DEVELOPMENT SPRINT REVIEW
CALENDAR WEEK 32.21

GENERAL (1/2)

HIGHLIGHTS:

- PMCS Assessment
  - 60% S0 and 65% S1 unassessed
  - Review of deliverables for S0
- Part Quantity Strategy
  - SVC3 BOM for quantities created (basis for order list and SVC3 cost evaluation)

LOWLIGHTS: None

GENERAL (2/2)

BLOCKER:

- BOM cost reduction investigations (cost per part)
  - OKR per module
- BOM Part Source attribute still with major empty fields
- Check-list for SVC3 DR defined by 20-AUG-21 (CAD/CAE/QUAL/EBOM/ME)
  → some feedback received, but not complete

LOGISTICS

HIGHLIGHTS:

- SOP
  - Logistics manual - 1st review round done. Next step review by legal.

LOWLIGHTS: None

BLOCKER: None

PRODUCTION

HIGHLIGHTS:

- Contracting
  - With a new SAP set up it is maybe possible to generate savings in the invest
  - BOM discussion with NEVS is started and MBOM discussion finalized (Task of NEVS ME)
- ME
  - Timing discussion with NEVS

LOWLIGHTS: None

BLOCKER: None

BODY CLOSURE

HIGHLIGHTS:

- 2x LEs signed contract > hood & doors
- RLE workshop closures

LOWLIGHTS: None

BLOCKER: None

HIGHLIGHTS:

- Non-PV Panels:
  - Solve PMCS issue against rocker. Cut-out required for decking. Tire spat and WAL affected. - Done
- Wiper/Wash Systems:
  - Review new smaller motor for package and function - Done

LOWLIGHTS:

Non-PV panels:

- Implement new styling surface in rocker and reposition of fixings

BLOCKER: None

BODY STRUCTURE

HIGHLIGHTS:

SVC3:

- Processing of PMCS issues is ongoing and and with satisfactory degree of processing
- Most of interface information are available → update body structure work in progress
- Body structure redesigned for integration of the grommet steering column → already in 3Dx available
- Proposal for accelerator pedal bracket in 3Dx available

LOWLIGHTS: None

BLOCKER: None

INTERIOR (1/2)

HIGHLIGHTS: SVC3:

- Supplier sourcing (sun visor, headliner, soft trims, hard trims, seats, 1st aid kit, ESP)
  - To get technical/cost feedback from supplier for the sun visors / WIP
  - To get cost & timing feedback from supplier for the sun visors / WIP
  - Finalized cost & timing feedback is awaited from supplier for the headliners / WIP
  - PO is in internal circulation to be approved for the hard trims / WIP
  - 1st Aid Kit supplier will confirm quote status that was agreed in 2018 after summer vacation/ WIP
  - Seat quotes for SVC3-4-5 are expected from supplier. Current PO covers only the engineering development / WIP
- Regular meetings with supplier on I/P, doors, trunk, and console hard points / WIP
  - To share remaining BIW related interior attachment points / WIP

INTERIOR (2/2)

LOWLIGHTS:

- PMCS
  - PMCS - Pre S0 - Deliverable - checked and judged - done
  - PMCS - S0 deliverables checked and questions prepared for PM / planned till the next sprint

BLOCKER: None

INFOTAINMENT (1/2)

HIGHLIGHTS:

SVC3:

- All Infotainment commodities are placed in their correct location in 3Dx and CAD
- All PMCS derivable
- HRS and SRS requirements are being consolidated on our confluence pages
- We received high level phone projection (AA and CP) and Instrument cluster proposals from Level 3 Systems, more refinement and details are needed before submission.
- Level 3 uploaded to the Sono GitHub the Android Automotive 11 software image (Digital team will use with the IMX8 to develop the UI/UX/HMI for the headunit)
- L7 Up loaded the 1st draft schematic layout for the VCM.
- Level 3 delivered the final version System Software Architecture.

INFOTAINMENT (2/2)

LOWLIGHTS:

SVC3:

- Program delay nomination of speakers, e-call, antenna, USB
- L7 cannot reduce the sleep current for the VCM the unit will use 22 mA in sleep mode, we need request the EE team to increase our overall system current allocation to 30 mA to cover the (VCM, e-call and audio headunit)

BLOCKER:

SVC3:

- No update on steering wheel controls from suppliers
- ADAS team needs to define the output specs for the rear camera (broad reach ethernet, LVDS or coaxial) we need this to finish the IHU schematic

THERMAL

HIGHLIGHTS:

SVC2:

- Final software update on Salt and Pepper: HVAC unit (flaps, fan, heating, cooling) finally fully functional

SVC3:

- Implementation of SQA targets into generic thermal SSTS (will be used for coolant and refrigerant lines and air ducts)

LOWLIGHTS: None

BLOCKER: None

CHASSIS (1/4)

HIGHLIGHTS:

- Brakes:
  - Booster connection to brake pedal brakes – 90%
  - Booster reservoir compatibility w/ foundations brakes – 50%
  - Freeze fastener design – 80%
  - Finish FuSa system definition – 90%
  - ESC timeplan completion - OK

- PM
  - PMCS S0/S1 assessment – 50%
  - Budget review - OK

CHASSIS (2/4)

- Knuckle/Spindle
  - Freeze fastener definition – 80%
  - Prepare rear spindle RFQ - OK
  - Send rear spindle for quote – OK
  - Kick-off tire repair kit sourcing - OK

- Suspensions
  - SF front extension attachment – 90%
  - FUp rear damper attachment CAE runs – 90%
  - Finish welding standard - tomorrow

CHASSIS (3/4)

- CAD / PDM
  - Finalize EVP position – Next CAD meeting
  - PDM attributes: Serviceability / Sourcing – 50%
  - Move w/ rolling chassis GD&T – 95%
  - Finish brake piping design – 100%
  - EVP / ESC / TMC interface documents – 60%
  - Finalize TMC positioning w/ front package - OK

- Steering:
  - FuSa system definition – 50%
  - Gd&T for body interface – 30%
  - Analysis of ass’y access – 40%

CHASSIS (4/4)

LOWLIGHTS:

- Knuckle DFM / D2C stalled due vacations
- CAE runs for RTB and SF too slow
- Suppliers on vacation

BLOCKER:

- Knuckle DFM / D2C stalled due vacations

E/E (1/2)

HIGHLIGHTS:

SVC3:

- 38/107~ tickets closed this sprint (Covers both EE & Powertrain)
- ARRK CAD integration | brackets for under-hood fusebox, 12V battery and pre-fusebox underway
- All weights up to date in 3DX to current status
- eBOM updated to current status
- 1 headcount contract signed (E/E integration)

E/E (2/2)

LOWLIGHTS:

SVC3:

- Part sourcing attribute took a backseat to other more important topics this sprint, will be scheduled for the next sprint

BLOCKER:

SVC3:

- Headcount (timing)

HV BATTERY

HIGHLIGHTS:

SVC3:

- 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

- 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 till 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

LOWLIGHTS:

SVC3:

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

BLOCKER:

SVC3:

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

SIMULATION (1/4)

HIGHLIGHTS:

CAE software acquisition (pre/post-processor)

Expectation:

- Pre-processor and post-processor in-house available

Actual achieved

- Licence check available
- Quotes available
  - Pre-processor: yes
  - Post-processor: WIP by supplier

SIMULATION (2/4)

CAE Standardization

Expectation:

- Overview of current status created and start work packages

Actual achieved:

- Content overview and strategy available
- Overview of current status available

SIMULATION (3/4)

CAE DR Checklist

Expectation:

- Creation of a result oriented check-list (part and vehicle level) from all stakeholders for SVC3 design release

Actual achieved:

- Checklist done

SIMULATION (4/4)

LOWLIGHTS:
Crash & Safety Sprint 1

Expectation:

- Full model assembly done in cw 31/32
- Structural crash: results available in cw 32/33

Actual achieved

- Finalization full model assembly in cw34

BLOCKER: None

HOMOGOLATION & RECYCLING

HIGHLIGHTS:

Homologation

- Presentation of homologation basics at all staff meeting
- First rough time schedule

Recycling

- Discussion on new process requirements due to new battery draft with IMS squad
- Master's thesis on recycling process for solar body panels

LOWLIGHTS: None

BLOCKER: None

VIRTUAL VEHICLE (1/2)

HIGHLIGHTS:

- Integration report concept sections and data quality issues added
- Final Data Exchange Bertrandt CFD (via 3DX)
- Concept Section sign off: change actions created
- Issues resolved
  - H points BIW - EDU mount
  - Fusebox package
  - Tire envelopes collision front fender
  - Surge tank positioning
  - Washer bottle package check
  - 2nd row seat collision with BIW

VIRTUAL VEHICLE (2/2)

- Concept for sub-frame Integration, Brake Booster and frunk in work, no showstoppers anymore
- Focus on front end
  - 12V Battery tray optimized (new battery position) and uploaded
  - HV wiring OBC, socket positioning alignment
  - Vacuum pump and ESC positioning and bracket in work

LOWLIGHTS:

- New data quality issues since last release (hhost links..)

BLOCKER:

- Scope of release I.1 unclear

DESIGN (1/3)

HIGHLIGHTS:

SVC3:

- Exterior:
  - Styling loop 02 ongoing. overall around 85% done until end of design release.
    - Styling release V3 (G1 in 3DX) released (every 2 weeks roughly we plan to release a complete updated exterior styling)
    - Change requests now come more from closures / exterior, less from solar. Which means detailed work in gap / flange areas. Changes are still above 1 mm.

DESIGN (2/3)

- Interior:
  - Styling loop 02 ongoing. Overall about 60 % done until end of design release.
    - IP 80%
    - Doors 70% (door handles are being overworked, overall concept is working and fixed and confirmed)
    - Greenhouse / headliner / trims 20% done. A pillar: 80%, lower trim: 30 % , upper trim: 15%

- Wallbox
  - 3 designs chosen and confirmed by founders, branding and “technik”

DESIGN (3/3)

LOWLIGHTS:

- Many change requests from engineering

BLOCKER: None