Genesis Open Call (OC1)
Terms and Conditions

Submission Starts: 9th of November 2026, at 09:00 Brussels Time
Submission Deadline:: 10th of February 2027, at 17:00 Brussels Time

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Introduction

Welcome to the GRAIL Open Call Terms and Conditions.

GRAIL aims to develop Europe's first trustworthy, sovereign **General-Purpose Foundational Robotics Model**. This model utilizes an agentic, hierarchical Mixture-of-Experts (MoE) architecture, dividing tasks into an **Abstract Planning Agent** ("Cognitive Cortex"), a **Grounding Agent** ("Subcortical Integrator"), and a **Physical Control Agent** ("Reflex Spine"), sharing a common latent space and normalising perception within an **Integrated Situational Model (ISM)**.

GRAIL aims to organise 3 open calls in total and each third party can receive up to a cumulative limit of **EUR 500,000** across all three open calls.

Good luck!

The GRAIL Consortium

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01. Open Call Basic Conditions

Call Opening Date	9th November 2026, at 09:00 Brussels Time.
Call Deadline	10th February 2027, at 17:00 Brussels Time.
Max. Grant Amount & Funding Mode	The **maximum grant amount per project in this open call is up to EUR 100,000** (100% funding rate). The Project budget is part of the application form. The total amount you list will be fixed and will determine the grant you'll receive if you qualify to the GRAIL Genesis support programme. The grant will be paid as a lump sum[1].
Number of grants and total funding available	The total budget allocated for this open call is EUR 1,000,000 (targeting at least 10 projects). The total budget allocated for Financial Support to Third Parties (FSTP) for 3 open calls organised under the GRAIL project is **EUR 10.100,000** to support at least **40 third-party projects**:

[1] The lump sum is a simplified method of settling expenses in projects financed from Horizon Europe Programme funds. It means that the subgrantee is not required to present strictly defined accounting documents to prove the cost incurred (e.g., invoices) but is obliged to demonstrate that the implementation of the project is in line with the milestones set for it. The lump sum does not release the Beneficiary from the obligation to collect documentation to confirm the costs under the fiscal regulation

Project Scope & Eligible Activities	Activities must fall directly within the scope of **GRAIL** Open Call, which concerns the development of technical solutions focusing on data collection, crowdsourcing, low-cost capture devices, and open-benchmarking tools to resolve the "Robotic Data Gap". Eligible activities must focus on creating or improving the data assets that will feed the GRAIL foundation model. The indicative activities that qualify for financial support are the following: 1. Generalist Data Foundations.: Creation of broad datasets across robots and tasks, capturing primitive skills (grasping, pushing, insertion, handover) with multimodal sensors. Emphasis on lab-scale but diverse conditions, including rigid, deformable, and cluttered interactions, to serve as transferable baselines for later UCs. 2. Democratizing Data Capture. Low-cost, plug-and-play kits for data collection, with multimodal sensors easily retrofittable to lab robots. Citizen-driven contributions via phone apps and gamified platforms, enabling non-roboticists to record demonstrations and interactions, increasing diversity and accessibility of training data. 3. Lab-scale Generalization Stress Tests. Benchmarks to evaluate zero-/few-shot generalization, sim-to-real transfer, and robustness under varying lighting, clutter, and human presence. Micro-scenarios for safe HRC (handover, collaborative navigation) tested in controlled lab conditions. 4. Open Benchmarking Tools. Shared tests, evaluation boards, and baseline models that allow consistent measurement of performance across partners and future UCs. Focus on interpretability, comparability, and transparent reporting of progress. We are funding the following topics: • **Topic 1:** Dexterous and precise tasks with robotic hands • **Topic 2:** Long-horizon stationary robot tasks • **Topic 3:** Long-horizon mobile robot tasks • **Topic 4:** Industrial Robot Tool-Use Tasks • **Topic 5:** Egocentric Video Data Collection for Dexterous Tasks

	• **Topic 6:** Low-Cost Multimodal Capture for Contact-Rich Manipulation • **Topic 7:** Plan–Fail–Repair: Gamified Collection of Robot Reasoning Data • **Topic 8:** Open generalization-stress benchmarking kit: physical stress artefacts, sweep protocol and a portable evaluation harness with reliability and human-in-the-loop reporting When applying to this Open Call, please note that all activities are expected to start at TRL[2] 2 and finish at TRL4 but this is not a mandatory requirement. One application can address only one challenge. For the detailed description of topics see **Annex 1.** For more detailed information on GRAIL's architecture, artefacts, pilots and infrastructure, please check the Technical Guidelines which can be found here.

[2] TRL - Technology Readiness Level - Technology Readiness Levels (TRLs) are indicators of the maturity level of particular technologies. This measurement system provides a common understanding of technology status and addresses the entire innovation chain. There are nine technology readiness levels; TRL 1 being the lowest and TRL 9 the highest. In our project, we refer to Annex B of the General Annexes for Horizon Europe Work Programme 2023-2025 for a full description of TRLs.

Who can Apply?	This call is open to single entities (no consortia) including**:** ● SMEs (including startups), ● Research organisations (RTOs)[3], ● Mid-Caps[4], or ● Large companies[5], registered as legal entities before the end date of this open call. We allow only single entities (not consortia). Applicants have to be either acting as data providers or data-collection-tool developers (hardware and/or software) who may propose valuable multimodal dataset generation and structured reasoning data, or developers of benchmarking methodologies without developing a dedicated data-collection tool (depending on the needs of the selected Challenge). This Open Call is subject to restrictions due to safeguarding the Union's strategic assets, interests, autonomy and security. Therefore, the entities have to be established in any EU Member State, Iceland, Norway, or the following associated countries are eligible: Canada, Israel, Republic of Korea, New Zealand, Switzerland, United Kingdom.

[3] Research organisation means an entity, such as university or research institute, irrespective of its legal status (organised under public or private law) or way of financing, whose primary statutory goal is to conduct fundamental research, industrial research or experimental development and to disseminate their results by way of teaching, publication or technology transfer; all profits are reinvested in these activities, the dissemination of their results or teaching; undertakings that can exert influence upon such an entity, in the quality of, for example, shareholders or members, shall enjoy no preferential access to the research capacities of such an entity or to the research results generated by it.

[4] Mid-cap means an enterprise that is not a SME and that has up to 3 000 employees, knowing that the staff headcount is calculated in accordance with Articles 3 to 6 of the Annex to Commission Recommendation2003/361/EC:https://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:124:0036:0041:EN:PDF

[5] Large company refers to Companies that do not comply with SME definition

Support Programme Duration	Projects will participate in the **GRAIL Genesis Support Programme** that lasts **8 months at maximum**. Our Support Programme covers 3 Stages: ● Stage 1: Individual Mentoring Plan Set-up ● Stage 2. Technology design and development and Data acquisition ● Stage 3: GRAIL Data and tech integration. Third-party projects will receive their grant in installments upon the successful completion of each stage. For more details on the exact payment schedule and how each project's progress will be evaluated, please refer to the 'Payment conditions' and 'Milestones Review' chapters.
How to Apply?	Applications must be submitted through the online **FundingBox Open Call Management Tool** before the designated call deadline. Applications must be submitted entirely in **English**, and all **mandatory sections** must be completed. **Multiple submissions** are allowed. However, applicants are permitted to submit a maximum of 3 applications under the condition that each proposal addresses a different topic offered by GRAIL. If more than one application on the same topic was submitted, only the one submitted closer to the deadline will be considered. Please note that the same entity cannot receive more than €500,000 across the three GRAIL open calls.

Additional conditions related to who can apply?	Applicants under EU restrictive measures under Article 29 of the Treaty on the European Union (TEU) and Article 215 of the Treaty on the Functioning of the EU (TFEU) are ineligible. The GRAIL partners and their affiliated entities can NOT be involved in the FSTP recipients' projects neither their employees and associates - including persons working under employment contract or contract equal or similar to employment contract and board members (former employees and associates shall be also excluded if they were involved in the project execution at any stage).
Security Restrictions:	Applicants under EU restrictive measures under Article 29 of the Treaty on the European Union (TEU) and Article 215 of the Treaty on the Functioning of the EU (TFEU) are ineligible. Legal entities directly or indirectly controlled from non-eligible countries are ineligible unless they submit an **Ownership Control Declaration** accompanied by country-assessed guarantees[6] demonstrating that their participation does not negatively affect the Union's strategic assets, interests, security, or autonomy. Project activities (including subcontracted work) must take place in eligible countries. Participation in any capacity in third-party projects is limited to entities established in and controlled from eligible countries.

[6] The guarantees shall in particular substantiate that, for the purpose of the project, measures are in place to ensure that:
a) control over the applicant legal entity is not exercised in a manner that retrains or restricts its ability to carry out the project and to deliver results, that imposes restrictions concerning its infrastructure, facilities, assets, resources, intellectual property or know-how needed for the purpose of the project, or that undermines its capabilities and standards necessary to carry out the project;
b) access by a non-eligible country or by a non-eligible country entity to sensitive information relating to the project is prevented; and the employees or other persons involved in the project have a national security clearance issued by an eligible country, where appropriate;
c) ownership of the intellectual property arising from, and the results of, the project remain within the recipient during and after completion of the project, are not subject to control or restrictions by non-eligible countries or non-eligible country entity, and are not exported outside the eligible countries, nor is access to them from outside the eligible countries granted, without the approval of the eligible country in which the legal entity is established.

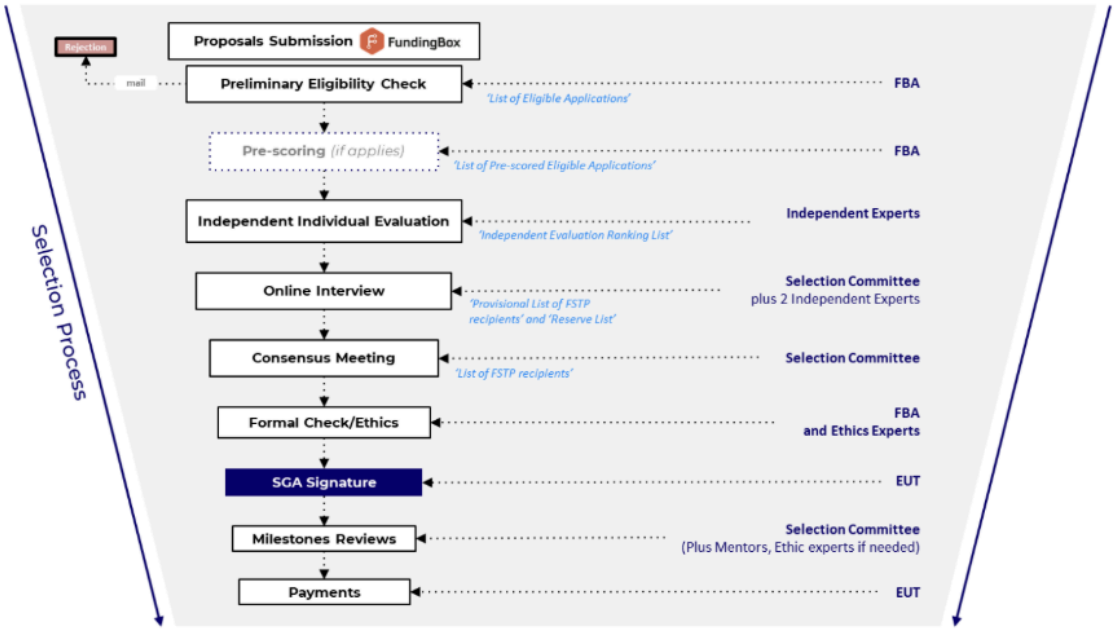
	High-risk suppliers (or entities fully or partially owned or controlled by a high-risk supplier) of mobile network communication equipment are strictly excluded and cannot submit guarantees. All data sharing, storage, and processing must strictly respect **Europe-first data sovereignty rules**.
Ground rules and formal requirements	When applying to this Open call, please also note that the following conditions will be checked: 1. Submission deadline: Only applications submitted through the online form before the deadline will be considered. 2. Language requirement: Applications must be written in English. If mandatory sections are in another language, the application will be rejected. Non-mandatory sections in another language will not be evaluated, but the application will remain valid. 3. Data accuracy: The information you provide must be correct, complete, and allow proper evaluation. Extra material provided by you that was not requested in the form will not be considered. However, we may use other resources to verify that the provided data is true. 4. Completeness: Ensure all required fields are filled. You can edit your submission until the deadline, but no changes are allowed after that. 5. European dimension: Your application should align with EU goals and contribute to creating a positive impact within the EU. 6. AI content: The use of AI tools to improve clarity and structure is permitted, provided the content remains accurate and fact-based. Applications may be rejected if found to be AI-generated and lacking a factual foundation. All submissions must be authentic reflections of the project, and the applicant team must evidence the technical and operational capacity required for implementation. Providing unverifiable or non-authentic information is grounds for immediate rejection.

	7. Conflicts of interest: We will check for any conflicts of interest between applicants and Consortium partners. Partners, their affiliated entities, and their employees cannot participate. Each case of conflict will be reviewed individually. 8. Financial stability: Entities under liquidation, in financial difficulty, or excluded from receiving EU funding are not eligible. We also exclude companies in bankruptcy. 9. Original work: Execution of your project should not violate third-party IPR. It must be based on your intellectual property or you must be allowed to use third-party rights. IPR to the project can not be subject to any dispute. 10. Funding limit: the maximum amount of financial support cannot exceed 500 000 € per third party. Each third party may benefit from more than one GRAIL grant in one or more support programmes, provided that the maximum total support never exceeds 500 000 € and that there is no violation of the prohibition on double funding[7] in this regard. 11. Acceptance of rules: By applying, you agree to the Open call Terms and Conditions outlined in this document. 12. Gender Equality Plan (GEP): Public bodies, universities, and research organizations from EU or Associated countries must have a GEP.
Ecosystem Platform:	More information about the GRAIL project and the Testing Hubs is available on the official project website: https://grail-robotics.ai/open-call/genesis The open call is managed by **FundingBox Accelerator sp. z o.o.** (PIC 951227688, established in Warsaw, Poland) and organised by the GRAIL Consortium Partners.

[7] The "no double funding" rule means that the same costs for the same activity cannot be funded twice with public money. This is a key rule for EU funding and must always be followed.

02. Submission & Evaluation Details

Our evaluation process is transparent, fair and equal to all participants. We will evaluate your project in a few phases described below. We will inform you about the results of the evaluation as soon as they become available.



2.1 Initial Check

After the closure of the GRAIL 1st Open Call, the system will review your application to ensure it meets the conditions outlined in this Terms and Conditions Document (Section 1).

This check will be based on the declarations in your application.

2.2 Pre-scoring (if applicable)

If the volume of eligible applications exceeds five times the number of projects to be funded (indicatively equivalent to a success rate below 20%), a Pre-scoring will be triggered.

The **GRAIL Selection Committee** will pre-score applications automatically based on objective criteria focused on project relevance (scope, TRL alignment etc.), potential impact, and team implementation capabilities to shortlist the most competitive projects for independent expert evaluation.

As an applicant, choose the option that best fits your project for each criterion and confirm all your statements are true. We will check them during the next phases. If we identify false information, we may reject the application.

Your project can earn up to 100 points. The top 50 applications will move on to the next phase. Each question is automatically scored on a scale from 0 to 5 points based on the applicant's selected answer from a drop-down menu. The final score is calculated automatically using the defined percentages.

- **Relevance** (15% Weight | Maximum 15 points). To assess the application's technological scope and its alignment with data collection in robotics.
- **Impact** (35% Weight | Maximum 35 points). To evaluate the technical benefits of the scenario, specifically the quality and magnitude of the data.
- **Implementation** (50% Weight | Maximum 50 points). To measure the team's technical capacity, the maturity of the action plan, and resource allocation to execute the project.
    - o Action Plan Maturity.
    - o Resource Allocation.

Tie-Breaking rules:
if two or more applications receive the exact same total score at the cut-off threshold, the system will apply the following tie-breaking criteria automatically, in this specific order:

- The highest score obtained in the Impact section.
- The highest score obtained in the Implementation section.
- The highest score obtained in the Relevance section.

2.3 Independent Individual Evaluation

Applications that pass the eligibility check will be assigned to up to **three independent internal evaluators** who will be selected and approved by the Selection Committee based on their competences. These internal, independent evaluators will also abide by confidentiality obligations and conflict-of-interest checks.

The independent evaluators will score the applications from 0 to 5 points across three awarding criteria:

1. **EXCELLENCE (0–5 Points):**
    - **Ambition:** The applicants have to demonstrate to what extent the proposed third-party project contributes to GRAIL ´s scope, has a European dimension and is beyond the State of the Art, with a clear focus on the quality, amount and typology of data to be collected/contributed to feed the GRAIL foundation model.
    - **Innovation:** Applicants should provide information about the level of innovation within their market and about the degree of differentiation that this project will bring, including novel capture/annotation workflows, low-cost capture tools, or benchmarking artefacts that measurably raise data utility.
    - **Soundness:** Soundness of the approach and credibility of the proposed methodology, including ethics and data governance.
2. **IMPACT (0–5 Points):**
    - **Data utility and market opportunity:** The applicants have to demonstrate a clear idea of what they want to do and whether the new/improved product has market potential, evidenced by the expected utility of the datasets/tools for multiple industrial contexts (cross-pilot value) and their role in de-risking later fine-tuning/validation.
    - **Competition:** The applicants have to provide information about the degree of competition for their particular product/service and if the idea is disruptive. Differentiation may refer to superior data quality, coverage and documentation that enable reuse across pilots.
    - **Adoption pathway and scalability:** The applicants have to demonstrate the level of scalability beyond a single problem via reusability/portability of datasets and tools across tasks, robots and environments, and clarity on access/licensing that does not hinder adoption.
    - **Environmental and social impact:** The applicants have to demonstrate the project contribution towards environmental, social and economic impacts to contribute to sustainable development, Green Deal and other European policies (e.g. indicating any measures

that reduce the footprint of data acquisition and promote broader knowledge sharing).

3. **IMPLEMENTATION (0–5 Points):**
    - **Team:** The applicants have to demonstrate their management and leadership qualities, their ability to take a concept from ideas to market, their capacity to carry through their ideas and understand the dynamics of the technical development they are trying to tap into. The team should be a cross-functional team, with a strong background and skills base and considering its gender balance.
    - **Work Plan:** Quality and effectiveness of the work plan proposed to reach the expected objectives.
    - **Resources:** Demonstrate the quality and effectiveness of the resources assigned to achieve the objectives/work plan/deliverables proposed. This section may also include an estimated budget to describe the planned cost allocation for the project implementation.

Each criterion will be scored on a scale from 0 to 5, with evaluators providing individual reports and scores based on these criteria. Once the Individual Evaluation Reports are submitted, the final score for each individual criterion will be calculated as the average of the scores provided by all evaluators. The final score per application will be calculated as the sum of the score for each individual criterion. The threshold for individual criteria will be 3. The overall threshold, applying to the sum of the three individual scores, is 10 points.

Once we have an initial ranking, ties (if any) will be solved using the following criteria in order of priority:

1. Highest score in Excellence Section.
2. Gender balance among the staff responsible for performing the activities.
3. The following criteria applying to each topic:
    a. Challenge 1, highest number of valid, annotated, multimodal dexterous manipulation trajectories;
    b. Challenge 2, highest number of hours of annotated, usable, real-world multi-stage robot execution;
    c. Challenge 3, highest number of hours of annotated, usable, real-world mobile robot execution, covering the relevant navigation and manipulation activities;
    d. Challenge 4, highest number of valid, annotated tool-usage episodes;
    e. Challenge 5, highest number of hours of annotated, usable egocentric video covering dexterous tasks;

f. Challenge 6, highest number of valid multimodal demonstrations collected with the proposed system;
g. Challenge 7, highest number of validated, structured planning, failure-diagnosis and recovery traces;
h. Challenge 8, highest number of distinct, documented and reproducible stress-test conditions supported by the benchmarking kit.

As a result, an 'Independent Evaluation Ranking List' will be produced.

Please note that we need time to process all the applications in this phase, so you probably won't hear back for a while.

2.4 Online Interview / Pitching Session

Up to the 20 highest-scored applications (i.e, approximately twice the number of applications to be funded) from the 'Independent Evaluation Ranking List', provided that all of them are above threshold, will be invited to an online interview.

This online session gives us the opportunity to get to know your team, explore your application in greater detail, and ensure that all submitted ideas reflect your own original work and expertise. We look forward to an open, interactive discussion about your vision for the project.

At the online interview, the Selection Committee, with the support of two evaluators who had participated in the Independent Evaluation, will assess and rank the invited applicants based on the following 'Awarding Criteria':

- Vision, capacity, and attitude of the Team
- Conceptual alignment with the application submitted.
- High potential impact on the project's goals.
- Positive impact on the applicant's processes, products, or services.

Scoring methodology

- Each juror scores every finalist 0–5 on four criteria. The total is 0–20, supported by a justification / comment.
- Jurors can pre-vote, then edit their votes until the last pitch ends. An application's score is the simple average across jurors.
- Ties are broken by soft criteria in order: at least one application per challenge if possible, then underrepresented countries and regions first.

At this stage, the 'Provisional List of FSTP recipients' and 'Reserve List' will be defined.

2.5 Consensus Meeting

The 'Selection Committee', after the online interview, will approve the 'List of FSTP recipients'. The decision will be based on the 'Provisional List' obtained as a result of the online interview.

Whilst normally the highest ranked applications from the 'Provisional List' will be selected for funding, the Selection Committee might have fair reasons for objecting to a specific third party project,

- like the alignment with GRAIL goals and scope, the ability to achieve the highest impact possible (verifiable KPIs per stage (e.g. hours or episodes, number of modalities, number of robots, share of failure and recovery data),
- commercial competition (Dataset or tool already sold openly on the market. Exclusivity or licence terms that would block GRAIL's tiered private/protected/public data mode),
- quality of the competing projects (relative standing among applications on the same topic),
- as well as the existence of significant ethical concerns or a potential conflict of interest. In this case, the choice may pass to the next-ranked application in the Reserve List.

The final number of applications approved will be decided based on the overall quality of the applications. Note that funding is allocated on merit across all eight Genesis topics, without predefined topic quotas, while allowing reasonable portfolio balance among applications of comparable quality that meet the required thresholds.

In case the number of applications approved is lower than expected, the 'Selection Committee' may decide either to select a lower number of beneficiaries, in this particular open call, or to extend the selection process by inviting applicants (over threshold) from the Reserve List .

At this stage, the 'List of FSTP recipients' will be decided.

2.6 Formal Check and Ethics Assessment

Finalists will undergo a formal check to confirm their legal status (e.g., company registration, financial documents, ownership structure, tax ID, etc.). Therefore, we will ask you to provide documents to confirm all the details (these will be - not be an exhaustive list: company's registration document, tax ID number, ownership structure, financial statements, Bank Identification Form).

All selected entities will be required to submit, during the Formal Check, an Ownership Control Declaration and, if applicable, the guarantees positively assessed by their eligible country of establishment, that their participation in the action would not negatively impact the Union's strategic assets, interests, autonomy, or security.

All the documents must be provided within the given deadline. If you don't deliver the requested documents on time, without a clear and reasonable justification, we will have to exclude you from further formal assessment.
After passing this check, we will invite you to sign the Sub-grant Agreement with the GRAIL consortium to officially participate in the programme.

The selected applications will also undergo an ethics assessment performed by GRAIL's Ethics Partner. An 'Ethics Summary Report' will be produced and, when applicable, specific requirements will be included in the Individual Mentoring Plan.

03. After the Sub-Agreement Signature

3.1 Payment Conditions

FSTP grants from GRAIL will be paid as a lump sum. Payments are triggered purely by the successful and timely completion of each stage of the work planned and outlined in the Individual Mentoring Plan developed at the very beginning of the support programme.

Payments are distributed across **three tranches**[8] corresponding to the support programme stages:

Milestones	Deliverable	Stage Duration (Months)	Total funding per tranche	% Total Grant
IMP (end 1st Stage)	Individual Mentoring Plan	1	Up to 23,000 EUR	Up to 23%
Design and data acquisition (end 2nd Stage)	Report on data acquisition	4	Up to 50,000 EUR	Up to 50%
Data contribution (end 3rd Stage)	Report on Data contribution	3	Up to 27,000 EUR	Up to 27%
		Total		100%

⚠️ Delayed payment mechanism will be applied to all payments. At least 15% of each tranche will be paid once the whole GRAIL Project is completed. This should happen approximately 9 months after the end of the GRAIL Project. The expected end of the GRAIL Project is 31.05.2031. Relevant provisions will be included in the Sub-grant Agreement. Please consider that the GRAIL Project might be extended.

[8] The amounts of tranches included in the table (up to 23%, up to 50% and up to 27%) are subject to prior approval by the European Commission and the signature of an amendment to the GRAIL Grant Agreement concluded between the GRAIL consortium and the European Commission. If the European Commission does not approve, the proposed tranche amounts, they will return to their original values, i.e., up to 15% (up to 15.000,00 EUR), up to 45% (up to 45.000,00 EUR), and up to 40% (up to 40.000,00 EUR), and will be included in the Subgrant Agreement at those amounts and will be binding for the FSTP grant recipient.

3.2 Progress Evaluation & Milestone Reviews

We pay upon the delivery of the agreed results - not upon delivery of certain receipts. Therefore, Consortium Partners, gathered in the Selection Committee, will evaluate your progress regularly.

Stage	Explanation
Individual Mentoring Plan (IMP)	Within the first month of the Support Programme, you will prepare an Individual Mentoring Plan (IMP) outlining the final budget split, KPIs, and deliverables for performance assessment. It will also cover any specific Ethics Assessment requirements (if applicable). The IMP will be evaluated by the Selection Committee, taking into account the Deliverables quality (90%) and Deadline compliance (10%).
Milestone Reviews	Before each payment, the Selection Committee will review your progress. Performance will be evaluated by Technical Partners and Ethics Partners (in the case of third-party projects where specific requirements on ethics have been included as deliverable in the Individual Mentoring Plan) based on: ● Deliverables quality (30%) ● Technical/Business KPIs (60%) ● Deadline compliance (10%) Each criterion will be scored from 0 to 10, and the final score will be calculated based on the weights indicated. A score of 7 points or more is required to continue in the program. For more details, please check the template of the Sub-grant Agreement.

Continuation Threshold & Grant Reductions:
A minimum score of **7 out of 10 points** is required to continue in the support programme and receive full payment. If a project falls below this threshold, the

Selection Committee considers individual situations and will make the final decision whether the project should be invited to leave the support programme without the corresponding payment or whether the project should get additional time for completion or whether it should receive a reduced grant payment.

4. Contact Us

4.1 Technical Support

For questions regarding the application process, guidelines, or technical platform issues, applicants must submit queries to the **GRAIL Helpdesk** at: **grail.helpdesk@fundingbox.com**

Please note that responses are given individually and do not change these Terms, they are provided for informational purposes only.

In case of any technical issues or problems, please include the following information in your message:

- your username, phone number and email address;
- details of the specific problem (e.g. error messages you encountered, bug description, i.e. if a dropdown list isn't working, etc.); and
- screenshots of the problem.

4.2 Complaints Procedure

If you believe there was an error in one of the evaluation phases, you may submit a complaint within three (3) calendar days after sending the results to you. Send it to grail.helpdesk@fundingbox.com in English and include:

- your contact details (including email),
- the subject of your complaint,
- evidence of the specific issue.

Please note that we will review only complaints related to:

- errors in the process caused by our staff,
- technical issues beyond the applicant's control,
- clear human or mechanical errors made by our staff,

- incorrectly marked statements, minor clerical errors, and obvious typographical mistakes.

Please note that we will not review complaints related to the content of the expert evaluations.

Complaints will be reviewed within seven (7) calendar days. If more time is needed, we will inform you via email. Anonymous complaints or those with incomplete information will not be considered.

5. Final Provisions

Any issues not covered by these Terms and Conditions are governed by Polish law, Horizon Europe Programme rules, and EU grant regulations.

We make our best effort to keep all provided data confidential; however, for the avoidance of doubt, you are solely responsible for indicating your confidential or sensitive information as such. Please be aware that your application form will be shared with the external evaluators and GRAIL Consortium partners.

You retain ownership of your intellectual property rights (IPR).
Due to security restrictions, please be aware that your project IP and results cannot be made subject to control, restrictions, or claims by non-eligible countries or foreign entities. IP and results cannot be exported outside eligible countries, nor can access to them from outside eligible countries be granted, without prior formal authorization from the eligible country where your entity is established.

In the event that a third-party project and a GRAIL partner jointly generate results, they must sign a **Joint Ownership Agreement** to define post-project rights and filing costs before public dissemination.

Open Source & Ecosystem Contribution: Results, code, and datasets generated by the third-party projects should be made available as **open source** where feasible, and registered as reusable assets on the **GRAIL Platform** and the **AI-on-Demand (AIoD)** platform to benefit the broader European manufacturing ecosystem.

The signature of the Sub-grant Agreement is the initial condition to establish any obligations among applicants and any Consortium partners (with respect to the obligation of confidentiality of the application). The Sub-grant Agreement will include a set of obligations towards the European Commission (for example:

promoting the project and giving visibility to the EU funding, maintaining confidentiality, and understanding potential controls by the EC/ECA, EPPO, and OLAF).

Please be aware that eligibility criteria will be checked throughout the process, including a final review and support programme.

In the event of any discrepancies between these Terms and their Annexes, the Terms shall prevail.

The GRAIL Consortium reserves the right to cancel or modify the call at any time, informing applicants accordingly.

Need more help? Contact us at grail.helpdesk@fundingbox.com, and we'll be happy to assist.

Annex 1: Genesis Open Call Topics

General Requirements applicable to all topics (except for Challenge 8)

The requirements below apply to every topic in this document, whether or not the data is human-related. They complement the topic-specific Scope, Datasets and Deliverables and are repeated in each topic for safety.

A. Legal and data-protection requirements

A1. Legal compliance documentation. Applicants must describe and document how they have addressed all applicable legal requirements when collecting and providing the data, in particular (and not limited to) anonymisation, consent, metadata, provenance and licensing.

A2. Regulatory compliance. Applicants must show that data collection and provisioning for GRAIL's purposes comply with all applicable regulation, including (but not limited to) privacy and data-protection regulation (GDPR) and copyright regulation, and how they ensured that the datasets contain no data whose processing and use in the project would infringe any applicable regulation.

A3. No prohibited data. Datasets must not contain data whose processing is prohibited. This includes special categories of personal data under Article 9 GDPR, such as health data and physiological measurements (e.g. heart rate/ECG, skin conductance, pupil diameter, surface EMG) and biometric data used to identify a person. Such data must not be collected or provided.

A4. Warranty. Every deliverable set must include a written warranty by the applicant that the data collection and provisioning for GRAIL's purposes meet all applicable legal requirements, so that the data is legally compliant for its intended use in the project. The warranty covers the legality of collection, provision and use under all applicable regulation, not only GDPR, licensing and copyright.

B. General technical requirements

B1. Data description. Each application must describe, for every dataset or tool it delivers: (i) data volume (size, e.g. GB/TB, plus hours, episodes or frames where relevant); (ii) data formats, preferably standard machine-readable ones (e.g. ROS/ROS2 bags, HDF5, mp4, jpeg, JSON, CSV, Parquet or LeRobot-compatible formats); (iii) access patterns (e.g. batch download, streaming or random access, and the access tier under GRAIL's private/protected/public data model); and (iv) overall technical requirements (sensor setup, calibration, synchronisation, metadata schema, storage and transfer).

Topic No.	Dexterous and precise tasks with robotic hands
1	**Scope** Dexterous manipulation is the next frontier of robot control. Recent developments in multi-fingered hands have enabled the ability to demonstrate, learn, and execute tasks which require high precision. Control policy architectures are being advanced to solve manipulation in this high-dimensional solution space. Given the relative novelty of this hardware, there is a lack of datasets which use five-finger hands. The difficulty of contact-rich tasks motivates collecting tactile sensory data, too. We seek to obtain a dataset which is rich enough to learn dexterous and precise tasks. For robustness, we seek a significant proportion of failure trajectories and failure-recovery demonstrations. An example of a relevant dataset is Tactile-Reactive Dexterous Manipulation ("T-Rex") available at https://tactile-reactive-dexterous.github.io/ which collected data with: ○ A bimanual Dexmate Vega-1 with two 7-DoF arms and two 22-DoF Sharpa Wave dexterous hands. ○ A head ZED X Mini stereo camera with two wide-view wrist cameras. ○ Teleoperation uses Manus gloves and VIVE trackers routed through the same control pipeline used at deployment. ○ Every episode is a time-aligned bundle at 30 Hz: three RGB streams, bimanual proprioception, SE(3) wrist poses, per-fingertip tactile (a deformation depth map plus a 6-axis wrench for all ten fingertips), and a language instruction – beneath a 300 Hz low-level control thread. ○ Using 200+ household objects, along 22 motion primitives, with 3 tactile modalities: a total of 50h of teleop data. **Legal compliance (general requirement A).** Applicants must describe and document how all applicable legal requirements have been addressed when collecting and providing the data (in particular anonymisation, consent, metadata, provenance and licensing), and how the collection and provisioning comply with all applicable regulation, including privacy and copyright regulation. Datasets must not contain data whose processing is prohibited, such as special categories of personal data under Article 9 GDPR.
	Objectives ● Perform teleoperation using a bimanual setup with a pair of 5 finger hands with ● tactile-sensor fingertips, such as the ROBOTIS HX5-D20.

	• Demonstrations to cover a range of environments, with a bias to industrial tasks such as screw/bolt tightening, Ethernet cable plug/unplugging, and duct taping.

	Datasets
	• Time-bundled at 30Hz:
	  ○ Joint actions (target positions / velocities)
	  ○ Bimanual proprioception
	  ○ Per-fingertip tactile feedback (e.g. deformation of taxels matrix)
	  ○ 6-axis wrench for all ten fingertips if available
	  ○ Three RGB streams (one head-mounted wide-angle camera, and one wrist-mounted wide-view camera on each arm)
	  ○ SE(3) wrist poses
	• Language instruction (for each demonstration)
	• Per-demonstration outcome label: success / failure / failure-recovery.
	• Timestamp of the failure & failure-recovery where relevant.
	Include both successful and failed trajectories, with failure and failure-recovery trajectories comprising at least 10% of total demonstrations.
	
	Data volume, format and access (general requirement B). Applicants must state the expected data volume (size, plus hours, episodes or frames where relevant), data formats, access patterns and overall technical requirements of the dataset. The specification above already sets time-bundled episodes at 30 Hz and a total of 40 hours of teleoperation demonstrations; applicants must also state the data size and access patterns.

	• **Deliverables** 40 hours of teleoperation demonstrations in the above specification. • Documented data schema and export format for the collected episodes. • Technical documentation describing the collection setup: embodiments, sensing hardware and teleoperation methods used. • Legal compliance documentation describing how all applicable legal requirements have been addressed (anonymisation, consent, metadata, provenance, licensing) and how the data collection and provisioning comply with all applicable regulation. • A written warranty that the data collection and provisioning for GRAIL's purposes meet all applicable legal requirements, making the data legally compliant for its intended use in the project, and that the datasets contain no data whose processing is prohibited. • A data description stating the data volume (size), formats, access patterns and overall technical requirements.

Topic No.	Long-horizon stationary robot tasks
2	**Scope** Collect multimodal datasets of long-horizon manipulation tasks performed by stationary robotic platforms in real-world industrial environments. Existing public robot-manipulation datasets are predominantly collected in controlled laboratory environments or purpose-built experimental setups. This topic addresses the resulting gap by targeting data collected in operational or representative real-world industrial settings, where robots encounter the natural variability, disturbances, and imperfections associated with deployment. Tasks should consist of multiple stages and generate challenges related to planning and/or grounding, for example requiring the robot to determine task order, identify relevant objects or locations, reason about object and task states, or adapt to changing conditions during execution. The tasks should be contact-rich and representative of industrial manipulation, for example assembly, machine tending, insertion, fastening, cable handling, packaging, material handling, or maintenance operations. Data collection should expose robots to meaningful real-world variation, which may include changes in object pose and properties, workpiece or fixture variation, clutter, lighting, wear, tolerances, environmental conditions, human activity, or other disturbances encountered during normal operation. The objective is not simply to reproduce benchmark tasks in a laboratory environment, but to capture the complexity of robot operation in realistic settings. Datasets collected exclusively in highly controlled laboratory environments are therefore not the main focus of this topic. **Legal compliance (general requirement A).** Applicants must describe and document how all applicable legal requirements have been addressed when collecting and providing the data (in particular anonymisation, consent, metadata, provenance and licensing), and how the collection and provisioning comply with all applicable regulation, including privacy and copyright regulation. Datasets must not contain data whose processing is prohibited, such as special categories of personal data under Article 9 GDPR.
	Objectives • Create datasets of long-horizon, contact-rich manipulation in real-world industrial environments that complement existing laboratory-oriented robotics datasets.

	• Capture multi-stage tasks requiring planning, grounding, state tracking, and adaptation over extended execution horizons. • Represent meaningful variations encountered during real robot deployment, rather than repeated executions under nearly identical laboratory conditions. • Include successful task executions together with failures, corrective actions, and recovery behaviours where these can be collected safely. • Provide semantic annotations that make it possible to relate low-level robot behaviour to task intent, task stages, objects, locations, and execution outcomes. • Enable the resulting data to be reused for training and evaluating GRAIL models for long-horizon robot reasoning and execution.
	Datasets Applicants should provide datasets collected predominantly in real operational industrial environments, or in settings that reproduce the variability and constraints of such environments to a clearly justified degree. The dataset should contain synchronized visual observations and robot proprioceptive information. For contact-rich tasks, force/torque, tactile, motor current, or other interaction-related signals should be included where available and technically feasible. Data should preferably include: • RGB or RGB-D observations from relevant viewpoints. • Robot joint states, end-effector pose, commanded and executed actions, and other relevant proprioceptive information. • Force/torque, tactile, motor-current, or other contact-related measurements where available. • Natural-language descriptions of the overall task and, where possible, individual task stages, including what the robot is doing, why the action is required, and where it is being performed. • Task segmentation, relevant object and scene states, and execution outcomes. • Successful executions as well as representative failures and trajectories containing corrective or recovery behaviour. Metadata describing relevant environmental variation, such as objects, workpieces, fixtures, scene configuration, lighting, disturbances, operating conditions, or task variants. Applicants should document the collection environment and explain how it differs from a controlled laboratory setup and which sources of real-world variability are represented. Data streams should be synchronized and accompanied by calibration information, coordinate frames, metadata, provenance, and documentation of

	the data schema. Data should be provided in standard machine-readable formats compatible with GRAIL data-processing pipelines. **Data volume, format and access (general requirement B).** Applicants must state the expected data volume (size, plus hours, episodes or frames where relevant), data formats, access patterns and overall technical requirements of the dataset.
	Deliverables • A documented and quality-controlled multimodal dataset of long-horizon stationary robot manipulation collected in real-world industrial scenarios. • Structured task, action, environment, and execution-outcome annotations. • Successful, failed, and, where feasible, recovery executions covering meaningful real-world variation. • Documentation of the robot platform, sensors, collection environment, calibration, synchronization, metadata, provenance, and data formats. • A description of the real-world variations represented in the dataset and of the limitations of the collected data. • A baseline experiment demonstrating the usefulness of the dataset for a relevant problem such as task understanding, long-horizon policy learning, grounding, failure prediction, or recovery. • Legal compliance documentation describing how all applicable legal requirements have been addressed (anonymisation, consent, metadata, provenance, licensing) and how the data collection and provisioning comply with all applicable regulation. • A written warranty that the data collection and provisioning for GRAIL's purposes meet all applicable legal requirements, making the data legally compliant for its intended use in the project, and that the datasets contain no data whose processing is prohibited. • A data description stating the data volume (size), formats, access patterns and overall technical requirements.

Topic No.	Long-horizon mobile robot tasks
3	**Scope** Collect multimodal datasets of long-horizon tasks performed by mobile robotic platforms in real-world industrial, logistics, or warehouse environments, where successful task execution requires movement through the environment over extended spatial and temporal horizons.

	Existing mobile-manipulation and robot-learning datasets are predominantly collected in controlled laboratory environments, with limited representation of the variability encountered during actual robot deployment. This topic addresses this gap by targeting data from operational real-world environments, including naturally occurring changes in scene configuration, object locations, accessibility, traffic, human activity, obstacles, lighting, and other operating conditions. Tasks should create challenges related to planning and/or grounding, including deciding where to move, which objects or locations are relevant, how actions at different locations should be sequenced, and how plans should be adapted as conditions change during execution. The primary focus is on mobility and long-horizon execution; contact-rich manipulation is therefore not required. Mobile manipulators combining an arm and a mobile base are particularly encouraged when mobility is functionally necessary for task completion rather than incidental. Examples include tasks in which relevant objects or task locations are spatially distributed, manipulation requires base motions beyond the arm workspace, or the robot must interact with several workstations during a single task. Examples could include transporting and routing cables, collecting and delivering parts, operating equipment at multiple locations, or performing sequential inspection and manipulation operations. Datasets collected exclusively in small, highly controlled laboratory environments are not the main focus of this topic. **Legal compliance (general requirement A).** Applicants must describe and document how all applicable legal requirements have been addressed when collecting and providing the data (in particular anonymisation, consent, metadata, provenance and licensing), and how the collection and provisioning comply with all applicable regulation, including privacy and copyright regulation. Datasets must not contain data whose processing is prohibited, such as special categories of personal data under Article 9 GDPR. **Recordings involving people (comment on human activity).** Where recordings may capture people (e.g. workers, visitors or other human activity in the environment), the applicant must anonymise the data (e.g. blurring of faces and other identifying features) or rely on a valid legal basis and documented consent, and must document this in the deliverables.
	Objectives • Create datasets of long-horizon mobile-robot execution in real-world industrial, logistics, and warehouse environments. • Capture tasks in which mobility, navigation, and spatial reasoning are integral to successful execution.

	• Represent the environmental variability and disturbances encountered during real deployment. • Capture decisions involving navigation targets, relevant objects and locations, task ordering, and transitions between navigation and manipulation. • Include successful task executions together with navigation, planning, grounding, or execution failures and subsequent recovery behaviour where feasible. • Provide semantic annotations linking robot trajectories and actions with task intent, spatial context, and execution outcomes. • Enable the data to be reused for training and evaluating GRAIL models for long-horizon planning, grounding, navigation, and mobile manipulation.
	Datasets Applicants should provide datasets collected predominantly in real operational environments, such as warehouses, factories, logistics facilities, or other industrial sites in which mobile robots operate over spatially extended areas. Datasets should contain synchronized visual and proprioceptive information together with the robot's motion through the environment. Relevant data may include: • RGB or RGB-D observations from onboard and, where useful, external cameras. • Robot joint states, end-effector state where applicable, mobile-base state, odometry, and commanded and executed actions. • Robot trajectories and spatial information sufficient to reconstruct relevant movement through the environment. • Maps, localization information, navigation goals, or other spatial representations where available. • Natural-language descriptions of the overall task and task stages, including what the robot is doing, why it is doing it, and where the current action is being performed. • Annotations of task stages, relevant objects and locations, navigation and manipulation actions, and execution outcomes. • Successful executions together with representative failures, replanning events, corrective actions, and recovery trajectories. Metadata describing environmental variability, including changes in layout, obstacles, human activity, object locations, accessibility, lighting, or other operating conditions. For mobile manipulators, datasets should preferably contain tasks for which base motion is necessary to complete the manipulation task, for example because relevant objects or interaction points cannot be reached from a single stationary configuration.

	Applicants should document the collection environment and identify which aspects of real-world variability are represented in the data. All streams should be synchronized and accompanied by calibration information, coordinate frames, metadata, provenance, and documentation of the data schema. Data should be delivered in standard machine-readable formats compatible with GRAIL data-processing pipelines. **Data volume, format and access (general requirement B).** Applicants must state the expected data volume (size, plus hours, episodes or frames where relevant), data formats, access patterns and overall technical requirements of the dataset.
	Deliverables • A documented and quality-controlled multimodal dataset of long-horizon mobile-robot tasks collected in real-world operational scenarios. • Robot trajectories and structured annotations covering task stages, navigation goals, relevant objects and locations, actions, and execution outcomes. • Successful, failed, and, where feasible, recovery executions covering meaningful environmental variation. • Documentation of the robot platform, sensors, environment, calibration, synchronization, spatial representations, metadata, provenance, and data formats. • A description of the real-world variations represented in the dataset and of the limitations of the collected data. • A baseline evaluation demonstrating the usefulness of the dataset for a relevant problem such as long-horizon planning, grounding, navigation, mobile manipulation, failure prediction, or recovery. • Legal compliance documentation describing how all applicable legal requirements have been addressed (anonymisation, consent, metadata, provenance, licensing) and how the data collection and provisioning comply with all applicable regulation. • A written warranty that the data collection and provisioning for GRAIL's purposes meet all applicable legal requirements, making the data legally compliant for its intended use in the project, and that the datasets contain no data whose processing is prohibited. • A data description stating the data volume (size), formats, access patterns and overall technical requirements.

Topic No.	Industrial Robot Tool-Use Tasks
4	**Scope** Training robot manipulation policies for industrial tool use requires data capturing not only successful executions, but also failures and the recovery strategies that follow them, across a full multimodal sensing stack. Existing approaches such as REASSEMBLE, Assembly101, FurnitureBench, RealSource-World, YUBI, AgiBot World / Colosseo and RoboMIND cover contact-rich manipulation at scale, but none is designed around real named hand tools with the sensing and failure coverage this topic requires: • REASSEMBLE uses a two-finger gripper for generic assembly, not tool use, though it does provide force sensing and failures; • Assembly101 has no robot embodiment at all, only human hands; • FurnitureBench uses a two-finger gripper for screw/peg-level; • RealSource-World includes tasks that organize and sort tools; • YUBI treats tool use as one unlabelled skill category among many; • AgiBot World / Colosseo is gripper-based today, with dexterous-hand stated only as a future extension; RoboMIND offers both a 5-finger hand embodiment and labelled failures with causes, but this is a minority slice of an otherwise household dataset. **Legal compliance (general requirement A).** Applicants must describe and document how all applicable legal requirements have been addressed when collecting and providing the data (in particular anonymisation, consent, metadata, provenance and licensing), and how the collection and provisioning comply with all applicable regulation, including privacy and copyright regulation. Datasets must not contain data whose processing is prohibited, such as special categories of personal data under Article 9 GDPR.
	Objectives The objective of this challenge is to collect a dataset of robots using real industrial hand tools, including wrenches, hammers, screwdrivers, welding stations and soldering stations, to perform dexterous, contact-rich tasks, including both failed and failure- recovery trajectories. A key challenge is to achieve meaningful coverage only of 5-finger dexterous-hand embodiments, since our review found this to be the scarcest category

	across all comparable existing datasets. Collection should support dual teleoperation setups and should range from single-tool pick-and-use actions to longer-horizon multi-step industrial tasks. • Perform teleoperation using a bimanual setup with a pair of 5 finger hands with tactile-sensor fingertips, such as the ROBOTIS HX5-D20. • Collect contact-rich manipulation data of robots using only real industrial hand tools: wrenches, hammers, screwdrivers, welding stations and soldering stations.
	Format of the dataset: • Time-bundled at 30Hz: **Datasets** 6. Time-bundled at 30Hz: a. Joint actions (target positions / velocities) b. Bimanual proprioception c. Per-fingertip tactile feedback (e.g. deformation of taxels matrix) d. 6-axis wrench for all ten fingertips if available e. Three RGB streams (one head-mounted wide-angle camera, and f. one wrist-mounted wide-view camera on each arm) g. SE(3) wrist poses 7. Language instruction (for each demonstration) 8. Per-demonstration outcome label: success / failure / failure-recovery. 9. Timestamp of the failure & failure-recovery where relevant. 10. Object-level annotations including state (object's configuration, e.g. a switch "on"/"off", a device "assembled"/"disassembled") and objectname. Include both successful and failed trajectories, with failure and failure-recovery trajectories comprising at least 10% of total demonstrations. **Data volume, format and access (general requirement B).** Applicants must state the expected data volume (size, plus hours, episodes or frames where relevant), data formats, access patterns and overall technical requirements of the dataset. The specification above already sets time-bundled episodes at 30 Hz and a total of 40 hours of teleoperation demonstrations; applicants must also state the data size and access patterns.

	Deliverables • 40 hours of teleoperation demonstrations in the above specification. • Documented data schema and export format for the collected episodes. • Technical documentation describing the collection setup: tools, embodiments, sensing hardware and teleoperation method used. • A validation summary reporting tool coverage and tasks analysis. • Legal compliance documentation describing how all applicable legal requirements have been addressed (anonymisation, consent, metadata, provenance, licensing) and how the data collection and provisioning comply with all applicable regulation. • A written warranty that the data collection and provisioning for GRAIL's purposes meet all applicable legal requirements, making the data legally compliant for its intended use in the project, and that the datasets contain no data whose processing is prohibited. • A data description stating the data volume (size), formats, access patterns and overall technical requirements.

Topic No.	Egocentric Video Data Collection for Dexterous Tasks
5	**Scope** Develop complementary egocentric multimodal data-collection approaches for dexterous and contact-rich manipulation tasks performed by human operators in realistic industrial or industrial-like environments, such as assembly, packaging, welding, inspection and material handling. Existing industrial egocentric datasets mainly provide unannotated visual recordings, while force- and tactile-instrumented egocentric datasets are predominantly available for everyday manipulation tasks rather than industrial operations. This topic addresses this gap by supporting the collection of structured industrial egocentric demonstrations combining visual data with task, contact, force, or other complementary information. Projects should address specific gaps (not covered by GRAIL WP2 activities), such as underrepresented use cases (e.g. intralogistics, steel), tasks, materials, operator profiles, sensing modalities (notably force/torque, which existing recordings largely lack), or failure and recovery behaviours. Depending on the proposed approach, data may combine head-mounted and wrist-mounted cameras with hand or body pose, gaze, force/torque, tactile, audio, or other complementary signals.

	Applicants are encouraged to build on and differentiate from existing egocentric and multimodal robotics datasets, such as Ego4D, Ego-Exo4D, Assembly101, HoloAssist, IMPACT, EgoTac, EgoTouch/TouchAnything, and existing industrial egocentric datasets. These resources are provided as examples, not mandatory data sources. applications should explain how they address limitations in existing resources, particularly regarding industrial relevance, task-level annotation, force or tactile information, failure and recovery behaviours, synchronisation, or robot retargeting. The focus should be on useful and well-structured human demonstrations for robot learning, task understanding, action anticipation, grounding, and embodiment retargeting. Applicants should address calibration, synchronisation, annotation, anonymisation, consent, metadata, provenance, and licensing. The topic does not require a complete foundation model or a general-purpose capture platform. **Legal compliance (general requirement A).** Applicants must describe and document how all applicable legal requirements have been addressed when collecting and providing the data (in particular anonymisation, consent, metadata, provenance and licensing), and how the collection and provisioning comply with all applicable regulation, including privacy and copyright regulation. Datasets must not contain data whose processing is prohibited, such as special categories of personal data under Article 9 GDPR.
	Objectives • Develop a focused industrial egocentric dataset combining visual demonstrations with task-level annotations and, where relevant, force, torque, tactile, gaze, pose, or other complementary signals. • Collect demonstrations addressing a clearly identified gap in existing GRAIL or publicly available datasets. • Include successful executions and, where relevant, failures, error detection, corrective actions, recovery behaviours, re-grasps, hesitation, or task abandonment. • Demonstrate the value of the collected data for at least one downstream task, such as action recognition, task segmentation, intent prediction, grounding, robot retargeting, or failure prediction. • Establish a reproducible workflow covering sensor setup, calibration, synchronisation, annotation, quality control, anonymisation, consent, provenance, and licensing.

	• Provide data that follows the GRAIL data conventions, so that it can be ingested by the consortium, and methods that can be reused by GRAIL and future Open Call projects.
	Datasets Applicants should provide a focused demonstration dataset collected using the proposed approach, together with documentation of the sensor configuration, calibration, synchronisation method, sampling rates, data schema, metadata, and annotation process. The dataset should represent at least one underrepresented industrial or industrial-like context, or address a justified gap in existing datasets. It should include variation in operators, tasks, objects, materials, viewpoints, or execution outcomes where relevant. Successful demonstrations should be complemented by failure and recovery examples where these can be collected safely. Applicants are expected to cover most of the core data below, adapted to the proposed use case; justified omissions are acceptable where a sensor is impractical. Time synchronisation, failure annotation and consent documentation are required in all cases. **Core data (required):** • Head-mounted RGB-D video, at least 30 fps, with calibrated intrinsics and extrinsics. • Two wrist-mounted RGB camera views. • Hand–object force/torque, at least 100 Hz (500 Hz preferred), with units, sensor frame and calibration declared. • Hand pose (at least 21 keypoints per hand) and wrist 6-DoF pose in a world frame. • A shared clock across all streams (tolerance below 10 ms, method documented). • Task-level annotations: task segments and actions, with object or interaction information where applicable. • Failure and recovery events annotated with a shared taxonomy (detection moment, cause, severity). • Natural-language descriptions of what is being done, why, and where. • Provenance and consent metadata (site, machine, product reference, pseudonymised operator ID, environmental conditions). • Operator demographics, evidencing balanced participant panels (at least 40% women/non-binary).

Optional data (nice-to-have, not mandatory):

- Human interventions and autonomy-mode transitions (timestamp, type, initiator, reason), where a robot or cobot is present.
- Tactile or pressure distribution across palm and fingers; grip aperture and grasp-force profile.
- Object 6-DoF pose, state and name where observable.
- Task decomposition as the operator conceives it (sub-goals, ordering constraints), and audio, including operator utterances.
- Operators' verbalised rules of thumb, and operator experience metadata (task familiarity, shift position, hours worked).
- SUS and a trust-in-automation scale per session.

The dataset should combine egocentric visual data with relevant task-level annotations and, where proposed, complementary signals such as force/torque, tactile information, hand or body pose, gaze, audio, or physiological data. Data should be provided in standard machine-readable formats, such as ROS/ROS2 bags, HDF5, mp4, jpeg, JSON, CSV, Parquet, or another justified format, aligned with the GRAIL data conventions.

All data streams should be synchronised using a documented common clock and accompanied by calibration information, coordinate frames, sampling rates, sensor metadata, provenance, and quality indicators. Where human-related data are collected, applicants should document consent, withdrawal procedures, anonymisation, privacy protection, and the applicable access and licensing conditions. Raw data are protected; anonymised subsets are public.

Large-scale data volume is not required if the dataset provides richer annotations, sensing modalities, or industrial relevance than existing alternatives. Applicants should also provide a small baseline experiment demonstrating the usefulness of the dataset for a relevant downstream robotics task.

Data volume, format and access (general requirement B). Applicants must state the expected data volume (size, plus hours, episodes or frames where relevant), data formats, access patterns and overall technical requirements of the dataset. Formats are listed above; applicants must additionally state the expected data size and access patterns.

Deliverables

	• A documented and quality-controlled industrial egocentric dataset addressing a defined gap in existing robotics datasets, in formats aligned with the GRAIL data conventions. • A reproducible data-collection and processing pipeline covering sensor setup, calibration, synchronisation, annotation, quality control, and metadata. • Structured annotations covering task segments, actions, object or interaction information where applicable, and failure and recovery events where relevant. • Documentation covering operator consent, anonymisation, provenance, licensing, access conditions, and dataset limitations. • A baseline evaluation demonstrating the usefulness of the data for at least one relevant robotics task. • Technical recommendations for reusing the dataset and collection methodology within GRAIL and in future Open Call projects. • Legal compliance documentation describing how all applicable legal requirements have been addressed (anonymisation, consent, metadata, provenance, licensing) and how the data collection and provisioning comply with all applicable regulation. • A written warranty that the data collection and provisioning for GRAIL's purposes meet all applicable legal requirements, making the data legally compliant for its intended use in the project, and that the datasets contain no data whose processing is prohibited. • A data description stating the data volume (size), formats, access patterns and overall technical requirements.

Topic No.	Low-Cost Multimodal Capture for Contact-Rich Manipulation
6	**Scope** Develop a low-cost multimodal data-capture system for contact-rich manipulation tasks without a physical robot, specially thought for humanoid robotics. The market has 3 main solutions: 1) Hand-held gripper, 2) Wearable (glove/finger-worn), and 3) Exoskeleton. While significant progress has been achieved in all three categories, challenges remain in integrating multiple sensing modalities, capturing whole-body and loco-manipulation behaviors relevant to humanoid robots, and reducing system cost and complexity to enable scalable deployment.

	We propose a challenge focused on the development of low-cost, user-friendly systems for collecting contact-rich manipulation data for robot learning. The challenge targets two complementary directions: (i) multimodal manipulation capture, integrating modalities such as vision, tactile sensing, force/torque measurements, proprioception, audio, and contact information to provide richer representations of interactions; and (ii) whole-body and loco-manipulation capture, enabling the synchronized acquisition of manipulation-specific data together with full-body motion, including upper-body, lower-body, and locomotion information, to support humanoid robot learning. Across both directions, applications should prioritize affordability, scalability, ease of deployment, and operator comfort to facilitate large-scale dataset generation and real-world adoption. **Legal compliance (general requirement A).** Applicants must describe and document how all applicable legal requirements have been addressed when collecting and providing the data (in particular anonymisation, consent, metadata, provenance and licensing), and how the collection and provisioning comply with all applicable regulation, including privacy and copyright regulation. Datasets must not contain data whose processing is prohibited, such as special categories of personal data under Article 9 GDPR.
	Objectives • Enable the synchronized capture of multiple sensing modalities (e.g., vision, tactile, force, audio, proprioceptive, and motion data). • Support the acquisition of whole-body and loco-manipulation demonstrations relevant to humanoid robot learning. Facilitate scalable dataset generation and effective transfer of learned policies to robotic platforms.
	Datasets For validation purposes, participants should provide a small demonstration dataset collected using the proposed system, together with documentation describing the data schema, sensor setup, synchronization procedures, and metadata structure. **Data volume, format and access (general requirement B).** Applicants must state the expected data volume (size, plus hours, episodes or frames where relevant), data formats, access patterns and overall technical requirements of the dataset. Formats are listed under Deliverables; applicants must additionally state the expected data size and access patterns.
	Deliverables

	• A functional prototype of the proposed capture system, including hardware and software components. • A documented data acquisition and synchronization pipeline. • A demonstration multimodal dataset in standard machine-readable formats (e.g., ROS/ROS2 bags, JSON, CSV, Parquet, or LeRobot-compatible formats). • Technical documentation covering system architecture, calibration procedures, data formats, and deployment guidelines. An evaluation report assessing sensing quality, usability, scalability, and suitability for robot learning applications. • Legal compliance documentation describing how all applicable legal requirements have been addressed (anonymisation, consent, metadata, provenance, licensing) and how the data collection and provisioning comply with all applicable regulation. • A written warranty that the data collection and provisioning for GRAIL's purposes meet all applicable legal requirements, making the data legally compliant for its intended use in the project, and that the datasets contain no data whose processing is prohibited. • A data description stating the data volume (size), formats, access patterns and overall technical requirements.

Topic No.	Plan–Fail–Repair: Gamified Collection of Robot Reasoning Data
7	**Scope** Training robot planning models requires data capturing not only successful executions, but also planning decisions, failures, and recovery strategies. Existing approaches such as DROC, Merlo et al., and SHRIMP use human feedback to improve robot plans, but are not primarily designed as scalable data-generation pipelines. The objective of this challenge is to develop a gamified simulation environment that elicits robot planning and reasoning data from human users. Through gameplay, users should solve, inspect, explain, and repair simulated robot tasks, while the system captures their plans, reasoning, failure diagnoses, and recovery strategies in structured form. A key challenge is to design engaging interaction mechanisms that naturally encourage users to provide useful annotations, including natural-language explanations. The simulation environment should support different game play modes and variable tasks, environments, and robot embodiments, ranging from simple atomic-action sequences to longer-horizon tasks involving tools and failures. Collected information should include plans, execution outcomes, failure diagnoses, recovery actions, and reasoning annotations. Optionally,

	technologies such as VLMs may be used to generate plans that may contain failures which humans have to correct. **Legal compliance (general requirement A).** Applicants must describe and document how all applicable legal requirements have been addressed when collecting and providing the data (in particular anonymisation, consent, metadata, provenance and licensing), and how the collection and provisioning comply with all applicable regulation, including privacy and copyright regulation. Datasets must not contain data whose processing is prohibited, such as special categories of personal data under Article 9 GDPR.

	Objectives
	• Develop a gamified simulator for eliciting plan–fail–repair data from human users in simulated robot tasks.
	• Support variable environments, task complexity, parametrizable actions, tools, and robot embodiments.
	• Capture human-provided:
	  ○ Plans as sequences of atomic actions.
	  ○ Reasoning/explanations.
	  ○ Failure identification and diagnosis.
	  ○ Recovery actions and revised plans.
	• Design game mechanics that make the provision of previously mentioned data natural and engaging.
	• Atomic actions could be parametrizable, which would enable the generation of data on manipulation poses, grasping angles, or other skills related to grounding.
	• Provide player feedback and task evaluation through metrics such as task success, safety, speed, and number of retries.
	• Export collected episodes in a structured, machine-readable format for training and evaluating robot planning models.

	Datasets A limited demonstration dataset generated using the developed environment must be provided to support validation and testing activities. **Data volume, format and access (general requirement B).** Applicants must state the expected data volume (size, plus hours, episodes or frames where relevant), data formats, access patterns and overall technical requirements of the dataset. Export formats are listed under Deliverables; applicants must additionally state the expected data size and access patterns.
	Deliverables • Software modules implementing the data-generation environment.

	• Documentation describing the data model and export pipeline for plans, reasoning annotations, failure diagnoses, recovery actions, and execution outcomes. Export shall be supported through standard machine-readable formats (e.g., JSON, CSV, or ROS-compatible logs). • Game manual and technical documentation. • Software validation with test users, including a small demonstration dataset generated with the tool; a large-scale dataset is not required. • Legal compliance documentation describing how all applicable legal requirements have been addressed (anonymisation, consent, metadata, provenance, licensing) and how the data collection and provisioning comply with all applicable regulation. • A written warranty that the data collection and provisioning for GRAIL's purposes meet all applicable legal requirements, making the data legally compliant for its intended use in the project, and that the datasets contain no data whose processing is prohibited. • A data description stating the data volume (size), formats, access patterns and overall technical requirements.

Topic No.	Open generalization-stress benchmarking kit: physical stress artefacts, sweep protocol and a portable evaluation harness with reliability and human-in-the-loop reporting
8	**Scope** Most reported results describe where a policy succeeds. This topic asks applicants to build a portable, low-cost kit that systematically locates where a policy fails, by sweeping controlled variation along independent stress axes and reporting the boundary of degradation rather than a single success rate. Applicants should cover three or more of the following stress axes; two will be considered if the choice is justified: • object properties - geometry, mass, stiffness/compliance, surface friction, tackiness, and objects whose shape changes during manipulation; • scene conditions - lighting, clutter, occlusion, reflective or transparent surfaces; • wear and contamination - dust, oil, scratches, partially damaged or mislabelled parts; • embodiment change - same task across grippers or platforms; • human variability - different operators, instruction phrasings, intervention styles.

	Legal compliance (general requirement A). Applicants must describe and document how all applicable legal requirements have been addressed when collecting and providing the data (in particular anonymisation, consent, metadata, provenance and licensing), and how the collection and provisioning comply with all applicable regulation, including privacy and copyright regulation. Datasets must not contain data whose processing is prohibited, such as special categories of personal data under Article 9 GDPR.
	Objectives • Locate the boundary of degradation of a policy along controlled stress axes, instead of reporting a single success rate. • Make the physical test artefacts reproducible by any lab at low cost, with the total cost stated and verified. • Implement the GRAIL KPI framework in a machine-readable evaluation schema, so that results are comparable and can be ingested by the consortium. • Report human-in-the-loop metrics as first-class outputs. • Release outputs as open source where feasible, registered on the GRAIL Platform and AIoD, for reuse in the Ascent and Summit Open Calls.
	Datasets The GRAIL KPI framework, reporting templates and logging schemas will be provided to selected applicants at onboarding. Formats follow the GRAIL data classification: ROS 2 bag, HDF5, mp4 and jpeg for recordings; csv for logs and usability or workload questionnaires • Seed dataset: synchronised multimodal recordings of the trials (RGB-D, force/torque, tactile where available, robot state) with per-trial annotation of the stress condition applied and the observed failure cause. • Recordings and evaluation runs must align with the GRAIL multimodal data conventions (RGB-D, trajectories, force/torque, human and robot signals) so that they can be ingested by the consortium.
	Deliverables • Sweep protocol covering three or more of the stress axes listed in the Scope (two if justified), with the boundary of degradation reported rather than a single success rate. • Open hardware specification, build instructions and bill of materials for the physical test artefacts and fixtures, designed to be reproducible at low cost by any lab. The total cost must be stated in the bill of materials and will be verified. • Portable evaluation harness: a machine-readable evaluation schema implementing the GRAIL KPI framework (task, embodiment, initial

	conditions, stress condition applied, autonomy mode, outcome, failure class, human interventions); a test runner that enforces repeated trials and logs per-trial traces rather than single best runs; and reliability/repeatability reporting (success rate with confidence intervals, failure taxonomy, time-to-recover, degradation curves); human-in-the-loop metrics as first-class outputs (number and type of operator interventions, takeover latency, autonomy-mode transitions, standard usability/workload instruments such as SUS or NASA-TLX). • Seed dataset, as described under Datasets. Portability package: containerised, documented and installable by a team with no access to consortium internals, so the kit can be rerun elsewhere unchanged.