

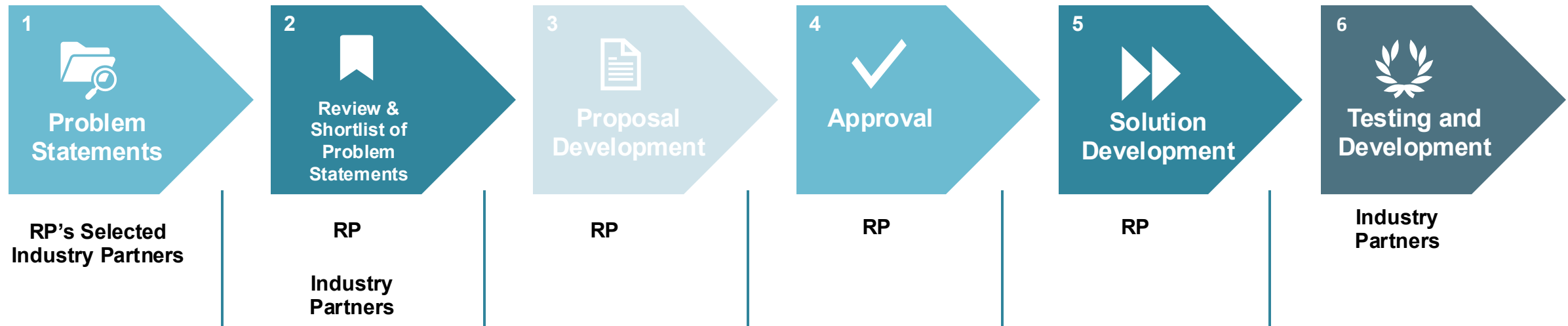
Open Innovation x Grand Challenge: Humanoid & Cyber Physical AI

Office of Technology Development
Jan 2026

Overview

- RP drives innovation by bringing its Schools and industry partners together to tackle real-world challenges. Since 2019:
 - 7 Grand Challenges launched
 - >1,000 companies engaged
 - >3,000 projects generated in fields like agrifood, health & wellness, supply chain, sustainability and GenAI.
- This round of Grand Challenge follows an open innovation model, inviting companies to submit problem statements based on real-world challenges in the focus area of **Humanoid & Cyber Physical AI**.
- RP will review and shortlist the submitted problem statements.
- We will collaborate with the companies behind the shortlisted statements to develop the solutions. Funding will be provided by RP for approved development projects.

Open Innovation Model



Key Features

(i) Demand-Driven Innovation

- Problem statements sourced from industry partners, ensuring alignment with industry needs
- Maximise potential for adoption and commercialisation.

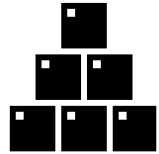
(ii) Comprehensive support from RP

- Collaborate with RP's domain experts in AI & ML, Humanoids, Embedded Systems & IoT, Control System & Automation, and Human-Robot Interaction.
- RP leads project proposal and solution development, involving industry partner at critical stages.
- Funding provided to accelerate the development projects.

(iii) Driving adoption and commercialisation

- Facilitate the transition of lab-based innovations to the market, enabling industry partners to adopt and commercialise the solutions.

Benefits for Industry Partners



Accelerate Product Development with Lower Risk

- Co-develop humanoid and cyber-physical AI solution with RP's experts
- Supported by project funding and R&D resources



Build Market-Ready Solutions from Real Industry Needs

- Submit real-world problem statement
- Develop solutions with strong adoption and commercialisation potential



Gain Priority Access to IP and First-Mover Advantage

- Access and license project-generated IPs
- Strengthen differentiation and competitive edge in the market



Speed up Go-to-Market with Applied Expertise

- Leverage RP's multidisciplinary capabilities, facilities, and applied research strengths
- Shorten development cycles and scale faster

Participation Timeline



Items	Timeline
Submit Your Problem Statement Industry partners provide real-world challenges in the area of Humanoid and Cyber Physical AI	Feb 2026 - Mar 2026
Problem Review and Shortlisting RP reviews the submissions and shortlists those with the best alignment for solution development.	Apr-May 2026
Proposal development with RP's project teams RP experts will work closely with the shortlisted partners to develop the proposals (i.e. project scope of work, timeline and deliverables)	Jun-Aug 2026
Approval for project funding and completion of collaboration agreement RP seeks internal approval for project funding. Upon approval, RP and partners to complete Research collaboration Agreement (RCA), if required.	Sept 2026
Solution Development Humanoid and Cyber Physical AI solutions are developed and refined through iterative collaboration (i.e. project duration of up to 1 year)	Oct 2026 – Sept 2027 (estimated)

Key Areas

1



2



1. Facility Management

E.g. Humanoids assisted by AI to support security, facility management, and cleaning.

2. Hospitality

E.g. To perform housekeeping tasks, manage guest requests, deliver items, and enhance service efficiency.

3



4



3. Sports and Health

E.g. To assist caretakers in monitoring patients' or residents' physical activities, providing real-time support during exercise, and ensuring safety and wellbeing.

4. Logistic

E.g. Automate repetitive tasks, minimise manual lifting, strain injuries, and other workplace hazards.

Next Steps

- Submit your problem statement via our submission portal provided in the email.
- Deadline: 31st March 2026
- Contact us: help-OTD@rp.edu.sg

Thank You