

#### STARTUP APPLICATION GUIDE

Mobility • Sustainability • Logistics • Battery

ZER01NE ACCELERATOR, open innovation platform for Hyundai Motor Group (HMG), is calling for startup applications.

We aim to connect external startups and scaleups with internal business units in Hyundai Motor Group to execute collaborative projects.

Any startups and scaleups interested in collaborating with HMG are welcome to apply!



### PROGRAM

### ZER01NE ACCELERATOR is an open innovation program operated by Hyundai Motor and Kia

• Connecting Hyundai Motor Group (HMG) business units and external startups to create synergy

- ① Sourcing external startups based on internal needs derived by HMG business units
- 2 Piloting strategic partnerships by executing HMG and startup collaboration projects
- ③ Reviewing equity investments to consolidate strategic relationships
- HMG business units directly participate in the program as shown below
  - ① Deriving open innovation projects with startups based on internal needs
  - Participating in startup review and selection process
  - ③ Executing collaborative projects with selected startups
- Executing open innovation activities throughout 10 batches
  - ① Internal Participants: 170 business units within 11 HMG affiliate companies
  - ② External Participants: 195 startup cohorts
  - ③ Key Activities: 143 collaborative projects and 104 startup investments executed

HMG COLLABORATION

**SUMMARY** 

#### ACHIEVEMENTS

## **APPLICATION**

### ZER01NE ACCELERATOR is looking for startups eligible to participate in 6 projects derived by HMG

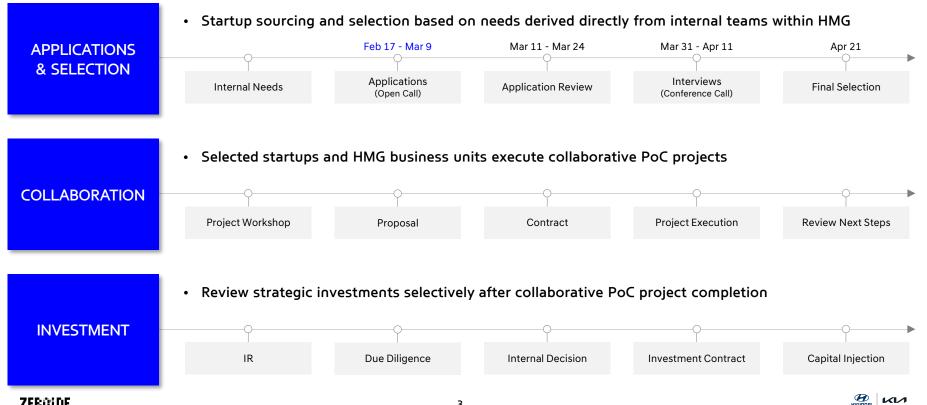
OPEN CALL TARGET

- Sourcing relevant startups to participate in collaborative projects with HMG may apply
  - ① Target : Startups eligible for partnerships with Hyundai Motor Company, Kia, and Hyundai Glovis
  - 2 Minimum Qualification : Startup must be incorporated, registered, and legal entity
  - ③ Investment Stage: Seed Pre IPO (Listed companies may not apply)
  - Select ONE project from the 'Project List' on pages 4 6 and apply as shown below
    ① Submission Period : Feb 17th March 9th (KST)
  - 2 Process : Submit your application via Submission URL below (company deck required)
  - ③ Submission URL: <u>https://z1.collab.mycroft.kr/rocket/9724/apply?langType=en</u>
  - ④ Inquiries:zer01ne.contact@gmail.com
- Providing collaboration, investment and global expansion opportunities for selected startups
  - ① Collaboration with HMG (Max 50K USD development budget provided)
  - ② Investment from HMG (Target startups selected separately)
  - ③ Global expansion opportunities via Hyundai CRADLE

#### APPLICATION PROCEDURES

#### BENEFITS

Dates below are subject to change under operational circumstances



# PROJECT LIST | Hyundai Motor Company & Kia (Mobility)

CODE	TITLE	DESCRIPTION	SOLUTION
P1	Mobility Service & Contents	<ul> <li>Mobility Specialized Service &amp; Contents Development</li> <li>Purpose: Discover services and content that can be operated through in-car infotainment</li> <li>Requirements: Expertise in developing services specialized for vehicle space and mobility data integration, rather than just extending existing mobile service</li> <li>Verification: Usability testing for in-car features connected to interior space and mobility data</li> <li>Application Plan: Review next steps for mass production</li> </ul>	SW Service
P2	Infrared High-Transmittance Heating Solution	<ul> <li>Transparent heating technology for vehicle front windshield glass application</li> <li>Purpose: Improve performance of IR camera and LiDAR sensors by applying transparent heating element to glass</li> <li>Requirements: <ul> <li>Transparent heating technology with high infrared transmittance and defrosting performance</li> <li>Must be laminated or attachable to windshield glass</li> <li>Verification: Infrared transmittance and defrosting performance</li> <li>Application Plan: Review preliminary development upon completion of verification</li> </ul> </li> </ul>	HW

## PROJECT LIST | Hyundai Motor Company & Kia (Sustainability)

CODE	TITLE	DESCRIPTION	SOLUTION
Ρ3	Non-Flammable Batteries	<ul> <li>Non-flammable batteries applicable in factories</li> <li>Purpose: Develop a battery storage system to facilitate the adoption of renewable energy within factories</li> <li>Requirement: Ability to produce and supply fire-safe batteries based on proprietary technology</li> <li>Verification: Battery fire safety, energy efficiency, capacity retention, and thermal characteristics at the battery cell level</li> <li>Application Plan: Review factory application upon completion of verification</li> </ul>	HW
Ρ4	Biodegradable Packaging Materials for Vehicle Parts	<ul> <li>Biodegradable materials for packaging of vehicle products/parts</li> <li>Purpose : Improve economic efficiency and eco-friendliness by creating biodegradable materials that replace existing packaging vinyl</li> <li>Requirements: <ul> <li>Can be used for more than 6 months in outdoor conditions (rain/heat wave, etc.)</li> <li>Can be packed with air permeability without being attached directly to the vehicle surface</li> <li>Can be biodegraded when disposed of under natural conditions</li> <li>Price competitiveness compared to existing synthetic resin packaging materials</li> <li>Has attachment function(ex: wrap), attachment material will also be biodegraded</li> <li>Verification: Biodegradable when disposed of under natural conditions</li> <li>Application Plan: Review the application in vehicle seat packaging vinyl, parts packaging materials, etc.</li> </ul> </li> </ul>	HW

# PROJECT LIST | Hyundai Glovis (Logistics/Battery)

CODE	TITLE	DESCRIPTION	SOLUTION
Ρ5	Indoor/Outdoor Positioning Control System	<ul> <li>Indoor/outdoor vehicle control system for pre-delivery center</li> <li>Purpose: Identify the location and movement path of vehicles without license plates that are received at the vehicle pre- delivery center</li> <li>Requirements: <ul> <li>Indoor/outdoor vehicle positioning solutions using communication sensor modules such as GPS and UWB, OR vehicle tracking and control technology based on multi-CCTV video recognition</li> <li>Ability to visualize vehicle location and operational status, and match each vehicle with its VIN number</li> <li>Verification: PoC for managing 200 vehicles within a 20,000m' pre-delivery center</li> </ul> </li> </ul>	HW SW Service
P6	Battery Reuse/Recycling Solutions	<ul> <li>Rapid discharge tech for removed battery packs and direct recycling tech for waste batteries</li> <li>Purpose: Ensure economic and operational safety with battery reuse/refurbish/recycling tech</li> <li>Requirements: One of the following requirements must be met <ul> <li>① Charging/discharging diagnosis and discharge tech for removed battery packs in an unopened state</li> <li>② Direct recycling tech for recovering cathode active materials based on physical separation</li> <li>Verification:</li> <li>① Rapid discharge and quick diagnosis capabilities for discharge tech</li> <li>② Cathode active material recovery rate and capacity recover rate for direct recycling tech</li> <li>Application Plan: Review the application within battery recycling pilot center (test beds)</li> </ul> </li> </ul>	HW