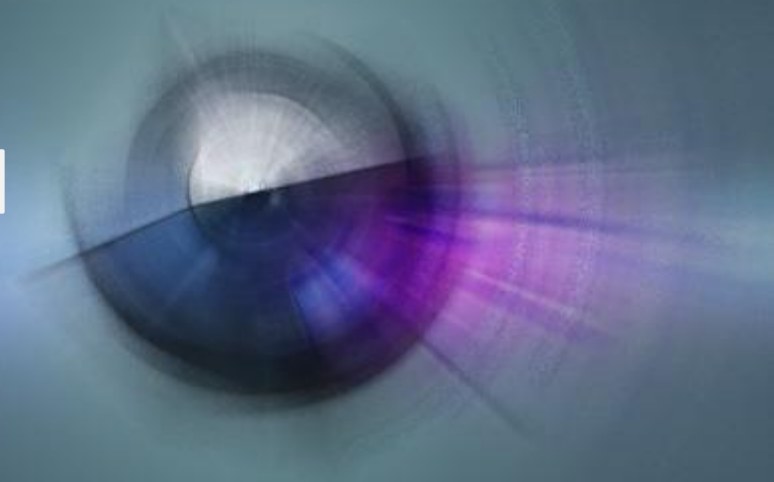
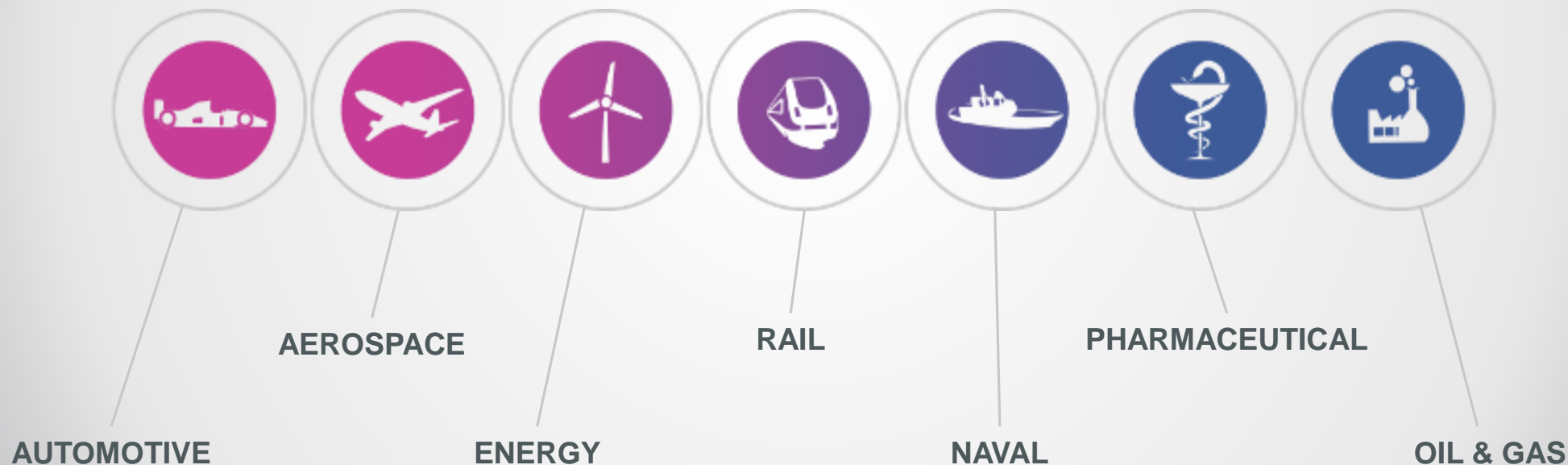


DESIGN & ENGINEERING INNOVATION SEGULA JAPAN



Segula Group Business Scope

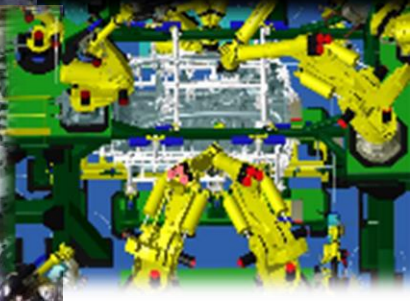
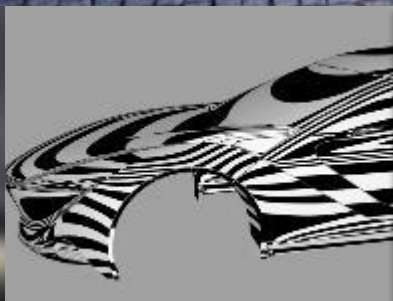
A French international engineering company, start operation in Japan.



Segula Group Capabilities – Automotive Upper Body



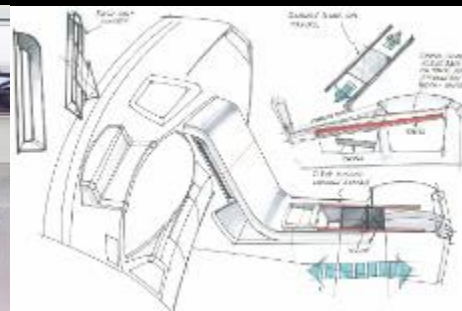
One-stop service from Concept Design, to Engineering, Prototyping, Test & Validation, and Production Engineering



Segula Group Capabilities – Automotive Interiors



One-stop service from Concept Design, to Engineering, Prototyping, Test & Validation, and Production Engineering

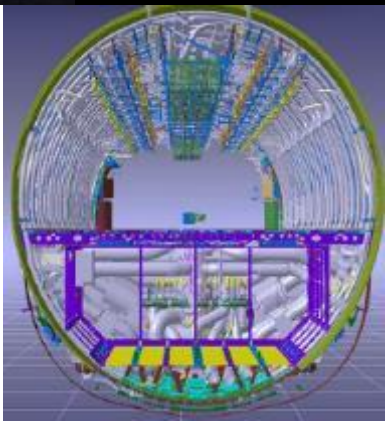
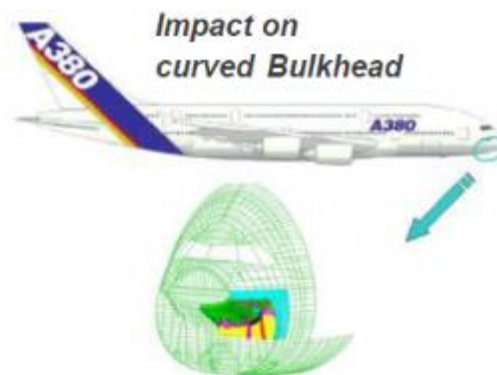




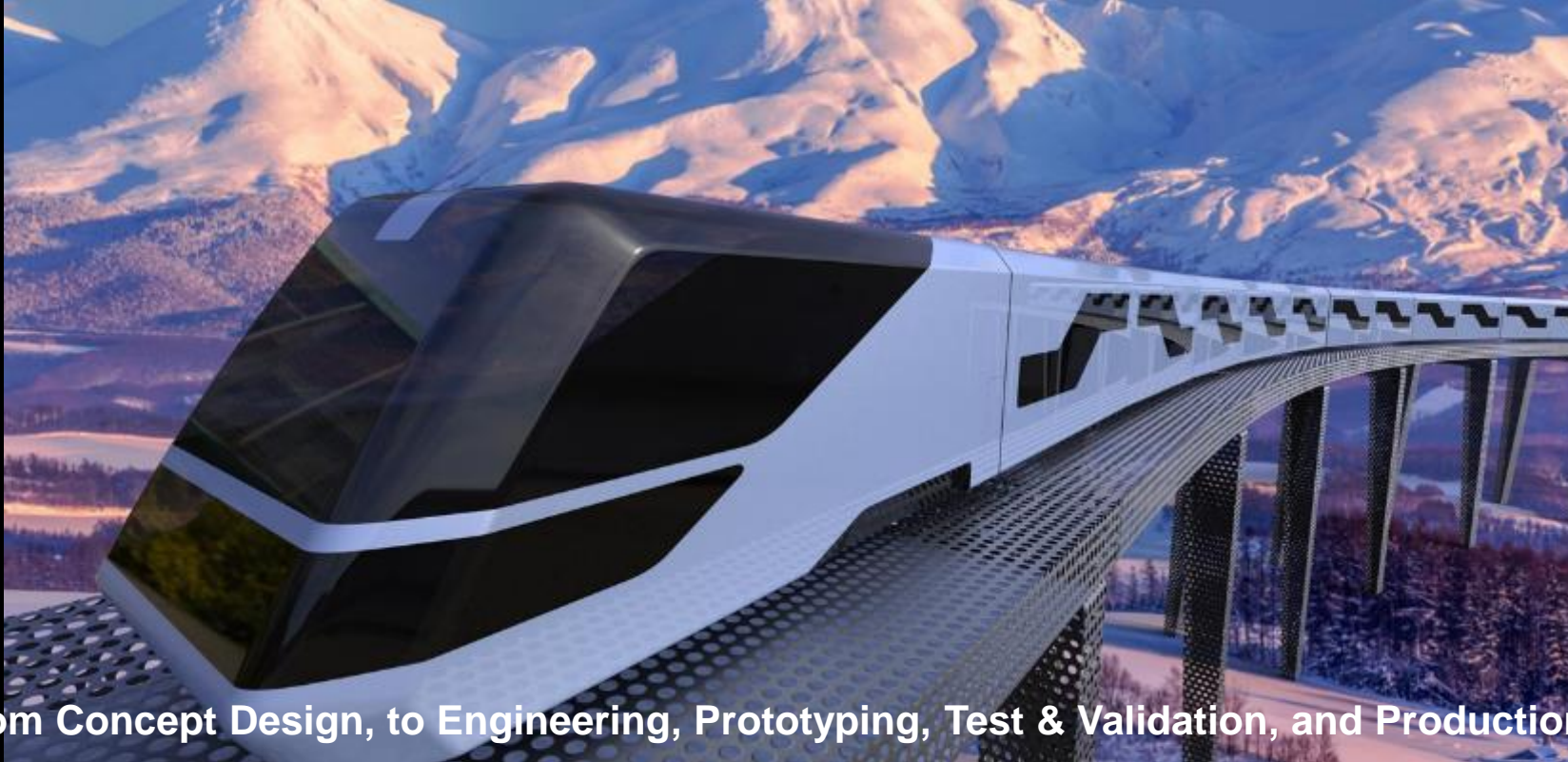
Segula Group Capabilities – Aerospace



One-stop service from Concept Design, to Engineering, Prototyping, Test & Validation, and Production Engineering



Segula Group Capabilities – Railways



One-stop service from Concept Design, to Engineering, Prototyping, Test & Validation, and Production Engineering



Segula Group Capabilities – Research and Innovation



Segula Group

Key Figures - 2018



12,000
EMPLOYEES



30
COUNTRIES



140
LOCATIONS



MORE THAN
300
CLIENTS

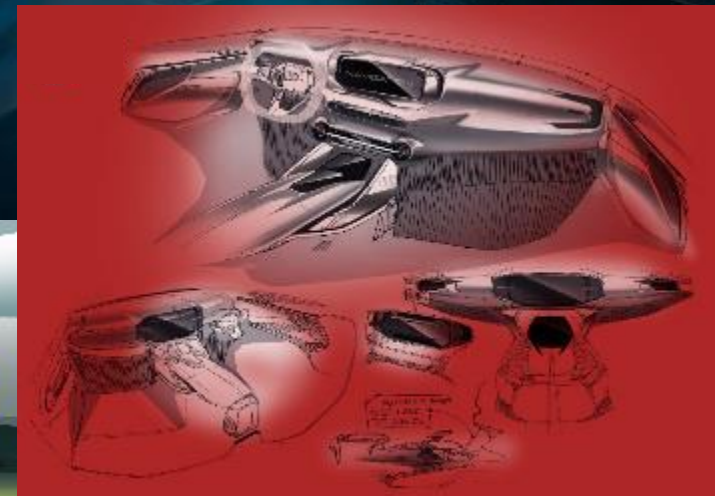


200
Research & Innovation
PROJECTS EACH YEAR

Segula Group Technicon Design



One-stop service from Sketches, Rendering, Design concept of HMI to Modeling



Segula Group Technicon Design



Consistent global design process utilizing virtual reality

Project fREN at Technicon Design



Effective development, by integrated Design and Engineering execution

Standard VRED single VR conference setup

- 1 Oculus HMD's
- 2 Hi spec open GL workstations
- 2 Autodesk VRED Pro licenses



Segula Group Engineering Services in France

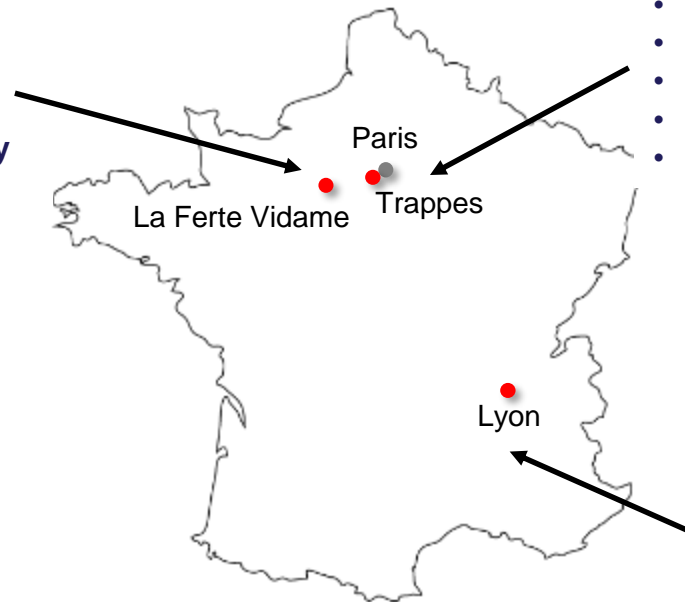
- Operation of PSA Proving Ground, providing services to other OEMs (@La Ferte Vidame)
- Overall vehicle Design and Development, Research & Development (@Trappes)
- EV Development, CAE, Commercial Vehicle Development (@Lyon)

R&D Center and Global Development Hubs

La Ferte Vidame Test Course



- Chassis performance development
- Vehicle durability testing



- Design and Vehicle Integration
- Vehicle Body and Interiors Engineering
- Software development
- Autonomous Driving Development
- Prototyping
- Process Engineering



Truck & Bus Technical Center

- Design and Vehicle Integration
- Vehicle Body and Interiors Engineering
- Powertrain Engineering
- Software Development
- CAE



Segula Group Integration of OPEL R&D Center

- Opel R&D Center (Germany) acquired from PSA, in 2018.
- Organizational (over 2000 engineers) & facility integration, planned for 2019.



Ruesselsheim R&D Center

Rüsselsheim (Germany)
Development Center

- Emission & CO2 reduction (Dyno:48, Chassis dyno:18)
- Crash performance
- NVH (Vehicle, Powertrain)
- Climate test
- Bench test



- Chassis performance
- Vehicle durability
- Emission & CO2 reduction

Dudenhofen (Germany)
Proving Ground



Segula Group Projects in WP & Full Project Mode

Product Engineering



EU OEM A



EU OEM B



EU OEM B



EU OEM C



EU OEM A



EU OEM D



EU OEM B

Product Engineering / Production Engineering



EU OEM A (EV)



EU OEM C (EV)



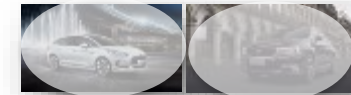
EU OEM A



EU OEM B



EU OEM A



EU OEM E



EU OEM F



EU Formula E



EU OEM B



Ottimo / China



EU OEM A&E



EU OEM B



EU OEM E



EU OEM A&E

Production Engineering



EU OEM A



EU OEM A



EU OEM E



EU OEM A&E



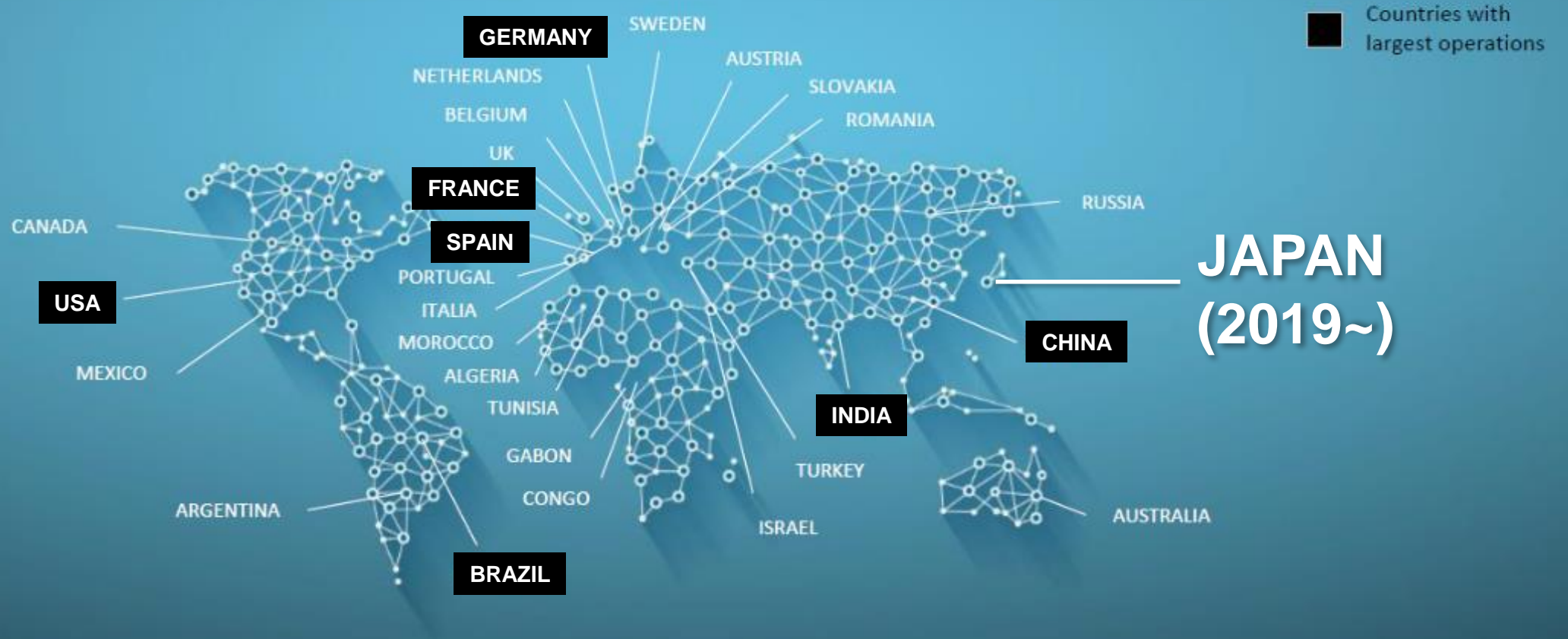
US OEM G



US OEM H

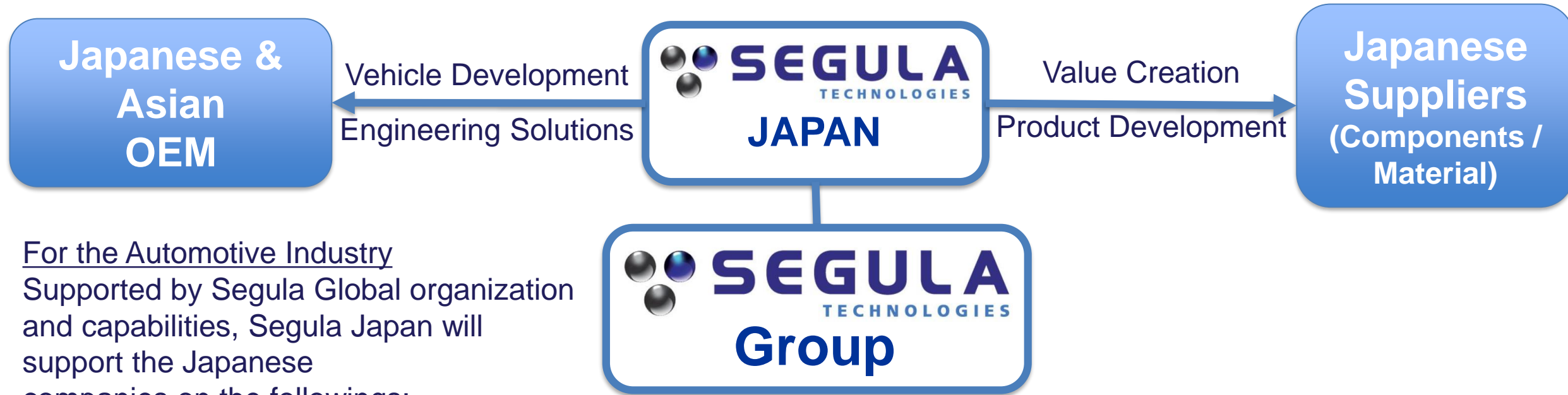


Segula Group Global Footprints



Segula Group – Japan Roll-out Plan

Segula Global Capabilities + Japanese Strength



For the Automotive Industry

Supported by Segula Global organization and capabilities, Segula Japan will support the Japanese companies on the followings:

- Add product value, by Creative and industrial Design
- Support innovation development
- Support Product development
- Support overseas production roll-out

For the Rail, Naval, Aerospace, and Energy sectors

Segula Japan will roll-out services reacting to the needs of the Japanese customers.

Segula Group – Japan Roll-out Plan

Providing Segula's Global Capabilities



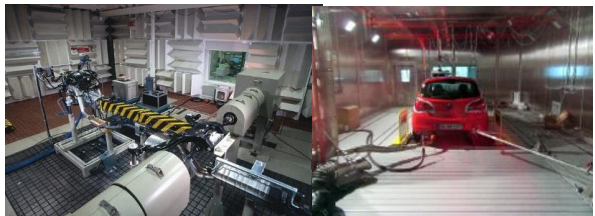
Variable performance development utilizing the proving ground in Europe
(Super high speed vehicle performance, etc)



Engineering of NVH, EMC, Crash safety including CAE and Test



Upper body development including CAE, Mockup creation and Test
Electric vehicles development
(Passenger vehicles, Commercial vehicles, Buses, Construction machines)



Development for exhaust gas and CO2 emission reduction system
(One-stop development is possible utilizing the latest dynamo equipment)

Segula Group – Japan Roll-out Plan

Interior Design realizing High Level of Perceived Quality



Segula will provide an Interior Design, with a high level of European Perceived Quality



Segula Group – Japan Roll-out Plan

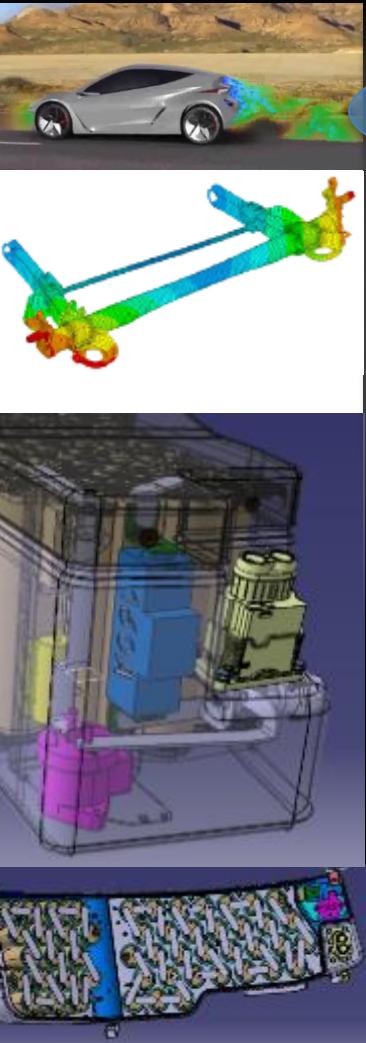
Integration of Electronics and Interiors

- Integrate Leading Edge Japanese Electronic technologies into the Car Interiors, by Segula's Design power, and UX technologies.
- Support deployments, not only to Japanese OEMs, but also to Global OEMs, using Segula's network.



Segula Group – Japan Roll-out Plan

Powertrain Electrification Technologies

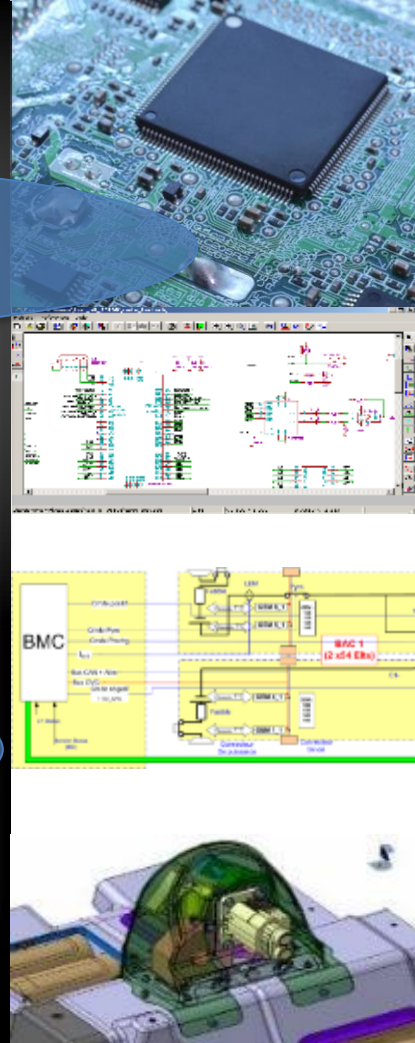


Plastic Composite
Material

Softwares and
Control Systems

Integrated Battery Pack

**Develop key technologies needed for Light Weight /
Low Cost EV Platforms**

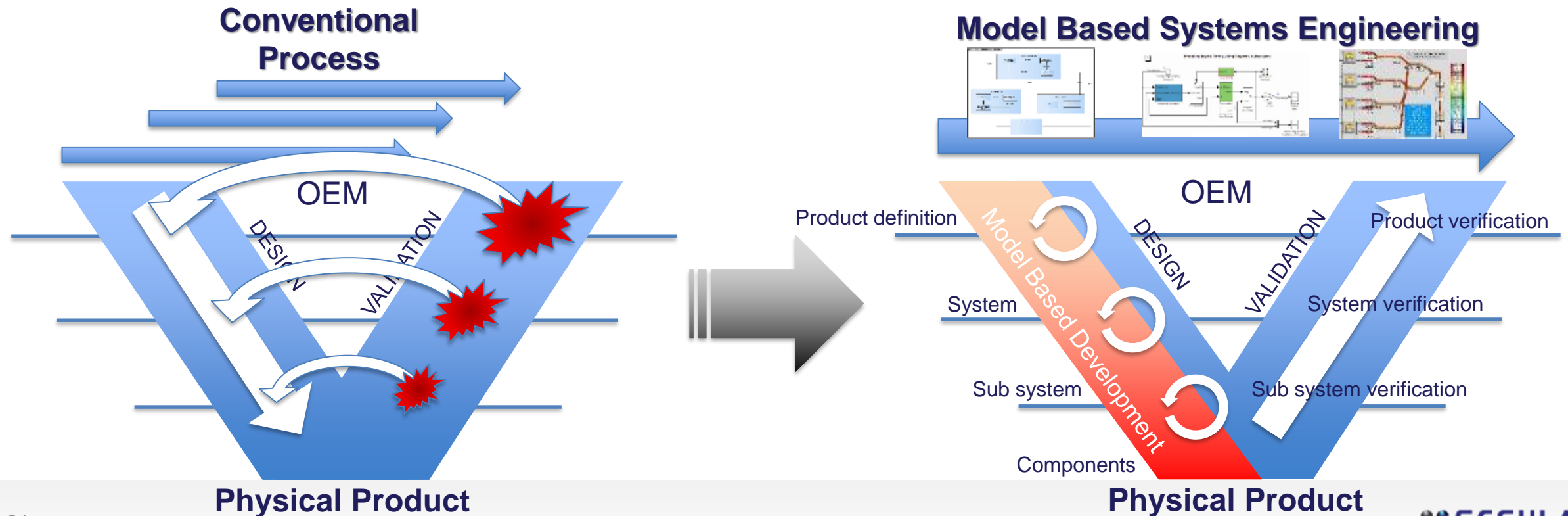


Segula Group – Japan Roll-out Plan

Lean Development Driven by MBSE

Integrated System Development, powered by **Model Based Systems Engineering (MBSE)**

- Support integration of MBSE into Japanese companies, to help them comply with the increase of complex Electronic Control Systems, and Software developments.



Segula Group – Japan Roll-out Plan

Start from Minatomirai Yokohama – for Japan



Segula Japan

Innovate Design and MONOZUKURI
By Segula's Global Creativity and
Japanese Engineering

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