DEVELOPMENT SPRINT REVIEW
CALENDAR WEEK 46.21

GENERAL (1/5)

HIGHLIGHTS:

- All Squads moved to Jira
- After-IPO: wave of contracts for new employees
- Wave of purchase orders sent out
- Crossfunctional Board for crossfunctional requests → Group Coordination Meeting on Monday with all Squad POs (before: only R&D Squads)
- Chassis: most cross-functional steering blockers resolved
- Progression Fusa item definition
- CAE Load case overview: awareness and fill rate increased - 227 simulation activities, result feedback ~50%

GENERAL (2/5)

- FVC Mounting: Space between FVC and windshield - DONE
- FVC stray light cover design clarification and support - DONE
- Move camera closer to the windshield to achieve a clearance of 2.3mm (per benchmark) - DONE
- Alignment between supplier and Sono Infotainment Team - DONE

GENERAL (3/5)

IN PROGRESS:

- CAE data of Center Information Display (CID) for crash analysis - IN REVIEW
- Update charging lid styling to new E/E package - IN REVIEW
- Interior interface status: No progress since 5th Nov. (nightletter) → Focus topic for upcoming sprint
- PMCS input: Good progress, but not finished - 11% open for S1 and S0
- DTs: Progress made, but still items open (nightletter)
- Each squad will deliver CAE models derived from SVC3 design release CAD till 17-Dec-2021
- Chassis to deliver CAE models required for crash & safety assessments based on design release CAD data by 17th Dec2021

GENERAL (4/5)

- HV Battery to deliver CAE models required for Crash&Safety assessments based on Design Release CAD data till 17-Dec-2021
- PO sent to supplier to source PABD / Hazard Light Switch / Brake Light Switch
- Towing Capability vs Target
- BOM for Purchasing & Cost Accounting & Project Engineering
- Rear LF Antennas located in Rear Bumper for SVC3
- Headcount Plan Update E/E
- Resolve clash between HVAC and VCM CAD data
- Receive crash simulations from Level 3 for HU for crash analysis

GENERAL (5/5)

LOWLIGHTS:

- No DVP available for SVC3 → solutions to be defined next sprint
- 3 parties-NDAs take too long
- Finalize Rear view camera packaging proposal for SVC3
- PMCS Input E/E: S0 &S1 = 100%
- Provide EE team IHU Device Transmittal Information

BODY CLOSURE (1/2)

HIGHLIGHTS:

- NEVS work package discussions > lots of scope
  - DVP purchase
  - Materials & fixing testing (additional cost = PVL/SBP testing corrosion, climate chamber, cycling, shaker)
  - SVC3 closures testing
  - SSTS/CTS continues
  - Tolerance analysis (experience & software analysis)
- NEVS support more engaged

BODY CLOSURE (2/2)

IN PROGRESS:

- Closures drives ME purchasing

LOWLIGHTS:

- Spare parts strategy for SVC3 - currently planned 5x sets > squads need direction here
- SVC3 parts sourcing - task returns to product owners - plan B, C, D required

BODY STRUCTURE (1/2)

HIGHLIGHTS:

SVC3

- PO signed with NEVS → corrosion testing
- Implemented all change wishes from other squads which where highlighted until 11.11.21
- Jira work process goes better and better
- CAD export tool → We can right now the CAD data with the information of the revision and maturity status in the data name

IN PROGRESS:

- Latest crash test simulations (CAE) showed need for minor design changes according to change management process (SVC3)
- Still change request from other squads --> cannot considered for SVC3 anymore

BODY STRUCTURE (2/2)

LOWLIGHTS:

- SVC3 body structure build
  - Single part sourcing is open → official status is that supplier will source all parts
  - because of market situation → prototype builder have to order raw material
- Discussion about re-numbering the enterprise item number for SVC3 take a lot of time
- Decision of sheet metal material not done (last needed information expected in the beginning of next week) → No reservation of raw material possible right now (purchasing)

INTERIOR (1/2)

HIGHLIGHTS:

- Supplier sourcing (sun visor, soft trims)
  - To send PO to supplier for the sun visors (waiting feedback on cost targets) / done
  - Supplier search for soft trims has been kicked-off due to response delays from the production-intend supplier / done
  - Supplier has been identified as alternative cost-efficient supplier from Turkey /done
- Cross functional data status for the completion of interior development
- Tooling POs to be sent to suppliers

INTERIOR (2/2)

IN PROGRESS:

- Overhead console thus headliner design heavily affected by eCall and wiring (on hold)
- Frunk detailed design on-hold due to underneath package clarifications (OBC/MCU)

LOWLIGHTS:

- Deadline to raise issues in PMCS to be specified or PMCS issues should be raised with design-freeze data to manage workload/priorities
- Cross functional issues highlighted in the night letter

INFOTAINMENT (1/4)

HIGHLIGHTS:

- Item Definition - infotainment - DONE
- Item Definition - connectivity - DONE
- Instrument Cluster - item definition - DONE
- Bench testing H/W and S/W requirement is completed and shared with the development team: on bench test H/W and S/W requirement - DONE .
- DT for eCall is shared with all the connector details: DT for eCALL - DONE, harness team has to update the schematic accordingly.
- Provided 2nd version of security document between VCM and BCM.: Provide supplier basic functionality of CAN security between VCM and BCM. - DONE

INFOTAINMENT (2/4)

- Next step: plan timeline for provisioning at the assembly: Early provisioning for factory update - DONE
- Next step: update requirements with new proposed method: Follow up on RTC high level requirement - DONE

IN PROGRESS:

- Received new CID CAD data for head impact area: follow-up on CID to meet ECE R21 head impact - DONE
- SW benchmark for complete e-cockpit will be done in this week, Sync with Sono Digital team to sync with the SW release plan: software release plan for infotainment system - PARKED

INFOTAINMENT (3/4)

- Based on the functionalities CAN messages are prepared will be in progress till design Freeze: CAN.dbc for IHU - IN PROGRESS
- CAN details are updated and shared for development team, will be in progress till design freeze: CAN details for all the tell tales list - IN PROGRESS
- eCALL - item definition - DONE
- Straight connector is available but the final decision will require testing. Next step: alignment between harness team and supplier: confirm VCM 12-pin main connector - IN REVIEW
- Supplier for SoS (ECall) Button is in progress waiting for the quotation expected early next week: supplier for eCall button - DONE

INFOTAINMENT (4/4)

LOWLIGHTS:

- Complete the release of all infotainment components - PARKED
- Screw type not finalized: Confirm screw length and torque for VCM - PARKED
- Wire-frame for the instrument cluster application is required for further development.

THERMAL (1/2)

HIGHLIGHTS:

Series:

- ESP planning 2022 done → Quote tbd

SVC3

- A lot of POs for SVC3 have been sent out
- Technical follow ups with coolant pipes, refrigerant pipes and air ducts suppliers done
- Power steering clash with air ducts solved → air ducts is smaller to clear power steering motor, but motor will get moved back anyway due to clash with HVAC unit
- Kick off with supplier (TXV)
- Supplier meeting (pumps and suppressor plan B) done
- Supplier meeting (coolant valves) today
- CAD review coolant pipes with ESP

THERMAL (2/2)

- Clash VCM to HVAC air pipe solved
- Blocked air evacuation path to pressure relief drafter by interior panel solved
- Parts already released : chiller, pumps, surge tank, pressure relief valves
- Manufacturing engineering update

IN PROGRESS:

- Supplier meeting cancelled due to office regulations (COVID)

LOWLIGHTS: None

- no reply from supplier (TXV)
- 3D Data DAT sensor missing

CHASSIS

HIGHLIGHTS: None.

IN PROGRESS:

- OK: ESP, ESC, tires, wheels, hubs, calipers, valves, balancing weights, accelerator, EVP, disks, knuckle, fasteners, brake pedals, RTB & sub-frame, tire repair kit, wheel speed sensors.
- Missing: brake booster, steering, ARB, drop-links, spindle, brake hoses, dampers

LOWLIGHTS:

- ESP speed on RTB and sub-frame design.

E/E (1/4)

HIGHLIGHTS:

- **E/E Integration**
  - SCCM Supplier proposal received and matches our requirements
  - GEM Supplier committed to SVC3 and Series
  - Start/Stop Button Supplier committed to deliver for SVC4 and series (piece price meets target)
  - DFMEA for body rlectronics started
  - HARA for some of the functions completed (LV Energy management & wash and wipe)
  - Item definition for FuSa team almost completed (85%)

- **CAD Integration:**
  - SVC3 release process started

E/E (2/4)

- **ADAS:**
  - Supplier: Many topics are solved in one sprint (radar/front camera/rear view camera packaging is clear to avoid delays in the future
  - For all three components DTs is from supplier side ready
  - Really good understanding about the RVC (alignment between ADAS & infotainment & supplier) a decision next week from Infotainment
  - Jira helps a lot in supplier consulting period

- **Wiring Harness:**
  - Connection boxes 3Dx are ready (PV panels) --> a lot of meeting with solar team
  - Grommet supplier onboard

E/E (3/4)

- **Overall:**
  - Nearly all item definitions are ready and we are in the next stage: HARA
  - PMCS deliverables S0/S1 - Great progress but still not all done, due to capacity bottlenecks.

IN PROGRESS:

- **Body Electronics:**
  - Start/Stop Button for SVC3 might be an after sale switch. No CAD, No DTs.
  - Supplier (vehicle access and start) PO not signed yet. Working on a plan B where access only via smartphone.
  - LabCAR progress slower than expected because of missing components.

E/E (4/4)

- **ADAS:**
  - Indication that supplier will might not provide all ADAS functions until SOP → plan B would be to update them over the air (3-6 month after SOP) → would not affect SOP and homologation
  - Waiting for NDA from supplier (steering alignment)

LOWLIGHTS:

- Miscommunication with supplier (working on the same)
- Suppliers refuse to collaborate to provide necessary step files for components (retainers) → Plan B: New supplier
- Misalignment between brake system requirements from ADAS and the current brake system (chassis and functional safety team)

POWERTRAIN (1/2)

HIGHLIGHTS:

- Driveshaft supplier nominated with piece cost lower than target (~ 125 Euros lower) and incl. bearing bracket + bearing -> 31 million euros saving over vehicle lifetime.
- Progression of system test procedure authoring with NEVS.
- NEVS manufacturing support
- Contract offer for DVP engineer.
- Purchase orders for vehicle misuse simulation and PT mounts CAE raised.

IN PROGRESS: None

- Engineering support from external EDU team improved but room for improvement (still chasing latest CAD).
- Eng. support from supplier VCU H/W team and SVC3 quote still outstanding (meeting on 26.11.21)

POWERTRAIN (2/2)

LOWLIGHTS:

- No headcount for powertrain DVP engineer, powertrain attribute engineer and powertrain control engineer → recruitment ongoing
- More resources and support required on controls side (system controls architecture).

BI-DIRECTIONAL (1/2)

HIGHLIGHTS:

- Good progress on hiring
- Bidirectional charging system - item definition done

IN PROGRESS:

- OBC casing - lifting points & MCU mounting still ongoing
- Risk with supplier achieving 11 kW AC for SVC3 ---> V2G/H functionality on time for SOP → plan B as risk mitigation
- Risk mitigation would be the OBC-features: to be decided which features are coming for SVC3 (eg. 11kW AC V2H etc) and which feature come for SOP or later

BI-DIRECTIONAL (2/2)

LOWLIGHTS:

- Still no PO with supplier for PLC module
- Hiring for PLC development engineer bidirectional charging system ongoing

HV BATTERY (1/3)

HIGHLIGHTS:

- Update HV battery dimensions, mounting concept and BIW cutout, communicate changes to supplier
- Confluence page on positioning of MSD, HV battery pack in BIW and its virtual validation
- Simulation plan for
  - According ECE R100 r2, UN 38.3, LV124, vehicle crash pulse
  - Internal planned simulations
  - BIW and complete vehicle related
- Define requirements and cost (machine, license, maintenance costs etc.) of performing the simulations.
- Screws BIW-HVB dimension preliminary calculation on static loads

HV BATTERY (2/3)

- Implement error calculation for reference and obtained speeds from simulation. Tune PID to meet error specs of ISO 8714.
- Testing the electric motor and battery model , its integration and do some improvements to the model.
- Communicate BMS / battery pack warnings icon for infotainment team (refer to UN ECE R121)
- Confluence page for simulations why, what, how and work until now
- Release version 1.0 of HV SSTS
- Finalize HV cable size, connector and LV interfaces for battery pack.
- Align battery BoM cost, budget for planned DVP and other development activities
- Finalize the length at 1680 mm

HV BATTERY (3/3)

IN PROGRESS:

- Finalize BMS diagnostic list
- Get quote of complete DVP or part of tests in battery pack DVP
- Release PO for cell storage and testing jig on hold

LOWLIGHTS:

- Internal / external support for defining BMS hardware / software functionalities.

PURCHASING

HIGHLIGHTS:

- Young company disclaimer has been removed
- Moving forward with supplier nominations

IN PROGRESS:

- reviewing all costs in the BOM which costs quite a lot of time

LOWLIGHTS: None

QUALITY (1/3)

HIGHLIGHTS:

SVC3/SOP

- **SQA:**
  - SQA PPAP requirements with full technology suppliers ongoing for SVC3 - no concerns reported by our suppliers on this point.
  - PFD and PFMEA reviews planned for supplier battery pack wk47
  - supplier (of Kombi, eCall, speakers etc) DFMEA reviewed. The supplier DFMEA require considerable work to avoid failures.
  - Follow up DFMEA review with supplier planned this week for the EPB and floating brake caliper
  - It seems unlikely that 3DX will able to incorporate the GD&T features so 2D drawings will be necessary. This is critical as suppliers will not be able to supply PPAP with dimensional reports without a basic 2D drawing.

QUALITY (2/3)

- Solar Cell supplier audit is now set for Dec as the PFMEA had issues that need to be resolved by supplier before the process audit
- Foundation FMEA training is now run virtually to allow greater participation and will be ongoing until Holiday break

Sustainability

- ***LCA2:***
  - Conduct LCI workshop with FfE - done
  - First calculation of comparison LCA (ICE vs. Sion) - done

QUALITY (3/3)

IN PROGRESS:

SVC3/SOP

- Lack of design features on the drawing will be an impediment for SVC3

LOWLIGHTS: None

PRODUCTION (1/2)

HIGHLIGHTS:

- Hiring
  - First actions for restarting hiring are done. Invitation will follow.

- Contracting
  - Negotiation about cover letter has started
  - Agreement for R&D support is signed and assure support for SM R&D by NEVS R&D and ME
  - Adjustments for the SVC3 offer by NEVS are initiated

- Organization and Process
  - Orientation phase of NEVS is finished
  - List for support functions by NEVS for R&D SM is available

PRODUCTION (2/2)

  - First action to activate additional resources is done
  - Starting using Jira for sprints
  - Simultaneous engineering: limited support for aluminium welding will be compensated by other supplier

IN PROGRESS:

- Hiring: Ongoing
- Organization and Process
  - Work around for SVC3 parts ordering should be evaluated due to limited resources

LOWLIGHTS: None

SIMULATION (1/2)

HIGHLIGHTS:

- Defining expectations of PM ==> Mainly complete vehicle simulations
- Plannings until 05/2022 created
  - Alignment PO and attribute lead: scope and project timeline
  - Alignment ESP/Supplier: execution
- Closures & exterior durability
  - Adding information/input on Abaqus MoCa (90% of work done)
  - Durability LC standards (50% of work completed)

SIMULATION (2/2)

IN PROGRESS:

- NVH Modelling guideline, because of high volume of activities could not fill up the guideline content ==> next sprint / no blocker currently
- Gathering information of the following modules
  - Thermal (done thermal team updated with latest results)
  - Chassis (sent follow up mail on status, waiting for the response)
  - Complete vehicle durability (sent follow up mail on status, waiting for the response)
  - Body structure (sent follow up mail on status, waiting for the response) ==> counter-measure:
    - Creating LCO consolidation with reporting purpose
    - Setting up LCO review meeting

LOWLIGHTS: Last alignments not feasible due to sickness of certain stakeholders

PERFORMANCE REQUIREMENTS (1/2)

HIGHLIGHTS:

- Jira NVH channel setup
- Jira tickets creation 100% completion
- NVH testing on SVC2 reports> 70%
  - Partial feedback given to
    - thermal squad
    - powertrain squad (clonk)
- Engine mounts development NVH support
  - Stiffness recommendations delivered
  - Validation profiles ongoing
- NVH software delivered
- Cross-functional meetings with interior & exterior

PERFORMANCE REQUIREMENTS (2/2)

IN PROGRESS:

- Preparation work to setup a weight reduction loop for SVC4
- Jira link to requirement
- OBC/MCU vibration / design support : design concept on going, CAE status and planning to SVC3 freeze still pending
- Follow CAD issues on various modules
- CAE results analysis
- AVAS system integration launched - sound package on-going

LOWLIGHTS:

- Weight: input source: BOM attributes part_source and estimated weight

DESIGN (1/2)

HIGHLIGHTS: SVC3

- ***Exterior / Closures :*** 95% done
  - exterior door handle updated and aligned to new engineering conditions
  - new mirror position checked
  -
- ***Interior:*** 96% done
  - greenhouse: 100% done (lower / upper trim + headliner → update for front overhead lightning unit to be expected
  - ip: 100%
  - Center console: 99% ncap gap to cc has to be updated
  - doors 95% : interior door handle delivered to closures. First draft for driver / passenger / rear seat window switch bezel delivery

DESIGN (2/2)

- ***Visualization***
  - interior / exterior rendering for SEC filing updated
- ***Design Circle***
  - 5 design keywords defined
    - Honest
    - Sustainable
    - Caring
    - Intuitive
    - Bold

IN PROGRESS: None
LOWLIGHTS: None

CRASH & SAFTEY (1/3)

HIGHLIGHTS:

- preSVC3 PedPro status overview is outstanding /done
- SVC3Prog PedPro is planned in 3 weeks / WIP
- SVC3Prog structural crash status to be reviewed on 21st Sep with body structures, chassis, CTO /done
- preSVC3 occupant safety vehicle model is ready with generic restraints / Done
- SVC3Prog occupant safety vehicle model is ready with updated interior and available restraints from supplier / WIP

CRASH & SAFTEY (2/3)

IN PROGRESS:

- Closures to deliver CAE models required for crash & safety assessments based on design release CAD data by 17th Dec 2021
- Exterior to deliver CAE models required for crash & safety assessments based on design release CAD data by 17th Dec 2021
- Each squad will deliver CAE models derived from SVC3 design release CAD by 17th Dec 2021
- Infotainment to deliver CAE models required for crash & safety assessments based on design release CAD data by 17th Dec 2021
- HV Battery to deliver CAE models required for crash & safety assessments based on design release CAD data by 17th Dec 2021

CRASH & SAFTEY (3/3)

- E/E (including EDU, MCU, OBC, HV cable etc. excluding HV Battery) to deliver CAE models required for crash & safety assessments based on design release CAD data by 17th Dec 2021
- Chassis to deliver CAE models required for crash & safety assessments based on design release CAD data by 17th Dec 2021
- Recruitment is ongoing /WIP / focus should be on crash & safety screening and interviews

LOWLIGHTS: None

DEVELOPMENT SPRINT REVIEW
CALENDAR WEEK 48.21

GENERAL (1/8)

HIGHLIGHTS:

- Cross-functional board for cross-functional requests → Good progress on prioritized items achieved
- Design release progress: All squads within releasing their parts (e.g. main body structure etc.)
- RV requirement for dynamic overlays → IN REVIEW
- DFMEA discussion → DONE
- Start discussion LoDMC for ACC and AEB → DONE
- Meeting between Sono SCCM/BCM and supplier ADAS signal experts → DONE
- RVS217/218 Technical specifications document → DONE
- NDA Sono - supplier (ADAS) - supplier (steering) → DONE

GENERAL (2/8)

- Meeting between suppliers for EOL procedures → IN REVIEW
- Check packaging implications on SVC3 of switching between SVC220 to RVS218 → DONE
- WSS cable routing in CAD → DONE
- Cyber security alignment with homologation team → DONE
- SVC3 Plan → DONE
- Steering commercials - 1 → DONE
- Overview of ordered SVC3 parts → DONE
- Headcount plan update interior → DONE
- TE socket mounting interfaces → DONE
- Homologation issue - Do we need map data? → DONE
- ADAS boundary diagram → DONE

GENERAL (3/8)

- SVC3 tool choice → DONE
- Map project statuses in the cross functional board → IN REVIEW
- PT controls engineer job posting → DONE
- Costing | Cost workshop 01.12.2021→ DONE
- ECALL - Item definition → DONE
- Resolve clash between HVAC and VCM CAD data → IN REVIEW
- CAE data of center information display (CID) for crash analysis → DONE
- Finalize HU bracket/fastener alignment → DONE
- Provide antenna device transmittal information → DONE
- Provide EE team IHU device transmittal information → IN REVIEW
- Coordination with WireHarness team for display's schematic and cabling → IN REVIEW

GENERAL (4/8)

- Bring Jira plugins into Confluence sprint reviews → DONE
- Overview of ordered SVC3 parts → IN REVIEW
- Sourcing decision on e-call button → DONE
- Deliver audio system CAE data to interiors → IN REVIEW

GENERAL (5/8)

IN PROGRESS:

- PedPro and CV crash & safety: additional loops required.
- DTs: progress made, but still items open (night letter)
- Update supplier mirror + mirror foot → IN REVIEW
- To discuss map strategy to apply for TSR/OSP → IN REVIEW
- Pinion angle sensor/steering wheel angle sensor→ IN REVIEW
- Support the release and approval process → IN REVIEW
- Chassis to deliver CAE models required for crash & safety assessments based on design release CAD data by 17-Dec-2021→ IN REVIEW
- HV battery to deliver CAE models required for crash & safety assessments based on design release CAD data by 17-Dec-2021 → IN REVIEW

GENERAL (6/8)

- Infotainment to deliver CAE models required for crash & safety assessments based on design release CAD data by 17-Dec-2021 → IN REVIEW
- Exterior to deliver CAE models required for crash & safety assessments based on design release CAD data by 17-Dec-2021
- Individual hardware demands (Bucks+BIW) - crash & safety → IN REVIEW
- Hood to be updated to improve for homologation requirements → IN REVIEW
- PO sent to supplier to source PABD / hazard light switch / brake light switch → IN REVIEW
- FVC cover design → IN REVIEW
- Review IHU messages for ADAS → IN REVIEW
- PMCS input E/E: S0 &S1 = 100% → IN REVIEW
- Overview of ordered SVC3 parts → IN REVIEW

GENERAL (7/8)

- Release AVAS (SVC3) → IN REVIEW
- Release horn (SVC3) → IN REVIEW
- Support the release and approval process → IN REVIEW
- E/E interfaces in interior are open → IN REVIEW
- E/E (including EDU, MCU, OBC, HV cable etc. excluding HV battery) to deliver CAE models required for crash & safety assessments based on design release CAD data by 17-Dec-2021 → IN REVIEW
- Update DT for EPS Ext_EE-DESS squad → IN REVIEW
- CAN details for all the tell tales list → IN REVIEW
- Support the release and approval process → IN REVIEW
- Sion exterior color matching - need grain / color info from solar → IN REVIEW

GENERAL (8/8)

LOWLIGHTS:

- Release Process: CA approval time takes too long → risk on getting all planned releases DONE on time for next sprint
- CAE data of instrument cluster display for crash analysis → PARKED
- Deliver HU CAE data to interiors → PARKED

BODY CLOSURE (1/3)

HIGHLIGHTS:

- 75% PMI completed before release
- Agreement short-term way forward with supplier
- Initial ESP discussions
- Cost workshop: Alignment with all squads.
- SBP mostly DONE - minor revisions (CAE possible without)

BODY CLOSURE (2/3)

IN PROGRESS:

- PedPro - improvements ongoing
- CL - extended lid to be analyzed - delays possible
- Side doors - awaiting feedback on frames + 1.5 wks
- DTs - supplier delayed feedback
- RVC changes 1 wk before release - no option but to delay & adapt
- No clear plan EE sockets in CL - SVC3 assumptions taken, risk +350k investment to protect for changes
- EE socket deleted - CL size affects PedPro but now no reason for increased size
- Release process works well - quality input not so well
- Extrusion profile & sheet sourcing - slow, expensive
- SBP - late change requests: not complete until 23.12

BODY CLOSURE (3/3)

LOWLIGHTS:

- Decontent - unclear expectations: SVC3 or SVC4?
- SVC3 part quantity definition ongoing
- Decontent timing - 1wk before SVC3 DR
- Clear problem communication

BODY STRUCTURE (1/4)

HIGHLIGHTS:

SVC3

- Supplier welding analysis presentation (first part)
- Trailer hitch supplier meeting → verbally info that they can deliver trailer hitch for SVC3
- Design release process started for the big body structure assemblies (about 300 parts)

IN PROGRESS:

SVC3

- Status PedPro simulation: risk that changes on the body structure are needed (affected area: front end & wiper bracket)
- Supplier welding analysis shows that we need in some areas an update of the welding lines.

BODY STRUCTURE (2/4)

- Single parts sourcing
  - Feedback supplier that they cannot support for the profiles sourcing
  - Single part sourcing is time critical
- No planned topics in the next sprint
  - Supplier meetings
  - Cost workshop
  - Workshop PO
- Data Export from 3DX
  - Revision and maturity status not in the export (requirement from body team: must be in the FILE/ Catia name and Catia attribute)
  - Needed for 3D and 2D data

BODY STRUCTURE (3/4)

- Single parts sourcing
  - Feedback supplier that they cannot support for the profiles sourcing
  - Single part sourcing is time critical
- No planned topics in the next sprint
  - Supplier meetings
  - Cost workshop
  - Workshop PO
- Data Export from 3DX
  - Revision and maturity status not in the export (Requirement from body team: must be in the FILE/ Catia name and Catia attribute)
  - Needed for 3D and 2D data

BODY STRUCTURE (4/4)

- Body structure SVC3 MRD date still 18.01.22 in the VPP
  - In the past highlighted that this date is not confirmed by supplier
  - Date not achievable with Sono sourcing, external support needed
- Currently no time for CAs (after SVC3 DR and SVC3 part order)
- The list for change request gets longer

LOWLIGHTS:

SVC3

- SVC3 builder purchasing ongoing
- 2D drawing
  - Delay because of rework details for SVC3 DR
  - 3DX save strategy was unclear

INTERIOR (1/2)

HIGHLIGHTS:

- Cross functional data status for the completion of interior development
- Steering column updates lead to CCB & I/P changes post DR
- Tolerances of interfaces are required

IN PROGRESS: None

INTERIOR (2/2)

LOWLIGHTS:

- Overhead console thus headliner design heavily affected by e-call and wiring (on hold)
- Deadline to raise issues in PMCS to be specified or PMCS issues should be raised with design-freeze data to manage workload/priorities
- Open Xfunctional interfaces

INFOTAINMENT (1/5)

HIGHLIGHTS:

- HARA ready IS-20: item definition - infotainment → DONE
- HARA ready IS-21: item definition - connectivity → DONE
- HARA ready IS-22: instrument cluster - item definition → DONE
- Bench testing H/W and S/W requirement is completed and shared with development team → DONE
- DT for e-call is shared with all the connector details → DONE
- Provided 2nd version of security document between VCM and BCM → DONE
- Next step: plan timeline for provisioning at the assembly → DONE
- Next step: update requirements with new proposed method → DONE
- Complete the release of all infotainment components → IN REVIEW

INFOTAINMENT (2/5)

- Provide EE team IHU device transmittal information → IN REVIEW
- Coordination with WireHarness team for display's schematic and cabling → IN REVIEW
- Sourcing decision on e-call button → DONE
- Create decisions documentation for e-call sourcing decision → IN REVIEW
- Deliver audio system CAE data to interiors → IN REVIEW
- Position VCM in the new location → IN REVIEW
- Discuss with interiors to shorten e-call brackets by (3 mm on both sides) 6 mm → IN REVIEW
- Resolve clash between HVAC and VCM CAD data → IN REVIEW
- Overview of ordered SVC3 parts → IN REVIEW
- Test bench components to source → IN REVIEW

INFOTAINMENT (3/5)

- DFMEA foundation training → IN REVIEW
- eSIM activation on hologram → IN REVIEW

IN PROGRESS:

- Received new CAD data for head impact area IS-33: follow-up to meet ECE R21 head impact→ DONE
- SW benchmark for complete e-cockpit will be DONE in this week, sync with Sono digital team to sync with the SW release → SELECTED FOR DEVELOPMENT
- Based on the functionalities CAN messages are prepared will be IN PROGRESS until design freeze → IN REVIEW

INFOTAINMENT (4/5)

- CAN details are updated based on CAN1_SION_V08.dbc and shared for development team, will be IN PROGRESS until design freeze → IN REVIEW
- In progress will be completed in next weeks → DONE
- Straight connector is available but the final decision will require testing. Next step: alignment between harness team and TE. IS-3: confirm VCM 12-pin main connector → DONE
- Supplier for SOS (e-call) sutton is IN PROGRESS waiting for the quotation expected early next week IS-32: supplier for e-call button → DONE
- IC controller/CANbus monitor module/phone projection module proposal review → IN REVIEW
- Create plan for infotainment team headcount → IN REVIEW
- Source test bench components → IN REVIEW

INFOTAINMENT (5/5)

- CAN.dbc for IHU → IN REVIEW
- Quotation for CAE data for displays from ESP → IN REVIEW
- CAN details for all the tell tales list → IN REVIEW
- IVI system specification reference document for digital team → IN REVIEW
- Review SRS for phone projection → IN REVIEW
- Complete parking aid item definition → IN REVIEW

LOWLIGHTS:

SVC3

- IS-15: Complete the release of all infotainment components→ IN REVIEW
- Screw type not finalized. IS-26: confirm screw length and torque for VCM → PARKED
- Wireframe for the instrument cluster application is required for further development.

CHASSIS (1/8)

HIGHLIGHTS:

- Overall steering development
- Rear axle and sub-frame design speeding up
- SVC3 releases
- SVC3 BOM in place - great initiative
- SVC3 DVP taking shape for chassis. But we really need the CV test plan.
- Most of the brackets are nominated.
- Front brake hose routing to be updated to remove/reduce clash to WAL → DONE
- Add brake line split near firewall → DONE
- supplier ESC proposal initial discussion → DONE
- EVP and ESC data from supplier → DONE

CHASSIS (2/8)

- To get quote from supplier → DONE
- SVC3 Plan → DONE
- Create bolted joint sign-off sheet → DONE
- Determine bolted joint release process → DONE
- Complete fastener BOM with all details → DONE
- LCA → DONE
- LOI for steering supplier → DONE
- Update G drive Structure → DONE
- How to handle I shaft before assembly → DONE
- Tie rod sweep zones → DONE
- Pinion length and manufacturability → DONE
- OBJ optimization → DONE

CHASSIS (3/8)

- Legal requirements fulfillment → DONE
- Mechanical steering gear (MSG) → DONE
- General steering → DONE
- Structured Jira board - steering → DONE
- Quote for SVC3 development → DONE
- Steering commercials - 1 → DONE
- Brake pedal and throttle pedal sweep zones → DONE
- Nominate ESP for brackets → DONE
- Get supplier quote for drop links → DONE
- Drop links development- 1 → DONE
- Wrap-up technical alignment with supplier → DONE
- Brackets supplier strategy → DONE

CHASSIS (4/8)

- Send RFQ to supplier for ARB → DONE
- Send RFQ to supplier for drop link → DONE
- Get spindle hard quotes → DONE
- Coolant pump bracket updates → DONE
- Define test method for drop links → DONE
- Wrap-up tech alignment with supplier → DONE
- Implement design feasibility → DONE
- Kickoff ESP CAD support → DONE
- Definition on RTB bushing → DONE
- Droplink hard quotes → DONE
- Nominate tire repair kit supplier → DONE
- Test physical samples → DONE

CHASSIS (5/8)

- Wheels + tires commercials -1 → DONE
- Nominate wheel supplier → DONE
- Preliminary quote for brackets → DONE
- Rubber edge protector added → DONE
- Damper interface plate adapted to act as stopper → DONE
- Update brake line structure in BOM doc → DONE
- Organisation chart of the supplier → DONE
- ESC mass and C.O.G → DONE
- EVP mass and C.O.G → DONE
- Get ESC forces → DONE

CHASSIS (6/8)

IN PROGRESS:

- Supplier quote for SVC3 → IN REVIEW
- SVC3 bucks: detailed test plan → IN REVIEW
- ADAS: supplier 1 x supplier 2 integration → IN REVIEW
- How to route the brake hoses? → IN REVIEW
- Booster feasibility study for SVC3 → IN REVIEW
- Priorities for design freeze → IN REVIEW
- Implement supplier fasteners → IN REVIEW
- Steering FMEA - 1 → IN REVIEW
- Intermediate shaft - 1 → IN REVIEW
- CEPS mechanical - 1 → IN REVIEW

CHASSIS (7/8)

- Rear spindle development- 1 → IN REVIEW
- Suspension commercials-1 → IN REVIEW
- Chassis test and validation - 1 → IN REVIEW
- Freeze tire repair kit with documents → IN REVIEW
- DT document updation → IN REVIEW
- Identify prio joints → IN REVIEW
- DFMEA with foundation brakes supplier & SQA → IN REVIEW

CHASSIS (8/8)

LOWLIGHTS:

- MRD rear spindle proto parts on CW31/2022 - Go for plan B
- MSG bolt access - gotta change the sub-frame design
- DT data from supplier → IS BLOCKED
- 3D models are missing → IS BLOCKED
- Prototype timeline information from supplier → IS BLOCKED
- Mounting holes for brake pipe clips + brackets→ IS BLOCKED

E/E (1/7)

HIGHLIGHTS:

- **E/E integration**
  - Body electronics
    - BCM wiring harness for LabCar finished
    - Item definition for seat features finished
    - Item definition for vehicle access finished
    - Item definition for vehicle start finished
    - HARA power windows, wash & wipe and side mirrors finished
    - PO for vector tool has been raised (rest-BUS simulation (CAN & LIN)/ data-logging & testing)
    - SVC3 start/stop-button in place (carry over part) already confirmed with interior team

E/E (2/7)

- Body-CAN, diagnostic-CAN and powertrain-CAN: BUS-termination already defined
- Design for AVAS, PDC-sensors, RF-receiver are frozen

- ADAS
  - Negotiations for ADAS timeline are finished with supplier
  - ALL DTs finalized
  - Discussions with suppliers on end-of-life procedures and calibration.
  - Our ADAS function concepts have all been reviewed with supplier and minor changes have been made to fit off the shelf features provided by supplier → Functions are frozen, changes have been captured in FuSa documents.

E/E (3/7)

- **Wiring Harness**
  - Grommets requirements finished (also for next prototypes)
- **CAD Integration**
  - Change actions for every E/E part started
- **Overall**
  - ALL item definitions DONE!
  - PMCS deliverables S0/S1 - Nearly DONE (only one component not)
  - Exchange on the agile scale camp
  - Kick-off weekly meeting Sono Solar & Sono Sion

E/E (4/7)

IN PROGRESS:

- **E/E Integration**
  - Body electronics:
    - slow progress regarding LV-battery management (complication because of MCU CCCV charging strategy (12 V battery))
    - Charge lid motor control: closures changed the motor and is impacting the BCM hardware (new motor schematic)
    - PO for brake light switch: no supplier feedback on the new pricing → need this for design freeze

E/E (5/7)

- **CAD Integration**
  - PO for electrical licences for Catia will only send out this week (harness design)
  - Fuse box (doesn’t work) → Steering column motor is clashing with fuse box → Need to update the design of IP (instrument panel (Interior make this)) for fuse box fixings

- **Overall**
  - Good progress regarding prepare the overall timing E/E in road map

E/E (6/7)

LOWLIGHTS:

- **E/E Integration:**
  - Body electronics:
    - SCCM: supplier still not defined
    - Steering wheel buttons: not defined → supplier need the A-surfaces from Sono → Working with design to create A-surfaces
  - ADAS:
    - SVC3 parts and SW will come later
    - Cyber security: hiring an expert here!

E/E (7/7)

- **Wiring Harness**
  - Position for connection boxes for solar panels

- **CAD Integration**
  - CAD integration need connector CAD form supplier: steering column motor might have issues with location of BCM

- **Overall**
  - Detailed testing plan: testing requirements from other departments? (effects: test locations, headcount…..)

POWERTRAIN

HIGHLIGHTS:

- Driveshaft design changed to a nut (120.000 € tooling savings!)
- Correct EDU CAD received from supplier
- Engagement from VCU hardware from supplier

IN PROGRESS:

- Combination component release and sprint tasks is making progress slow

LOW LIGHTS:

- Headcount

BI-DIRECTIONAL (1/2)

HIGHLIGHTS:

- Applicant hired for OBC development engineer
- Final discussions in terms of requirement and project plan with supplier 1 x supplier 2, order to make a decision of a nomination
- OBC casing - lifting points & MCU mounting are finalized
- Hardware requirements for OBC finalized

IN PROGRESS:

- Requirements for wiring harness from PLC module to control pilot are unclear

BI-DIRECTIONAL (2/2)

LOWLIGHTS:

- Still no PO with supplier for PLC module
- No enough applicants yet for PLC development engineer bi-directional charging system
- Diagnosis specification open

PURCHASING

HIGHLIGHTS:

- SOP
  - Young company disclaimer has been removed
  - Moving forward with supplier nominations

IN PROGRESS:

- SOP
  - Reviewing all costs in the BOM which costs quite a lot of time

LOWLIGHTS: None

QUALITY (1/4)

HIGHLIGHTS:

SVC3/SOP

- ***SQA:***
  - SQA PPAP requirements with full technology suppliers ongoing for SVC3 - no concerns reported by our suppliers on this point.
  - PFD and PFMEA reviews planned for supplier battery pack wk47
  - Supplier (supplier of combi, e-call, speakers etc) DFMEA reviewed. The supplier DFMEA require considerable work to avoid failures.
  - Follow up DFMEA review with supplier planned this week for the EPB and floating brake caliper
  - D drawings to be started for BIW - this is critical as suppliers will not be able to supply PPAP with dimensional reports without a basic 2D drawing.

QUALITY (2/4)

- Foundation FMEA training is now run virtually to allow greater participation and will be ongoing until Christmas break
- Several engineers have requested for P-diagram training - I will arrange this in the new year

- **HR**
  - SQE recruiting process - job ad for SW SQA raised wk 44 however role will be amended to include SW testing to help encourage interest

- ***IMS***
  - Knowledge & experience for quality assurance competence cluster → DONE
  - Sono Solar - implementation of incoming inspection process → IN PROGRESS, to be moved to the next sprint

QUALITY (3/4)

    - Project handbook & development handbook - definition of necessary processes & stakeholders → IN PROGRESS, to be moved to the next sprint
    - Rearrangement of norms & standards confluence page (added child pages to norms where applicable) → DONE

- **COP / Homologation**
    - Initial assessment mandatory processes landscape → gap analysis DONE

- **Sustainability**
    - LCA2:
        - 2nd calculation Sion SEV → DONE

QUALITY (4/4)

IN PROGRESS:

SVC3/SOP

- Lack of design features on the drawing will be an impediment for SVC3

LOW LIGHTS: None

PRODUCTION (1/2)

HIGHLIGHTS:

- Hiring
  - First interviews are DONE
- Contracting
  - Preparation for SVC 3 offer by supplier will be finished on Friday this week
- Organization and Process
  - ME

PRODUCTION (2/2)

IN PROGRESS: None

LOW LIGHTS: None

SIMULATION (1/4)

HIGHLIGHTS:

VPP CAE Plannings

- Defining expectations of PM → mainly complete vehicle simulations
- Planning until 05/2022 created
  - Status: draft
  - Next steps [cw 44 & 45]
    - Alignment PO and attribute lead: scope and project timeline
    - Alignment ESP/supplier: execution

SIMULATION (2/4)

CAE Standardization

- Closures & exterior durability. Adding information/input on supplier

IN PROGRESS:

CAE Standardization

- NVH modelling guideline
  - due of high volume of activities could not fill up the guideline content
    → next sprint / no blocker currently

SIMULATION (3/4)

LCO Follow-Up

- Gathering information of the following modules
  - Thermal (done thermal team updated with latest results)
  - Chassis (sent follow-up mail on status, waiting for the response)
  - Complete vehicle durability (sent follow-up mail on status, waiting for the response)
  - Body structure (sent follow-up mail on status, waiting for the response)

    → Counter measure:
    - Creating LCO consolidation with reporting purpose
    - Setting up LCO review meeting

SIMULATION (4/4)

LOW LIGHTS:

Creating CAE cross meeting

- Rough/general agenda defined
- Participants identified
- Block: last alignments not feasible due to sickness of certain stakeholders

NVH (1/2)

HIGHLIGHTS:

- NVH testing on SVC2 reports> 90%
  - Final feedback given to
    - Thermal squad
    - Powertrain Squad (clonk)
- Final roadmap planning to SOP (resources, budget and scope)
- Weight reduction framework kicked off
- Steering design support (air tightness on lower cross member)
- Engine mounts development NVH support
- Cross-functional meetings with interior & exterior/body

NVH (2/2)

IN PROGRESS:

- Jira link to Requirement
- OBC/MCU vibration / design support
- AVAS system integration launched - sound package on going

LOWLIGHTS: None

HIGHLIGHTS:

SVC3

- Create rear window switch bezel → DONE
- Create windshield front camera bezel → DONE
- Update cap of center console (bigger gap) → DONE
- Create passenger window switch bezel → DONE
- Create window driver switch bezel → DONE

IN PROGRESS: None

LOW-LIGHTS: None

FUNCTIONAL SAFETY (1/2)

HIGHLIGHTS:

SVC3

- Management technical alignment
  - CTO is up to date on FuSa doing, challenges, blockers
  - Follow-up meeting to discuss next FuSa steps after design release
- FuSa Process
  - Alignment with quality and project management on documentation management, FuSa scope communicated and included
  - All 25 FuSa processes drafted and pushed to quality > quality will review all supporting processes to have a common supporting processes across Sono
  - Item definition [~95%]

FUNCTIONAL SAFETY (2/2)

IN PROGRESS: None

LOWLIGHTS:

SVC3

- Item definitions
  - Item definitions input still missing and finalizing not expected in this or upcoming sprint in the following squads > HV battery
- FuSa processes
  - The shown FuSa processes underneath will be parked, so that they can be reviewed/optimized while living these processes

CRASH & SAFETY

HIGHLIGHTS:

- PedPro updates for SVC3 are ongoing
- PAB, CAB, SAB bag shape iterations are ongoing

IN PROGRESS:

- Closures to deliver CAE models required for crash & safety assessments based on design

LOWLIGHTS:

- timing CAE models

DEVELOPMENT SPRINT REVIEW
CALENDAR WEEK 50.21

GENERAL (1/5)

HIGHLIGHTS:

- SVC3 & Series mirror design finalized
- eCall sourcing decision finalized: → DONE
- Infotainment: Confirmed SVC3 parts tool choice
- Wiring: Position for connection boxes for solar panels is fix
- E/E: Many components have been released (e.g. BCM, LF-Antenna, Switches, RCM, gSAT, pSAT,….)

GENERAL (2/5)

- Steering Column Motor is not anymore clashing with fusebox → Instrument panel is updated
- All Hardware requirements for supplier OBC finalized
- Communicate BMS / Battery pack warnings icon for infotainment team (Refer to UNECE R121)

GENERAL (3/5)

IN PROGRESS:

- Solar body panels > concept confirmation shows need for improvements shaping PV label to body panel
- First thermal expansion simulation
- eCall & VCM are last remaining components to be released, only waiting on updated CAD & CAE data IN REVIEW
- Test bench components to be finalized and ordered in January; also waiting on supplier to provide specifications for test bench components → IN REVIEW
- E/E: Item definition vehicle start in progress (70 % completed)

GENERAL (4/5)

- E/E (including EDU, MCU, OBC, HV cable etc. excluding HV Battery) to deliver CAE models required for Crash&Safety assessments based on Design Release CAD data
- PO sent to supplier to source PABD / Hazard Light Switch / Brake Light Switch
- Towing Capability vs Target → IN REVIEW

GENERAL (5/5)

LOWLIGHTS:

- SVC3 part quantity - tryout parts > open points
- SVC3 launch planning > open points
- SCCM: Supplier still not defined

BODY CLOSURE (1/3)

HIGHLIGHTS:

- SVC3 manufacturing location decision
- Supplier PO for tailgate D&D
- SVC3 Solar Body Panels: concept confirmation progresses
- Door structure OK > monitor at pole & MPDB
- SVC3 & Series mirror design finalized

BODY CLOSURE (2/3)

IN PROGRESS:

- PedPro - loops 3.4, 3.4 & 4+ kicked off
- Door inner panel > simulation KO for PP T30 5x elongation
- Solar body panels > concept confirmation shows need for improvements shaping PV label to body panel
- SVC3 testing plans (+cost)
- First thermal expansion simulation

BODY CLOSURE (3/3)

LOWLIGHTS:

- Solar body panel concept > potential effect on SVC3 vehicle appearance (thermal expansion & PVL shaping)
- SVC3 part quantity - tryout parts > open points
- SVC3 launch planning > open points

INFOTAINMENT (1/5)

HIGHLIGHTS:

SVC3

- eCall sourcing decision finalized: → DONE
- Completed review of past ordered parts → DONE
- Finalized SVC3 parts quantities
- Confirmed SVC3 parts tool choice
- Progress of purchasing SVC3 parts
  - POs sent to suppliers
    - Antennas
  - POs in approval
  - Quotes submitted to Supplier

INFOTAINMENT (2/5)

        - VCM
    - Waiting for quote
        - IHU
- 100% assessments done
- Team completed DFMEA training → DONE
- Provide EE team IHU Device Transmittal Information → DONE
- Deliver HU CAE data to Interiors → DONE
- Coordination with WireHarness Team for Display's Schematic and cabling → DONE
- Deliver VCM CAE data to Interiors → DONE
- Quotation for CAE data for Display's from ARRk → IN REVIEW
- Sourcing decision on E-Call Button → DONE

INFOTAINMENT (3/5)

- Create Decisions Documentation for eCall sourcing decision → DONE
- Deliver Microphone CAE data to Interiors → DONE
- Deliver Audio System CAE data to Interiors → DONE
- Deliver USB CAE data to Interiors → DONE
- Position VCM in the new location → DONE
- Discuss with Interiors to shorten ECall brackets by (3mm on both sides) 6mm → DONE
- Resolve clash between HVAC and VCM CAD data → DONE
- Test bench components to source → DONE
- Overview of ordered SVC3 Parts → DONE
- HARA for ECall → DONE
- DFMEA Training → DONE
- eSIM Activation on Hologram → DONE

INFOTAINMENT (4/5)

IN PROGRESS:

- Infotainment team HC in discussion → IN REVIEW
- Currently waiting on supplier to provide in-depth milestone schedule with payment revisions → IN REVIEW
- Working with ESP to provide Interiors CAE Crash&Safety data → IN REVIEW
- eCall & VCM are last remaining components to be released, only waiting on updated CAD & CAE data → IN REVIEW
- Test bench components to be finalized and ordered in January; also waiting on supplier to provide specifications for test bench components → IN REVIEW
- IC Controller/CANbus Monitor Module/Phone Projection Module Proposal Review → IN REVIEW

INFOTAINMENT (5/5)

- Review SRS for Phone Projection → IN REVIEW
- CAN.dbc for IHU → IN REVIEW
- Discuss provisioning plan with Supplier → IN REVIEW
- CAE data of Instrument Cluster Display for crash Analysis → IN REVIEW
- CAN details for all the Tell Tales list → IN REVIEW
- Test bench components to source → IN REVIEW
- Create plan for Infotainment team headcount → IN REVIEW
- Complete Parking Aid Item Definition → IN REVIEW

LOWLIGHTS: None

CHASSIS (1/5)

HIGHLIGHTS:

- Tire, Rim, Valve, Balancing Weight → DONE
- Implement Supplier Fasteners → DONE
- LOI for Steering Supplier → DONE
- Update Gdrive Structure → DONE
- Fastener spec → DONE
- How to handle I shaft before assembly → DONE
- Pinion Length and Manufacturability → DONE
- OBJ Optimization → DONE
- Ergonomics & Safety Alignment with interior → DONE
- 3D model update - Design Freeze → DONE

CHASSIS (2/5)

- Legal Requirements Fulfillment → DONE
- Intermediate Shaft - 1 → DONE
- Mechanical Steering Gear (MSG) - 1 → DONE
- General Steering - 1 → DONE
- Structured Jira Board - Steering → DONE
- Quote for SVC3 Development → DONE
- Steering Commercials - 1 → DONE
- Brake Pedal and Throttle Pedal Sweep Zones → DONE
- Nominate supplier for Brackets → DONE
- Get supplier quote for Drop Links → DONE
- Drop Links Development - 1 → DONE
- Wrap-up Technical alignment with Supplier → DONE

CHASSIS (3/5)

- Get Hard quote from Supplier → DONE
- Prototype Timeline information from supplier → DONE
- Rear Spindle Development - 1 → DONE
- Brackets Supplier Strategy → DONE
- Marking Standards for the Knuckle Supplier → DONE
- Send RFQ to supplier for ARB → DONE
- Send RFQ to supplier for Drop link → DONE
- Get Spindle Hard quotes → DONE
- Twistbeam Updates - 1 → DONE
- Subframe Updates - 1 → DONE
- Coolant Pump Bracket updates → DONE

CHASSIS (4/5)

IN PROGRESS:

- Steering Fasteners → IN REVIEW
- CEPS Mechanical - 1 → IN REVIEW
- Suspension Commercials - 1 → IN REVIEW
- Chassis Test and Validation - 1 → IN REVIEW
- DT Document Updation → IN REVIEW

CHASSIS (5/5)

LOWLIGHTS:

- MSG bolt access - Gotta change the subframe design
- Data from Supplier → IS BLOCKED
- 1 piece of CEPS needed for LabCar → IS BLOCKED

E/E (1/6)

HIGHLIGHTS:

- **E/E integration**
  - Body electronics
    - Steering Wheel Buttons: A-Surfaces and Design in being finalized
    - PMCS Issues are finished
    - PMCS Deliverables S0/S1 for BCM are finished → Every Deliverables are 100 % finished!
    - Body CAN final SVC3 release (85 % completed)
  - ADAS
    - dbc V1 released

E/E (2/6)

- **Wiring Harness**
  - Catia wiring work bench now available
  - Position for connection boxes for solar panels is fix
- **CAD Integration**
  - Many components have been released (e.g. BCM, LF-Antenna, Switches, RCM, gSAT, pSAT,….)
  - Froze E/E parts for review
  - Steering Column Motor is not more clashing with fusebox → Instrument panel is updated
- **Overall**
  - PMCS deliverables S0/S1 - All done
  - Good progress in estimating the hardware demands (Bucks+BIW) - EE & Powertrain

E/E (3/6)

IN PROGRESS:

- **E/E Integration**
  - Body electronics:
    - Item definition vehicle start in progress (70 % completed)
    - Integration of PDC sensors is delayed
    - No PO for brake light switch as we did not get a revised quote from supplier yet
  - ADAS
    - Received the ADAS offer late and were not able to raise the PO before the end of the year

E/E (4/6)

- **CAD Integration**
  - OBC installation issue → access needed → Thermal: perhaps clashing with components

- **Overall**
  - Good progress regarding prepare the overall timing E/E in roadmap, but not ready

E/E (5/6)

LOWLIGHTS:

- **E/E Integration:**
  - Body electronics:
    - SCCM: Supplier still not defined
    - BMS DVC file not ready
  - ADAS:
    - LoDMC strategy - what is the strategy for blending regen braking with foundation braking? This controller is needed to execute the ACC function
    - Steering system - Some signals required from ADAS are not provided by steering system

E/E (6/6)

        - Lack of map data - ADAS supplier has informed us that we cannot be GSR compliant with camera only solution so we will need map data. Supplier investigation is already ongoing for this.

- **Wiring Harness**
    - DT’s are not complete

- **Overall**
    - Still missing (10 %) and incomplete (32 %) DT’s from Thermal, Chassis and Closures

POWERTRAIN (1/3)

HIGHLIGHTS:

- Supplier confirmed they can supply their VCU HW for SVC3
- EDU release is set to approval
- Successful handover of HV battery

IN PROGRESS:

- Durability Requirements → IN REVIEW
- SVC3 Powertrain System DVP → IN REVIEW
- Design release for SVC3 EDU Mounts → IN REVIEW
- Design Release for SVC3 Fasteners → IN REVIEW
- Towing Capability vs Target → IN REVIEW

POWERTRAIN (2/3)

- Benchmarking and Concept Design → IN REVIEW
- Fixing Strategy → IN REVIEW
- CAD Release-Engine Mount → IN REVIEW
- CAD Release → IN REVIEW
- CAD Release → IN REVIEW
- SVC3 Vehicle RLD Test Plan → IN REVIEW
- SVC3 PO sent to VCU HW supplier → IN REVIEW
- Job Interviews → IN REVIEW
- Clarify peak current capability of HV Battery → IN REVIEW
- HV Battery cell temperature delta improvement → IN REVIEW

POWERTRAIN (3/3)

LOWLIGHTS:

- Headcount ramp-up
- HV battery handover support and new responsibilities are taking a lot of time

BI-DIRECTIONAL

HIGHLIGHTS:

- PO with supplier for PLC module
- PO with ESP to support for specification and testing
- Final discussions in terms of requirement and project plan with suppliers
- All Hardware requirements for supplier OBC finalized

IN PROGRESS: None

LOWLIGHTS:

- Headcount ramp-up
- Diagnosis specification open

HV BATTERY (1/3)

HIGHLIGHTS:

- Update HV Battery dimensions, mounting concept and BIW cutout, communicate changes to supplier
- Confluence page on positioning of MSD, HV battery pack in BIW and its virtual validation
- Simulation plan for
  - According ECE R100 r2, UN 38.3, LV124, vehicle crash pulse.
  - Internal planned simulations
  - BIW and complete vehicle related
- Define requirements and cost (machine, license, maintenance costs etc.) of performing the simulations.
- Screws BIW-HVB dimension preliminary calculation on static loads

HV BATTERY (2/3)

- Implement error calculation for reference and obtained speeds from simulation. Tune PID to meet error specs of ISO 8714.
- Testing the electric motor and battery model, its integration and do some improvements to the model.
- Communicate BMS / Battery pack warnings icon for infotainment team (Refer to UNECE R121)
- Confluence page for simulations why, what, how and work until now
- Release version 1.0 of HV SSTS
- Finalize HV cable size, connector and LV interfaces for battery pack.
- Align battery BoM cost, budget for planned DVP and other development activities
- Finalize the length at 1680 mm

HV BATTERY (3/3)

IN PROGRESS:

- Finalize BMS diagnostic list
- Get quote of complete DVP or part of tests in battery pack DVP
- Release PO for cell storage and testing jig on hold

LOWLIGHTS:

- Internal / external support for defining BMS Hardware / Software functionalities

NVH (1/2)

HIGHLIGHTS:

- Roadmap Planning to SOP (Resources, budget and Scope) => validated with Project team)
- Weight reduction First results in 2021-12-20 Meeting notes
- Benchmark analysis on battery position for weight reduction 2021-12-20 Meeting notes
- Steering design support (air tightness on lower cross member)
- Validation plan - Durability discussions
- Crossfunctional meetings with Interior & Exterior /Body: Air tightness review
- Cost reduction advice
- Squeak and Rattle appraisal
- NVH testing on SVC2 Reports> 95%

NVH (2/2)

    - Additional reports for shaft swap decision Drive shaft Validation
    - SVC2 status
- Recruitment on going

IN PROGRESS:

- Jira link to Requirement
- OBC/MCU Vibration / Design Support
- AVAS system integration Launched - Sound Package ongoing

LOWLIGHTS: None

DESIGN

HIGHLIGHTS:

SVC3

- CUpdate supplier Mirror + mirror foot → DONE
- Create rear window switch bezel → DONE
- Create windshield front camera bezel → DONE

IN PROGRESS: None

LOWLIGHTS: None