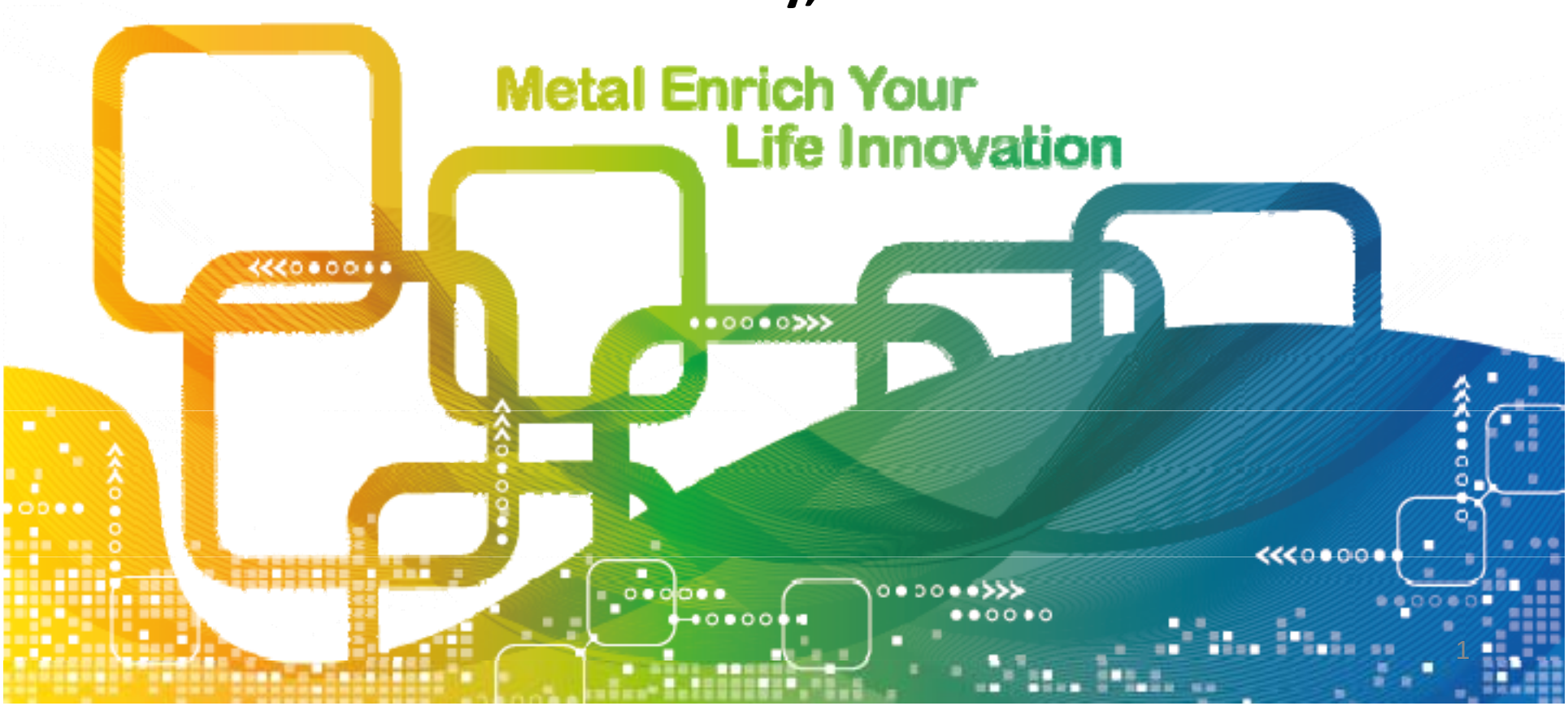
SMEs Cluster Development through STI and Supplier Value Chain Integration

Metal Enrich Your Life Innovation

Dechnology & Green Vehicle Open Innovation Platform

MIRDC APEC Project Team

May, 2017



Outline

- **Project Introduction**
- **About 2017 APEC Design Contest**

Project Introduction

Project Topics:

SMEs Cluster Development through STI and Supplier Value Chain Integration

- **This project will demonstrate how SMEs use open-innovation platform to cross-field integration, and combine with the external partners and resources to co-innovation.**
- **Sharing 2 best practice experiences:**

(1)The tourism factory focus on the combination with regional metal supply chain and culture/ innovation industries.

(2)Micro EV uses open chassis platform to display ICT integration with plug & play function.

- **Dechnology(Design + Technology) Platform of metal**

Tourism Factory

- **Open Innovation Platform for plug & play demonstration**

Micro Electric Vehicle

Mechanism and Expected Outcomes

- **Contest on metal dechnology and green vehicle**
- **Forum on global benchmarking and KSF investigation of the best practice**
- **Workshops from the innovation initiation, SMEs' value chain readiness assessment, and on-site practice to draft a policy recommendation proposal**
- **Policy recommendation to focus on SMEs' green growth priority setting, STI foundation enhancement procedure and value chain integration mechanism to open innovation platform**

Forum and Workshop Schedule

- **Contest on Metals and/or Green Vehicle (2017/5~8)**
  - To be used as reference for the planning of training curriculum
  - Help APEC members to understand various regions' market demands for electric vehicles
- **Forum/workshop(2017/10/17~19)**
  - Forum 1 day
  - Workshop A 1 day: Sheet metal OIP based chiefly on tourism factory
  - Workshop B 1 day : An Open chassis platform (plug & play OIP) based chiefly on micro electric vehicles
- **Policy recommendation report**

2017 APEC Design Contest Rules

- **Hosted by: APEC, Ministry of Economic Affairs**
- **Organized by: Metal Industries Research & Development Centre**

Contest Schedule

➢ Important Date

■Registration Date:

- **Summary Registration Deadline: July 20, 2017 (end of online registration)**
- **Submission Deadline: August 15, 2017 (end of uploading entries)**

■Announcement of Final Selection Results:

- **before September 15, 2017**

■Award Ceremony: October 17, 2017 in Kaohsiung, Chinese Taipei

Contest Rules

Theme B：Green Vehicle

Slogan: Green Vehicle Concept Design for Urban

■ Description:

1.Scope of Work:

a)Describe local urban transportation problem, and identify the opportunities to use micro EV to improve transportation efficiency;

b)To use ICT plug & play technology to improve safety and convenience;

c)To present niche features and innovative concepts on the vehicle profile.

2.Urban Micro EV Innovation Theme: Better methodology to identify urban transportation improvement opportunity by using ICT plug & play smart technology, concept vehicle with member economics niche features and innovation.

Contest Rules

3.Application scenario: ICT plug & play categories for better urban driving with intelligent safety, convenience, and communication package (please refer to *1)

4.Strategy and Effectiveness(outcome or impact): Based on provided micro EV chassis (as a reference below *2 or use local chassis) to implement ICT (Plug & Play) technology for better safety, intelligence, and convience; to start to describe local urban transportation problem, to find a local scenario for transportation efficiency improvement, and to design an innovative concept for vehicle usage profile.

***1** Google's Self-Driving Car Project https://www.youtube.com/channel/UCCLyNDhxwpqNe3UeEmGHl8g
-The future of ICT https://www.youtube.com/watch?v=GpJ36KzHJG4
- Connected Vehicles http://www.swri.org/4org/d10/isd/ivs/coop-systems.htm

***2** Reference micro EV chassis:
- wheelbase: 1,600-1,900 mm
- track: 1,200—1,300 mm

Concept Scenario- Smart Green Vehicle(1/2)

Case Study

Scenario of local transportation

- Severe **air pollution**
- **Not efficient/safe/smart/convenient enough**

  for better urban driving and transportation
- **People's custom of using vehicle**

Traffic jam plus huge amount of ICE vehicle be used induce severe air pollution and inefficient in transportation

Requirements

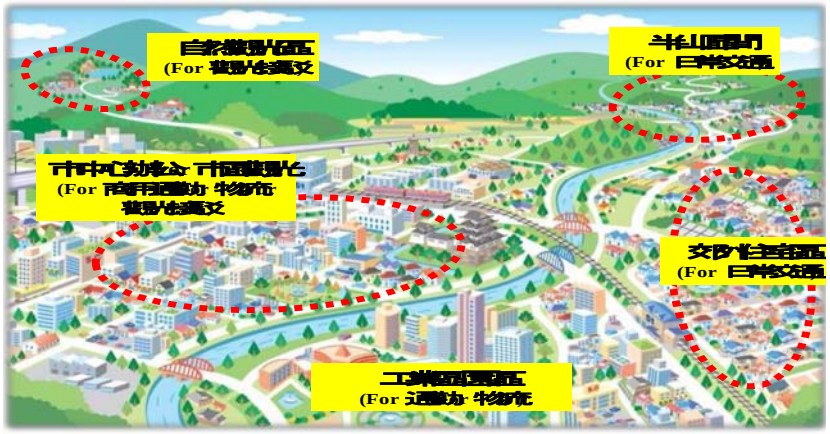
1. **Requirements of the electric vehicle be proposed to solve the problems for current transportation**
2. **New business model /regulation/infrastructure facilitate to establish a sustainable green city**
3. **ICT devices/modules be applied to add value on vehicle and improve mobility.**
4. **Integration of the chassis, ICT devices/modules and other key components.**

Present vehicles with traditional ICE-based suppliers can be hardly to bring a better life environment and rarely to create more value as well

Concept Scenario- Smart Green Vehicle(2/2)

Case Study

Vehicle Design with innovative features/concepts



Micro Smart Green Vehicle

- For eldly or disabled person, equipped with health auditing function
- For logistic, transport in narrow and busy street
- For last mile, sightseeing, from MRT to home--car sharing system
- For daily commuter, routing road—smart autonomous driving

Display ICT integration and electric vehicle platform with intelligent function

Build up a city of efficient/safe/smart/convenient mobility

Contest Rules

5. Process

- All participants are required to register online.
- Official website is under construction, for further detail process information, please e-mail to chialung@mail.mirdc.org.tw

Qualifications

■ Qualification

1. Participants **shall be students** holding proofs of student status from all colleges and universities in the **member countries of APEC** (including college or university students/master students/PhDs).
2. The **project leader shall be a student**. Joint creators can be the supervising professor or other non-students status.
3. **Cross-department networking** is preferred.
4. You may register as **an individual** participant or as **a team.**
   - For Theme A, whatever type it may be, **at least one of the team members shall be student**.
   - For Theme B, at least **one half (incl.) of the team should be composed of students** Each entry can have **six creators** at most. The team may include a supervisor, who cannot act as the project leader.
   - Each entry can have **six creators** at most.
   - The team may include a supervisor, who cannot act as the project leader. Also.

■ No registration fee is needed for the contest.

Documents and Entry Submission

1. Registration needed information:

Project leader/Team members/Supervisor professor/liaison-tel.+e-mail+address/APEC member/University or college/Department/copy of Student ID in pdf format.

2. Design drawings:

Theme B：2 -4 design drawings (present the exterior design and its application scenario respectively)【 at jpg format, resolution 300dpi 】

Documents and Entry Submission

4. **The description to the work**：**All the abstract or full article should be written in English. Abstract should be less than 500 words, the full article is no limitation. The contents should include**：
   a) **Title of work**
   b) **Scope of Work**
   c) **Innovation Theme**
   d) **Application scenario**
   e) **Strategy and Effectiveness**
5. **Introduction of work could be shown in video or animation-not necessity**：**The time of video or animation should be less than 90 sec. at mp4 or avi or MPEG format. Please upload to a free cloud and offer the access link for contest positive evaluation use. It is not the necessary document/data.**

Awards

- **Best Creativity Award: 3 Winners for Topic B (Smart Green Vehicle)**
  - First Prize – US$ 2,000 & 1 Trophy
  - Second Prize – US$ 1,000 & 1 Trophy
  - Third Prize – US$ 800 & 1 Trophy
- **Associate Award**

  The Smart Green Vehicle top three winners will be invited to Kaohsiung to receive the awards and attend the this APEC related activities. The travel expense and accommodation costs will be fully subsidized by the organizer. (If the award winner is a team, only the project leader or an appointed team member assigned by the project leader will be subsidized.)

Note: The award winners must pay the Income Tax according to the Tax Law of Taiwan

Thank you for your attention