to the execution of the project tasks, such as costs for project analyses, testing, maintenance and repair of equipment purchased by the project, use of specific IT facilities and software, costs for surveys, open data publications, organisation of workshops and events, etc. These costs need to be clearly described in the proposal and each of them shall be justified by invoices during the project.

Overheads: Institutions' general overheads that cover, in one lump sum, administration, telephone, postal, maintenance, heating, lighting, electricity, rent, machine depreciation, and insurance costs. The total amount of this item is set as a fix amount of 10% of the total staff and operating costs.

Equipment: List of investment goods specific to the implementation of the project and to be purchased on the project budget. It concerns the purchase and installation of scientific and technical equipment and instruments, including computer equipment, to be entered in the inventory or assets of the institute/company. Equipment needs to be clearly described in the proposal and shall be justified by invoices.

Subcontracting: Expenses incurred by a third party to carry out project tasks or provide services that require special scientific or technical competences outside the partner's normal area of activity. The amount may not exceed 25% of the total budget allocated to the partner concerned. If the subcontractor is not yet known then only the nature, the planned duration and the estimated amount needs to be indicated in the proposal.

2.8.   STATE AID FOR RESEARCH AND DEVELOPMENT AND INNOVATION

The selected projects are entitled to receive state aid following two complementary approaches:

- State aid according to Commission Regulation on the application of Articles 107 and 108 TFEU[2], and the communication from the Commission on the Framework for State aid for research and development and innovation[3];
- State Aid creating a level playing field for the Belgian entities compared to the other entities already involved NGCAT development programmes[4].

The combination of these two approaches results in a total state aid intensity up to:

	Small enterprise	Medium-sized enterprise	Large enterprise	RTO[5]
Eligible project costs for fundamental research.	100%	100%	100%	100%
Eligible project costs for applied research (industrial research or experimental development up to TRL 6) conducted within the framework of an effective collaboration with at least one SME and a research organization.	100%	90%	85%	100%
The project coordination costs incurred by the project coordinator from an effective collaboration with minimum four entities.	100%	100%	100%	100%

Small, Medium-sized and Large enterprises are defined as in the Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (Text with EEA relevance) (notified under document number C(2003) 1422)[6].

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[2] EUR-Lex - 02013R1407-20231025 - EN - EUR-Lex (europa.eu)
[3] EUR-Lex - 52022XC1028(03) - EN - EUR-Lex (europa.eu)
[4] Following application of the protection of Belgian Essential Security Interests invoking Art 346, 1,b of the TFEU
[5] Research Technology Organisation
[6] EUR-Lex - 32003H0361 - EN - EUR-Lex (europa.eu)

For the definition of fundamental research, industrial research and experimental development the communication of the European Commission on Framework for State Aid for research and development and innovation is used[7].

2.9. GENDER

The RHID strongly encourages the applicants to take into account the equality between women and men and to ensure gender mainstreaming in the implementation of the project. The project should include this both in the choice of the researchers and, where relevant, by integrating the gender dimension into their research.

3. SUBMISSION PROCEDURE

The submission of projects will be done in two phases using the NGCAT on-line submission platform:

https://ngcat.belspo.be

3.1. EXPRESSION OF INTEREST

An **Expression of Interest** (EoI) must be submitted at the latest on 7 June 2024 at 14h00.
An Expression of Interest is the first required step towards introducing a full proposal.
If an EoI has not been submitted in time, it will not be possible to submit a full proposal.

Applicants must submit the Expression of Interest via the online NGCAT submission platform.

The following information needs to be filled in directly into the online platform:

- The choice of the theme;
- The title and acronym of the project;
- The coordinates of the foreseen coordinator and partners; partners that do not have a security clearance need to thick the appropriate check box (see Section 2.5.1.);
- Summary of the project (1/2 page) including a rough order of magnitude estimate of the overall project cost;
- Keywords (min 2; max 6).

Companies, a(i)sbl and foundations must upload the extract of the Ultimate Beneficial Owners Register (UBO) on the online platform.

The Expression of Interest will be used by RHID to check the eligibility of the partners and the partnership and to seek experts for the evaluation of the full proposals.

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7 EUR-Lex - 32003H0361 - EN - EUR-Lex (europa.eu)

3.2. ELIGIBILITY CHECK

The eligibility check shall be done after the reception of the Expression of Interest. The eligibility criteria are:
- The composition of the partnership;
- The eligibility of each of the partners including a security screening as described in section 2.5.1;
- Compliance with the scope of the call;
- Completeness of the Expression of Interest.

> On **28 June 2024**, the applicants will be informed of
> the result of the eligibility check.

Applicants deemed non-eligible are unable to advance further in the process.

3.3. FULL PROPOSAL

Applicants must submit the full proposal via the online NGCAT submission platform.

> The **full proposal** must be submitted at the latest on **25 September 2024 at 14h00.**
> If the full proposal does not comply with the submission rules or has not been submitted in time,
> it will not be taken into account for evaluation.

The objectives of the full proposal may differ somewhat from those of the Expression of Interest. However, the divergence must not be so substantial that it renders the expertise chosen for evaluating the proposal irrelevant. Any alterations in the project partnership, including changes in the participating institutes or companies and the coordination role, require explicit approval from RHID. The keywords must remain consistent, as they are crucial for forming the evaluation panel.

Content of the full proposal:

Within the full proposal form (automatically copied from the Expression of Interest):
- The choice of the theme;
- The title, acronym, key words and summary of the project;
- The name and contact details of the project partners.

As separate files for which the mandatory templates are available on the platform:
- The proposal description:
    - scope and objectives,
    - state of the art and innovative character,
    - relevance and potential impact for the BDTIB and NGCAT, including the data management plan,
    - quality of the partners/partnership of the project,
    - methods and tools used,
    - the work plan: work packages, the project risk assessment.
- The GANTT chart.
- The budget file, to detail all cost categories.

4. EVALUATION PROCEDURE AND CRITERIA

> Only full proposals that are complete and submitted in time will be taken into account.

The selection of proposals is based on a thorough evaluation that ensures both outstanding quality and consistency with the thematic objectives of the call. The evaluation of the full proposals occurs in four steps:

Step 1 - Remote evaluation
Step 2 - Experts Committee (EC) evaluation, including interviews with the applicants
Step 3 - Selection of proposals by the NGCAT programme Selection Committee
Step 4 - Final approval by the Board of Directors of the RHID

STEP 1 - REMOTE EVALUATION

RHID organises and coordinates a thorough evaluation of each proposal. The principles of this evaluation are the same for all themes.

Each of the full proposals will be evaluated by a team of experts having an adequate combined expertise to evaluate the proposal. RHID is responsible for composing this team of experts.

For each proposal, an individual written evaluation is performed. The written evaluation is uploaded via the online NGCAT evaluation platform, based on an evaluation form. During this assessment, the experts will only have access to the proposals they will evaluate. They will not know who the other reviewers are for that proposal, nor will they have access to each other's evaluations.

Each reviewer will assess the proposal and provide comments considering a variety of (sub)criteria, namely in the following categories:

1. Quality of the proposal and efficiency of the implementation
2. Quality and experience of the network
3. Impact

More information about the criteria used can be found in the [evaluation matrix for full proposals.](#)

Once all written evaluations have been introduced for a given proposal, one expert will compile the evaluation reports into a Consensus Report for each proposal. The Consensus Report will consist of appreciations and comments for the different criteria. The report will also include questions to which the applicants must **respond in writing** prior to the presentation to the Experts Committee (EC) (step 2).

At this stage, the Consensus Reports are definitive. They will not be modified in the subsequent steps of the evaluation.

> The individual evaluations are neither communicated to
> the Experts Committees, nor to the applicants.

Applicants will get access to an anonymised version of their definitive Consensus Report, in preparation of the presentation for the Experts Committee. They will also get the list of questions to which they must answer in writing by **29 November 2024**.

STEP 2 – EXPERTS COMMITTEE EVALUATION, INCLUDING INTERVIEWS WITH THE APPLICANTS

Preparation of the Experts Committee (EC) evaluation

BELSPO will convert the outcome of each proposal's evaluation into numeric scores. In practice, this will be done as follows:

1. Convert the appreciations given to each sub-criterion into scores.
2. Adding the scores of the sub-criteria to obtain a total for each criterion.
3. Performing a weighted sum of the criteria in the following way:

WEIGHT OF THE DIFFERENT CRITERIA	ALL THEMES
Quality of the proposal and efficiency of the implementation	50%
Quality and experience of the network	25%
Impact	25%

According to the scores obtained, the proposals will be ranked (Proposal Ranking). This ranking will be used for the Experts Committee panel discussion.

Experts Committee (EC) evaluation

For each theme, an Experts Committee will be established composed of members that are relevant for the theme.
Each EC will receive the corresponding Proposal Rankings, and will have access, via the online NGCAT evaluation platform, to the proposals as well as the anonymised Consensus Reports. The Consensus Reports shall not be modified by the EC. The EC will also receive the written answers of the applicants to the questions that were asked in the Consensus Reports.

Each EC will organise interviews[8] with the applicants of the full proposals with following agenda:

- Presentation by the applicants, including an introduction of the proposal and integrating the answers to the questions of the remote experts (15 minutes).
- Questions and answers (Q&A) (15 minutes).
- Deliberation (10 minutes).

The applicants can only be present for the presentation and Q&A session of their own proposal.

Based on the Consensus Reports, the presentation and Q&A, the Experts Committee will evaluate the proposals considering following elements:

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[8] Physical meeting if possible - online meeting if necessary. Detailed instructions to adequately prepare the panel presentation will be sent separately.

- Quality of the proposal;
- Quality of the partnership;
- The coherence of the proposals with the objectives (scope) of the themes;
- Pairwise comparison of proposals with significant overlaps.

After the interviews, the Experts Committee members will gather in a plenary session to compile for each theme an Experts Committee ranking list with proposals recommended for funding as well as a list of proposal not recommended for funding, these reports are the "Expert Committee funding Scenarios".

STEP 3 - SELECTION PROPOSAL FORMULATED BY THE NGCAT PROGRAMME SELECTION COMMITTEE

The NGCAT Programme Selection Committee will receive the following documents:

- All the Experts Committee Funding Scenarios, including their motivations;
- The full proposal and Consensus Report of each proposal (on demand).

Based on these documents, the NGCAT Programme Selection Committee will perform a selection of the proposals based on following high level criteria :
- Overall efficient use of resources;
- Achieving an as balanced and large field of participants as possible;
- Pairwise comparison of proposals with comparable ranking.

The NGCAT Programme Selection Committee will formulate the Selection Committee Funding Scenario taking into account the following rules:

- Under no circumstances proposals deemed 'out of scope' will be retained.
- Under no circumstances proposals deemed 'not recommended for funding' will be retained.

The NGCAT Programme Selection Committee will submit a Selection Committee Funding Scenario to the Board of directors of the RHID.

STEP 4 - FINAL SELECTION OF PROPOSALS BY THE BOARD OF DIRECTORS OF THE RHID

The final selection decision of proposals to be funded is made by the Board of Directors of the RHID on the basis of the Selection Committee Funding Scenario.

5. CONTRACTUAL OBLIGATIONS FOR SELECTED PROJECTS

5.1. PROJECT STARTING AND END DATE

The projects selected within the context of the current call will start in March 2025.

The project contracts will have a duration of 24 to maximum 30 months (plus 3 months to allow meeting all administrative requirements before the effective start-up of the project).

5.2. CONTRACTS

For the selected proposals, a contract is concluded between Belgian Defence and the funded partners.

The Technical Annex to the contract will be drawn up in consultation between the funded partners of the selected proposals and the Belgian Defence/RHID. Recommendations formulated by the evaluators and the NGCAT Programme Selection Committee will be taken into account when drafting the Technical Annex to the contract.

Adaptations to the original proposal may relate, among other things, to the content of the research, the composition of the project partnership, the budget, the proposals for valorising the research.

Belgian Defence/RHID grants the selected projects the funds required for their implementation. The RHID shall reimburse at most, and up to the amount specified in the granted budget, the actual costs proven by the partners providing these costs are directly related to the implementation of the project.

5.3. COMPOSITION AND ROLE OF THE PROJECT STEERING COMMITTEE

Each project will be accompanied by a **Project Steering Committee**, to be set up at the start of the project. The Project Steering Committee is composed of the coordinator, the project managers of the partners and the programme manager of the RHID.

The Project Steering Committee acts as a governance body, to ensure that the project remains in line with the objectives and adapt the project plan accordingly whenever necessary. It ensures that the project reporting is done in accordance with section 5.4.

The Project Steering Committee should meet at least once a year to discuss the project's progress. The organisation of such meeting must be included in the project work plan and the project budget. Ideally, this(these) meeting(s) should take place in the same period as the delivery of the progress report(s).

The following actions and decisions will be taken by the Project Steering Committee:
● Examine information collected by the Coordinator on the progress of the Project, to assess the compliance of the Project with the Proposal and, if necessary, propose modification of the Proposal.
● Determine the policy for press releases, joint publications and other public disclosures regarding the Project.

- Keep a register of Foreground generated within the Project and patents filed thereon, which is concluded at the end of the Project.
- Examine and approve proposed changes to the work programme. In case of actions with a budgetary impact, the Project Steering Committee will make proposals to the funding authority but cannot decide without the approval of this funding authority.
- If necessary, propose the termination of all or part of the Project.

5.4. REPORTS

The contract foresees the following reports to be submitted to the RHID:

- Initial report: to be submitted within three months after the start of the project.
- Progress report(s): to be submitted according to the specifications in the contract (annex 1, technical specifications).
- Final report: to be submitted three months after the end of the project.
- If deemed useful by the RHID, an additional report may be requested for an external evaluation of the project.
- The RHID can ask for a report or other input at any time during the course of the project in order to provide scientific support to valorisation and service actions related to the programme.

These reports are to be included in the project work plan and the cost of preparing them (including possible translations) must be covered by the project budget.

They should contain all necessary information to assess the progress of the project in relation to the work packages, deliverables and budget. Problems must be identified, including possible solutions.

6. DATA, RESULTS, INTELLECTUAL OWNERSHIP AND SECURITY REQUIREMENTS

6.1. GENERAL CONDITIONS

The Data Management Plan (DMP), to be submitted as part of the proposal, describes how the project partners deal with the collected data before, during and after the project. It is a key element of good data management.

For all aspects regarding the use of data, intellectual ownership and valorisation of the project results and the confidentiality or security requirements, the conditions of the General Conditions (Annex II of the contract and the articles 12, 13 and 14 in particular) apply.

Ownership of existing information and data (the individual background) remains with the original owner.

As a principle, the Foreground - the results (including information) produced by the project - shall be the property of the partner carrying out the work generating this foreground.

The principles for the use of joint foreground will have to be determined by the project partners, with respect for these General Conditions.

6.2. CLASSIFIED INFORMATION/SECURITY RELATED ACTIVITIES

Certain activities undertaken in the frame of the projects may use or generate classified information. This paragraph solely concerns protective measures to be taken to preserve the confidentiality of security-sensitive information regarding research projects under these themes.

A classification is given to documents to prevent their improper use which could damage, among other things, the fulfilment of the tasks of Defence, the external security and international relations of the State and the scientific and economic potential of the country (for the complete list see "Wet van 11 Dec 1998 Art 3/Loi du 11 Déc 199 Art 3").

According to the same law this identification should be based on the following classification levels:

- The "**TRES SECRET/ZEER GEHEIM**" level is assigned to a piece if its improper use could cause EXTREMELY SERIOUS damage to the main Belgian interests listed in the law. Topics that qualify under this category cannot be part of the project.
- The "**SECRET/GEHEIM**" level is assigned to a document if its improper use could cause SERIOUSLY damage to the interests listed in the law.
- The "**CONFIDENTIEL/VERTROUWELIJK**" level is assigned to a document if its improper use could harm any of the interests listed in the law.

Documents of which the originator wants to limit the distribution to persons who are authorized to use them on a need-to-know basis, without however attaching legal consequences to this limitation, are marked with the indication "**DIFFUSION RESTREINTE/BEPERKTE VERSPREIDING**".

These classification levels should be applied taking into account both the need to protect information and the need to avoid unnecessary obstruction to the use of research information and results.

Applicants should identify in the Full-Proposal the classification requirements for the work packages of the project that involve threat and /or vulnerability assessments and the information on specifications or capabilities of the tool(s) used.

- threat assessments (i.e. estimation of the likelihood of a malicious act against an asset, with particular reference to factors such as intention, capacity and potential impact)
- vulnerability assessments (i.e. description of gaps or weaknesses which can be exploited during malicious acts, and often contain suggestions to eliminate or diminish these weaknesses)
- specifications (i.e. exact guidelines on the design, composition, manufacture, maintenance or operation of threat substances or countermeasure substances, technologies and procedures)
- capability assessments (i.e. description of the ability of an asset, system, network, service or authority to fulfil its intended role — and in particular the capacity of units, installations, systems, technologies, substances and personnel that have security-related functions to carry these out successfully)

The applicable security framework for the action must be in place at the latest before the signature of the contract and will be considered as an annexe to the contract.

More information can be found on the NSA website: https://www.nvoans.be/

7. COMPLAINTS

Both BELSPO and RHID place great importance on the quality of their service and on improving the way they operate. A complaint about the administrative handling of the Expressions of Interest and Full Proposals submitted under this call for proposals will be handled by BELSPO, RHID will handle complaints about the content of the call, the evaluation procedure and the contracts that are concluded as a result of the call.

A special form to handle complaints has been created.

The complaint form is available at the following address:
http://www.belspo.be/belspo/organisation/complaints_en.stm

Complaints submitted anonymously or which are offensive or not related to our organisation will not be processed.

A complaint is handled as follows:

- Once your complaint has been filed, a notification of receipt will be sent.
- The complaint will be forwarded to the relevant departments and individuals and will be processed within one month.
- An answer will be sent by e-mail or letter.
- The complaint will be treated with strict confidentiality.

If you are not satisfied with the initial response to a complaint, you can always contact the Médiateur Fédéral / Federal Ombudsman, rue de Louvain 48 bte 6 / Leuvenseweg 48 bus 6, 1000 Brussels (email: contact@mediateurfederal.be / contact@federaalombudsman.be).

8. CONTACTS

Further information can be obtained by contacting the **secretariat**: ngcat@belspo.be

9. ABBREVIATIONS

BDTIB	Belgian Defence Technological and Industrial Base
BELSPO	Belgian Science Policy Office
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance
DEFRA	Defence-related Research Action
DIRS	Defence, Industry and Research Strategy
DMP	Data Management Plan
EoI	Expression of Interest
FCAS	Future Air Combat System
GISS	General Intelligence and Security Service
ICDP	Integrated Capability Development Plan
NGCAT	Next Generation Combat Aircraft Technologies
NGWS	Next Generation Weapon Systems
RHID	Royal Higher Institute for Defence

RTO	Research Technology Organisation
UBO	Ultimate Beneficial Owner