

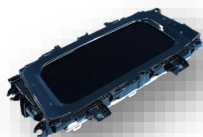
Front View Camera



Radar ECU



ADAS ECU



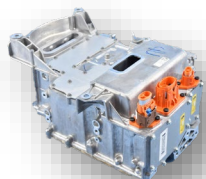
Instrument Cluster



Head Unit



Telematics ECU



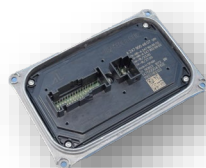
ACDC Inverter



DCDC Converter



Onboard Charger



Headlight ECU

ECU COSTING

2021

Product Improvements

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Non contractual document

Latest document update – March 2021

2021 IMPROVEMENTS OVERVIEW

DATA CONTENT

- Predictive Costing for next generation
- Detailed calculations on displays, power modules, etc.

VEHICLES SELECTION

- Analysis of 50 ECUs per year selected from multiple vehicles and markets (ECUs chosen in cutting-edge technologies & most interesting domains)

2021

2021 PRODUCT CONTENT



MAIN POINTS



COMPREHENSIVE

Get the most recent insights from the markets most innovative vehicles



SIMULATIVE

Cost simulation based on default standard parameters or with specific customized parameters



DETAILED

Access deep-dives for costings such as Lens-Modules and ECU-BOMs on semiconductor level



PREDICTIVE

Insights on cost-trends and market developments for main cost-drivers



CONCLUSIVE

Highlight reports and cost evaluation of selected modules, incl. costing of BOM and manufacturing process

SCOPE

Analysis of 50 ECUs per year (in cutting-edge technologies & most interesting domains)



ADAS:
3 ECUs / VH



Front View Camera

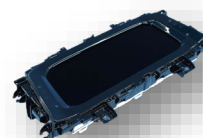


Radar ECU



ADAS ECU

INFOTAINMENT:
3 ECUs / VH



Instrument Cluster

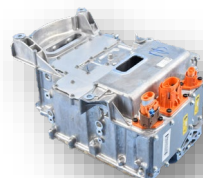


Head Unit



Telematics ECU

E-POWERTRAIN:
3 ECUs / VH



ACDC Inverter

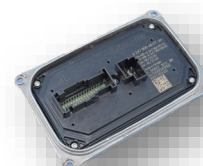


DCDC Converter



Onboard Charger

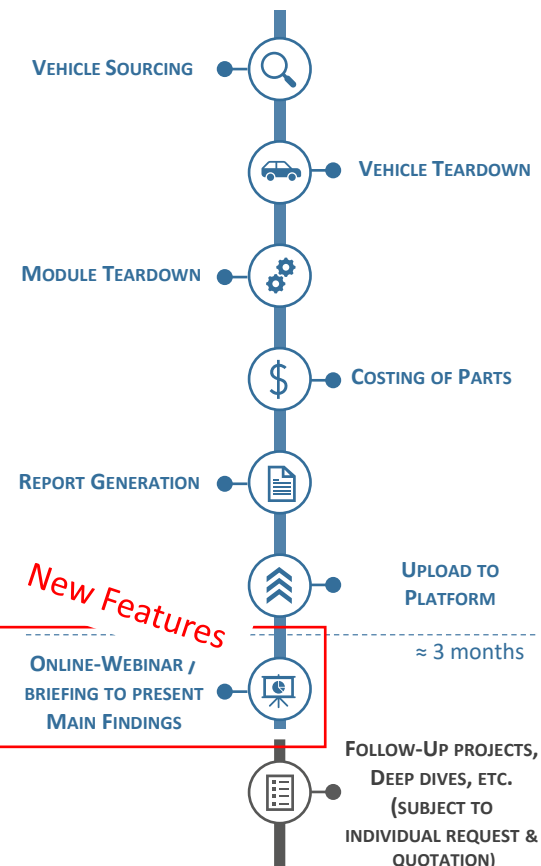
BODY:
1 ECU / VH



Headlight ECU

New from 2021:
Instead of selecting the ECUs from 5 vehicles, we enlarge the number of vehicles from which we are selecting the most relevant ECUs for each domain.

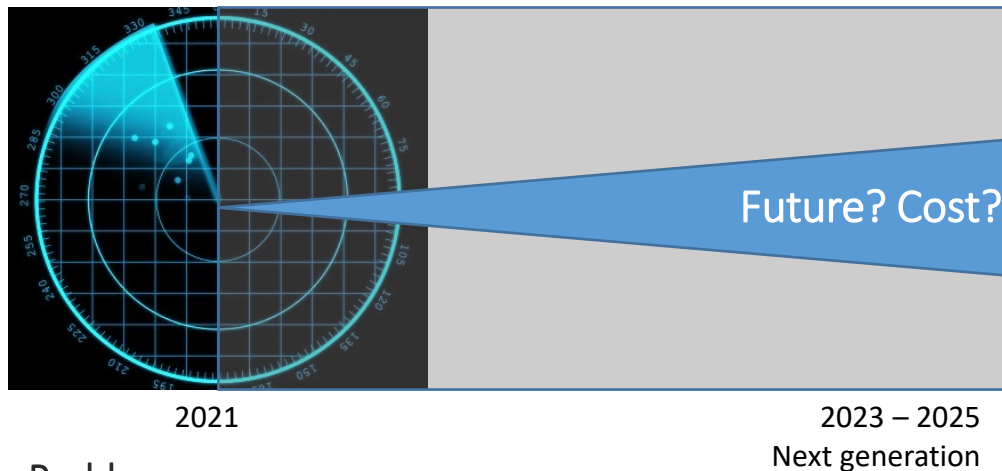
PROCESS



2021 Improvements - Predictive Costing for next Generation

The PROBLEM / CHALLENGE to get future with past solutions

Benchmarking: technical / costing radar



Problem:

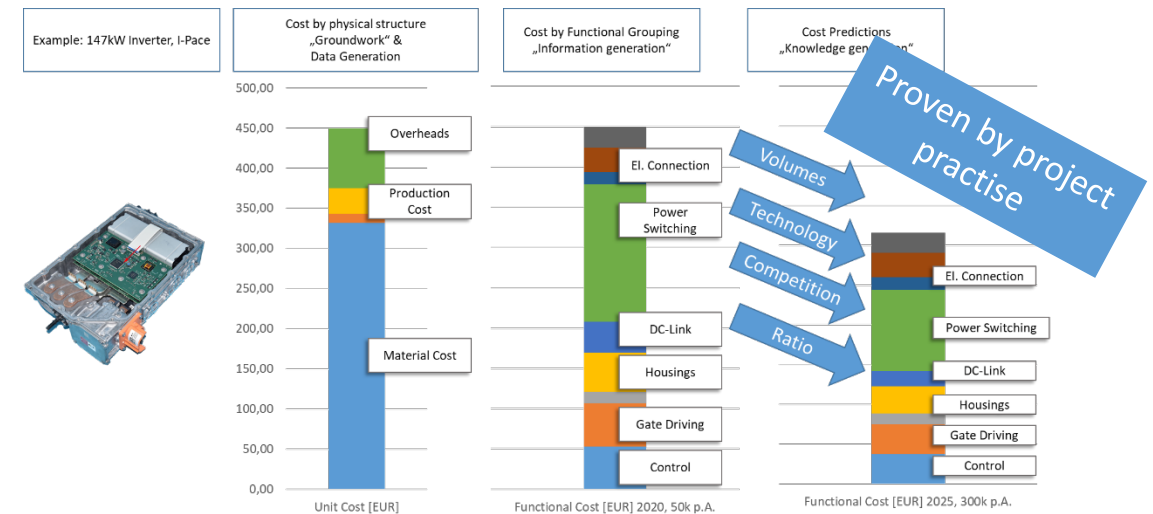
- based on old / past concepts
- Electronics: innovation & dynamics

Challenge

- What do tomorrow's solutions look like?
- What are their cost?

PREDICTIVE COSTING to simulate ECU cost for future / next generation

Cost Simulation: Future Cost Target

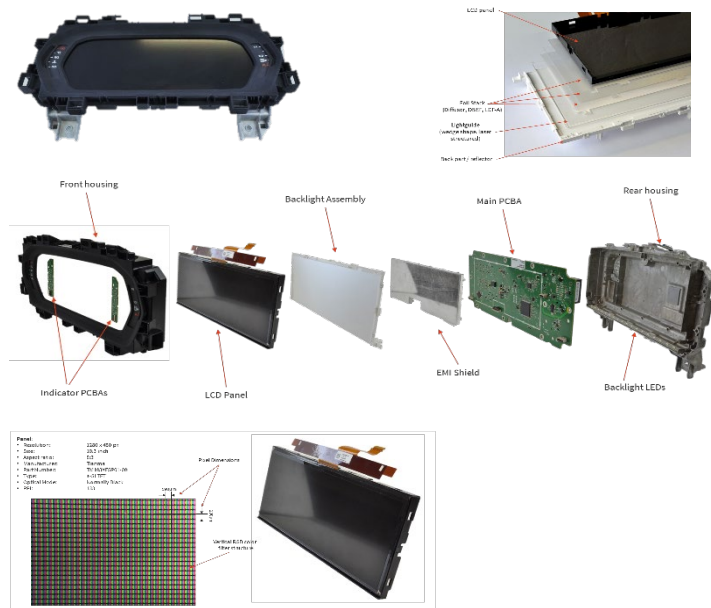


Based on current solution / cost structure

- Technological effects (innovation, integration)
- Volume effects / expected growth rates [economies-of-scale]

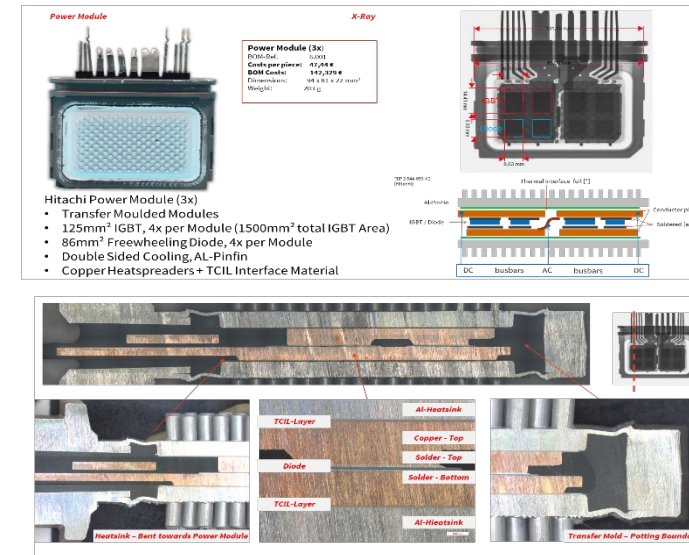
2021 Improvements - Further Cost-Break-Downs [CBD]

1 DISPLAY COSTING is a major focus for OEMs and OES due to value / innovation



- Tear-down
- Display BOM
- Detailed costing

2 A-PARTS CBD – POWER MODULE - is required to assess concept / technology



- Tear-down
- X-Ray, micro-graph analysis
- Detailed costing