SCRIMM

STRUCTURAL COLLABORATIVE RESEARCH IN MILITARY MEDICINE

- INFORMATION SESSION -

Welcome & Introduction

SCRiMM

STRUCTURAL COLLABORATIVE RESEARCH IN MILITARY MEDICINE

PROGRAMME

- 13:45 Registration
- 14:00 SCRiMM: context and objectives
- 14:30 Content of the call: timeline and themes
- 15:00 The rules of the SCRiMM programme
- 15:15 Evaluation procedure
- 15:30 Q&A
- 16:00 End

Meet the SCRiMM team

RHID Royal Higher Institute for Defence – Research, Development, Innovation & Industrialisation
& QAMH Queen Astrid Military Hospital

Lucie Geurts
Research Manager Human Factors and Medicine

Karen Pieters
Dep. Director RDII
Coordinator national programs
Program Manager DEFRA

Col. Damien Van Tiggelen
Innovation Officer
Medical Component

Research, Development, Innovation and Industrialisation

The Federal and MOD strategic vision on research, technology, and innovation

3% of BE Defence budget for RDII

The RHID wishes to be one of the driving forces for ***the development and the strengthening of the Belgian defence technological and industrial base (DTIB), in a European and NATO-framework***, in order to ***develop a larger and better knowledge base, more effective military and industrial capabilities and a larger strategic autonomy in the security and defence domain***.
To achieve this, the RHID will contribute to the elaboration and implementation of the ***Belgian defence, industry and research strategy*** (DIRS).

Belgian Defence 'Research, Technology & Innovation Vision 2030'

From an internal scientific and technological research programme
to a research, technology and innovation policy
within a national and European context.

Defence R&T capabilities

- Royal Military Academy
- Military Hospital
- Defence laboratories

National knowledge and technical base

- National Calls
- von KARMAN INSTITUTE FOR FLUID DYNAMICS
- Structural partnerships

International **research and development**

- EUROPEAN DEFENCE AGENCY
- NATO OTAN Science & Technology Organization
- esa

Innovation

- Inno4Def.be
- Hackathons
- Start2Def

Ecosystems

- Cooperation agreements

SCRiMM Concept

➢**Strategy**: In line with Belgian Defence's aim to reinforce the technological and knowledge base at national level, the Royal Higher Institute for Defence wishes to enhance research collaborations with the different **universities associated with university hospitals in the field of military medicine**.

➢ **Aim:** Create knowledge needed for Belgian Defence, to compensate for the lack of personnel, materials and infrastructure and because of an insufficient flow of patients.

➢**Concept**: Finance a 4–years PhD in co-promotion between a civilian university and Belgian Defence.

Content of the Call

Timeline & Themes

TIMELINE

	DATE	AT / VIA
Call Launch	5 March 2026	Mail, Website, social media
Information session	26 March (14h – 16h)	RMA, building I, meeting room Studio
Deadline Full proposals	**20 May 2026 (16h)**	Mail
Panel evaluation, incl. interviews with the applicants	**6-7 July 2026**	RHID
Selection proposal formulated by the scientific committee of the RHID	4 September 2026	N/A
Final selection of proposals by the board of directors of the RHID	10 September 2026	N/A
Communication of results to applicants	**14 September 2026**	Mail
Signature contracts	**14 November 2026**	

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STRUCTURAL COLLABORATIVE RESEARCH IN MILITARY MEDICINE

THEMES

- **Theme 1:** Advancing Military-Relevant Research on (Mild) Traumatic Brain Injury (mTBI)
- **Theme 2:** PTSD Treatment

BELGIAN MEDICAL SERVICES STAFF

KOL VAN TIGGELEN, PHD

26 mar 2026

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Military Medical Research

- Military medical research domains commonly include: Infectious diseases, combat casualty care, military operational medicine, chemical biological defense, anesthesia and critical care, emergency medicine, mental health, surgery and trauma, rehabilitation, and more specialized areas like environmental medicine and medical aspects of human performance.

- Military medical research is focused on unique conditions faced by service members such as blast injuries, battlefield trauma, deployment-related health issues, and readiness optimization.

- Military research today emphasizes innovation for future combat environments, including technology for en route care.

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SCRiMM: Why ?

Importance of the Civilian-Military collaboration

Research questions based on eg :

- Insufficient access to patients
- Insufficient access to equipment
- Insufficient access to infrastructure
- Insufficient knowlegde
- **Insufficient time & HR resources**
- Specific needs

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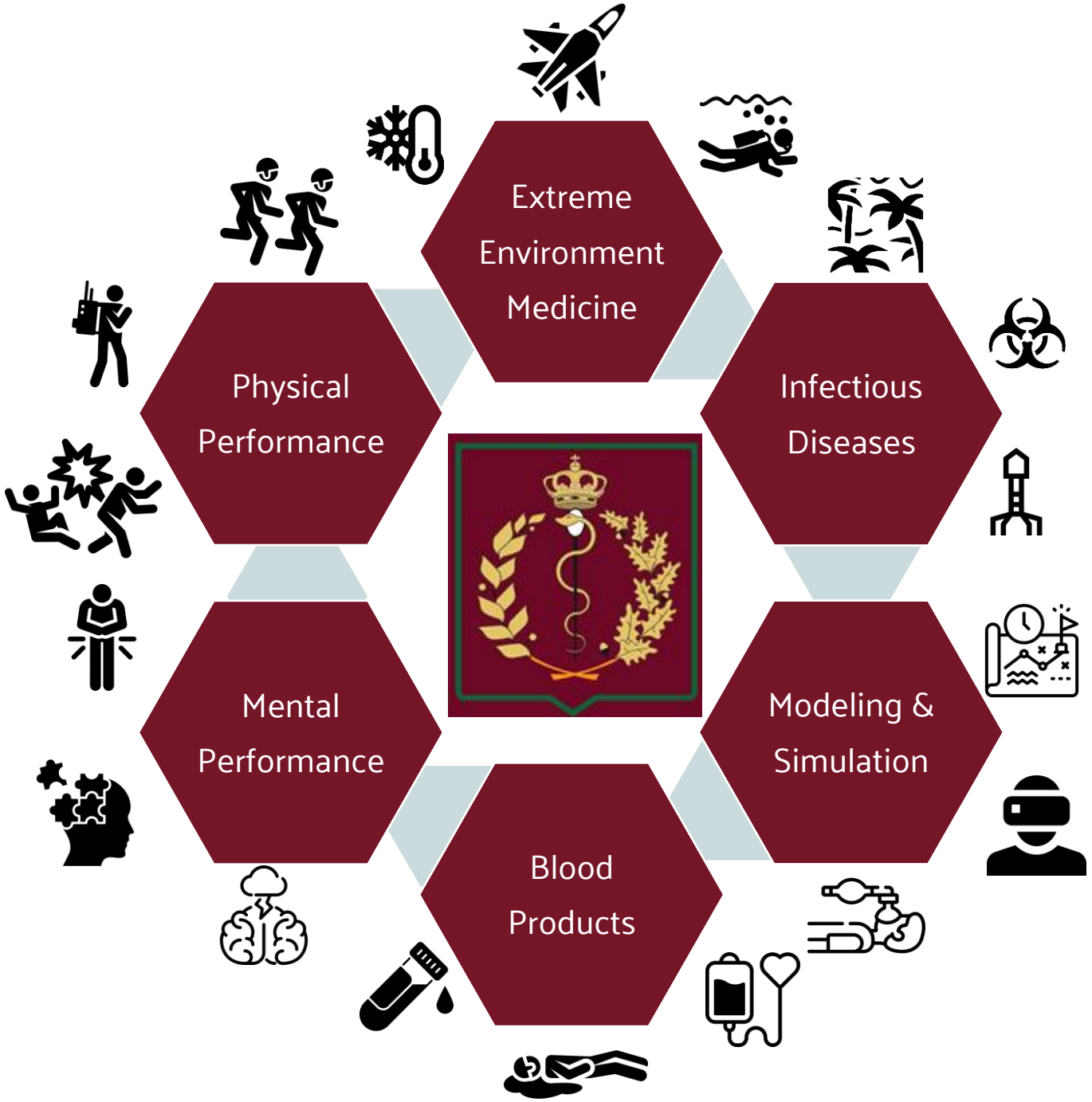

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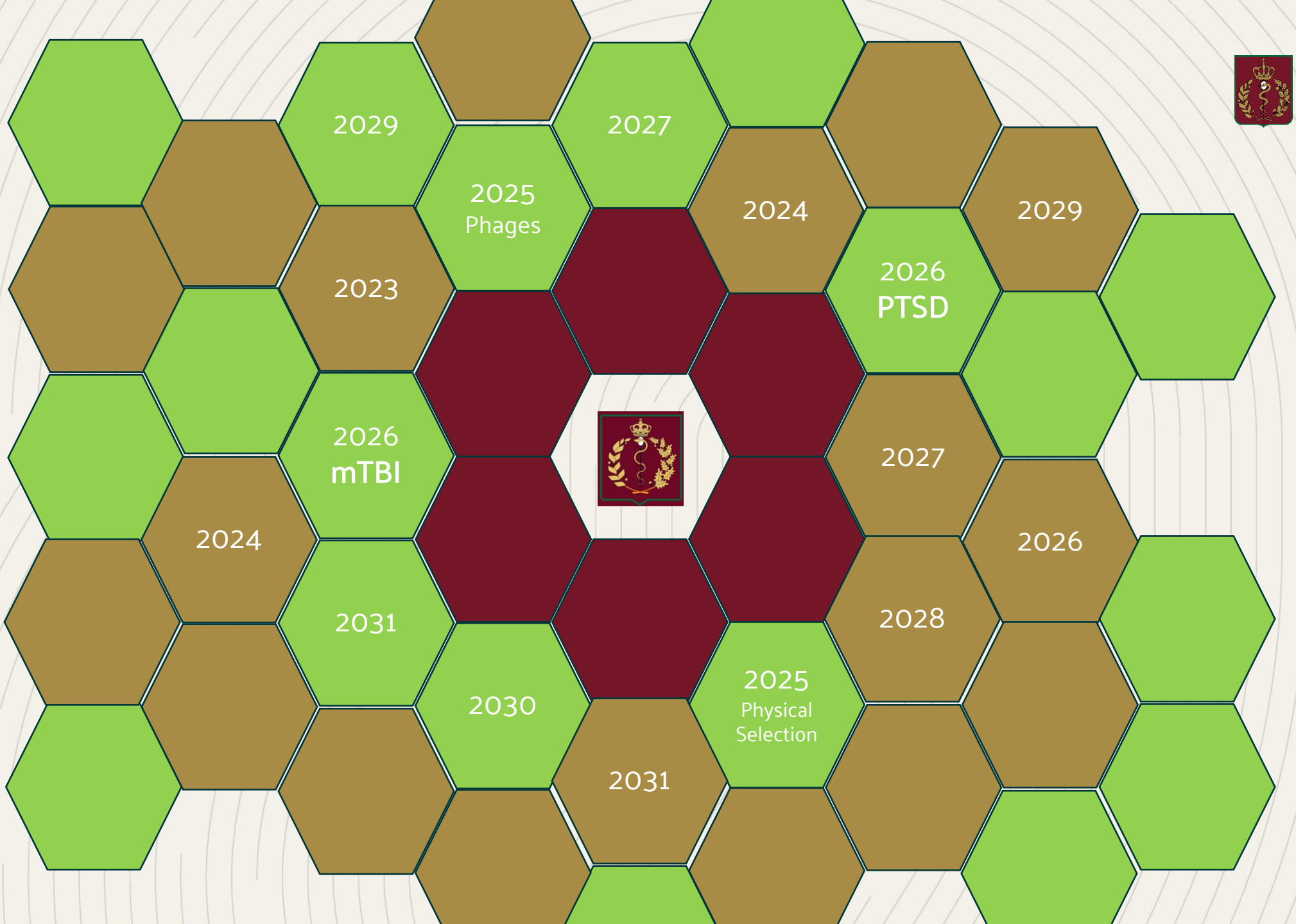
Belgian Medical Component



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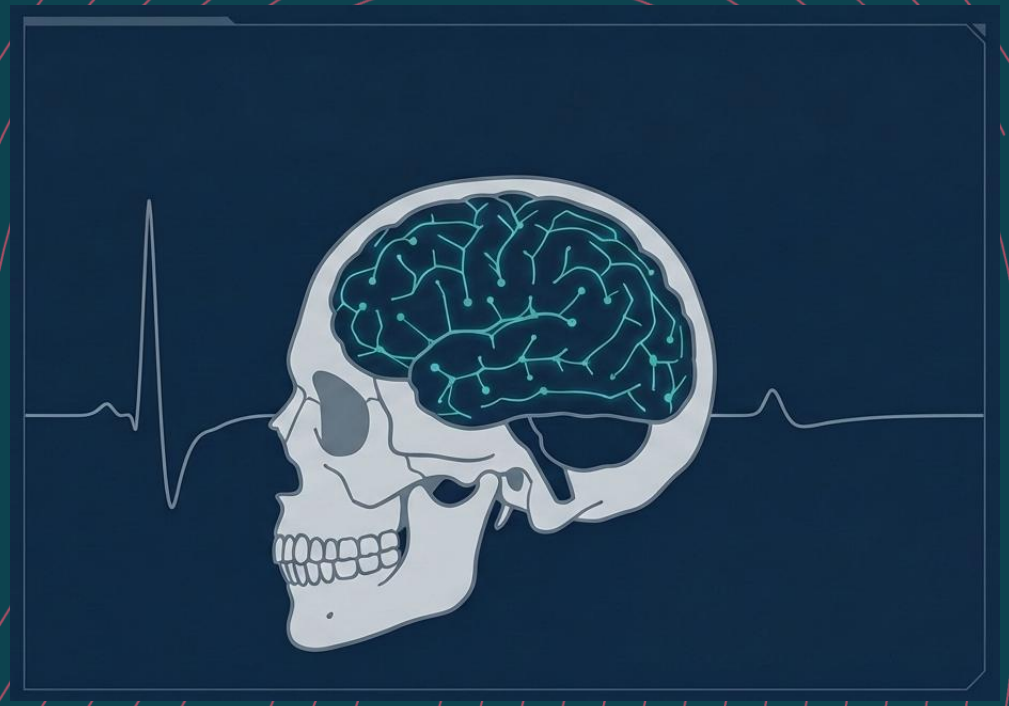
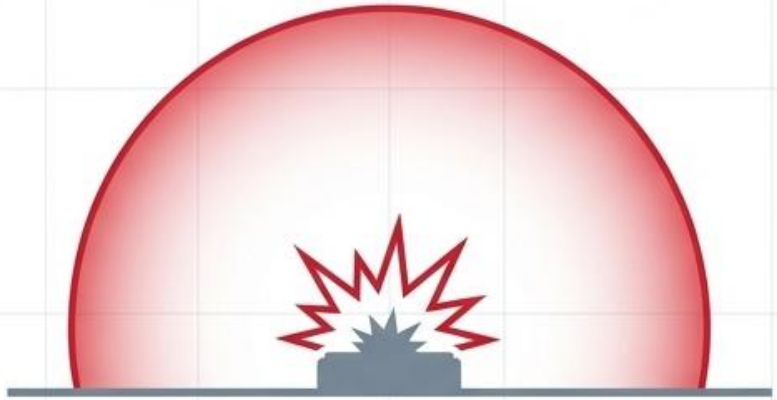


mTBI: tactical neurology

Advancing Military-Relevant Research on (Mild) Traumatic Brain Injury

The Exposure Matrix: Acute Combat vs. Chronic Training

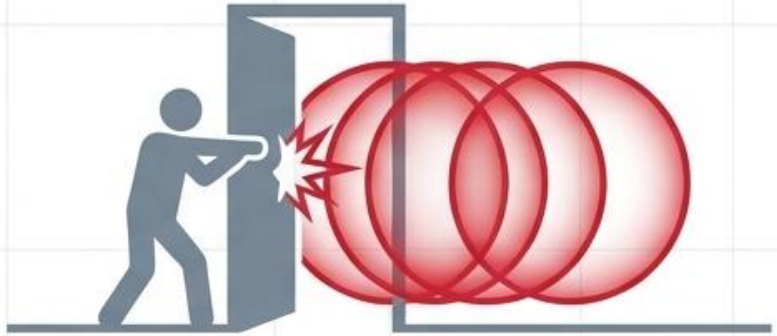
Acute Combat



Profile: Single, massive overpressure event.

Clinical Marker: Immediate Glasgow Coma Scale (GCS) drop, Loss of Consciousness, acute focal deficits.

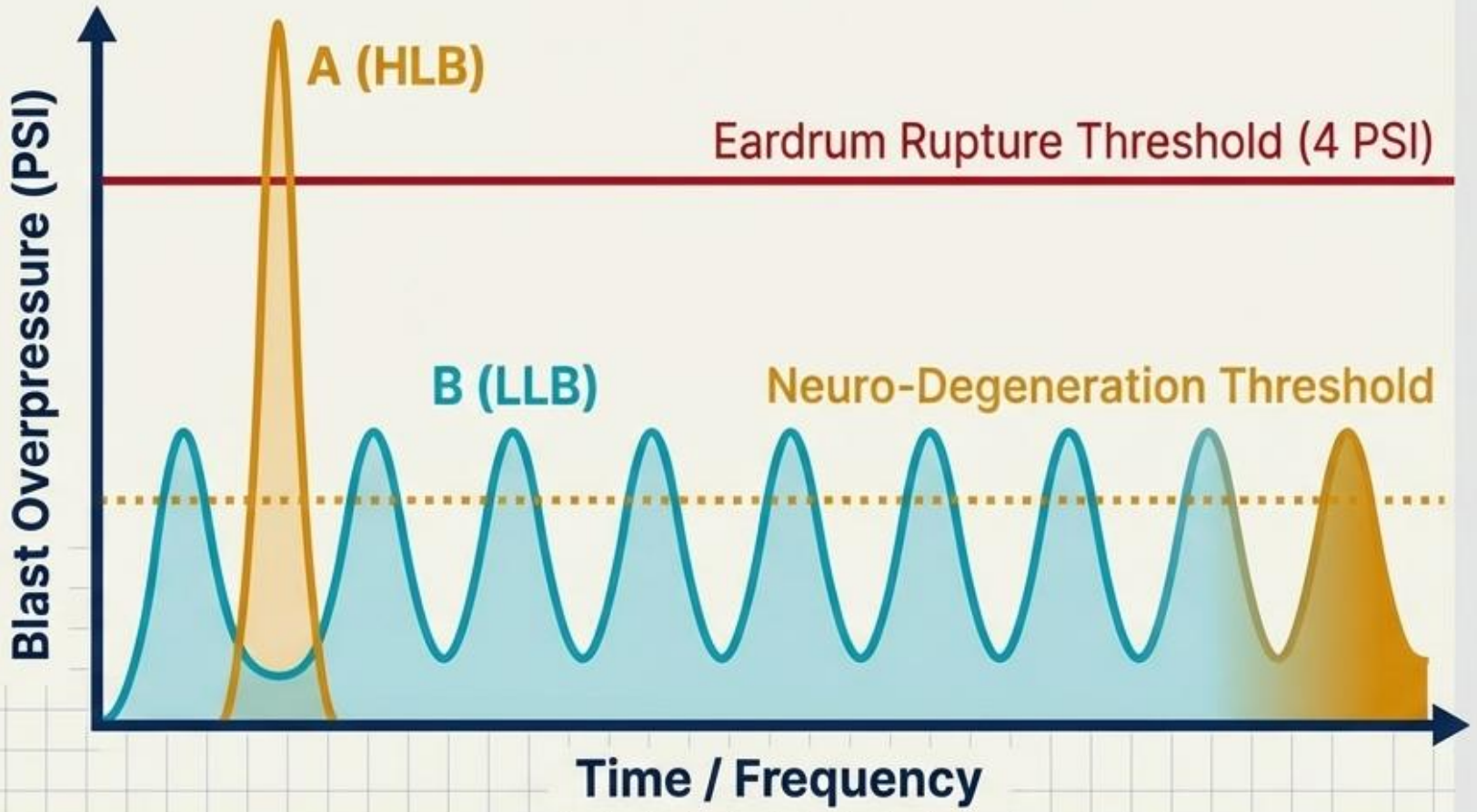
Chronic Training



Profile: Repetitive Low-Level Blasts (LLB) < 4 psi. Up to 184 cumulative psi per week.

Clinical Marker: Insidious symptom creep, no acute loss of consciousness, cumulative threshold breaches.

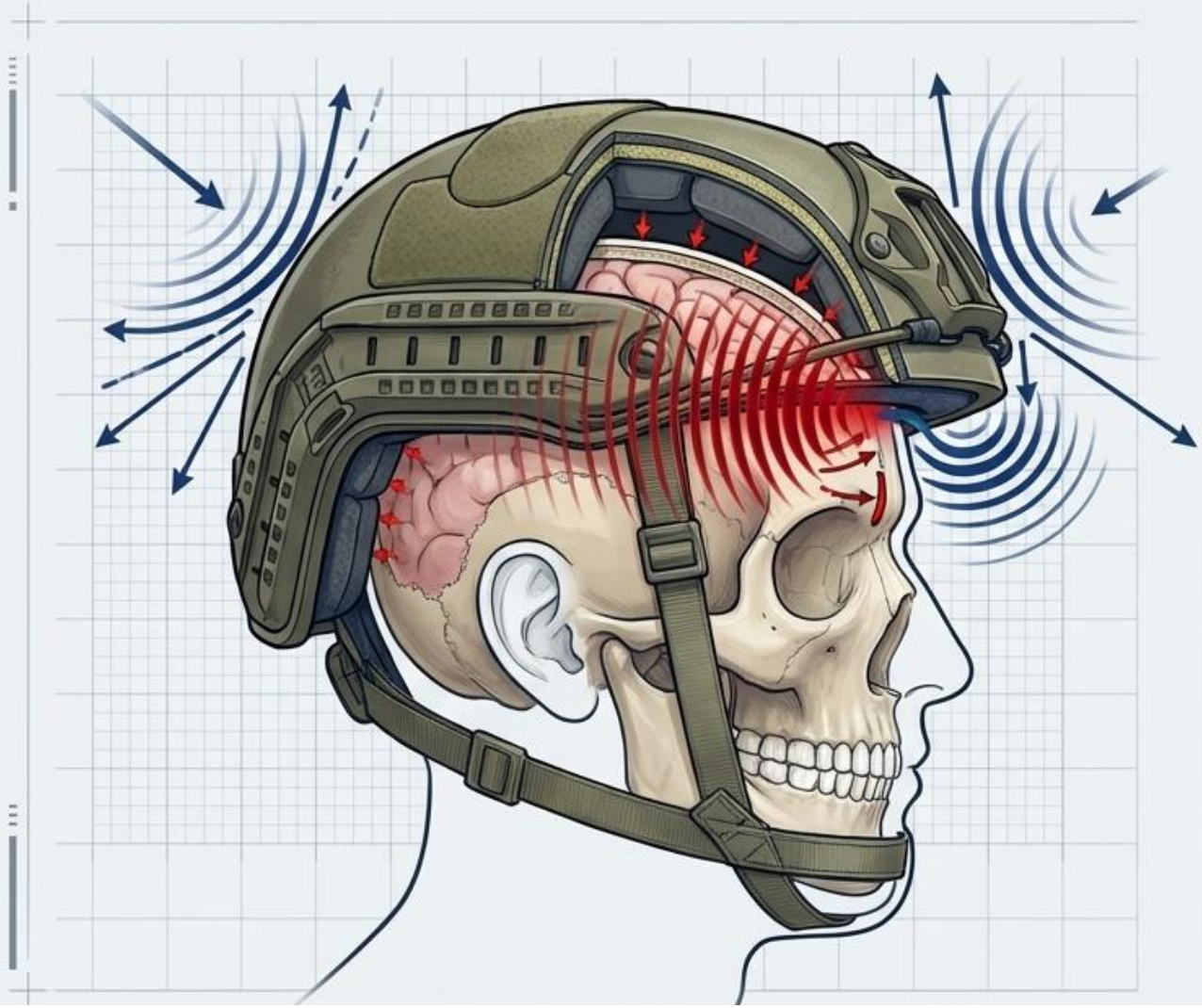
The 4 PSI Safety Myth: Cumulative Impulse



The military's 4 PSI safety limit is fundamentally based on gross injury to the human eardrum.

It completely ignores the **cumulative non-inertial energy transfer** that causes neurocognitive deficits over time.

The Underwash Effect



77% of military personnel who sustained a TBI were wearing their helmets at the time of injury.

A **poorly** fitted helmet with insufficient padding clearance can act as a wave-guide, **focusing** the blast impulse directly **into the cranium**.

Potential project domains

1. **Protection & prevention** (Physiological protection devices, Safety guidelines….)
2. **Dosimetry** (occupational mapping, cumulative exposure…)
3. **Pathophysiology & mechanisms** (overpressurisation wave & brain tisue, cellular damage, membare integrity, BBB permeability ….)
4. **Diagnostics & assessment** (field screening s.a. MACE2, Neurocognitive monitoring, questionnaires..)
5. **Biomarkers & imaging** (Blood-based biomarkers, volatile organic components in breath, fMRI, EEG, pupillometry)
6. **Clinical symptoms and comorbidities** (headaches, cognitive impairments, behavioural changes, pain, insomnia, social & psychological changes
7. **Long-term effects and diseases** (dementia, parkinsons, chronic traumatic encephalopathy, brain aging, epilepsy, …
8. **Treatment & rehabilitation** (Medications, progressive return to activity, V/X/AR, transcranial magnetic stimulation
9. **Operational impact** (medical readiness status, cognitive performance: decision making, visual scanning…)

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Expected Outcomes

Projects funded under this theme should advance both scientific understanding and Defence capability in the domain of mTBI. Anticipated outcomes **could** include:

- Novel diagnostic, monitoring, or decision-support technologies operating at TRL 3–5 or higher with clear potential for further maturation in Defence settings.
- Evidence-based prevention, rehabilitation, and return-to-duty strategies, aligned with or extending existing military clinical practice and activity-progression guidelines.
- Strengthened cross-sector partnerships between academia, civilian healthcare systems, and Defence medical or research units, including potential integration with multinational NATO efforts. Participation to NATO scientific working groups (NATO STO) by representing Belgian Defence will be encouraged.
- Well-defined pathways for subsequent translational studies, implementation research, or integration into Defence policy, doctrine, and practice where appropriate.
- The scientific output will be compiled in a PhD thesis.

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Questions

MENTAL HEALTH CENTER - QAMH
MAJ – FRÉDÉRIC GOETHALS

26 March 2026

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Theme 2 : PTSD Treatment

Content

Background

- Public Safety Personnel (PSP – aka First Responders) repeatedly **exposed to PTE**
- **Elevated risk** of developing PTSD/trauma-related injuries/operational stress injuries
- **Barriers** to accessing or completing standard outpatient treatments

=> **impact on operational effectiveness, workforce retention and overall well-being**

- **Intensive PTSD treatment models** have shown improved treatment engagement, accelerated symptoms reduction and reduced dropout rates.

- But :
  - **Evidence** remains sparse
  - Trauma-related mental health difficulties extend beyond PTSD => **need for transdiagnostic approach**

Scope

- 4-year PhD research => Evidence-based models for intensive treatment for PSP

- Possible projects (non-exhaustive) :

    - Feasability and acceptability
    - Effectiveness and outcomes
    - Implementation Science and Adaptation
    - Comparative effectiveness and cost-benefit
    - Digital and hybrid delivery models

- Controlled or observational designs

Collaboration & supervision requirements

- Lead academic supervisor :
  - research expertise in clinical psychology, psychiatry, mental health care or implementation science related to trauma or occupational stress injuries
  - Affiliated with Belgian universities
  - Selects the appointed candidate
- Co-supervisor from Defence
- Appointed candidate must be a citizen form EU or EFTA or NATO member country
- Primarily within civilian research settings
- Collaboration with operational partners expected for data collection, program adaptation and feasability validation

Expected outcomes

Projects should strengthen both scientific knowledge and practical capacity for Defence

- Validated models of intensive outpatient treatment (feasability, acceptability & preliminary effectiveness)
- Implementation & adaptation guidelines : trauma treatment in high-stress occupational settings
- Enhanced intersectoral collaboration (national & multinational)
- Evidence-based recommandations for scaling up intensive programs or integrating them within existing PSP healthcare infrastructures
- Completion of a PhD and scientific publications contributing to « PTSD research »

Bibliography

1. Gahnfelt, H., Weineland, S., Carlsson, P. F., & Blomdahl, C. (2025). 8-day intensive treatment programme for PTSD and complex PTSD vs treatment as usual: a clinical trial. European journal of psychotraumatology, 16(1), 2553422.
2. Held, P., Klassen, B. J., Boley, R. A., Wiltsey Stirman, S., Smith, D. L., Brennan, M. B., ... & Zalta, A. K. (2020). Feasibility of a 3-week intensive treatment program for service members and veterans with PTSD. Psychological Trauma: Theory, Research, Practice, and Policy, 12(4), 422.
3. Reij, K. M., de Jongh, A., Swens, E. P., & Voorendonk, E. M. (2025). PTSD Symptoms change in response to a brief intensive trauma-focused treatment programme in non-veterans and veterans with war-related PTSD. European Journal of Psychotraumatology, 16(1), 2511571.
4. Rubinstein, D., Abargil, M., Duek, O., & Harpaz-Rotem, I. (2025). RESET post-traumatic stress disorder: clinical protocol integrating reconsolidation, exposure, short-term emotional transformation. European Journal of Psychotraumatology, 16(1), 2540141.
5. Bettes, G., Saffaran, P., Walker, W., Bennett, S., Beaudette, K., Reitav, J., & Thirlwell, C. (2022). Examining the efficacy and feasibility of a residential retreat program for first responders and veterans with posttraumatic stress disorder: a pilot study. Integrative and Complementary Therapies, 28(5), 212-220.
6. Walter, K. H., Levine, J. A., Highfill-McRoy, R. M., Navarro, M., & Thomsen, C. J. (2018). Prevalence of posttraumatic stress disorder and psychological comorbidities among US active duty service members, 2006–2013. Journal of Traumatic Stress, 31(6), 837-844.
7. Alexander, D. A., & Klein, S. (2009). First responders after disasters: a review of stress reactions, at-risk, vulnerability, and resilience factors. Prehospital and disaster medicine, 24(2), 87-94.
8. Haugen, P. T., Evces, M., & Weiss, D. S. (2012). Treating posttraumatic stress disorder in first responders: A systematic review. Clinical psychology review,32(5), 370-380.
9. Kehle-Forbes, S. M., Ackland, P. E., Spoont, M. R., Meis, L. A., Orazem, R. J., Lyon, A., ... & Polusny, M. A. (2022). Divergent experiences of US veterans who did and did not complete trauma-focused therapies for PTSD: A national qualitative study of treatment dropout. Behaviour Research and Therapy, 154, 104123.

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Questions

Rules of the SCRiMM Programme

Who can participate? Eligibility criteria for partners.

The call is open to **Belgian** Universities and University Hospitals

! Foreign partners: only as **non-funded** partners. They must be registered in a country of the EU or of the EFTA or in a NATO member country.

RESEARCH ETHICS

It is the responsibility of the applicant to consult the relevant Ethical Board for their organisation before submitting a proposal.

- Full proposal contains an ethics self-assessment.
- The Ethical Advisory Board of the RHID will assess this information and can advise the partnership how to deal with ethical aspects of the proposal.

BUDGET RULES

	Public Research Institute and Private non-profit research centre
Partner budget FINANCED BY DEFENCE	100% eligible costs

BUDGET RULES

Category of expenditure	Rules
STAFF	• Preferably under labour contract • ! Non-employee staff costs (management company, free-lance, interim staff) • Maximum amounts for persons to be hired for the project • NO tax-free scholarships!
GENERAL OPERATING COSTS	• For the coordinator: max 15% of staff costs • For other partners: max 10% of staff costs
SPECIFIC OPERATING COSTS	• Described in the proposal • Justified by invoices during project
OVERHEAD	• 10% of total staff and operating costs

BUDGET RULES

Category of expenditure	Rules
EQUIPMENT	• Described in the proposal • Justified by invoices during project
SUBCONTRACTING	• *Max 25% of partner's budget* • *! Subcontractors must be registered in Belgium* • *! If applicable, obtain security clearance*

SCRIMM WEBSITE

SCRiMM Website

Available documents:

- Information document, incl. submission & evaluation guidelines and budget rules
- Full proposals template
- Gantt Chart
- Evaluation Matrix
- General conditions contract
- FAQs

SUBMISSION – ONE STEP

scrimm@mil.be

Submission full proposals:

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

EVALUATION PROCEDURE FULL PROPOSALS

- **Step 1** – Scientific Experts Committee (SEC) evaluation, incl. interviews with the applicants (50 minutes per proposal)

  → Funding scenario per theme

- **Step 2** - Selection proposal formulated by Scientific Committee RHID

  → Proposed funding scenario

- **Step 3** - Final decision by Board of Directors RHID

AFTER SELECTION

- Signature of contract (at least basic contract) in November 2026
- First advance payment (40%) → follow invoicing instructions of the RHID
- Selected projects start as from1st of March 2027
- Provide technical sheets with project description (for website)
- Kick-off meetings (after signature of Annex I to the contract) in the beginning of 2027

CONTRACTS

3 parts	Content	Who signs?
Basic contract	• Designates the contracting parties • Contains the general obligations applicable to the project • Defines the contract duration and budget	Heads of the partners: directors, rectors
Annex I: technical specifications	• Operational implementation of the project • Work description and planning • Details on funding by expenditure category	Persons in charge of the realisation of the project (principal investigators, “promotor”)
Annex II: General conditions applicable to the contract	• General provisions applicable to all contracts (incl. IPR rules)	Must not be signed – will be soon available on the SCRiMM website

Questions

scrimm@mil.be