

# **MTC INDIVIDUAL RESEARCH GRANTS (IRG) & YOUNG INDIVIDUAL RESEARCH GRANTS (YIRG)**

OGA, A\*STAR

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# Overview

- Manufacturing, Trade and Connectivity (MTC) IRG and YIRG support novel and fresh R&D investigator-led ideas in the technology readiness levels 1 and 2 space (*refer to Annex A-1 for more information*) in the MTC domain sectors:
  - Manufacturing & Trade: Aerospace; Energy and Chemicals; Electronics; Precision Engineering (Additive Manufacturing); Precision Engineering (Laser & Optics); Marine and Offshore; Food Manufacturing; Biopharmaceutical Manufacturing; Supply Chain & Logistics
  - Connectivity: Aviation; Sea Transport
- IRG and YIRG are open to public sector research performers: local universities, A\*STAR research institutes, polytechnics, and non defense-related public sector agencies (e.g. Ministries, Statutory Boards)

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# Overview

- Proposals are solicited through a ground-up mechanism across the research ecosystem. The IRG allows for submissions from either single Principal Investigators (PIs), or small teams of PIs, while the YIRG aims at grooming young researchers in conducting independent research.
- Funding Quantum and Duration

	IRG	YIRG
<b>Max. funding quantum</b> (supports EOM, OOE, EQPT and Travel, and includes <b>30% indirect cost</b> )	Up to \$1.2M per project over 3 years	Up to \$0.325M per project over 3 years



# Eligibility Criteria

	IRG	YIRG
Age	Any age	
Academic qualification	PhD	PhD (not more than 7 years post-PhD)
Employment	<ul style="list-style-type: none"> <li>PI must hold a primary appointment of at least 75% in a local publicly funded institution.</li> <li>Team PI/Co-investigator (Co-I) must hold an appointment in a local publicly funded institution.</li> </ul>	
Past funding received	-	PI of an on-going MTC/AME IRG or MTC/AME YIRG project is not eligible.
Mentorship support	Not required	Required
No. of Submissions	Applicants are only allowed to submit <u>one application</u> per call as a PI.	

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## Institutional pre-screening of proposal for MTC YIRG 2025

Institute	Proposal Submissions per Institute
NUS	15
NTU	15
A*STAR Research Entities	15
Public Sector Research Performers / Other Institute of Higher Learning (IHLs)	2

- A quota of 15 applications each for A\*STAR, NUS, NTU, and 2 applications for all other public sector research performers
- ORE\*s to submit the list of eligible proposals for their respective HI when the grant call closes, for validation of proposals submitted on iGrants

\*ORE- Office of Research or Equivalent

# Key Performance Indicators (KPIs)

Indicator	Definition	Data collection methodology	Guideline
[KPI] No. of publications in the top 10% most highly cited journals	<p>The top 10% most highly cited journals will be based on the CiteScore rankings maintained by Scopus.</p> <p>(<a href="https://www.scopus.com/sources.uri">https://www.scopus.com/sources.uri</a>, titles in top 10 percentile, Source type Journals and Conference Proceedings).</p>	<p>Data reported via annual progress reports, mid-term reviews and final reports.</p> <p>Publications will be checked against the CiteScore list for the year of publication (e.g. a publication that is submitted in 2021 but published in 2022 will be checked against the 2022 CiteScore list).</p>	<p>Recommended target for IRG: 5 journal papers</p> <p>Recommended target for YIRG: 2 journal papers</p>

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# Key Performance Indicators (KPIs)

Indicator	Definition	Data collection methodology	Guideline
Number of unique conference abstracts accepted for oral presentations at top conferences <i>*applicable to computer science/AI disciplines only</i>	Abstracts accepted for presentation, either in a physical or online conference, excluding poster sessions.	Data reported via annual progress reports, mid-term reviews and final reports. Supporting documents are required.	Number should reflect at least the number of conference planned for.

\* Additional KPIs and tracking indicators may be set at project level for tracking of outcomes



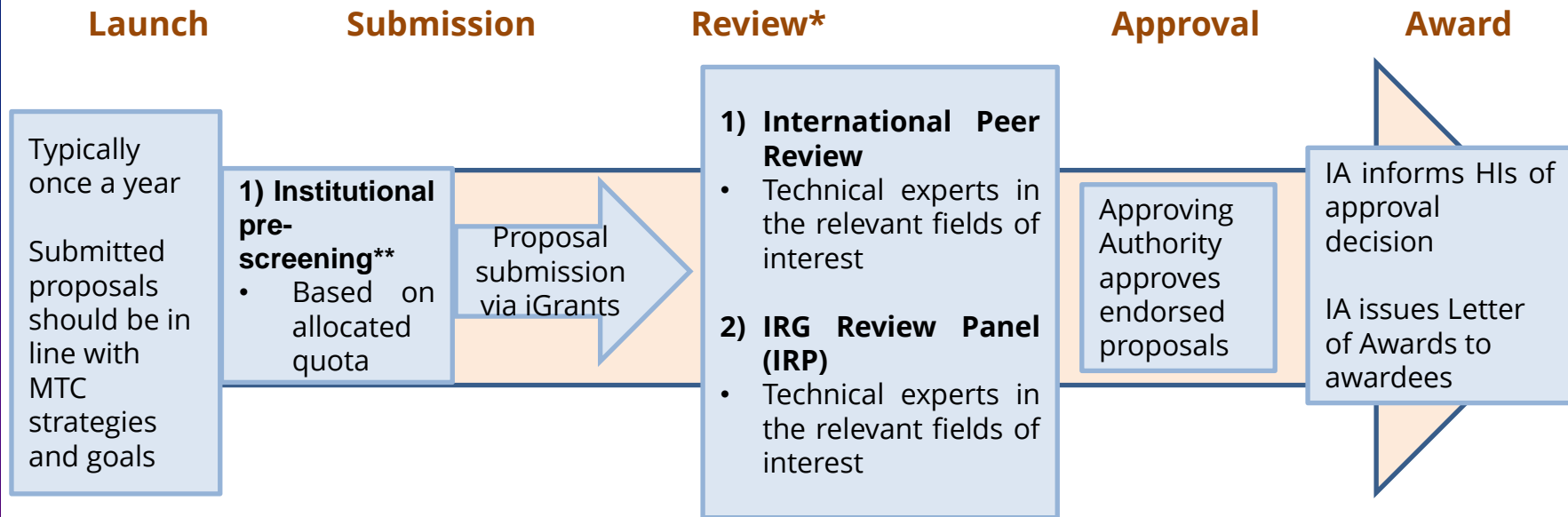


# Application Process

- Grant calls will be made annually to solicit proposals from the R&D community
  - Via A\*STAR website
  - Through Research Administrative Office (or equivalent) of the institutes of higher learning, academic medical centers, hospitals and A\*STAR research institutes
- Applications must be endorsed by the applicants' Host Institution(s) prior to submission
- Applications should be submitted through the iGrants.
- All queries must be submitted through A\*STAR (as Implementing agency) at [irg\\_mtc@hq.a-star.edu.sg](mailto:irg_mtc@hq.a-star.edu.sg)



# Selection Process Workflow



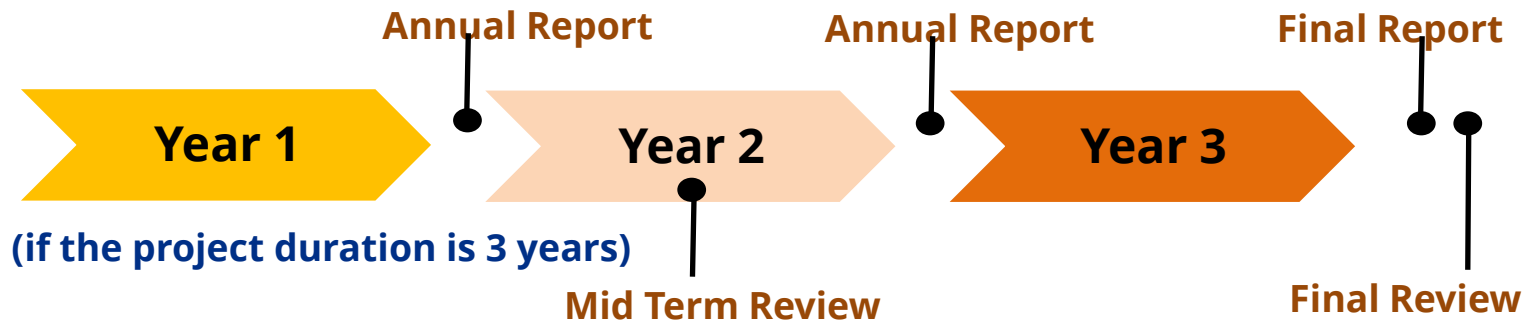
\*Evaluation criteria include, but not limited to: (i) PI's track record, (ii) Novelty, Intellectual / Innovative Merit, (iii) Competitive / Comparative Advantage, (iv) potential Scientific/ Technical impact, and (v) Feasibility

\*\* Applicable to MTC YIRG 2025

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# Post Award Grant Management

- Follow the A\*STAR Grants T&Cs and guidelines
- Yearly Progress Report within two (2) months from the end of the Financial Year
- Mid-Term and Final Review conducted approximately at the halfway mark and before the end of Term
- Final Report within three (3) months following the end of the Term
- FSOA within six (6) months from the end of the Term



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# Annex





# Technology Readiness Level (TRL)

DEPLOYMENT	9	ACTUAL SYSTEM PROVEN IN OPERATIONAL ENVIRONMENT
	8	SYSTEM COMPLETE AND QUALIFIED
	7	SYSTEM PROTOTYPE DEMONSTRATION IN OPERATIONAL ENVIRONMENT
DEVELOPMENT	6	TECHNOLOGY DEMONSTRATED IN RELEVANT ENVIRONMENT
	5	TECHNOLOGY VALIDATED IN RELEVANT ENVIRONMENT
	4	TECHNOLOGY VALIDATED IN LAB
RESEARCH	3	EXPERIMENTAL PROOF OF CONCEPT
	2	TECHNOLOGY CONCEPT FORMULATED
	1	BASIC PRINCIPLES OBSERVED



# TRL Examples

TRL	Description	Example
1	Basic principles observed	Scientific observations made and reported. Examples could include paper-based studies of a technology's basic properties.
2	Technology concept formulated	Envisioned applications are speculative at this stage. Examples are often limited to analytical studies.
3	Experimental proof of concept	Effective research and development initiated. Examples include studies and laboratory measurements to validate analytical predictions.
4	Technology validated in lab	Technology validated through designed investigation. Examples might include analysis of the technology parameter operating range. The results provide evidence that envisioned application performance requirements might be attainable.
5	Technology validated in relevant environment	Reliability of technology significantly increases. Examples could involve validation of a semi-integrated system/model of technological and supporting elements in a simulated environment.



## TRL Examples

TRL	Description	Example
6	Technology demonstrated in relevant environment	Prototype system verified. Examples might include a prototype system/model being produced and demonstrated in a simulated environment.
7	System model or prototype demonstration in operational environment	A major step increase in technological maturity. Examples could include a prototype model/system being verified in an operational environment.
8	System complete and qualified	System/model produced and qualified. An example might include the knowledge generated from TRL 7 being used to manufacture an actual system/model, which is subsequently qualified in an operational environment. In most cases, this TRL represents the end of development.
9	Actual system proven in operational environment	System/model proven and ready for full commercial deployment. An example includes the actual system/model being successfully deployed for multiple missions by end users.