



# DEFRA

## Defence-related Research Action

# Online Information Session

## Call for proposals 2022



10 March 2022





# Welcome and introduction

Practical rules for the session



10 March 2022







# Agenda

- 14:00 : Welcome and introduction
- 14:10 : Meet the DEFRA team
- 14:20 : DEFRA program: context and objectives
- 14:30 : Content of the call
- 15:00 : Submission procedure/use of the platform
- 15:20 : Evaluation procedure
- 15:30 : Q&A



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# Meet the DEFRA team

**RHID** Royal Higher Institute for Defence - Scientific  
& Technological Research@Defence **STRD**

&

**BELSPO** Belgian Science Policy



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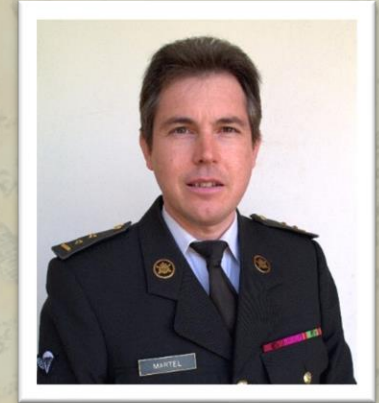




# RHID

Colonel Filip Martel, Ir  
Director Scientific & Technological  
Research for Defence (STRD)

[Filip.Martel@mil.be](mailto:Filip.Martel@mil.be)



Mrs Karen Pieters, MsC  
Programme Manager DEFRA

[Karen.Pieters@mil.be](mailto:Karen.Pieters@mil.be)



[defra@mil.be](mailto:defra@mil.be)



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# RHID

## Data Acquisition and Processing

Major Erik Van de Schoor, ir  
Domain Manager Data Acquisition & Processing  
[erik.vandeschoor@mil.be](mailto:erik.vandeschoor@mil.be)



Point of contact for theme 1:

Space : Space weather for security and defence applications

Point of contact for theme 2:

Communication : 5/6G for military, security and crisis applications



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# RHID

## Human Factors & Medicine

Mrs Lucie Geurts, PhD

Domain Manager Human Factors & Medicine

[Lucie.geurts@mil.be](mailto:Lucie.geurts@mil.be)



Point of contact for theme 3 :

Energy : sustainable and “green” energy applications for military use

Point of contact for theme 4:

Health : Preventive Medicine for improved soldier fitness



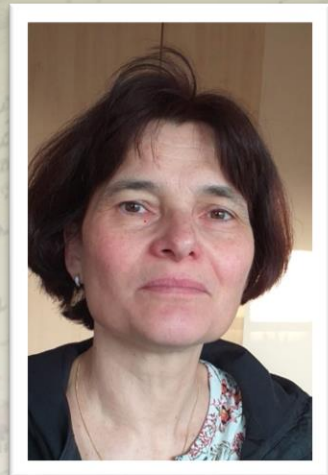
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# BELSPPO



Maaïke Vancauwenberghe  
Director a.i. Research Programs  
Coordinator BRAIN-be 2.0



Marleen Bosschaerts  
Dep. Director a.i. Research Programs  
Coordinator BCCM  
Coordinator SEPRO

[defra@belspo.be](mailto:defra@belspo.be)

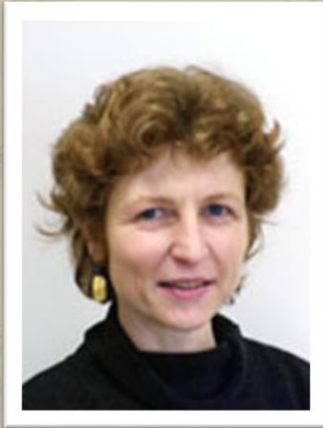


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# BELSPPO



Véronique Feys  
Program manager  
Responsible online introduction platform



Pascal Dermine  
Administrative assistant

[defra@belspo.be](mailto:defra@belspo.be)



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# DEFRA program: context and objectives



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# DEFRA program

## Strategic Vision 2016

“a gradual increase of the R&T contribution for security and defence until 2 % of the defence effort in 2030”

## Policy Note MoD 29 Oct 2021

“In this framework, the RHID will elaborate a suitable R&T-policy”, “... knowledge centres in Belgium, companies in general and Belgian SME’s, ...” “will flow back to society in the form of knowledge, technology and employment”

## RHID: R&T vision 2030

Five boosters for Defence related R&T, one of them is DEFRA

- Long term collaboration with BELSPO, this is the first full scale call
- Information on research policy, strategic objectives & focus areas (website: <https://www.defence-institute.be/>)



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# Objectives DEFRA program

- **Research** to contribute to :
  - **Belgian Defence capability development;**
  - **Culture of innovation** within Belgian Defence;
  - More & new ways of **employment** for Defence;
  - **Belgian industrial & technological base** (security & defence);
- **Encourage participation** of research institutes & industry in Defence & security related research activities;
- **Scientific excellence;**
- Promote **systemic, multidisciplinary/interdisciplinary and integrative approaches;**
- Strengthen research which **benefits potential users.**



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# Content of the second DEFRA call

- Themes and Indicative budget
- Eligibility criteria
- Funding rules



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# Themes & Indicative budget



Theme (project duration 2 to max 4 years)	Indicative budget (M€)
<b>Theme 1: SPACE:</b> Space weather for security and defence applications	1,6
<b>Theme 2: COMMUNICATIONS:</b> 5/6G for military, security and crisis applications	1,6
<b>Theme 3: ENERGY:</b> Sustainable and “green” energy applications for military use	1,6
<b>Theme 4: HEALTH:</b> Preventive Medicine for improved soldier fitness	1,6



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# Content of the DEFRA call 2022

## Theme SPACE

- **Context:** Solar Terrestrial Center of Excellence - Partnership with Belgian Defence - to develop a military expertise in Space weather
  - Changes in the environment driven by physical processes - solar origin
  - Impact on ground wave communications, sky wave communications, SATCOM and GNSS.
- **Scope:** impact on systems ➡ development simulation/testing tool for space weather events on military systems/sub-systems. Particular attention :
  - assessment on military equipment
  - space weather forensics
  - classification - standardization
  - configuration benchmarking
  - dissemination and exploitation of forecast products, ground-based or space-based sensor design or development
- **Impact:**
  - Forecasts more directly exploitable
  - Products more descriptive on the expected operational impact on specific equipment.





# Content of the DEFRA call 2022

## Theme COMMUNICATION

- **Context:** Currently : different technologies for tactical or crisis communications (TETRA,...). Impact of the emergence of 5/6G on communications systems (e.g homeland crisis management communication systems) and military applications (e.g. fixed or mobile tactical network) ?
- **Scope:**
  - Mobile 5/6G capacity : mobile deployable networks
  - Resistance to jamming e.g. performance in EMS contested environment
  - Security risks/requirements for network slicing
  - In a crisis management situation :
    - Reliability of 5/6G
    - Agile/dynamic authentication and network forming
  - Spectrum management: developments of 5/6G solutions - deployed worldwide
- **Impact:** concrete solutions, advantages and risks linked to the adoption of 5/6G for specific future applications



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# Content of the DEFRA call 2022

## Theme ENERGY

- **Context:** Future military systems ➡ use of increasing amounts of electrical energy ➡ need for higher capacity - higher power - more resilient energy storage systems
- **Scope:** smart energy storage systems – autonomous military camps:
  - Absorb and store overproduced energy of all locally available green energy sources
  - Considering an overall energy need of several thousands of kVA for larger camps
  - Considering peak shaving
  - Allowing peak performance e.g. EPS
  - modular/scalable - semi-mobile - easy to set up - withstand transportation in rough conditions
  - able to operate in a wide range of temperatures
  - less vulnerable to external military threats
  - environmental friendly and sustainable
- **Impact:**
  - enhance military capability and operational resilience
  - reduce through-life financial cost e.g. lower maintenance and environmental costs





# Content of the DEFRA call 2022

## Theme HEALTH

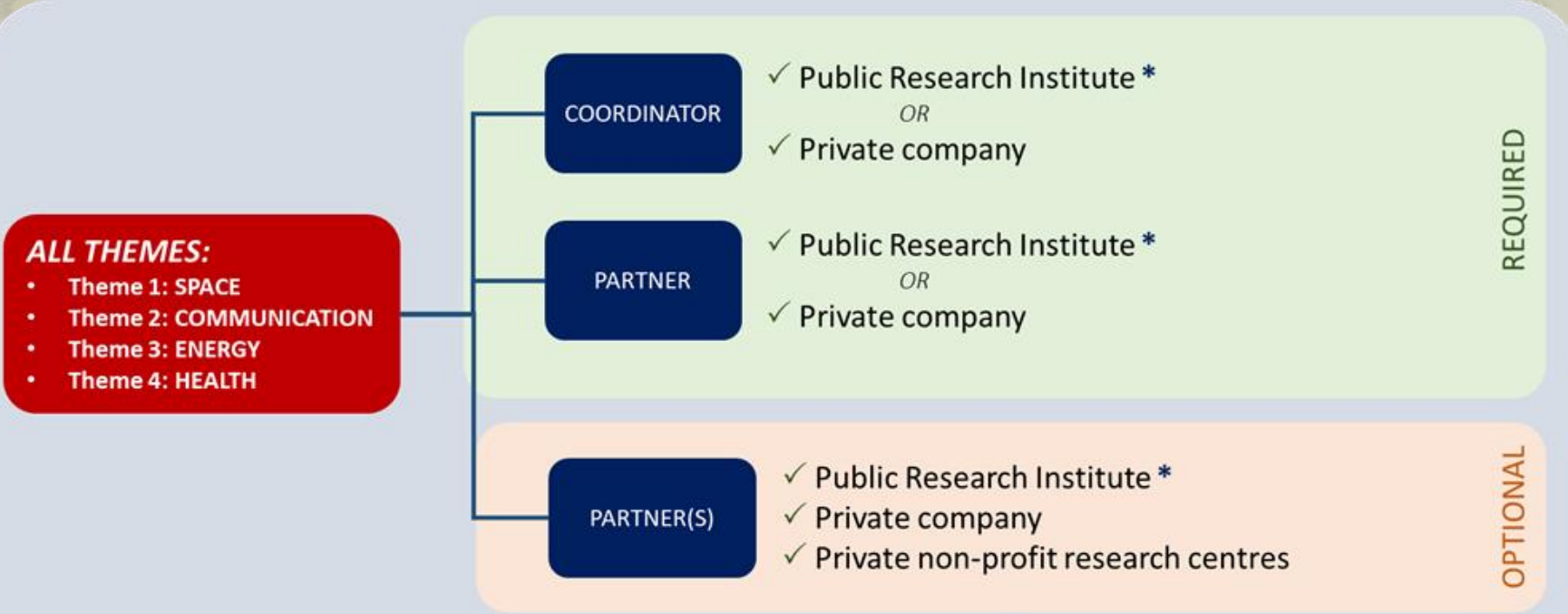
- **Context:** Monitoring physical readiness of the soldier
  - to prevent & mitigate injuries/other health conditions
  - appropriate medical exams : assessment of cardiorespiratory, metabolic and musculoskeletal functions as well as mental health
- **Scope:** use of recent sensor-based technology
  - possibility of remote diagnosis and monitoring of large numbers of people
  - supported by central data capture, analysis and artificial intelligence-supported algorithms.
  - Qualitative and quantitative high-quality data management
    - respect for privacy
    - high usability and reliability
- **Impact:**
  - an early-warning health monitoring system,
  - improve military performance in operations and training
  - reduce the long-term effects due to injuries/other health conditions.







# Eligibility criteria



\* The following Belgian Defence Research institutes **CAN** be a partner in the network. It is **NOT MANDATORY** to have one of these institutions as a partner; their presence / absence will **NOT HAVE** an effect on the evaluation result.

- Royal Military Academy
- Military Hospital Queen Astrid
- Defence Laboratories



# Funding rules

	REQUIRED PARTNERS	OPTIONAL PARTNERS
ALL THEMES	Coordinator: Public Research Institute OR Private Company	Partner: Public Research Institute OR Private Company
TOTAL PARTNER BUDGET financed by Defence	<b>Public Research Institute:</b> 100% eligible costs  <b>Private Company:</b> <ul style="list-style-type: none"> <li>• LargeCap enterprises: 65% eligible costs</li> <li>• MidCap enterprises: 75% eligible costs</li> <li>• SME: 80% eligible costs</li> </ul>	<b>Public Research Institute OR Private non-profit research centre:</b> 100% eligible costs.  <b>Private Company:</b> <ul style="list-style-type: none"> <li>• LargeCap enterprises: 65% eligible costs</li> <li>• MidCap enterprises: 75% eligible costs</li> <li>• SME: 80% eligible costs</li> </ul>





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# Submission procedure & Use of the platform



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# Website

<https://www.belspo.be/defra>

Available documents – under condition of approval  
Council of Ministers :

- Information document, incl. submission & evaluation guidelines and budget rules
- Evaluation matrices (pre & full proposals)
- Evaluators eligibility criteria
- Platform submission guidelines
- FAQ
- Templates pre & full proposals
- General conditions contract



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# Online submission platform

<https://defra.belspo.be>

PHASE 1 - submission of pre-proposals:

- Pre-proposal template (Word file)

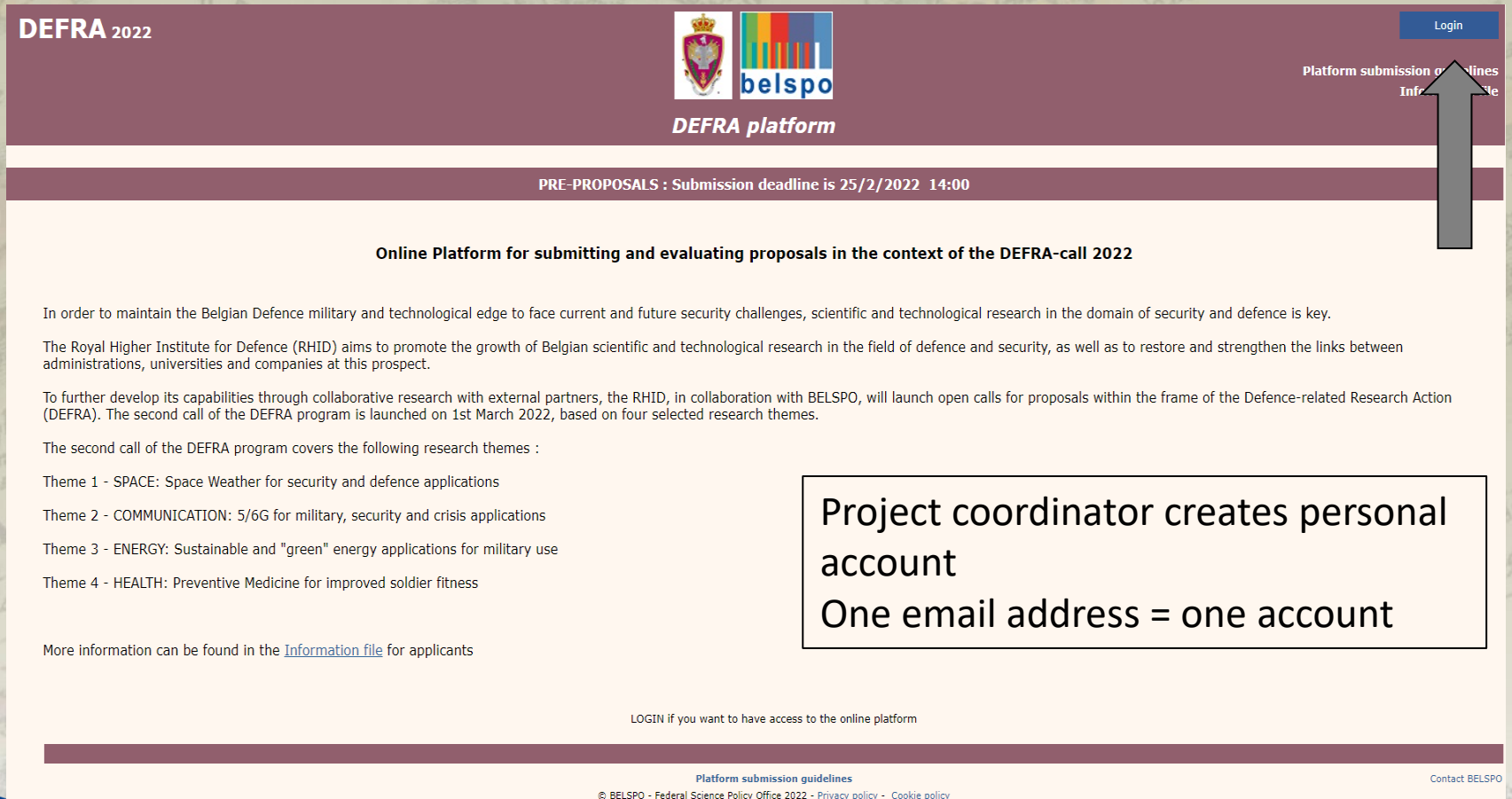
PHASE 2 – submission full proposals:

- Full Proposal template (Word file)
- Gantt chart (Excel file)
- Cash or in-kind commitment letter – non mandatory (Word file)





# Online submission platform

## Platform Homepage before Log In



**DEFRA 2022**

**DEFRA platform**

[Login](#)

Platform submission guidelines  
Information

**PRE-PROPOSALS : Submission deadline is 25/2/2022 14:00**

**Online Platform for submitting and evaluating proposals in the context of the DEFRA-call 2022**

In order to maintain the Belgian Defence military and technological edge to face current and future security challenges, scientific and technological research in the domain of security and defence is key.

The Royal Higher Institute for Defence (RHID) aims to promote the growth of Belgian scientific and technological research in the field of defence and security, as well as to restore and strengthen the links between administrations, universities and companies at this prospect.

To further develop its capabilities through collaborative research with external partners, the RHID, in collaboration with BELSPO, will launch open calls for proposals within the frame of the Defence-related Research Action (DEFRA). The second call of the DEFRA program is launched on 1st March 2022, based on four selected research themes.

The second call of the DEFRA program covers the following research themes :

- Theme 1 - SPACE: Space Weather for security and defence applications
- Theme 2 - COMMUNICATION: 5/6G for military, security and crisis applications
- Theme 3 - ENERGY: Sustainable and "green" energy applications for military use
- Theme 4 - HEALTH: Preventive Medicine for improved soldier fitness

More information can be found in the [Information file](#) for applicants

LOGIN if you want to have access to the online platform

**Project coordinator creates personal account  
One email address = one account**

[Platform submission guidelines](#)

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Contact BELSPO

# Online submission platform

Once logged-in: directed to your personal Homepage

DEFRA 2022

You are logged as: testdefra@dld.be [Logout](#)

Platform submission guidelines  
Information file

DEFRA platform

Add Pre-proposal

PRE-PROPOSALS : Submission deadline is 25/2/2022 14:00

Reference	Acronym	General information	Submitted
Back to Homepage			

Platform submission guidelines [Contact BELSPO](#)

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Click on “Add Pre-proposal” button to create Pre-proposal.





# Online submission platform

## Pre-proposal page

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You are logged as: testdefra@dld.be

Logout

[Platform submission guidelines](#)  
[Information file](#)

DEFRA platform

### New Pre-proposal - Information sheet

#### THEME

- Theme 1 - SPACE: Space Weather for security and defence applications
- Theme 2 - COMMUNICATION: 5/6G for military, security and crisis applications
- Theme 3 - ENERGY: Sustainable and "green" energy applications for military use
- Theme 4 - HEALTH: Preventive Medicine for improved soldier fitness

PROPOSAL'S ACRONYM (maximum 15 characters)

PROPOSAL'S TITLE (maximum 255 characters)

#### COORDINATOR

Lastname Firstname Email

Type of organisation

Organisation

Organisation's abbreviation

Department/Research unit/Division



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# Online submission platform

## Pre-proposal page – mandatory fields:

- Themes of the Call
  - **Proposal's Acronym**
  - **Proposal's Title**
  - Name, institution and contact details of the Coordinator
  - Partners (institution coordinates)
  - Summary
  - Keywords (min 2)
  - Approval statement for submission
- Minimal required info to start





# Online submission platform

Personal Homepage will change after saving Pre-proposal

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**DEFRA platform**

You are logged as: testdefra@dld.be [Logout](#)

[Platform submission guidelines](#)  
[Information file](#)

[Add Pre-proposal](#)

**PRE-PROPOSALS : Submission deadline is 25/2/2022 14:00**

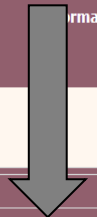
Reference	Acronym	General information	Submitted	
▶ Pre-proposal Pre-011	SPACE	Title: Space space space  Coordinator: Lastname Firstname, Laboratoires de la défense - Defensielaboratoria		<a href="#">Information sheet</a> <a href="#">Content</a> <a href="#">Experts</a> <a href="#">Print Pre-proposal</a> <a href="#">Submit</a>

1 pre

[Back to Homepage](#)

Platform submission guidelines
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# Submission procedure

- **Information sheet:** displays Pre-proposal page for further editing
- **Content:** contains downloadable template to be filled in off-line and subsequently uploaded to platform
- **Experts:** allows introducing 6 evaluation experts
- **Print Pre-proposal:** preview Pre-proposal PDF-file
- **Submit:** for submitting the Pre-proposal





# Submission procedure

- Download word template for pre-proposals
- Complete all fields, take into account evaluation criteria for pre-proposals (cfr evaluation matrix)
- Upload completed pre-proposal (PDF-file)
- Propose experts for evaluation of full proposals (min 2 Belgian and 2 foreign experts; 2 *non-grata*)



# Submission procedure

- Click on **'Submit'**. You will be directed to the Pre-proposal page
- At bottom of page, click on **'Check'**.
  - ⚠ This "function" ONLY checks if all necessary fields are completed. The content of the Pre-proposal and the fulfilment of the eligibility conditions are your responsibility.
- At bottom of page, click on **'Submit'**. The Pre-proposal will be submitted to BELSPO
- Confirmation by e-mail to coordinator
- **Deadline for pre-proposals: 26/04 - 14h**



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# Evaluation procedure

Two-step procedure:

- Phase 1: Pre-proposals
- Phase 2: Full proposals





# Phase 1: Pre-proposal

- General eligibility check
- Evaluation by internal evaluation committee Defence
- Criteria:

Weight of the different criteria	SPACE	COMMUNICATIONS	ENERGY	HEALTH
Quality of the pre-proposal	40%	40%	40%	40%
Quality of the partners & adequacy of the partnership	30%	30%	30%	30%
Impact	30%	30%	30%	30%

- Per theme: max. 5 pre-proposals invited to submit full proposal



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# Phase 2: Full proposal

- Step 1 - Remote scientific peer review evaluation  
3 independent experts (min 1 Belgian, 1 foreign)
- Step 2 - Panel evaluation, incl. interviews with the applicants
- Step 3 - Selection proposal formulated by Scientific Committee RHID
- Step 4 - Final selection proposals by Board of Directors RHID
- Selected projects start December 2022 (min 2 years-  
max 4 years)



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# Key dates

Activity	Date	At / via
Information session	10 March 2022 (14h00 - 16h00)	Online
<b>Deadline Pre-proposals</b>	<b>26 April 2022 - 14h00</b>	Online submission platform
Communication of evaluation result pre-proposals	10 May 2022	Mail
<b>Deadline Full proposals</b>	<b>28 June 2022 - 14h00</b>	Online submission platform
Remote scientific peer review evaluation	05 July - 15 August 2022	Online evaluation platform
Feedback to applicants in preparation of panel meeting	end August 2022	Mail
<b>Panel evaluation, incl. interviews with the applicants</b>	<b>beginning September 2022</b>	RHID or online
Selection proposal formulated by the scientific committee of the RHID	Mid September 2022	NA
Final selection of proposals by the board of directors of the RHID and allocation of projects	mid October 2022	Mail
Signature contracts	01 December 2022	Online E-sign platform



# Communication

**For questions about  
the call for proposals,  
the call procedure and documents,  
the submission and evaluation of  
proposals,  
conclusion of the contract for  
selected proposals**

[defra@belspo.be](mailto:defra@belspo.be)

**Once the contract is concluded,  
everything related to the project  
implementation:  
questions about reporting, invoicing,  
implementation, communication,  
follow-up and valorisation of the  
project**

[defra@mil.be](mailto:defra@mil.be)



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# ***GOOD LUCK !***

Further questions:  
FAQ on website  
**[defra@belspo.be](mailto:defra@belspo.be)**



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