China Euro Vehicle Technology AB

Innovation in vehicle development
1. This is CEVT
Started 2013 as a joint R&D center between Geely and Volvo Cars

Now an innovation center for Geely Group that keeps over 1700 people in several countries busy.

A Swedish registered company, owned by Geely, located at Lindholmen Science Park in Gothenburg.

Locations:

Gothenburg: Over 400 full-time and 750 consultants and recruiting.

Hangzhou: Over 400 full-time and recruiting.
Mr. An has served as the President of Zhejiang Geely Holding Group Company Limited (Geely Group) since December 29th 2011, and is now in charge of the Group’s overall operations. Mr. An joined Geely Group in 1996. Since then, he has held various key positions in the Group, including Chief Engineering Officer and General Manager.
CEVT first line organization structure

CEO CEVT
Mats Fågerhag

Geely Design
Peter Horbury

Geely Sales, Marketing & AS
Alain Visser

R&D
Jens Schönenberg

PS/PPL & VLM
Didier Schreiber

Quality
Fredrik Hedfors

Finance
Jon Johnsson

HR
Bengt Enbom

Purchasing
Guan Yu

Business Office
Gang Wei

Version 2 Official Corporate Presentation
The Geely Group

- Geely Auto (GAH)
- CEVT
- Volvo Cars (VCC)
- London Taxi Company (LTC)
- Minitime Group (Education)
2. This is what we do
R&D Portfolio

> Architecture Development
Creating new modular architectures and key components for C-segments cars.

> Top Hat Development
Creating complete, customer focused vehicles based on the new architectures.

> Shared Component Development
Creating technical solutions applicable to both brands and customer profiles.

> Complete Vehicle Design
Creating beautifully designed vehicles that expands the customer segment.

> Advanced Engineering and New Technologies
Deliverables to

- Architecture and components
- Shared Component Development
- Top Hat Development
- Shared Component Development
- Complete Vehicle Design
- Advanced Engineering and Technologies
Compact Modular Architecture (CMA)
Vehicle architecture definition

A vehicle architecture is the integration of all five of the following elements for a family of vehicles to meet customer requirements and maximize profits.

- The Set of Common Components (BOM)
- The Range of Dimensional Flexibility
- The Common Manufacturing System (BOP)
- Functional / Performance limits
- A Set of Common Interfaces
Compact Modular Architecture (CMA)

Scalable in length and height
Compact Modular Architecture (CMA)

Supports FWD or AWD
Compact Modular Architecture (CMA)

Propulsion systems:

> A family of 3 combustion engines
> Manual or DC Automatic transmission
> Integrated EL-motor in the DC Transmission for PHEV
> BEV
Compact Modular Architecture (CMA)

Examples of some of the possible steps on the ladder:

<table>
<thead>
<tr>
<th>Example of features</th>
<th>Lowest specification Manual Climate Control 1 zone</th>
<th>Example of Intermediate spec Electronic Climate Control 1 zone</th>
<th>Highest specification Electronic Climate Control 2 zone w AQS</th>
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<tbody>
<tr>
<td>Blower controller type</td>
<td>Resistor</td>
<td>Pulse Width Modulation/LIN</td>
<td>Pulse Width Modulation/LIN</td>
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<tr>
<td>No of actuators</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Air filter type</td>
<td>Pollen competitive</td>
<td>Pollen competitive +</td>
<td>Combi (carbon + pollen)</td>
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<tr>
<td>No of internal temperature sensors</td>
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<td>4</td>
<td>6</td>
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<tr>
<td>Rear seat air outlets</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
</tr>
<tr>
<td>Air Quality Sensor</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>
Architecture variants

Several variants are driven by vehicle geometry. Not shown in the pictures are two other dimensions of variants due to vehicle weight and customer choice of suspension.
3. CMA and electrification
PHEV technology

Compact yet powerful:

> Electric range >50 km
> Pure electric drive in city traffic
> Fuel efficient in highway
> Combined power >250 hp
Safety is a top priority for CMA

The sensitive Li-Ion battery is well protected in the center of the vehicle.
4. The future of CEVT
Where we are heading as a company
> Continuous growth

> Increased scope

> Consolidation phase
Combining two cultures
Creating products for a global market
To be able to in the frontline, the following is a key:

> Agile organization model with a dynamic leadership
> Accountable people with a “can do attitude”
> Right skills (recruitment and training)
> A good Performance Management system
> An open mindset prepared for changes
> Constantly challenge yourself on timing, quality and cost
Thank you