# ZalaZONE Proving Ground - 2022 May





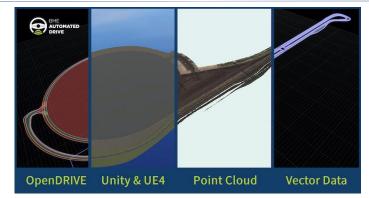
#### Available elements in use:

- 1. Motor road
- 2. Dynamic platform
- 3. Braking surface
- 4. Smart city
- 5. Conference centre
- 6. High-speed handling track
- '. University track
- 8. Test centre
- 9. ADAS surface
- 10. Motorway
- 11. Noise meas. track
- 12. Wet handling track
- 13. Rural roads
- 14. Slopes



# Combination Virtual and Physical Testing at ZalaZONE







### Static and Dynamic ground truth

- HD map of the area
- Infrastructure sensor based digital twin dynamic data (Real-time or Offline)
- Differential GNSS based dynamic data (Real-time or Offline)
- Drone based sensor information (Offline evaluation)

## Creation of highly detailed digital copy of the real-world traffic

- Static level with HD map information
- Real-time dynamic Information based on Infrastructure and vehicle sensors (GNSS, dynamic data and perception data) data
- Derived data from dynamic information (e.g. Traffic density,...)

### Real-time communication of the Digital Twin data

- Available now via Collective Perception Message (CPM) and SENSORIS standards
- Low latency, DSRC and 5G communication support



# Combination Virtual and Physical Testing at ZalaZONE



#### Mixed-Reality Test Support at ZalaZONE



### Mixed reality solution provides more freedom in testing

• Cheaper, safer and faster option for reproducible testing

### Mixed Reality scenarios contain real and virtual objects at the same time

- Real-time digital twin is running continuously
- Virtual objects can be injected into the scene, impacting the Vehicle Under Test's behavior (ViL)
- System can control real test elements (ADAS targets, remote vehicles) at the same time



