

# Implementation of Cargo Delivery ODD

Tier IV & Apex.AI Plan

# Recap

1. **March 2020:** Tier IV proposes [Modern AD Architecture](https://github.com/tier4/AutowareArchitectureProposal) (repo <https://github.com/tier4/AutowareArchitectureProposal>)
  - a. The architecture work in AWF is placed on hold in order to finish the [AVP2020](#)
2. **June 2020:** Cargo Delivery ODD is selected
3. **July 2020:** ODD WG is formed to specify the Cargo Delivery ODD
4. **July 2020:** Apex.AI reviews above architecture ( <https://gitlab.com/groups/Tier4/-/issues> ), Tier IV continues to improve it
5. **September 2020:** AVP2020 development concludes
6. **October 2020:** Cargo Delivery ODD specification is almost done
7. **October 2020:** Tier IV + Apex.AI start replacing ROS 1 APIs in <https://github.com/tier4/AutowareArchitectureProposal> with ROS 2 APIs (for Tier IV's internal use)

# Proposal

1. To implement parts of <https://github.com/tier4/AutowareArchitectureProposal> that will satisfy Cargo Delivery ODD in Autoware.Auto
2. Process
  - a. Fix and improve the issues from the Autonomous Valet Parking ODD in order to erase the technical debt
    - i. This will allow the developers to work with the stable and robust base software
  - b. Implement a system for scenario-based SIL testing
    - i. This will allow the developers to test larger parts of the whole stack, and reduce the need for in-vehicle testing
  - c. Finalize the Cargo Delivery ODD specification if still needed
  - d. Refactor <https://github.com/tier4/AutowareArchitectureProposal>
  - e. Document design and implementation.
  - f. Create unit and integration tests.

# Personnel

1. Apex.AI: 4 full-time engineers (partly funded by Tier IV)
2. Tier IV: 5 full-time engineers
3. Josh Whitley (technical lead)

## Questions / Discussion points:

1. This proposal is to bring the working mode of AWF engineers within the normal effectively now
  - a. It may contain some elements that in the professional interest of both companies
2. Do we need a vote for this plan?
3. Which other TSC members would like to join in with their engineers?
4. When & where to target the demonstration of this ODD?