NEVHA

Heat & Acoustic Management

Company introduction

1. Overview

Company	**NEVHA Corporation**
Adress	100-11 Machiyabora, Kamekubi-cho, Toyota, Aichi Japan
Establish	2018/April
Investment	HTC: 50%, Adler Pelzer Group: 50%
Member	6 (4 from HTC, 2 from APG)
content	Analysis / development of NV for interior and exterior products of NEV

<Parent company overview>

	Hayashi telempu	**Adler Pelzer Group**
Business	Development, design, manufacture and sale of automobile interior and exterior parts	Development, design, manufacture and sale of automobile interior and exterior parts
Main production	Floor carpet, Floor insulator, trunk trim, etc	Floor carpet, NV package, dash inner/outer, Headliner, Trunk trim,
Sales mount	242 billion yen(2021/12)	155 billion yen(2020/12)
Employee	3,761(2021/12)	About 13,000(2021/09)
Customer	Japan, US, Europe, China	Europe, Japan, US, Asia
R&D	Japan, US, China, Thai	EU, China, US and so (total 13)

Board of Directors

HTC Members

- **Seiji Matsumoto** — Deputy Representative*
- **Yasuhiro Yada** — Board Member

APG Members

- **Nicolas Leclercq** — Representative*
- **Lino Mondino** — Board Member

NEVHA members

- **Seiji Matsumoto** — President*
  - **Adam Saito** — Executive Advisor, Marketing
  - **Nicolas Leclercq** — Vice President
    - **Yasuhiro Yada** — Manager, Heat and Acoustic Engineering
    - **Naoya Murakami** — Manager, Heat and Acoustic Engineering
    - **Daisaku Kato** — Manager, Heat and Acoustic Engineering

(*) Alternating every 2 years

2. Policy

- Become the NV Research & Engineering leader for New Energy Vehicles using the most advanced technologies and competences to assist customers in the development of the next generation of concepts and vehicles.

- Harmonize the technology of parent companies and have higher technical / product capabilities and boost competitive advantage.

- Effectively utilize the resources of parent companies, to achieve synergistic effect.

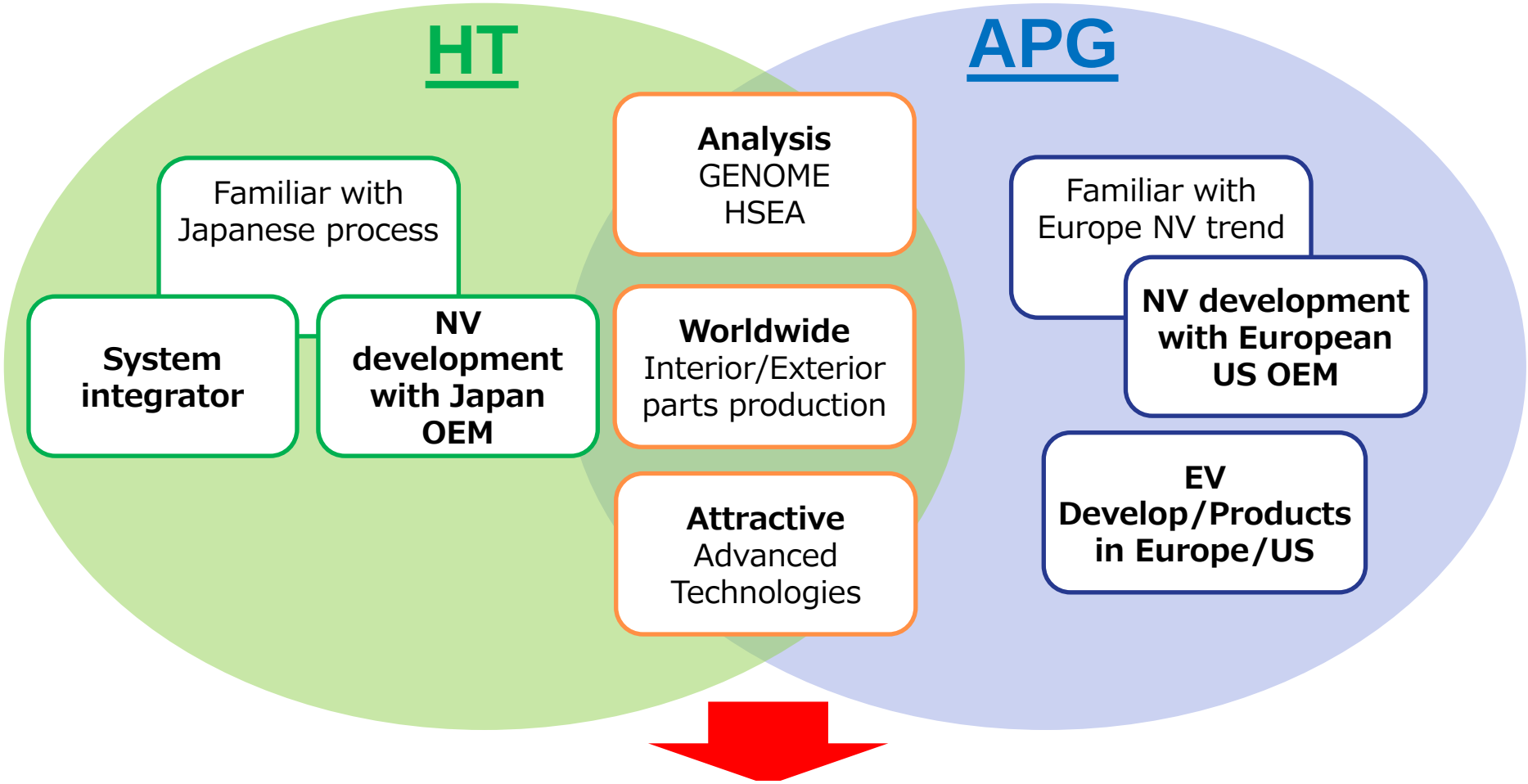
3. Scope

- Be entrusted studies, testing & analysis and full NV packages developments from customers.

- Be assigned the internal development of advanced NV testing & analysis technology aimed at NEV applications.

- Support and assist internal technologies enhancement and developments.

4. Effect of technical fusion



Timely Proposals satisfying all customer needs

NEVHA
Heat & Acoustic Management

4. Effect of technical fusion

(APG experience over 40 BEV programs)

- **26** projects with specific solutions for BEV needs developed
- **21** projects in development
- All experience and expertise made in our R&D centers USA, Europe and China bundled in NEVO

References
Tesla Models S, X, 3
BMW i3, i8
VW E-Golf, E-Up,
Karma Revero
Faraday FF91
NIO ES6 & ES8
BYD, Denza
Chagan Benben EV
Buick Verano-I
CHJ M01
Porsche Mission E, Grand Tourismo
VW new MEB platform
Audi Etron
Scania E-Bus

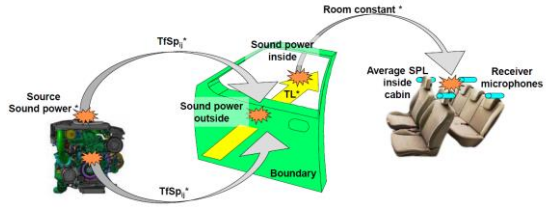
HAYASHI TELEMPU

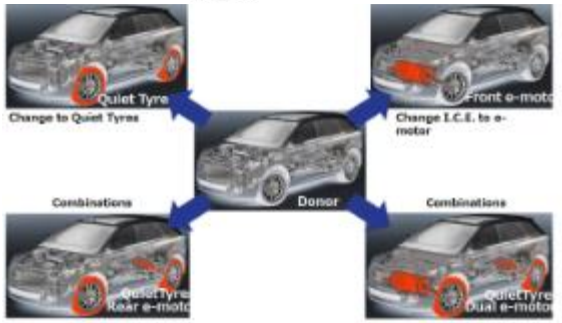
Adler Pelzer Group

5. Output

①Advanced NV evaluation & analysis

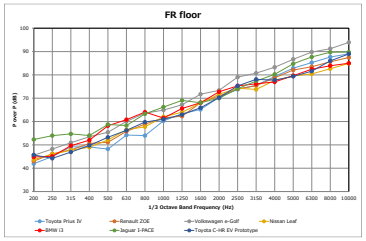
- System & sound source contribution analysis with DNA(*1)
  * 1 Acoustic Diagnostic Network Algorithms
- Impact prediction
  due to sound source / structural change with Morphing
- NV package optimization

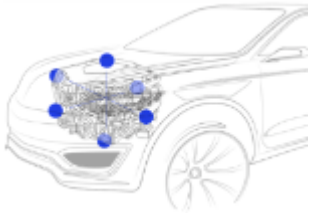




②BMC data utilization

Comparison with European / North American / Chinese car data
by standardizing measurement method





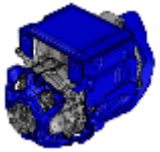
③ NV package proposal from development/production

- Tesla Model S
- Tesla Model X
- BMW i8
- BMW i3
- AUDI e-tron
- VW E-Golf, E-Up!
- Daimler EQC
- NIO ES8


Tesla Model S
NV Package


Tesla Model S
Motor Encapsulation


Tesla Model S
A/C Compressor
Encapsulation


AUDI e-tron
Motor Encapsulation


NIO ES8
Motor Encapsulation

6. Deliverable

①Package Proposal/Analysis for EV development

Proposal from comparison/Analysis

BMC → Detail analysis → Proposal

②NV package development for EV

NV package proposal (without dynamic measurement)

Contribution analysis → Detail analysis → Proposal

③NV parts development(dash inner)

Optimization from design/evaluation approach

Analysis for improvement → Optimization → Proposal

④Motor encapsulation study

Optimization study based on requirements and parts layout

Initial feasibility test → Detail analysis → validation

⑤Light weight silencer investigation

Investigation to be candidate material(acoustic/material test, design feasibility)

Material/acoustic evaluation → Optimization study → validation with protype parts

Contact for inquiries

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