



# VDA / ECG Digitalisation Working Group

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# Project Background

ECG-VDA Joint Digitalisation Group



**Project Motivation:** connected automatic vehicles present both new potentials and new challenges for the Outbound logistics chain. It is necessary to standardize processes across the industry to enable an efficient transition.

- ECG and VDA started with separate projects in 2016/2017
  - In October 2017 joint project started
- **Main project goal:** develop a digital twin for the entire outbound logistics chain as well as to digitalize standard processes that are currently handled manually
- The project results will be published in an Odette Recommendation supported by ECG and VDA

### OEMs



FIAT CHRYSLER AUTOMOBILES

DAIMLER



JAGUAR



GROUPE



RENAULT NISSAN MITSUBISHI



### LSPs

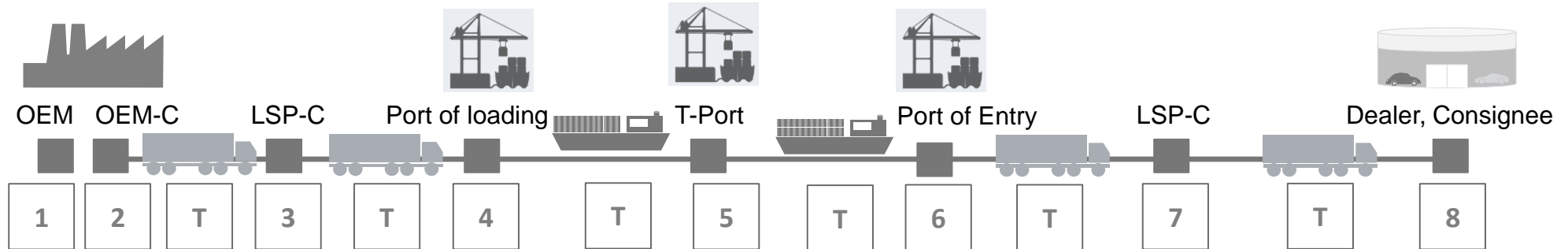


INTERNATIONAL CAR OPERATORS



Port de Barcelona





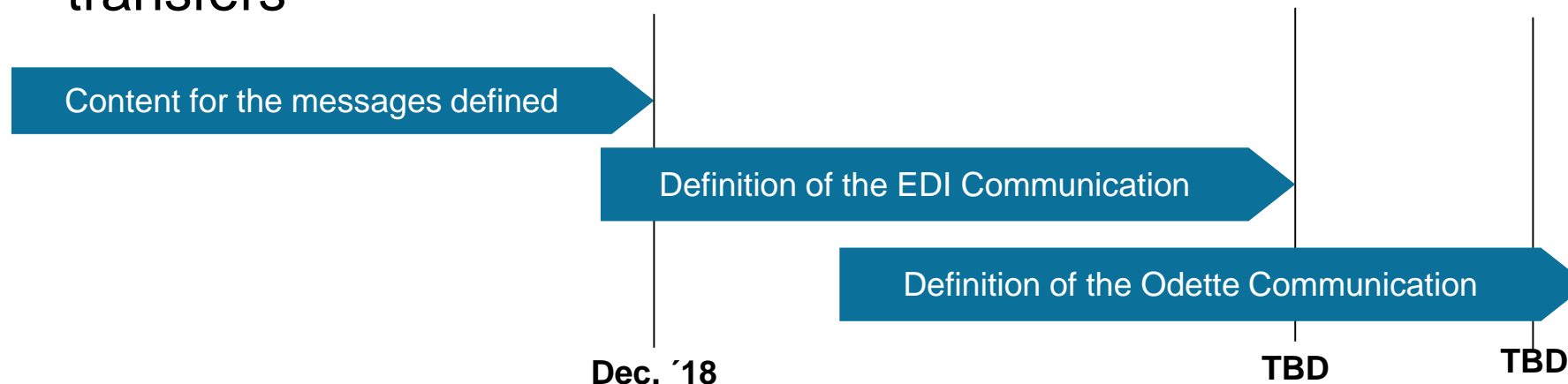
- Developing a digital twin for the entire supply chain

## Tasks of the group:

- Overview of all necessary data transmissions
- Legal and business questions
- Answering all business questions within 3 webinars with LSPs and OEMs
- Answering all legal questions with Contrast Law
- Result of legal based questions: no obstacles in general

What will be standardised:

- The message content
- A maximum number of digits per field (not the exact length)
- The format of the message
  
- The content for each field in the message to be defined
- EDI messages and in the second step XML messages
- Final achievement: a Pan-European Odette/ECG Recommendation for Data transfers







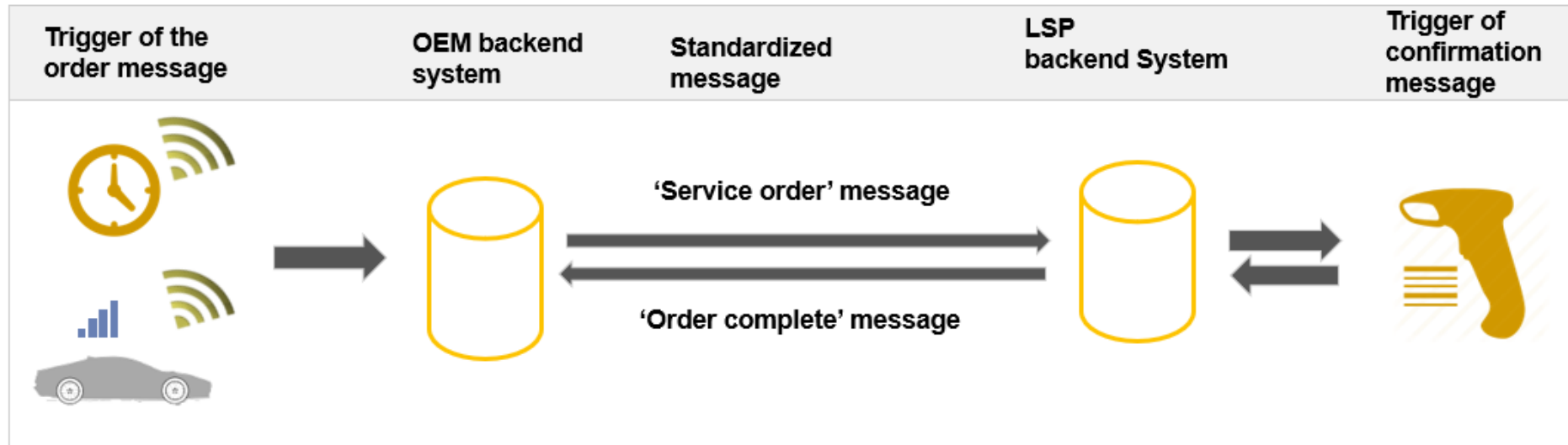
## Benefit

Avoiding process disturbances and increasing efficiency at compounds/ports.  
Improving the vehicle quality.

## Testing

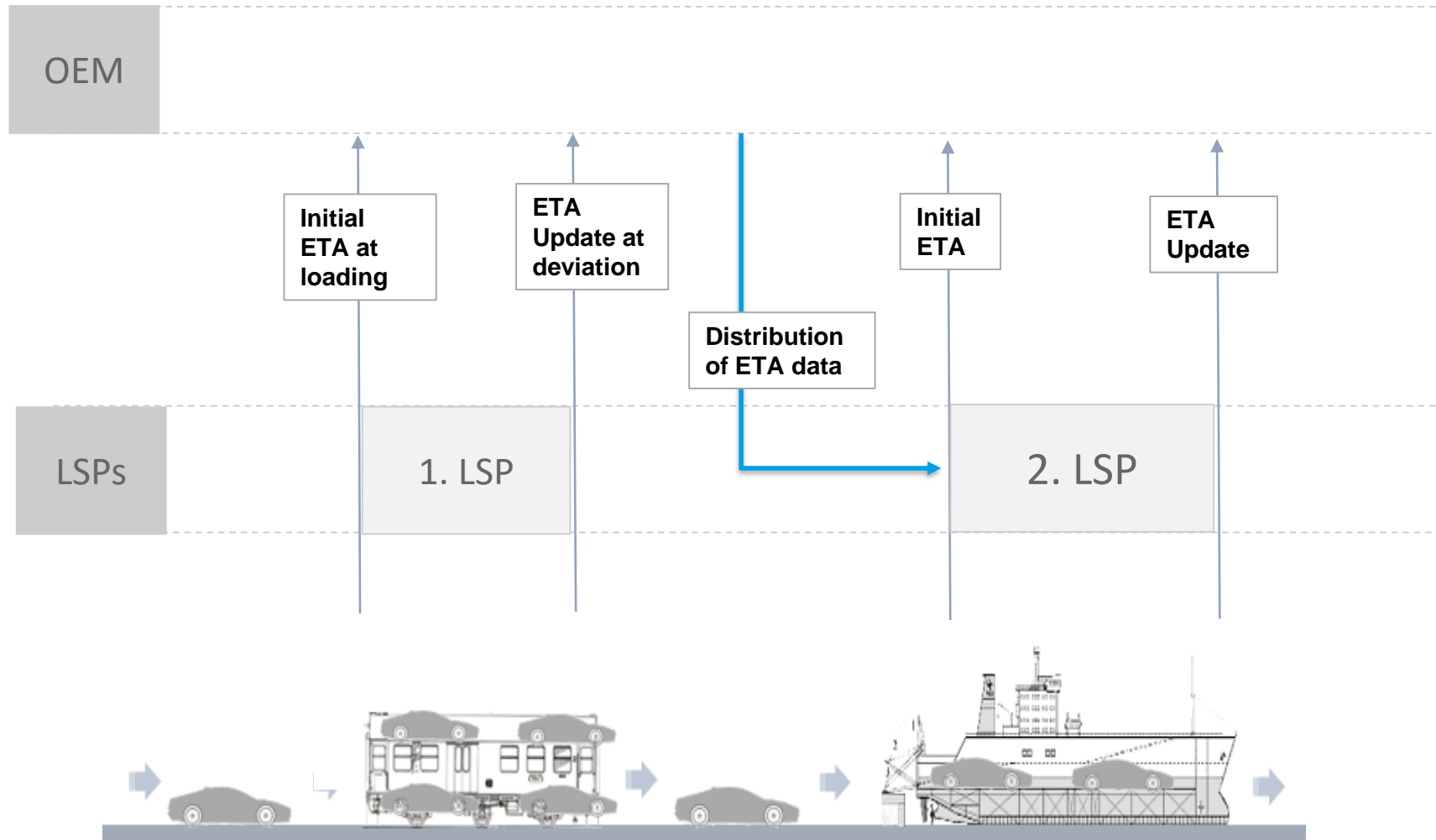
Process and message content have been Tested and validated.

## Process



# Use-case group 3 –ETA to the next transshipment point

ECG-VDA Joint Digitalisation Group



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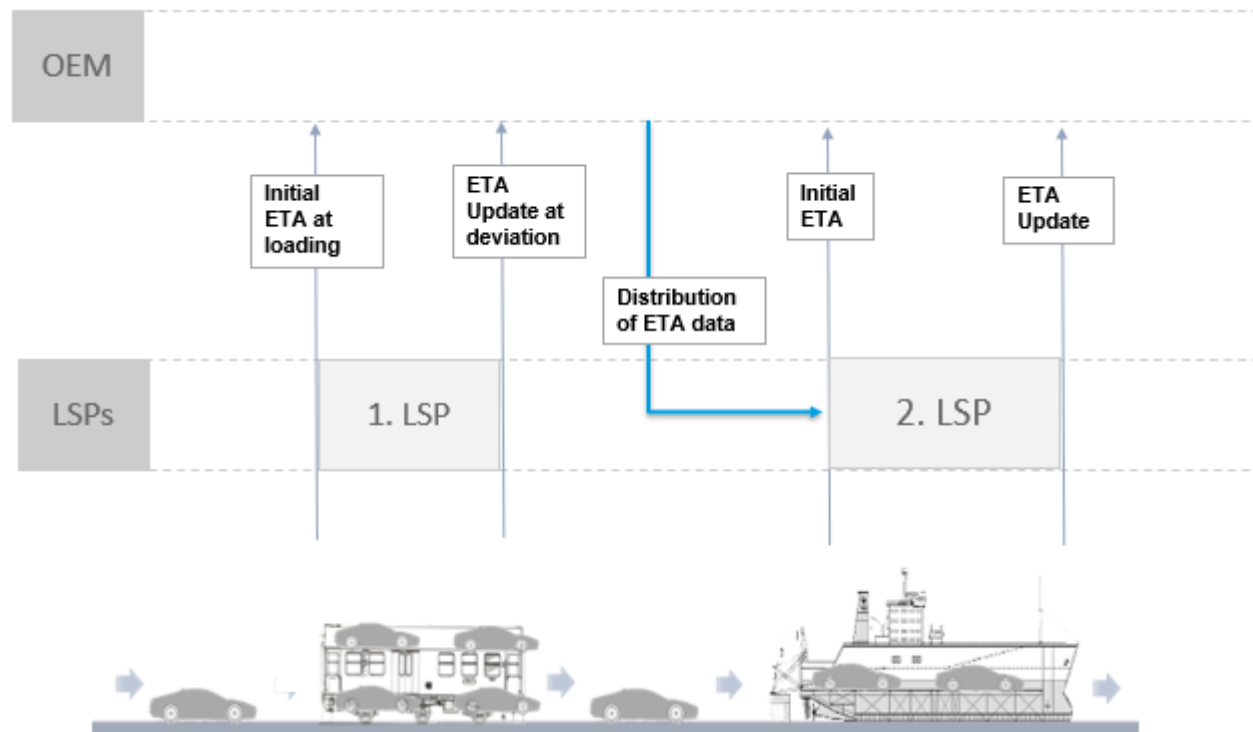
## Benefit

Efficient steering of resources for LSPs at the transshipment points.

## Testing

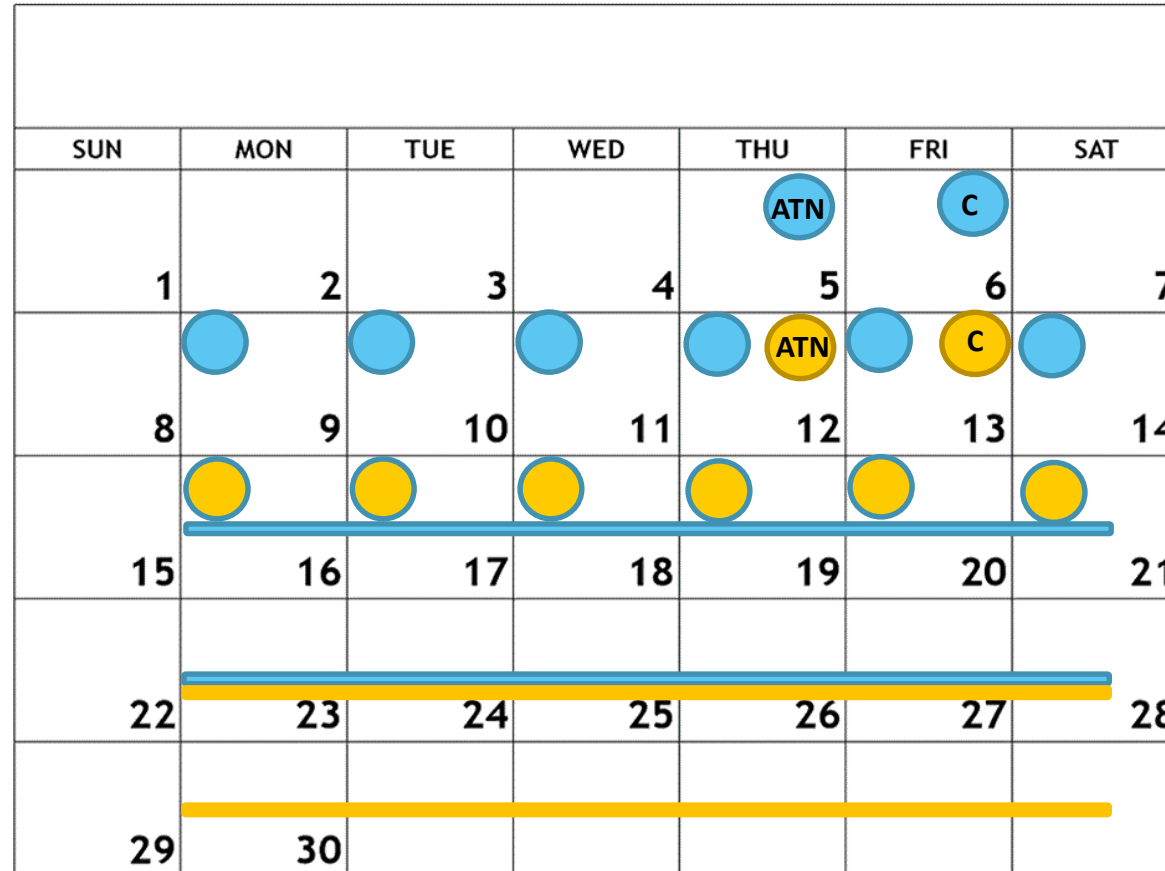
Process and message content to be tested in Q4 2018.

## Process



ETA calculation include several factors

- Average driving time
- Regulations (driver breaks, days with driving bans, holidays, etc.)
- Times for border crossing and customs clearance
- Opening hours at dealers
- Geoposition of means of transport
- Traffic situation
- Special occurrences (accident, means of transport damages, etc.)
- Weather conditions



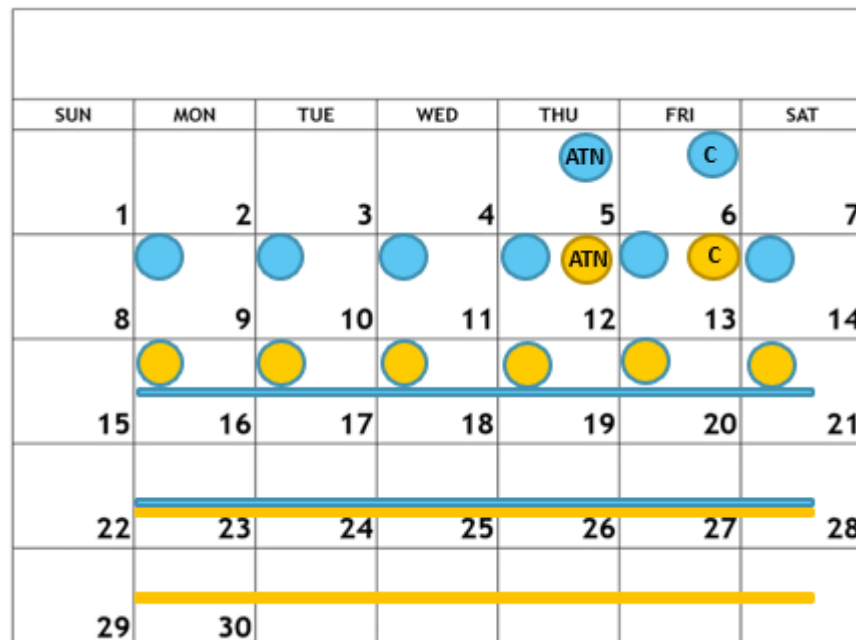
**ATN: Advanced Transport Notice**  
**C: ATN Confirmation Message**

○ Daily forecast (Same color = forecast of the same message)  
 ——— Weekly forecast (Same color = forecast of the same message)

## Benefit

Efficient planning of resources for carriers. Proactive actions on capacity bottlenecks for the OEMs and LSPs.

## Process



ATN : Advanced Transport Notice  
C: ATN Confirmation Message



Daily forecast (Same color = forecast of the same message)

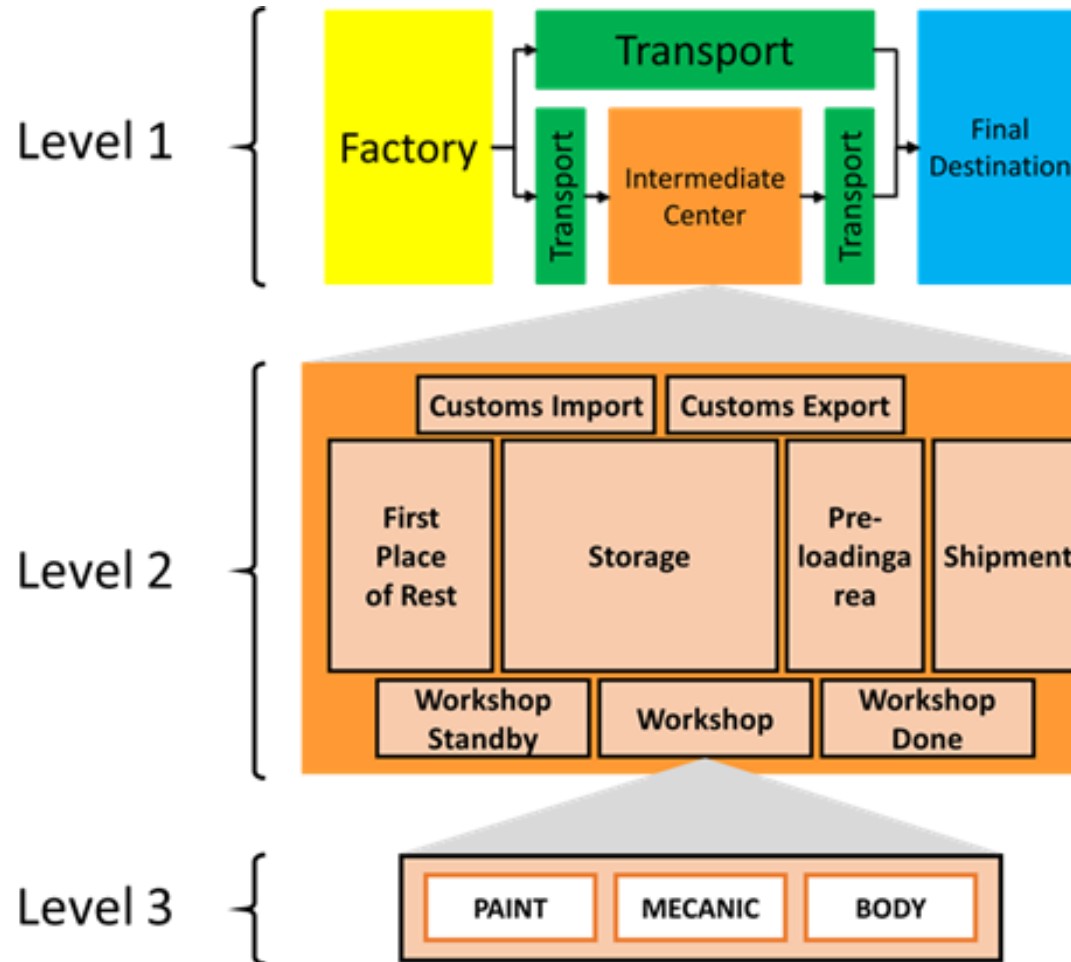


Weekly forecast (Same color = forecast of the same message)

## Testing

Process and message content currently in testing phase.

## Process



## Achievement

Standard zone architecture, names and definitions have been agreed by all parties

## Benefits

Common knowledge and understanding of position/status by all parties reduces mails and phone calls

Possibility to set rules in IT systems for transfers between zones avoids mistakes

Big data analysis on the whole flow becomes possible

### Achievements

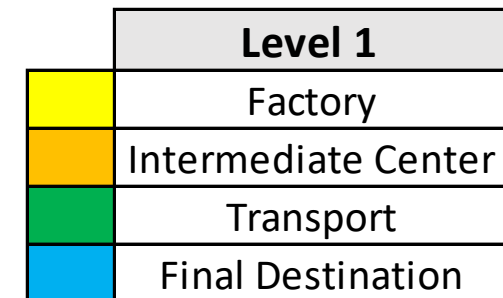
Standard definitions ensure common understanding. One page is enough to cover all needs on FVL flows.  
Practical recommendations were also issued to implement geopositioning and geofencing

### Benefits

Easier to link position and status whenever possible.  
Easier implementation

### Process

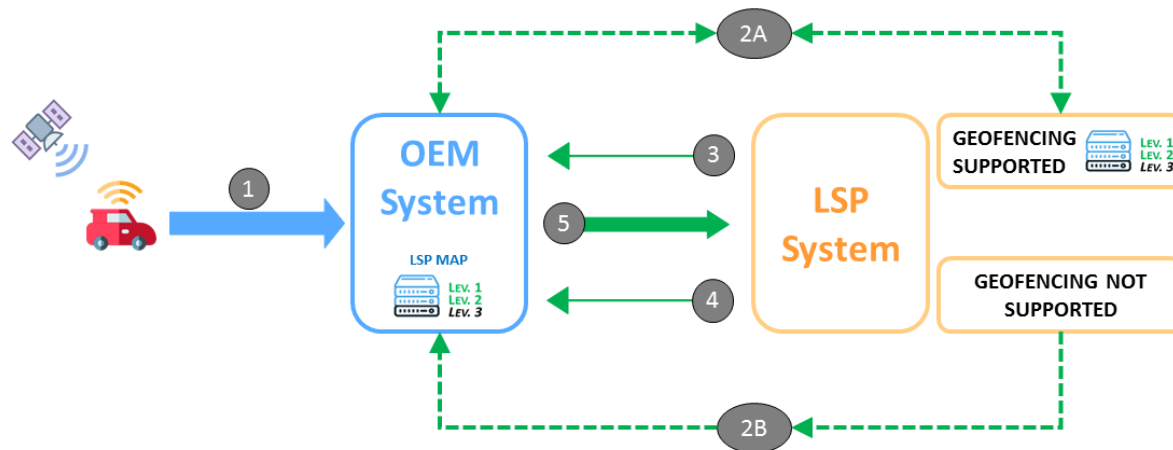
Level 1	Name Level 2	Definition Level 2
Yellow	Production	Vehicles still under the responsibility of the factory (manufacturing)
Yellow	Factory handover	Handover zone between factory and logistics - Vehicles are put there by the factory and are moved out by logistics when they are accepted by logistics
Yellow	Storage	Vehicles that are not scheduled for shipment
Yellow	Non Conformity products	Vehicles with a non conformity of factory origin are put there by logistics. After refurbishment the factory puts them back here to be collected by logistics
Yellow	Pre-loading area	Vehicles that are scheduled for shipment and are waiting for their transport means.
Yellow	Workshop standby	Vehicles that are waiting for their processing in the workshop
Yellow	Workshop	Vehicles for which a job of any nature is to be performed by the logistics provider's workshop
Yellow	Workshop done	Vehicles processed by the workshop waiting for the next step
Yellow	Customs Import	Imported vehicles not customs cleared yet.
Yellow	Customs Export	Exported vehicles already registered by customs.
Yellow	Shipment	Area where transport means are stationed and are being loaded. This is a "no return" zone, vehicles must be cleared for shipment at that stage.
Orange	First Place Of Rest	Buffer zone where vehicles are unloaded from a transport means.
Green	Transport by sea	Vehicles stationed in a vessel
Green	Transport by land	Vehicles stationed on a truck, railcar or barge



### Achievement

Target scenario of data exchange for the use of connected vehicles in logistics between OEMs and LSPs. In the final phase of discussion between 5 major OEMs and the LSPs of Group 4

### Process



Legend		
<b>OEM System internal messages:</b>	<b>LSP System to OEM System messages:</b>	<b>Unit messages:</b>
1: Unit to OEM	2A: Geofence LSP Map (automated)	3: LSP Unit Request
	2B: Geofence LSP Map (manual)	4: LSP Unit Update
		5: OEM Unit Update

### Benefits

Position and geofenced zone immediately available for both OEM and LSP.

Quick implementation possible when an OEM is ready for all its LSPs.

Reduced data exchange and simple updating of master data, compatible with frequent zone changes.

Standardized messages allow several technical scenarios.



## Next Steps:

- Development of information models by the end of 2018
- Development of EDI and XML-messages until the end of June 2019
- Editing of recommendation document until the end of Q3 2019
- Publishing of the Odette Recommendation supported by ECG and VDA in Q4 2019



Thank you for your attention!