



# Global Mobility Database AZ Tech Discussions

Follow-up meeting

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Internal

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AZ SE, H7/H10

January 25, 2023



# Agenda & Objective

## Agenda

Topic	Duration
<b>1 Recap</b>	10 min
1.1 MI EV&ADAS TeX Project	
1.2 Follow-up actions	
<b>2 Updates &amp; Discussion</b>	30 min
<b>3 Next steps</b>	10 min

## Meeting objective

Discuss open questions and define next steps for the Global Mobility Database creation with to AZTech



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# Combining internal and external data key to improve EV&ADAS insurance offerings

## What is mobility EV & ADAS?



- Business context (cars turning into computers)
- Problem (limited data exposure across each OE individually and ADAS features nil across OEs)
- Solution: AZ global enriched data base (foot note here that it also includes data for all

## Which are the pilot OEs?



-  AZ Germany
-  AZ Italy
-  AZ UK/LV=  


## Data Domains



- Claims Internal data
- Vehicle Internal data
- External data (GT Motive & Thatcham)



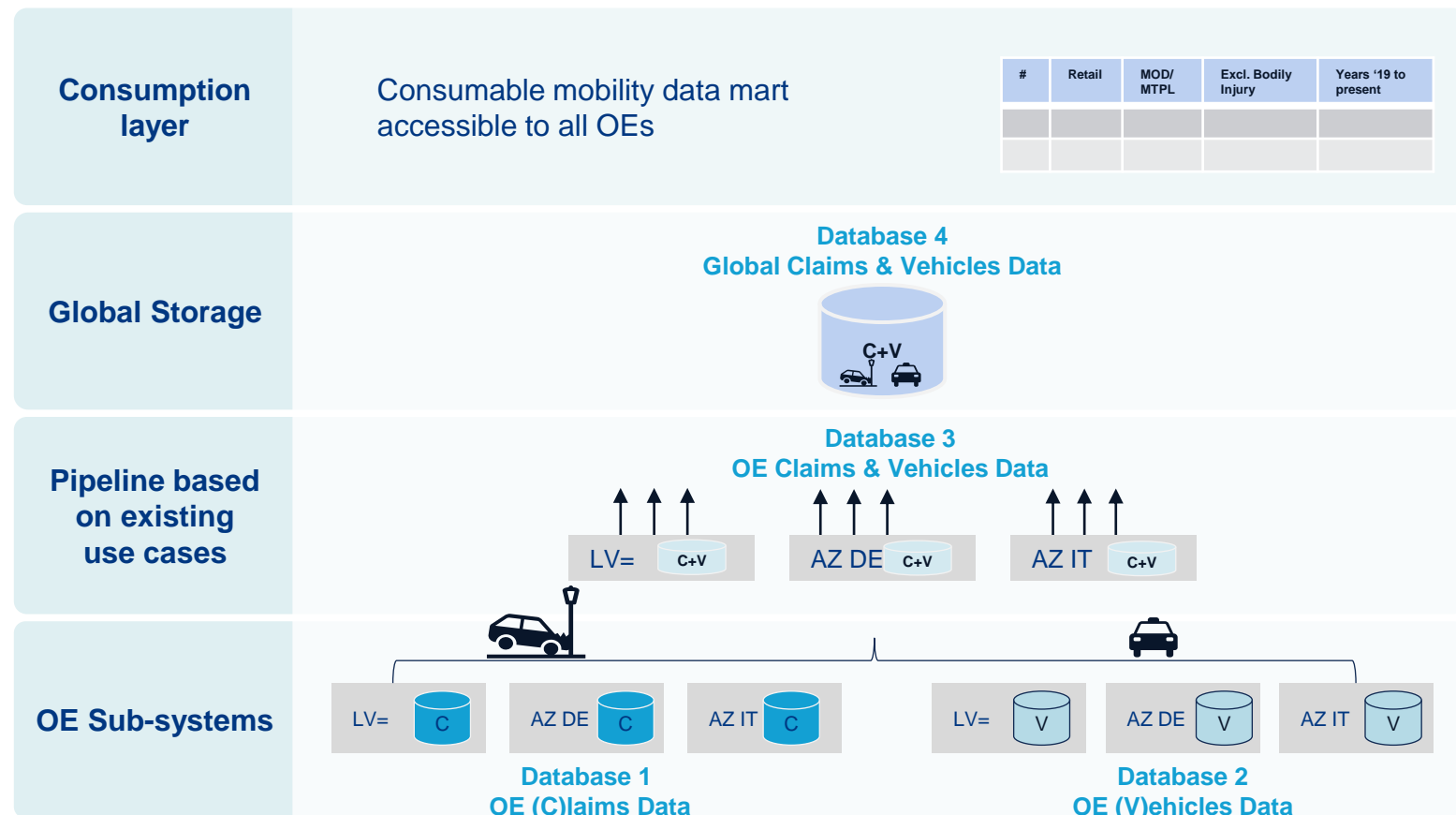
## Affected Systems

TBD



- ABS
- MIS
- Radar Live
- ...

# Internal OE data entities are combined to build a global data base



 Data available on MIS

## Consumption layer

- Consumable data mart available through MIS, accessible & flexible for OEs to run their own analytics across

## Global storage

- Combining both on MIS (extending the CIM model for claims)

## Pipeline based on existing use cases

- Reusing the already hosted claims data on MIS for claims inflation use case
- Loss assessment data is external but merged with internal claims data before being delivered to MIS

## OE Sub-systems

- Vehicle data base
- Not delivered on MIS
- Needs to be delivered

# Claims and vehicle data points

1

## 28 data points Claims inflation data model governed

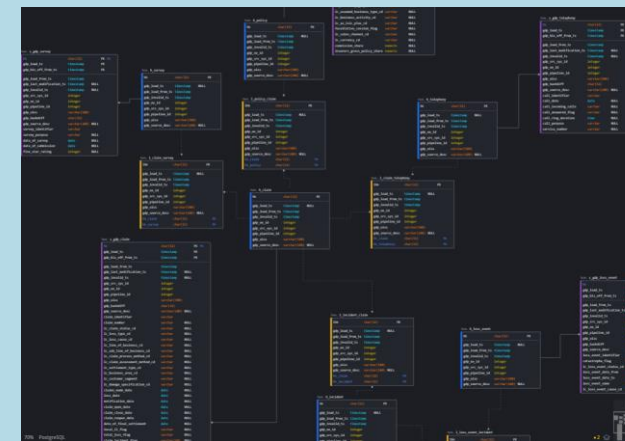
- Claim inflation data model on MIS (already received for Germany and Italy)
- Add claims data model picture here

2

## 2 additional vehicle data points – discussed with OEs & available/feasible

- Vehicle ID
  - ABI code for UK, Quarttroute for Italy and HSN/TSN for Germany
- Earned exposure

### Existing CIM model



### 2 Vehicle Data Points

Vehicle Identifier

Earned exposure

# External data is the only source for the availability of ADAS & Spare parts data



- **Only source for spare parts data** across **18 OEs**
- **Tracking cost evolution** for spare parts across different portfolio dimensions (Engine type, **ADAS** features, model year. Etc)
- Beneficial for **claims management, repair network** and **OEM management** and **negotiations, pricing, UW**, etc.
- **EV models expanding** in the future across GT

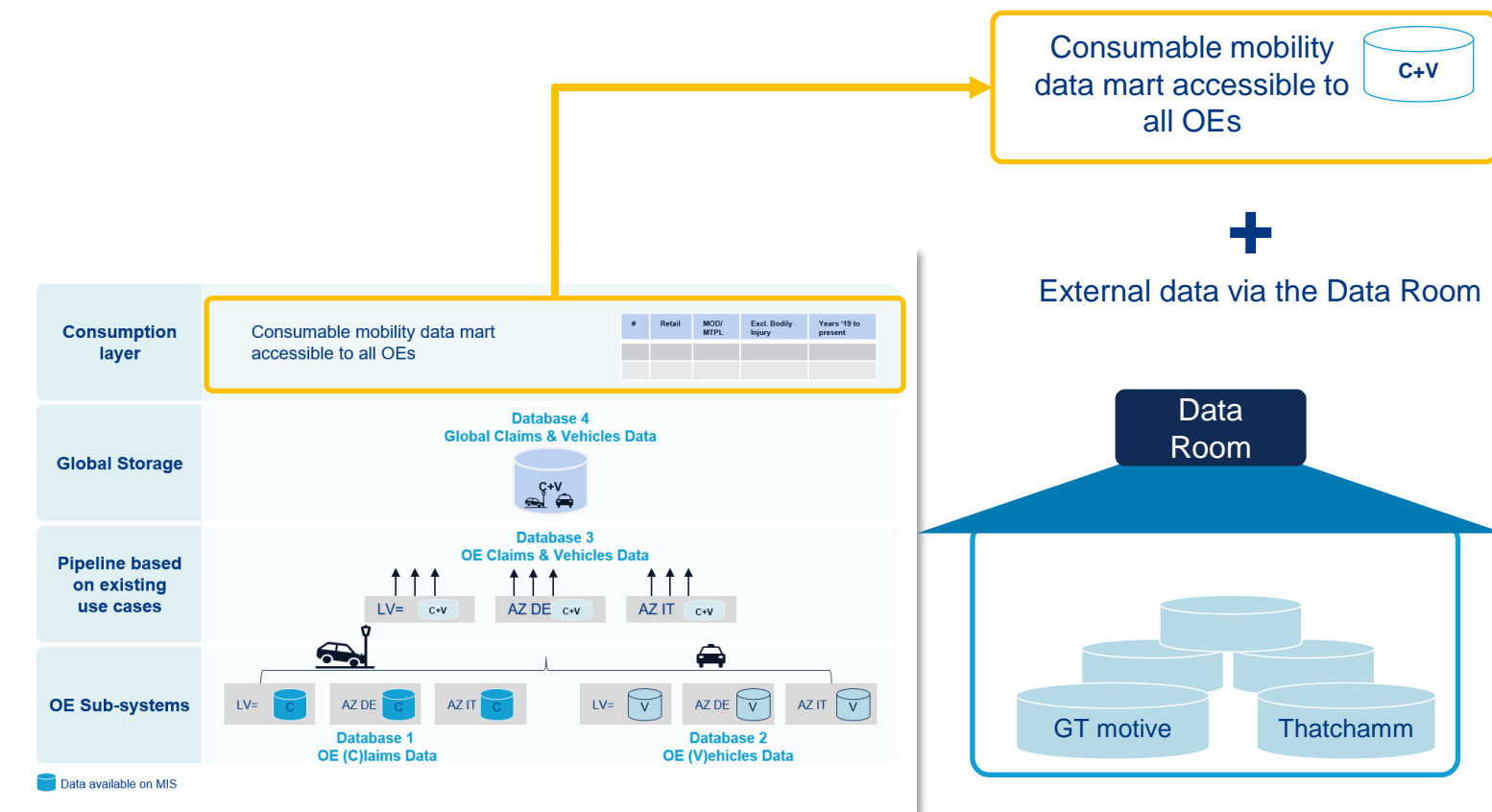


- **Only source of ADAS data** in the group
- Allows to **understand the drastic change in claims behaviours** in the highly tech vehicles currently invading the market
- **Access to the new vehicle descriptions** including full ADAS system catalogue, enabling better Underwriting risk discrimination and selection cess to the new vehicle descriptions
- **Improved understanding of claims cost drivers** and drill-down through new claims data on parts, paint and labour costs for repairs combined with enhanced vehicle feature descriptions.

## External data

- Sources: Thatcham, GT motive
- ADAS data availability internally is close to NIL in the internal OE portfolios
- Spare parts data is non existing in the
- GT Motive and Thatcham are critical for both claims inflation and mobility use cases

# Data Room is the vehicle to have easy access to curated external data



## External data

- Data room used as a **prototype** for the external data delivery
- First attempt for Az group to work **centrally** with external partners
- External data is part of the consumable data mart but in a separate instance
- As a priority, the external data should be in a separate instance
- No direct Keys to connect GT motive and Thatcham to internal data
- As a second step, creating a consistent grouping of some data dimensions can be used to connect internal and external data



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# Recap – next steps 19.12.22

- ✓ **Schedule follow-up** call for early January 2023, when AZT resources are defined (Gabriele)
- ❑ Planning of **dedicated AZT resources** (Product Owner and Architect) to support pre-project study for limited amount of time (ca. 12 PDs) (Gabriele)
- ❑ **Prepare 20 min Project Pitch** for "GIT" (TBD; e.g. Rico / Eline)
- ❑ **Mark project into the backlog** of the design authority (Kamil)

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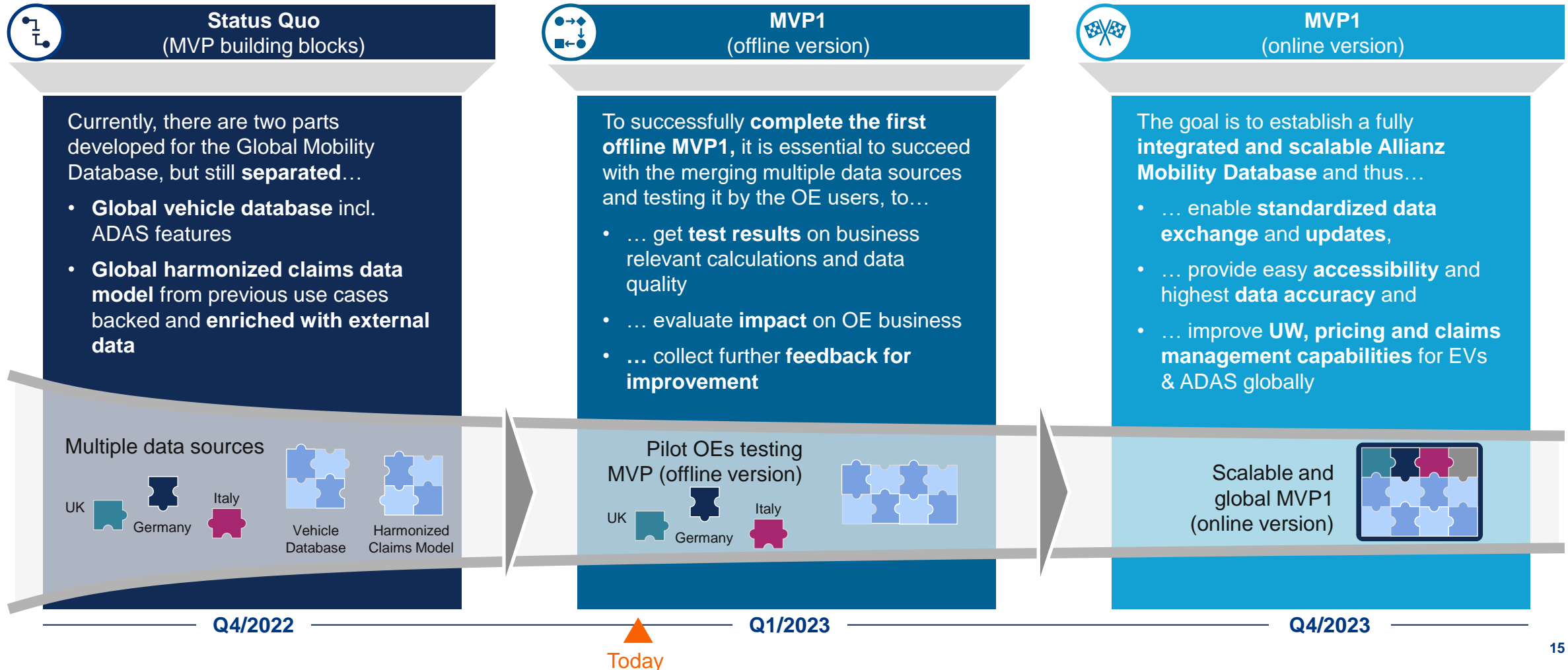
# Next steps

- TBD



# Backup

# To create the Global Mobility Database, a consecutive development from offline to online MVP1 is necessary



# Building a global data base serves clear business requirements



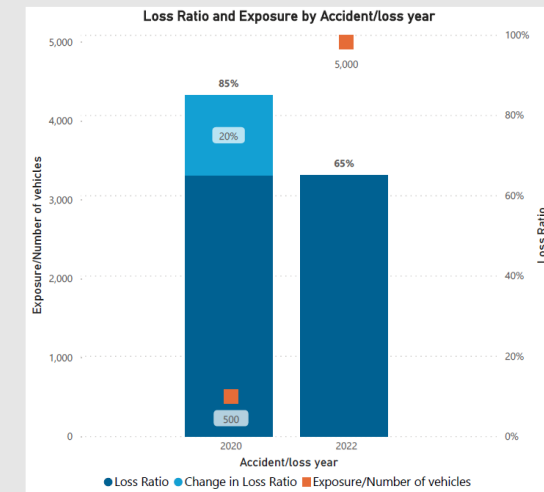
## Group

- More visibility on the data
- Enhancing existing use cases like Claims MIS and Claims inflation with additional vehicle data dimensions



## OEs

- Improve data exposure for vehicles
- Claims detailed analytics
- Improve pricing assumptions
- Claims data enrichment: ADAS exposure to data



# KPI calculation

1

Summation of number of claims

2

Mapping local loss codes into homogenous groups

- (screenshot to be placed)

3

Reporting logic: Yearly/monthly dates instead of daily dates

4

Enrichment of vehicle identifier

## Global Loss Grouping

Before

### Global loss groups

- 1 Material damage (Non-Glass)
- 2 Material damage (Glass)

Two wide loss cause groups available for MOD/MTPL:

- Material damage (non glass)
- Material damage (glass)

Now

### Global loss groups

- 1 MOD Accident
- 2 MOD Battery loss
- 3 MOD Active Legal Protection
- 4 MTPL Bodily Injury
- 5 MTPL Material Damage and other costs
- 6 Personal accident lumpsum
- 7 MOD Fire
- 8 MOD Theft
- 9 MOD Vandalism
- 10 MOD Natural events
- 11 MOD Animal damage
- 12 MOD Glass
- 13 MOD Terrorist attack
- 14 MOD Cyber attack

**14 well defined loss groups** with definition & loss causes list under each selected from **23 BMP/ACM groups**

## Audi Q2 ranked matches between ABI-KBA datasets

Rank 1 =  
best match

ABI Code	HSN TSN	Rank	dist_HSN_TSN	ABI Match	Manufacturer	KBA Match	Manufacturer	ABI Model	KBA Model
4136288	0588_BJU	1	4.13435E-05	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	Q2
4136288	0588_BOM	2	0.004049518	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	Q2
4136288	0588_BAF	3	0.045273224	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A3
4136288	0588_BJL	4	0.048735398	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A3
4136288	0588_AVJ	5	0.050468487	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A3
4136288	0588_BAJ	6	0.058737207	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A3 Sportback
4136288	0588_BAE	7	0.061144217	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A3
4136288	0588_BLL	8	0.061360233	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A3 Sportback
4136288	0588_AWM	9	0.064141331	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A3 Sportback
4136288	0588_AVI	10	0.067042319	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A3
4136288	0588_BAI	11	0.074361363	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A3 Sportback
4136288	0588_BJT	12	0.074601185	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	Q2
4136288	0588_BSF	13	0.076754434	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A1 citycarver
4136288	0588_AWH	14	0.080259465	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	A3 Sportback,A3
4136288	0588_BVR	15	0.0880427	AUDI	AUDI	AUDI	AUDI	Q2 SE TFSI 148bhp 5 Door Hatchback Petrol Manual 2WD	Q2

# Glimpse into how the end product should look like

The excel file (shared in meeting) and the MVP demo developed by Surendra

A	B	C	D	E	F	G	H	I	J
Zoom in the data base attributes									
OE	Product line	Loss type	Fuel type (EV / non-EV)	Make	Model	Accident/loss year	ADAS feature	Exposu	Nu
LV	MOD	MOD accident	BEV: Battery Electric Vehicle	Tesla	3	2020	AEB: Autonomous emergency braking	500	
LV	MOD	MOD accident	BEV: Battery Electric Vehicle	Tesla	3	2022	AEB: Autonomous emergency braking	5000	
Germany	MTPL	MOD Theft	ICE Petrol	BMW	X3	2021	AEB: Autonomous emergency braking		
Italy	MTPL	MOD Vandalism	ICE Petrol	Fiat	Panda	2019	AEB: Autonomous emergency braking		
Italy	MOD	MOD Natural events	BEV: Battery Electric Vehicle	Nissan	Leaf	2022	AEB: Autonomous emergency braking		
Germany	MOD	MOD Fire	PHEV: PLUG IN/ELECTRIC/HYBRID	Toyota	Rav4	2020	AEB: Autonomous emergency braking		
Second Zoom in once we choose the fiktors out to continue the calculation									
OE	LV								
Product line	(All)								
Loss type	(All)								
Fuel type (EV / non-EV)	BEV: Battery Electric Vehicle								
Make	(All)								
Model	3								
Row Labels									
		Sum of Actual Claims Frequency	Sum of Actual Claims Severity						
2020		3%	6286,8						
2022		5%	4404						
OE Productline Loss type Fuel type (EV / non-EV) Make Model									
7000			6%						



# Data governance, accessibility & other topics

## Accessibility to OEs

- OEs should access only the end vision 'consumable data mart' which has no claims/vehicle Identifications
- Ability for OEs to exposure the data they need into flexible file formats (csv, txt, JSON..etc)



## Data governance

- All data points are governed in the claims & vehicle data



## Data regular updates

- Needs maintenance & updates every month



## Manual updates (frequency, dependency (who will maintain it, send it ... etc?))

- CSV files for adding additional vehicles on top (how will this affect the data base?)
- CSV files for vehicles and earned exposure with no claims on top (no effect on data base, just need a place to save it)
- CSV files for bespoke features (how will this affect the data base)



## Additional OEs on board in long run

- Which additional OEs are we speaking about?



Disclaimer: Local implementation or alternatives to be used/created for non-RACo OEs

Thank you!

