



DEVELOPMENT SPRINT REVIEW

CALENDAR WEEK 02.22

HIGHLIGHTS:

- Each squad will deliver CAE models derived from SVC3 Design Freeze/Release CAD by 17 Dec 2021 → DONE
- Sealing SVC3 quote submitted → almost all seals will be series tooled
- Body Closure: Smaller parts suppliers nominated
- Dash panel tool is in trial process
- Locator hole in high speed crasher possible → CAE crash simulation positive
- POs for all infotainment parts sent to suppliers (for the exception of antennas)

GENERAL (2/3)

IN PROGRESS:

- Completed Squad Level OKRs 2022 → IN REVIEW
- Body Electronics: Item definition vehicle start almost completed. Was missing information on the vehicle start via the smartphone. This is planned to arrive two weeks later than originally scheduled.
- CAD Integration: Rear LF antenna location needs updated due to trailer hitch complexity
- VCU has a lead time of 16 weeks → Open VCU available from CW19 (w/c 9 May) but standard VCUs could be slightly earlier.

LOWLIGHTS:

- Unsourced SSCM holding up I/P, shroud, steering wheel and driver airbag. SSCM supplier sourcing ongoing. Progress on suppliers but still open points to make it work.
- eCall: Waiting on OEM to give approval on supplier nomination
- Final OBC decision for SVC3 needed (affects OBC, Type 2 socket, VCU, harnesses, etc.)

BODY CLOSURE (1/2)

HIGHLIGHTS:

- Risk mitigation to provide parts for SVC3 build
- Sealing SVC3 quote submitted > almost all seals will be series tooled
- Supplier Closures testing
- Smaller parts suppliers nominated

BODY CLOSURE (2/2)

IN PROGRESS:

- PedPro - continuous development
- PB General Assembly: supplier statement is “everything is fine so far”. Focus needed for this area of SVC3 build.

LOWLIGHTS:

- Solar body panel > potential effect on SVC3 vehicle appearance

BODY STRUCTURE (1/2)

HIGHLIGHTS:

- Dash panel tool is in trial process
- Supplier workshop “Retro 2021” → What do we need to change / adjust?
- Locator hole in high speed crasher possible → CAE crash simulation positive
- Meeting CTO / GL with body structure squad
- Compromise proposal from project management regarding standard part strategy

BODY STRUCTURE (2/2)

IN PROGRESS:

- Mixed up SVC3 and SVC4 discussions

LOWLIGHTS: None

INTERIOR

HIGHLIGHTS:

- Cross functional data status for the completion of interior development

IN PROGRESS:

- Overhead console thus headliner design heavily affected by eCall and wiring
- Steering column updates lead to CCB & I/P changes post DR

LOWLIGHTS:

- Unsourced SSCM holding up I/P,s, steering wheel and driver airbag

INFOTAINMENT (1/5)

HIGHLIGHTS:

SVC3

- POs for all infotainment parts sent to suppliers (for the exception of antennas)
- CAE data provided to Interiors team → DONE
- Supplier to deliver crash simulations by 21.01.22

Project/Program Management

- Finalized 2022 headcount planning and job descriptions
- Completed squad level OKRs 2022 → IN REVIEW

INFOTAINMENT (2/5)

Everything else

- Began purchasing test bench & components
- Working with supplier to acquire a head & torso test dummy (audio sound quality)
- Provide EE team IHU device transmittal Information → DONE
- Deliver HU CAE data to Interiors → DONE
- Coordination with wire harness team for display's schematic and cabling → DONE
- Deliver VCM CAE data to interiors → DONE
- Quotation for CAE data for displays from supplier → IN REVIEW
- CAE data of instrument cluster display for crash analysis → IN REVIEW
- Sourcing decision on eCall button → DONE
- Create decisions documentation for eCall sourcing decision → DONE

INFOTAINMENT (3/5)

- 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
- Create plan for Infotainment team head count → IN REVIEW
- Overview of ordered SVC3 Parts → DONE
- Complete parking aid item definition → IN REVIEW
- eSIM activation on hologram → DONE

INFOTAINMENT (4/5)

IN PROGRESS:

Infotainment Head Unit

- Currently waiting on supplier to implement revised milestone schedule → IN REVIEW

SVC3

- eCall & VCM are last remaining components to be released: IS-129: Completion of SVC 3 Release → IN REVIEW
- IC Controller/CANbus Monitor Module/Phone Projection Module Proposal Review → IN REVIEW
- CAN.dbc for IHU → IN REVIEW
- Source test bench components → IN REVIEW

INFOTAINMENT (5/5)

LOWLIGHTS:

eCall

- Waiting on OEM to give approval on supplier nomination

CHASSIS (1/7)

HIGHLIGHTS:

- Overall steering development
- Braking development picking up speed
- PO's for SVC3 parts out
- Decision on supplier
- Calipers → DONE
- Front Brake hose routing to be updated to remove/reduce clash to WAL → DONE
- Add brake line split near firewall → DONE
- Front left brake line to battery + powertrain mount → DONE
- Position brake pipe crowfoot tool → DONE
- Supplier Data for CAE → DONE
- Supplier ESC Proposal Initial Discussion → DONE

CHASSIS (2/7)

- Disc design freeze → DONE
- To get Quote from supplier → DONE
- Pedal Interface alignment with BIW → DONE
- Support the Release and Approval Process → DONE
- Update EVP bracket to new EDU bracket → DONE
- Create bolted joint signoff sheet → DONE
- Determine bolted joint release process → DONE
- LCA → DONE
- Tire, Rim, Valve, Balancing Weight → DONE
- Intermediate Shaft - 2 → DONE
- Subframe Tower failed in CAE, to be improved → DONE
- Improve and Finalize Steering System Layout → DONE
- Steering Commercials - 2 → DONE

CHASSIS (3/7)

- Fastener spec → DONE
- How to handle I shaft before assembly → DONE
- Manufacturing Ergonomics → DONE
- Steering Performance - Nonuniformity and Symmetry → DONE
- FOD seal and Top Hat Design → DONE
- Ergonomics & Safety Alignment → DONE
- CEPS 3D model update - Design Freeze → DONE
- PMCS Issues → DONE
- Meshing Models → DONE
- Intermediate Shaft - 1 → DONE
- Brake Pedal and Throttle Pedal Sweep Zones → DONE
- Nominate supplier for brackets → DONE
- Get supplier final quote → DONE

CHASSIS (4/7)

- Drop Links Development- 2 → DONE
- Knuckle Development- 2 → DONE
- Wrap-up Technical alignment with supplier → DONE
- Get Hard quote from supplier → DONE
- VehicleTimeline information from supplier → DONE
- Rear Spindle Development- 1 → DONE
- Knuckle 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

CHASSIS (5/7)

- Twist Beam Updates - 1 → DONE
- Subframe Updates - 1 → DONE
- Coolant Pump Bracket updates → DONE
- Source Grease Cap for Rear Hub → DONE
- Hub Development- 1 → DONE

CHASSIS (6/7)

IN PROGRESS:

- Sprint 6 Deliverables Brakes → IN REVIEW
- How to route the brake hoses? → IN REVIEW
- Booster feasibility study for SVC 3 → IN REVIEW
- Priorities for design freeze → IN REVIEW
- Get 3x & 1x brake line clip → IN REVIEW
- SVC3 - 1 → IN REVIEW
- Mechanical Steering Gear (MSG) - 2 → IN REVIEW
- General Steering - 2 → IN REVIEW
- Steering Fasteners → IN REVIEW
- CEPS Mechanical - 1 → IN REVIEW

CHASSIS (7/7)

- Suspension dynamics sheet → IN REVIEW
- Suspension Commercials-1 → IN REVIEW
- Chassis Test Validation - 1 → IN REVIEW
- Kickoff PO for parts → IN REVIEW
- DT Document Updation → IN REVIEW

LOWLIGHTS:

- DT Data from supplier → IS BLOCKED
- 1 piece of CEPS needed for LabCar → IS BLOCKED
- ESP speed on RTB and Subframe design. More speed needed.
- CAE results taking longer than expected

HIGHLIGHTS:

- **E/E integration**
 - Body electronics
 - BodyCAN_v13 final release to happen on Friday after the MCU latest updates. After the release all changes will be done with Change Request.
 - ChassisCAN_v03 will be released at the beginning of next week. (80% completed for SVC3).
 - PowertrainCAN has advanced including BMS and OBC new messages. MCU messages to be defined.
 - AVAS software for SVC3 completed and was tested. Bug reports and bug fixing sessions have started.

E/E (2/6)

- BCM SVC3 Requirements completed. Final Software release to be delivered the first week of march.
- First SVC3 keyfob was 3D printed. Electronics feasibility was successful. Supplier will send us the model for reference.

- **Wiring Harness**
 - Visit to supplier Headquarter was successful

- **CAD Integration**
 - Updated SCCM CAD received for SVC3
 - Updated Hazard light Switch CAD received for SVC3
 - Updated CAD received for new CCS socket with integrated charging light

- **Overall**

- Good progress in SVC4 roadmap
- More SVC3 Requirements have been documented in SionReq Jira project
- Many tasks that the PM assigned to us were processed and solved.
- A lean procurement process within the department including all external stakeholders involved (Procurement, Project Engineering, Product Owner, Component Owner, Cost Engineering) was implemented. All stakeholders are up to date. --> Benefit: Cost tracking, error prevention with the help of Poka Yoke, cost savings).

IN PROGRESS:

- **E/E Integration**

- Body electronics:

- Steering Wheel Button final concept not completed. Too many stakeholders being involved makes it hard to come to a final design that satisfies them all.
 - Vehicle Network Management (Sleep/Wake Up/Vehicle States) is ongoing. Takes much more time than previously accounted for.

E/E (5/6)

- **CAD Integration**

- Rear LF antenna location needs updated due to trailer hitch complexity
- Analysis for Front Crash Sensors show these need moved forward for faster response time
- VCU location may need updated after analyzing crash analysis

- **Overall**

- MCU: In order to freeze the MCU, they need help from our department (“HVIL”, “extra wake-up”, etc.)

LOWLIGHTS:

- **E/E Integration:**
 - Body electronics:
 - SCCM Supplier sourcing is still ongoing. Progress on supplier but still open points to make it work.
- **Overall:**
 - Still missing (9 %) and incomplete (30 %) DT's from Powertrain (supplier), Chassis (supplier), Thermal (supplier), Closures (PV Panel ready this week), Exterior, Infotainment (supplier) and E/E (supplier- hazard light switch feedback tomorrow).

POWERTRAIN (1/3)

HIGHLIGHTS:

- Supplier confirmed they will supply SVC3 VCU H/W parts and quote for series. SVC3 VCU H/W Purchase Order to supplier sent
- EDUs manufactured and ready for shipping. Driveshafts on track for SVC3 MRD. Powertrain Mounts on track for SVC3 MRD.
- Powertrain mounts SVC3 design frozen.
- EDU, Driveshafts and Powertrain Mounts Release in approval phase of Release. (checklist completed).
- Vehicle misuse simulation inputs and misuse cases fully defined → simulation work kicked off.

POWERTRAIN (2/3)

- HV Battery
 - successful handover of HV battery: stand-in team has assigned roles, new folder structure, updated confluence page, List of Open Items with clear actions and internal HV Battery weekly meeting.
 - supplier confirmed that 474 A can be delivered 10 x 20s and Solar charging during HV Battery discharge is possible.

IN PROGRESS:

- VCU has a lead time of 16 weeks → Open VCU available from CW19 (w/c 9 May) but standard VCUs could be a little earlier.
- Towing: ongoing investigation of uprated transmission and lifetime study

LOWLIGHTS:

- Headcount (PT and HV Battery).
- HV battery stand in support and new responsibilities are taking a lot of time and slowing sprint activities.

BI-DIRECTIONAL

HIGHLIGHTS:

- PLC module: Project kick off done, weekly meeting set up, functional development (PLC, VCU) started
- PO with supplier in place, for supporting on functional and testing specification of the charging system (OBC, PLC, VCU)
- All Hardware requirements for supplier OBC finalized
- New team member is starting in February, one month earlier than planned.

IN PROGRESS: None

LOWLIGHTS:

- Diagnosis specification open

SIMULATION (1/6)

HIGHLIGHTS:

- Recruiting (ESO-80)
 - Expectation:
 - Hiring 2 new employees until end Q4/2021
 - Actual achieved:
 - One signing, starting 17. Jan. 2022

- Water Mgmt (ESO-100)
 - Expectation:
 - Defining Load Cases
 - Cost indication
 - Time-2-market figured out

SIMULATION (2/6)

- Actual achieved:
 - Load Cases defined
 - Proper cost indication
 - Time-2-market available
 - Exterior & Body Closures onboarded
 - Next Step: Prioritization

- NVH&Durability Sprint 2 (ESO-70)
 - Expectation:
 - Defining Load Cases
 - Cost indication
 - Timing planned figured out

SIMULATION (3/6)

- Actual achieved:
 - Content defined, costs available & timeline derived
 - Next Step: Final alignment before quote
- Complete Vehicle Bracket Simulation Strategy (ESO-59)
 - Expectation:
 - Evaluation targets available (acceleration)
 - Evaluation strategy available
 - Actual achieved:
 - Strategy and requirements available
 - Complete Vehicle Bracket Simulation Strategy

SIMULATION (4/6)

IN PROGRESS:

- Gathering E/E status information (ESO-62 & 114)
 - Expectation:
 - Overview available: Items/scenarios to evaluate by E/E Squad
 - What could be simulated?
 - How to simulate?abc
 - Actual achieved:
 - no feedback yet

SIMULATION (5/6)

LOWLIGHTS:

- Expectation:
 - A lot of efforts in regard of developing our LCO
 - Some topics blocked due to capacities
 - Updating LCO
 - Gathering data
- Recruiting (ESO-80)
 - Expectation:
 - Hiring 2 new employees until end Q4/2021
 - Actual achieved:
 - -

SIMULATION (6/6)

- NVH Document nr. 2 (ESO-53)
 - Expectation:
 - Document finalized
 - Actual achieved:
 - 3/4 done
 - Blocked due to HVB capacity issues

- Chassis: Alignment on Load cases (LCO) (ESO-84)
 - Expectation:
 - Simulation content for SVC3 Confirmation Run defined
 - LCO filled
 - Actual achieved:
 - Content not defined
 - Capacity issue of Chassis Squad

NVH (1/2)

HIGHLIGHTS:

- EVP Reports completion
- Reorganization of Sprint and meeting with POs
- Steering design support (air tightness on lower cross member)
- XF - Interior Package Review and reorganization
- Validation plan - DVP integration
- Powertrain Validation Test Plan
- Recruitment on going

IN PROGRESS:

- Jira link to Requirement
- AVAS system integration Launched - Sound Package on going

LOWLIGHTS: None

DESIGN (1/2)

HIGHLIGHTS:

- Update Exterior handle + freeze it → DONE
- Get printed steering wheel → DONE
- Learn Blender → DONE
- Update styling to engineering release → DONE

IN PROGRESS:

- Steering Wheel Switch Alignment → IN REVIEW
- Hazard light switch position → IN REVIEW
- SION grain logo on hatch? → IN REVIEW
- Update steering shroud cover → IN REVIEW
- Update IP to new Steering shroud + lever Task → IN REVIEW
- Sion exterior color matching - need grain / color info from solar → IN REVIEW

LOWLIGHTS: None

CRASH & SAFETY (1/2)

HIGHLIGHTS:

- Closures to deliver CAE models required for Crash & Safety assessments based on Design Release CAD data till 17-Dec-2021 → DONE
- Exterior to deliver CAE models required for Crash Safety assessments based on Design Release CAD data till 17-Dec-2021 → DONE
- Sprint Review CW50 KPI Filling → DONE
- Headcount Plan Update Interior → DONE
- Each squad will deliver CAE models derived from SVC3 Design Freeze/Release CAD till 17-Dec-2021 → DONE
- Infotainment to deliver CAE models required for Crash & Safety assessments based on Design Release CAD data till 17-Dec-2021 → DONE

CRASH & SAFETY (2/2)

- HV Battery to deliver CAE models required for Crash & Safety assessments based on Design Release CAD data till 17-Dec-2021 → DONE
- Chassis to deliver CAE models required for Crash & Safety assessments based on Design Release CAD data till 17-Dec-2021 → DONE

IN PROGRESS:

- Sprint Process Adjustments → IN REVIEW
- Squad Level OKR 2022 → IN REVIEW
- Latest possible SVC3 hardware (CV, Bucks, BIW) → IN REVIEW
- Individual hardware demands (Bucks+BIW) - Crash and Safety → IN REVIEW
- Hood to be improved to meet PedPro homologation requirements → IN REVIEW

LOWLIGHTS: None