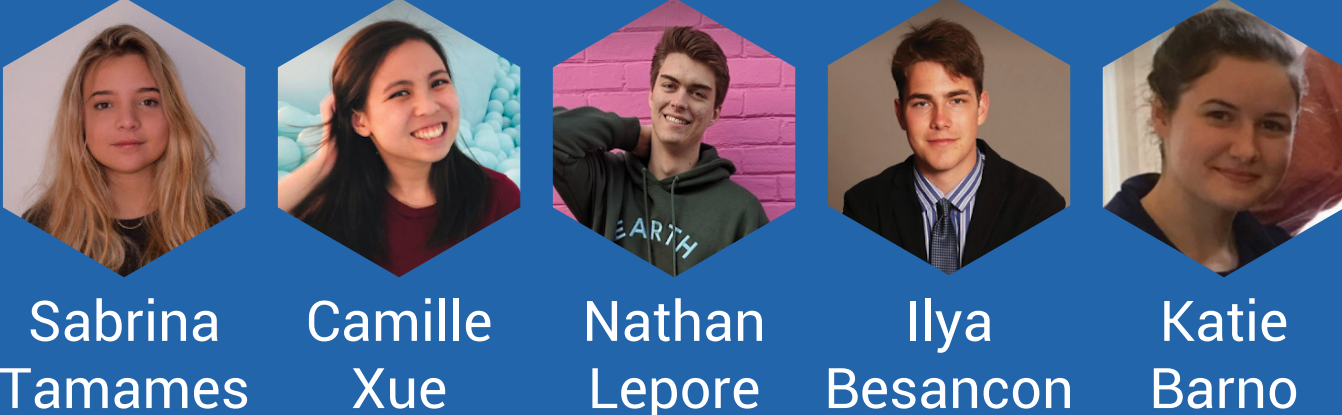


Building a New Paradigm for L3 Autonomy



Adivsor:
Alisha Sarang-Sieminski

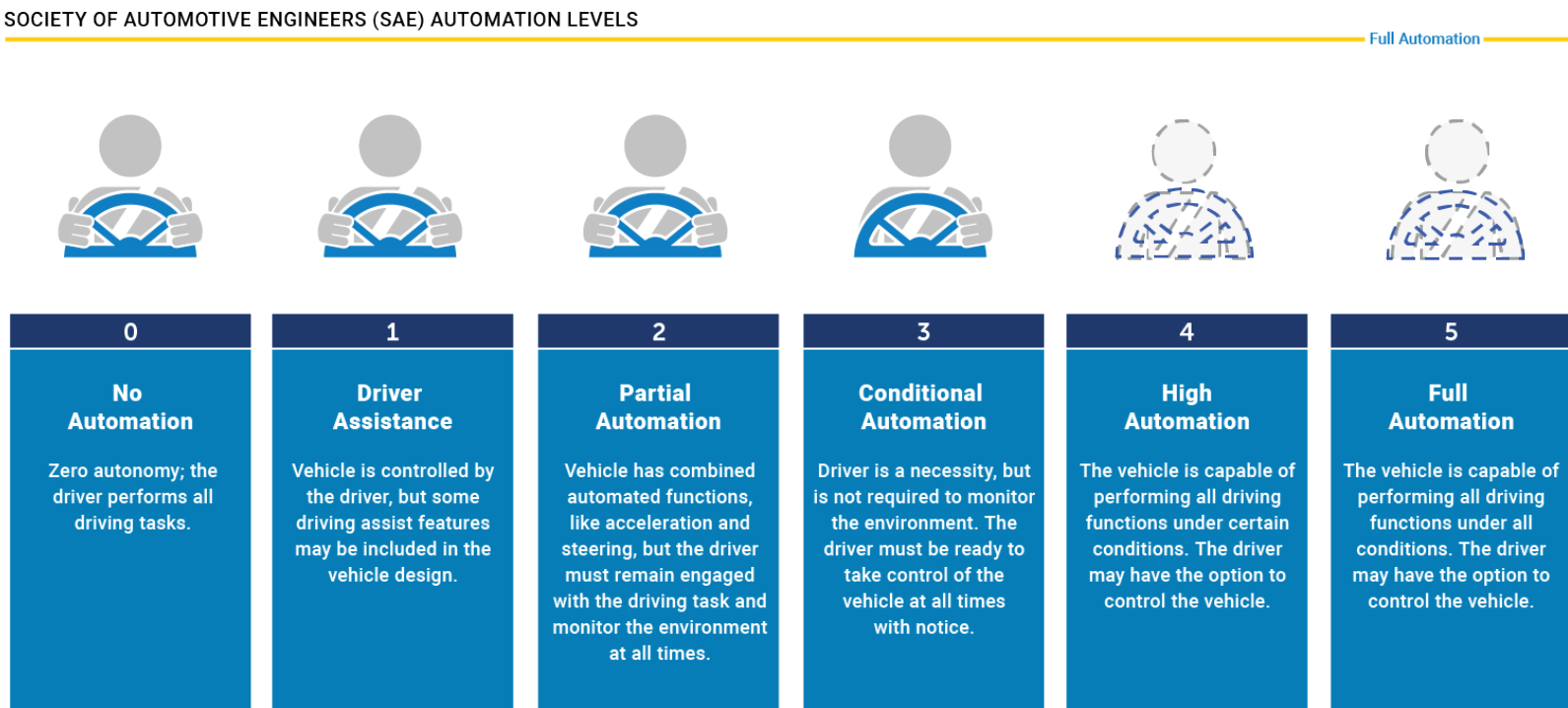
Liaisons:
Elaine Zelmanov, Trevor Sherts,
Leonidas Kiliaris, Chris Billman

Central Question

How might we design an L3 conditionally autonomous vehicle that:
Transforms the driving experience, fosters trust, keeps the driver in command, and gives a unique freedom to the user?

What is L3?

L3 is known as conditional autonomy and is the highest level that still has a “driver.” It has a unique potential to maximize the driving experience and provides an opportunity to eliminate the troughs of driving and emphasize the peaks.

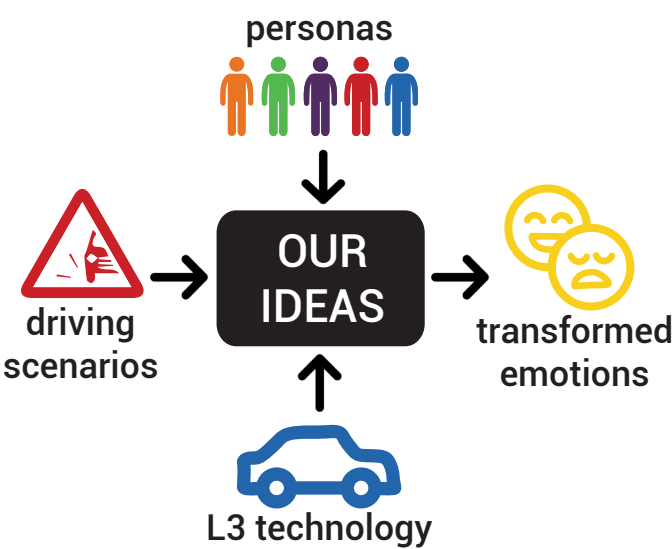


Design Process

User Research
In order to narrow our approach to better understanding the world of driving, we spoke to users in interviews and generated 5 personas to capture their key values.



Ideation
We used a black box framework to generate ideas that would remap the emotions users felt in specific scenarios to new target emotions.



The Essentials

The key values in the driving experience we learned from our users wasn't the revolutionary vehicle we were imagining. However, these values are essential to our users. So we decided to rebrand these key values into key assumptions in the driving experience that must exist for the experience to not fall apart. If one of these was missing from the experience, our drivers wouldn't get in the car a second time.

Safety

Drivers have expectations of physical safety features and assistive driving features.

Trust

The car should build a strong sense of reliability, it should behave the way the user expects.

Control

To feel comfortable in a car, a driver must feel as if they have complete control. The car is a direct extension of the driver's intent.

Transparency

Users should be clear on what's happening in the car at all times and should not encounter situations where they don't understand what is going on.

Familiarity

Drivers should recognize specific features of the car based on their past experiences, thus providing comfort and predictability.

The New Paradigm

Through our design process, we generated insights to capture our learnings and generated ideas based on them. We also created a list of hypotheses to that could be tested and would serve as new insights once validated or invalidated. Rather than testing ideas explicitly, groups of ideas together test the higher level concept captured by the hypotheses.

We grouped our insights, hypotheses and ideas into 6 themes. Building on top of the essentials with these groups creates the full paradigm.

Level 3 Autonomy is conditional and symbiotic, enables versatility and freedom, which maximizes the entire driving experience.

