



# **FORMULA STUDENT EAST COMPETITION HANDBOOK 2025**

**VER. 1.0**

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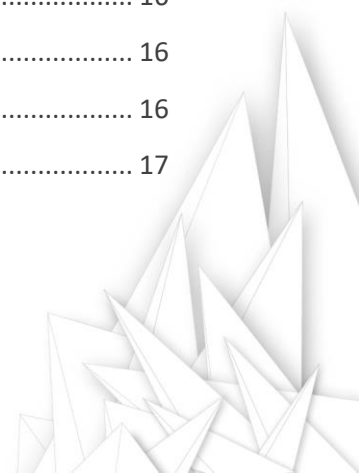




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## CHANGELOG

Rule	Version	Change
EA 1.5	1.0	Removed Driverless Class, introduced Driverless Cup
EA 1.10.3	1.0	ESO is required to monitor the TS Accumulator during the resting period
EA 1.11.1	1.0	Added possibility of using a street-legal van for night storage
EA 2.2	1.0	Individual team members do not need to register
EA 2.3	1.0	Added info for DC registration
EA 2.4.5	1.0	Changed registration quiz ranking method
EA 2.5	1.0	Removed regional slots
EA 2.8.4	1.0	Clarified that camping fee is non-refundable
EA 2.10	1.0	Adapted car number for DC
EA 3	1.0	Changed BPPV to optional, added BPS
EA 3.2.2	1.0	HSF now must be sent to hybrid@fs-world.org
EA 3.3.2	1.0	Increased late submission penalty for BPPEC
EA 3.5	1.0	Updated TMD & HIC submission rules to reflect the technical process
EA 3.6.1	1.0	ESQ and ASRQ are now mandatory submissions
EA 3.7	1.0	Removed DVSV, adopted standard FS Rules VSV
EA 4.7	1.0	Re-introduced rule about displaying the AAME logo
EA 4.9	1.0	Added new rule about re-scrutineering attempts
EA 5.1	1.0	Added rules for optional BPPV evaluation
EA 5.1.2	1.0	Adjusted Business Plan Presentation evaluation categories scoring
EA 5.2.1	1.0	Modified Cost and Manufacturing Event scoring
EA 5.3	1.0	Removed ADR for Engineering Design Event
EA 5.3.4	1.0	Adjusted Engineering Design Event evaluation categories scoring
EA 5.3.5	1.0	Added breakdown of Engineering Design Event evaluation categories
EA 6.1.2	1.0	Relaxed rule about long trousers in dynamic area
EA 6.1.3	1.0	Clarified rule about EV power limit
EA 6.11	1.0	Deleted rule about running order for multiclass teams
EA 6.11.3	1.0	Added note for running order
EA 6.14	1.0	Added new chapter for Post Inspection

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## ABBREVIATIONS

<b>AAME</b>	Association of Automotive Engineers, organizers of Formula Student East
<b>FSEast</b>	Formula Student East 2025
<b>FS Rules</b>	Formula Student Rules 2025 published by Formula Student Germany
<b>BPPEC</b>	Business Plan Presentation Electronic Copy
<b>BPS</b>	Business Plan Summary
<b>BPPV</b>	Business Plan Pitch Video
<b>ESC</b>	Evening Storage Container
<b>ESD</b>	Evening Storage Documentation
<b>DV</b>	Driverless Vehicle
<b>FTO</b>	Fuel Type Order
<b>HIC</b>	Health Insurance Certificate

## FSEAST DOMAINS

<b>fseast.eu</b>	FSEast official website
<b>quiz.fseat.eu</b>	FSEast quiz website
<b>login.fseast.eu</b>	FSEast team and participant management, documentation upload



## EA 1 GENERAL REGULATIONS

### EA 1.1 INQUIRES AND FEEDBACK

EA 1.1.1 Inquiries and feedback must be raised via [rules@fseast.eu](mailto:rules@fseast.eu) (regarding FSEast rules) or [hello@fseast.eu](mailto:hello@fseast.eu) (regarding general event information).

### EA 1.2 FSEAST RULES

EA 1.2.1 FSEast will follow FS Rules. This document describes changes and additions to FS Rules. In case of any contradiction between this document and FS Rules, FSEast rules supersede FS Rules.

### EA 1.3 OFFICIAL COMMUNICATION

EA 1.3.1 All announcements made by the officials in person, via speakers on the venue or via the official Discord server shall be considered part of these rules.

### EA 1.4 PROTEST PROCEDURE

EA 1.4.1 To initiate a protest as per FS Rules A 3.7 teams must submit a formal protest to [rules@fseast.eu](mailto:rules@fseast.eu) within the announced protest deadline.

EA 1.4.2 If no explicit protest deadline is announced, the deadline is 24h after the respective incident.

EA 1.4.3 Officials reserve the right to postpone protest review if the review process would likely jeopardize the start time of the award ceremony. Final results will be withheld until all protests are closed.

### EA 1.5 COMPETITION PROCEDURE

EA 1.5.1 FSEast is available in CV (including HY) and EV class.

EA 1.5.2 Vehicles of both classes can take part in an additional Driverless Cup (DC).

EA 1.5.3 Autonomous functionality is not required to achieve maximum score in CV or EV class.

EA 1.5.4 The achievable points in each class are listed in Table 2.

### EA 1.6 COMPETITION DATE AND LOCATION

EA 1.6.1 The competition will be held from 2025-07-28 to 2025-08-02.

EA 1.6.2 The competition will be held at ZalaZONE Proving Ground, Zalaegerszeg, Hungary.







**EA 1.7 COMPETITION TIME**

EA 1.7.1 The competition date/time format is “YYYY-MM-DD hh:mm” in 24 hours format.

EA 1.7.2 FSEast official time follows Central European (Summer) Time based on the table below:

From	Till	Time zone
2024-10-27 03:00	2025-03-30 02:00	CET
2025-03-30 03:00	2025-10-26 03:00	CEST

Table 1: Official competition time

**EA 1.8 PERSONAL TRANSPORT**

EA 1.8.1 Use of any small vehicles on the competition site, either self-propelled or not, is prohibited.

	CV & EV	DC
<b>Static Events:</b>		
Business Plan Presentation	75 points	-
Cost and Manufacturing	100 points	-
Engineering Design	150 points	250 points
<b>Dynamic Events:</b>		
Skidpad	75 points	100 points
Acceleration	75 points	100 points
Autocross	100 points	125 points
Endurance	325 points	-
Efficiency	100 points	-
Trackdrive	-	250 points
<b>Overall</b>	<b>1000 points</b>	<b>825 points</b>

Table 2: Maximum points awarded



## EA 1.9 WORKING IN THE PITS

EA 1.9.1 [EV only] TS cannot be activated in the pits without prior approval of an electrical scrutineer. The approval must be asked for by the ESO who will oversee the work done during TS activation. He/she must be able to clearly explain the goal and necessity of the activation, and the details of the planned work from start to finish.

EA 1.9.2 Power tools (angle grinders, drills, etc.) can only be used in the dedicated welding area.

## EA 1.10 [EV ONLY] TS ACCUMULATOR RULES

EA 1.10.1 Whenever the TSAC is installed in the car in the pits, the car shall be on the ground with all wheels mounted and must be easily removeable from the pits. Exemption is granted in cases when the team performs approved work on the TS in the pits as per EA 1.9.1.

EA 1.10.2 Whenever the TSAC is stored in the pits outside of the car, it must be stored on the TSAC Hand Cart, with the Hand Cart stationed by the unobstructed pit exit, with the handle facing outside.

EA 1.10.3 TS Accumulators must be left to rest for 60 minutes after charging. A resting area will be available near the charging area for this purpose. The AMS must be live and monitored by at least one ESO during the resting period.

## EA 1.11 [EV ONLY] TSAC EVENING STORAGE

EA 1.11.1 Storing the TSAC in the pits during the evening is prohibited. Teams must choose one of the options below and indicate their choice in the ESD.

**Option A)** The TSAC will be stored in open-air in front of the team's pit. The team must bring their own weatherproof container (ESC) to protect the TSAC (on or off the TSAC Hand Cart). The requirements of this container will be available in a separate document on the FSEast website. Detailed ESD must be submitted if the team chooses this option.

**Option B)** Teams can store their TSAC in a 20-foot weatherproof container provided by the officials along with up to 7 other teams. A rental fee applies if the team chooses this option. This fee will be published later and must be paid at Event Control in cash on the first day of the event.

**Option C)** Teams can store their TSAC in their own street-legal trailer or van used for transporting the race car or racing equipment on public roads.

EA 1.11.2 All trailers, ESCs and rented containers will be sealed by a scrutineer or official during the evenings or before a team leaves the event site.

EA 1.11.3 If a team stores or retrieves their accumulator without a scrutineer or official's registration, they incur a 40-point penalty. Not storing it leads to disqualification.

## EA 1.12 CAMPSITE RULES

EA 1.12.1 Playing excessively loud music between midnight and 05:45 is prohibited.

## EA 2 REGISTRATION

### EA 2.1 IMPORTANT DATES

Major dates:	From:	To:
Team Registration	2025-01-16 08:00	2025-01-30 10:59
Registration Quiz	2025-01-31 11:00	2025-01-31 16:59
Quiz Protest Period	2025-01-31 17:00	2025-01-31 23:59

Table 3: Important dates for registration

### EA 2.2 REGISTRATION PROCESS

1. The team captain must register himself/herself.
2. The team captain must register the team (not the individual team members).
3. Review the confirmation email sent after completing team registration.

Registration is possible on [login.fseast.eu](http://login.fseast.eu).

The team ID retrieved from the Formula Student Germany website is required for team registration. Hence, teams must be registered on the Formula Student Germany website.

Individual team members do not need to register.

## EA 2.3 DC REGISTRATION

- EA 2.3.1 It is possible for each team to compete in DC in addition to CV or EV class with the same vehicle.
- EA 2.3.2 DC does not have Business Plan Presentation and Cost and Manufacturing Events. DC participants will only take part in Engineering Design Event initial judging once, with additional judges to evaluate autonomous topics. It is possible that they will participate in separate Engineering Design Event finals for CV/EV class and Driverless Cup.
- EA 2.3.1 Teams must indicate their intention to participate in the Driverless Cup when registering.
- EA 2.3.2 There will not be a quiz for DC, any team who qualifies in CV or EV class can participate.
- EA 2.3.3 DC participants must pay an additional registration fee.
- EA 2.3.4 Teams that do not pass the DV technical inspection may not participate in DV dynamic events.
- EA 2.3.5 If a team fails only on the DV technical inspection, and the scrutineers assess that the AS can be safely disabled, the team may participate in non-DV dynamic events.
- EA 2.3.6 Configuration change on the car after technical inspection is prohibited.
- EA 2.3.7 DC participants acknowledge that the schedule may not be convenient.

## EA 2.4 REGISTRATION QUIZ

- EA 2.4.1 Qualification to the competition will take place in form of a quiz. The quiz will be available on the FSEast quiz website.
- EA 2.4.2 The team captain and only the team captain must be logged in to take the quiz.
- EA 2.4.3 The quiz starts at 2025-01-31 11:00.
- EA 2.4.4 Each class has its own set of quiz questions. The questions can be class specific, or they can overlap with questions from the other class. The quiz will consist of single-choice and multiple-choice questions. All questions will be revealed at the same time. The quiz must be submitted once only after all questions have been answered.
- EA 2.4.5 Teams will be ranked based on the number of correct answers. If two or more teams have the same number of correct answers, their rank will be decided based on the submission time. Multiple-choice questions are considered correct if all correct answers and only correct answers are selected.



**EA 2.5 REGISTRATION SLOTS**

EA 2.5.1 The number of registration slots available for each class and are listed in Table 4. If there are still unfilled slots available in one of the classes after the end of the registration period, remaining slots will be filled with teams from the waiting list of the other class at the discretion of the officials.

Class	CV	EV
Slots	24	60

Table 4: Registration slots available

**EA 2.6 INVITED TEAMS**

EA 2.6.1 Based on their results at FS East 2024 or FS Easter 2024 some teams are invited to FS East 2025. These teams do not need to participate in the registration quiz.

- The three highest ranked teams of each class of FS East 2024.
- The highest ranked Hungarian team of each class of FS East 2024.
- The highest ranked team of FS Easter 2024.

EA 2.6.2 The list of dedicated slots as per EA 2.6.1 are the following:

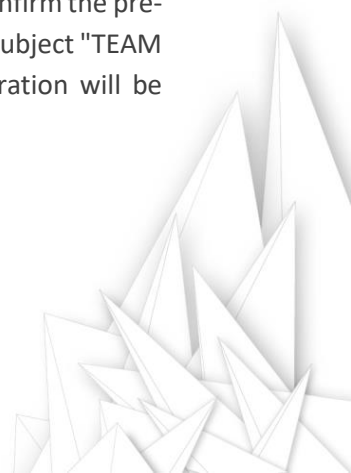
**CV:**

1. FSUPV Team – TOP 3
2. Centaurus Racing Team – TOP 3

**EV:**

1. Akademischer Motorsportverein Zürich – TOP 3
2. FS Team Tallinn – TOP 3
3. KA-RaceIng – TOP 3
4. Arrabona Racing Team – TOP 3 (inherited from CV)
5. Chalmers Formula Student – TOP 3 (inherited from DV)
6. BME Formula Racing Team – TOP Easter

EA 2.6.3 Pre-registration is open for teams listed above until 2025-01-29 10:59. To confirm the pre-registered status the team must send an email to [hello@fseast.eu](mailto:hello@fseast.eu) with the subject "TEAM NAME - Pre-registration confirmation" until the deadline. The pre-registration will be accepted if the registration fee is paid until 2025-01-29 23:59.



## EA 2.7 REGISTRATION FEE

EA 2.7.1 Qualified teams must pay the registration fee listed below, which does not include lodging.

- CV: 2000 EUR + VAT (+27%)
- EV: 2200 EUR + VAT (+27%)
- DC: 900 EUR + VAT (+27%)

EA 2.7.2 At all times throughout the registration periods the first 5 CV teams, the first 9 EV teams on the waiting list must pay a part of the registration fee, as listed below.

- CV: 500 EUR + VAT (+27%)
- EV: 600 EUR + VAT (+27%)

When a team from the waiting list qualifies for a slot, they must pay the remaining amount of the registration fee.

- CV: further 1500 EUR + VAT (+27%)
- EV: further 1600 EUR + VAT (+27%)
- DC: 900 EUR + VAT (+27%) (if applies)

EA 2.7.3 Teams must transfer the registration fee within 2 workdays after the quiz results have been finalized, or they have been notified by FS East officials. A payment receipt provided by the account holder's bank should be submitted to [hello@fseast.eu](mailto:hello@fseast.eu) as a confirmation.

EA 2.7.4 Teams who miss the payment deadline will be moved to the end of the waiting list.

EA 2.7.5 VAT-free payment is only acceptable from the following teams. Teams who don't fulfil any of the criteria must transfer the 27% VAT as well.

- Teams with a valid EU VAT number. Must be filled in correctly in the team profile.
- Teams who are located outside of the European Union, thus do not have an EU VAT number, but do have a VAT number and its validity can be proven by sending us a certification electronically. We will issue the invoice with a net amount of registration fee. Contact your finance department about a certification and send it to us via email with your request for a proforma invoice (if you need a proforma). If your country has a public website which contains authenticated data of organizations/companies and it includes VAT numbers as well, a website link can be sufficient as a certification.

EA 2.7.6 Teams without a VAT number and teams located in Hungary must transfer the 27% VAT as well.

EA 2.7.7 Digital invoices are issued upon successful payments. Teams can request a proforma at [hello@fseast.eu](mailto:hello@fseast.eu).





EA 2.7.8 There is no limit to the number of team members.

### **Banking information**

Account Holder: Association of Automotive Engineers  
Address: 1037 Budapest, Montevideo utca 3/B., HUNGARY  
Account Number: 10400511-50526983-78711011  
IBAN: HU15 1040 0511 5052 6983 7871 1011  
BIC (SWIFT) Code: OKHBHUHB  
Bank name: K&H Bank Zrt.  
Bank address: H-1095, 9th Lechner Ödön fasor, Budapest, HUNGARY  
Reference: FS East registration fee, [Team Name]

## **EA 2.8 REFUND POLICY**

EA 2.8.1 FS East 2025 may be cancelled – not exclusively – for the following reasons:

- Government restrictions are applied for events above 1500 participants – FS East reserves the right to limit the maximum number of participants per team.
- At least 70% of qualified teams are not able to travel to the competition due to border crossing restrictions.
- At least 70% of qualified teams overall have withdrawn for any reason.

EA 2.8.2 If FS East 2025 gets cancelled, a portion of the registration fee will be refunded based on the date of cancellation.

- Cancelled before 2025-03-31: 90% refund
- Cancelled between 2025-04-01 and 2025-05-31: 60% refund
- Cancelled after 2025-06-01: 0% refund

EA 2.8.3 No refund is granted after de-registration or if a qualified team withdraws from the competition for any reason.

EA 2.8.4 The camping fee is non-refundable for any reason.

EA 2.8.5 The partial registration fee for teams on the waiting list (see EA 2.7.2) may get refunded, if the team does not participate at the event, and they do not make use of any services provided by FS East officials (e.g., document review).



**EA 2.9 REGISTRATION AFTER DOCUMENT SUBMISSION DEADLINES**

EA 2.9.1 Teams must submit all overdue documents within 24 hours after the officials have confirmed that the registration fee has been received.

EA 2.9.2 Standard late submission penalties apply after the 24 hours period has passed.

**EA 2.10 CAR NUMBER**

EA 2.10.1 Teams can indicate their desired car number during registration. The following system will be applied to distinguish classes and autonomous functionality:

- 100 – 199: CV class, no DC
- 200 – 299: EV class, no DC
- 300 – 399: CV class with DC registration
- 400 – 499: EV class with DC registration
- 900 – 999: Alumni Cup

**EA 2.11 FACULTY ADVISOR**

EA 2.11.1 Faculty advisors are not mandatory for FS East 2025. Teams may be accompanied by any number of faculty advisors. All faculty advisors must be registered as such.



## EA 3 DATES & DOCUMENTS

### EA 3.1 DEADLINES

EA 3.1.1 The following documents must be submitted to FSEast by their respective deadline. Documents not listed in this table are not required.

Document	CV	EV	Deadline
ASF	o <sup>1</sup>	o <sup>1</sup>	2025-03-28 13:00
ESF		●	2025-03-28 13:00
HSF	o <sup>2</sup>		2025-03-28 13:00
SES & SE3D	●	●	2025-03-14 13:00
ASES		●	2025-03-14 13:00
IAD	●	●	2025-03-14 13:00
TMD & HIC	●	●	2025-06-29 23:59
ESOQ		●	2025-06-29 23:59
ASRQ	o <sup>1</sup>	o <sup>1</sup>	2025-06-29 23:59
EDR	●	●	2025-06-20 23:59
DSS	●	●	2025-06-20 23:59
CRD	●	●	2025-06-27 23:59
VSV	●	●	2025-06-15 23:59
ESD		●	2025-06-01 23:59
FTO	●		At registration
BPPEC	●	●	2025-07-27 08:00
BPS	●	●	2025-07-01 23:59
BPPV	o <sup>3</sup>	o <sup>3</sup>	2025-07-11 23:59

Table 5: Required documents

<sup>1</sup> Mandatory for DC participants.

<sup>2</sup> Mandatory for CV-HY cars.

<sup>3</sup> Optional.

**EA 3.2 SHARED DOCUMENTS WITH OTHER EUROPEAN FS EVENTS**

EA 3.2.1 ASF, ESF, SES & SE3D, ASES and IAD must be submitted through the FSG website. Teams who will participate at FSEast, but not FSG, also need to register their team on the FSG website. Registration for the end of the FSG waiting list is sufficient and no payment to FSG is required.

EA 3.2.2 [CV only] HSF must be sent to [hybrid@fs-world.org](mailto:hybrid@fs-world.org) by the submission deadline.

**EA 3.3 LATE SUBMISSION**

EA 3.3.1 FS Rules A 5.3.4 and A 5.4.1 are void. See rules below for details.

EA 3.3.2 Penalty points are applied for each started 24 hours period after the submission deadline. See Table 6 for the daily penalty points for each document.

EA 3.3.3 Penalties applied due to late submission of EDR, DSS, CRD, BPS and BPPEC will be deducted from the team's final score of the respective static event(s). The minimum achievable final score in each static event is 0.

EA 3.3.4 If a tie occurs in TOP3 positions due to EA 3.3.3, the team with the least penalty points will be ranked in the higher place. Teams in tie out of TOP3 positions will be ranked in the same place.

EA 3.3.5 The maximum possible sum of all penalty points applied due to late submission of the ASF, ESF, HSF, SES & SE3D, IAD, VSV and FTO is the total achievable points in all dynamic events. Penalty points applied for the late submission of these documents are deducted from the team's overall score, up to the team's achieved final points for all dynamic events.

EA 3.3.6 The maximum penalty points applied for late submission of the ESD is 50 points, which are deducted from the team's overall score.

EA 3.3.7 Penalties applied for the late submission of ESOQ, ASRQ, TMD and HIC are deducted from the overall score of the team.

EA 3.3.8 Submission penalties are applied separately in all classes the team competes where the respective document is required.

EA 3.3.9 [CV only] Teams who opt out of using the hybrid system will not receive any penalty points for the HSF. This choice will be recorded in the scrutineering sheet and is irrevocable.

EA 3.3.10 The last possible submission time for EDR, DSS and CRD is 2025-07-13 23:59. After this time the document will not be rejected, and corrections will not be accepted anymore. Any flaws of the document will be penalized with a minimum of 5 points and a maximum of the team's total score of the respective static event. Penalty points will be deducted from the team's final score of the respective static event.



## EA 3.4 DE-REGISTRATION

- EA 3.4.1 FS Rules A 5.4.2 is void. See rules below for details.
- EA 3.4.2 Teams who fail to submit a VSV, ESF, ASF, IAD or SES & SE3D until 24 hours after the respective deadline will be de-registered from the competition.
- EA 3.4.3 If the corrected version of VSV, ESF, ASF, IAD or SES & SE3D does not completely contain all requested corrections, the team will be de-registered from the competition.
- EA 3.4.4 FS Rules A 5.5 applies to the process of re-registration, except that the “24 hours after notification” deadline is raised to 168 hours in case of the VSV. The deadline remains the same for all other documents.

Document	Daily penalty points
ASF	10
ESF	10
HSF	10
SES & SE3D	10
IAD	10
TMD & HIC	5
ESOQ	5
ASRQ	5
EDR	5
DSS	5
CRD	5
VSV	10
ESD	5
FTO	5
BPPEC	10
BPS	5

Table 6: Late submission penalties

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## **EA 3.5 TMD & HIC**

EA 3.5.1 The TMD must be submitted on the FSEast team management website. The TMD template is available on the FSEast website, on the *Rules and Important Documents* page.

EA 3.5.2 A proof of valid health insurance in Hungary at the time of the competition (HIC) must be submitted for each participating team member. A single .zip file must be uploaded to the FSEast team management website containing the HIC files of all team members.

## **EA 3.6 ESOQ & ASRQ**

EA 3.6.1 ESOQ and ASRQ must be submitted on the team management website by the deadline.

EA 3.6.2 ESOs and ASRs must produce a signed liability statement upon onsite registration.

## **EA 3.7 VSV**

EA 3.7.1 The VSV must be uploaded to YouTube as a public or non-listed conventional (not Shorts) video. The submitted file must only include the link of the video.

## **EA 3.8 [EV ONLY] EVENING STORAGE DOCUMENTATION (ESD)**

EA 3.8.1 Teams must submit the ESD using the ESD Template available on the competition website.

## **EA 3.9 [CV ONLY] FUEL TYPE ORDER (FTO)**

EA 3.9.1 Teams must indicate their fuel choice on the FSEast team management website. Completing this process is considered as FTO submission.

## **EA 3.10 COST REPORT DOCUMENTS (CRD)**

EA 3.10.1 The CRD must be submitted as a single .zip file. The file must include the BOM (including the CCBOM), the Cost Explanation File and the Supporting Material. All zipped files must be in PDF format. The BOM must be exported from the FSG BOM tool using the Formula Student East template.

## **EA 3.11 BUSINESS PLAN PRESENTATION ELECTRONIC COPY (BPPEC)**

EA 3.11.1 BPPEC is the final version of the teams' presentation. Teams cannot change their presentation (except minor changes, like correcting typos) for the initial judging after their electronic copy is submitted. BPPEC must be submitted in a .pdf format.

## **EA 3.12 BUSINESS PLAN SUMMARY (BPS)**

EA 3.12.1 BPS is a document that helps potential investors and partners to better understand the business idea. The BPS is a support material, it does not substitute any parts of the presentation.

EA 3.12.2 Template of the BPS will be published no later than 2025.02.28. on the FSEast website.

## EA 4 TECHNICAL REGULATIONS

### EA 4.1 DRIVER EQUIPMENT

EA 4.1.1 The underwear (long pants and long sleeve t-shirt) and socks must be certified to one of the following standards and labelled as such: SFI Spec 3.3, FIA Standard 8856-2000 or FIA Standard 8856-2018.

### EA 4.2 FIRE EXTINGUISHERS

EA 4.2.1 [EV only] One of the fire extinguishers required by FS Rules T13.4 may be replaced by a fire extinguisher designated to contain lithium battery fires. This fire extinguisher must accompany the TSAC wherever it is moved (excluding the dynamic area), either in the vehicle or on the Hand Cart.

EA 4.2.2 Fighting a TSAC fire is permitted only until imminent danger to human life is abated.

### EA 4.3 DATA LOGGER

EA 4.3.1 Data Logger specifications will be available on the FSEast website. These specifications may differ from the ones listed in FS Rules EV 4.6 and supersede them in case of conflict.

EA 4.3.2 [CV only] CV vehicles will not be equipped with a Data Logger.

### EA 4.4 [DC ONLY] REMOTE EMERGENCY SYSTEM (RES)

EA 4.4.1 The RES that has to be used for the competition is a GF2000i-codec/T53R98 combination from GrossFunk GmbH.

EA 4.4.2 No CAN logging is required. Proper configuration and CAN communication with RES is the team's responsibility. No rerun is granted for RES failure.

### EA 4.5 [EV ONLY] ACCUMULATOR INSPECTION

EA 4.5.1 No official temperature logging device will be installed at FSEast.

### EA 4.6 TECHNICAL INSPECTION STICKER

EA 4.6.1 A 100x180 mm (WxH) spot shall be reserved on the upward-facing bodywork between the front bulkhead and the front roll hoop.

### EA 4.7 AAME LOGO

EA 4.7.1 Teams must place two stickers with the logo of the Association of Automotive Engineers on each side of the car on a vertical surface. The size of the logo must be at least 100 x 100 mm. The logo package is available on the FSEast website, on the *Press* page.

### EA 4.8 SCRUTINEERING ORDER

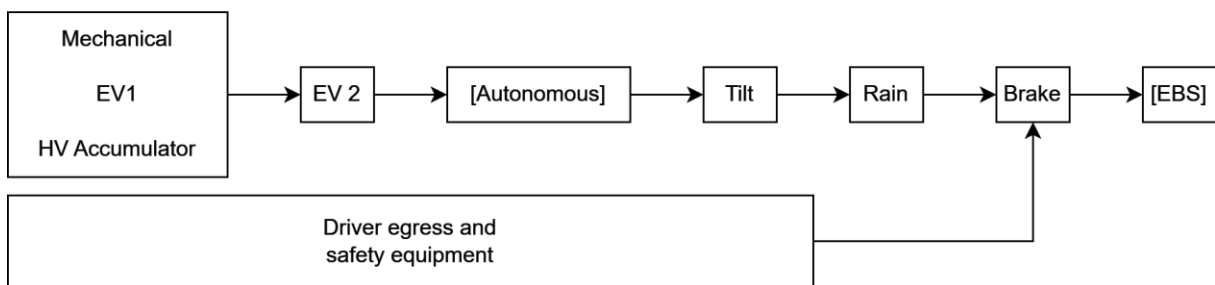
EA 4.8.1 The order for the initial scrutineering will be determined by the organizers. The following factors will be taken into account:



- Class, static schedule
- VSV submitted before the deadline
- Quiz results
- Eligibility for priority scrutineering (e.g. FSEaster)

EA 4.8.2 Technical inspections must be completed in the order shown in Figure 1.

### EV powertrain



### CV powertrain

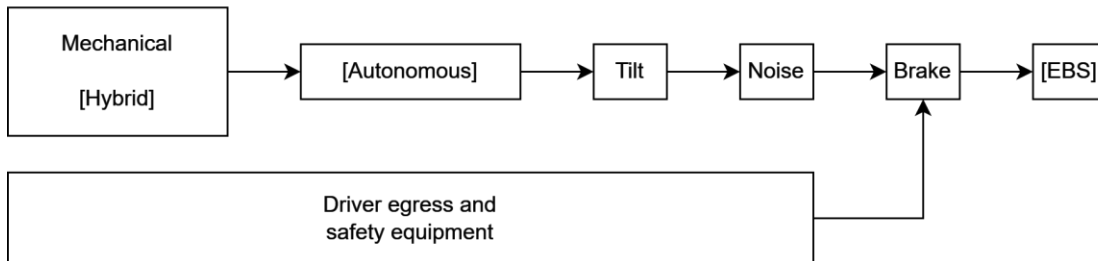


Figure 1: Scrutineering steps

## EA 4.9 RE-SCRUTINEERING

EA 4.9.1 In Tilt Test, Noise Test and Rain Test, 20 penalty points are incurred for each failed attempt after three consecutive failed scrutineering attempts by stage. The counter is reset after passing the inspection stage.

## EA 4.10 TIRES USED DURING COMPETITION

EA 4.10.1 All wheels and tires teams intend to use during competition must be presented to scrutineers at mechanical scrutineering.





## EA 5 STATIC EVENTS

### EA 5.1 BUSINESS PLAN PRESENTATION EVENT

EA 5.1.1 Teams cannot submit the same business plan that they presented in a previous FSEast Event, regardless of class. (E.g., 2024’s DV business plan cannot be an EV business plan in 2025.)

EA 5.1.2 The BPP will be evaluated different from the FS Rules. BPP will be evaluated on the categories specified in Table 7.

Category	Points
Content	15
Finances	15
Deep Dive Topic	10
Demonstration	10
Structure	10
Delivery	10
Q&A	15
General Impression	5
<b>Total</b>	<b>90</b>

Table 7: BPP evaluation categories







- EA 5.1.3 If one or more team members read the presentation, the maximum achievable score in the Delivery category for the team is 50% of the maximum achievable score.
- EA 5.1.4 The information that the team shares in the Q&A session will only receive points in the Q&A category, not in other categories.
- EA 5.1.5 If the business proposition (what kind of partnership the team is looking for) is not clear from the presentation, the maximum achievable score in the Finances category is 25% of the maximum achievable score.
- EA 5.1.6 Teams have the opportunity to use supporting materials (e.g., handouts, mockups, etc.). If a team chooses to use such materials, these materials will be evaluated only to the extent it is used/presented during the presentation and/or the Q&A. All supporting materials must be collected after the Q&A.
- EA 5.1.7 Teams have the opportunity to submit a BPPV. BPPVs will not be evaluated as a part of the Business Plan Presentation Event, it is evaluated separately as a great opportunity to win a special award.
- EA 5.1.8 If a team would like to submit a BPPV, they must submit it before the deadline. No late submissions will be evaluated.
- EA 5.1.9 By submitting a BPPV, teams consent to showing the BPPV in public, e.g. on the award ceremony.
- EA 5.1.10 BPPV must be uploaded to YouTube as a public or non-listed conventional (not Shorts) video. The submitted file must **only** include the link of the video. If the file contains any other information (e.g. team name, car number etc.), the video will not be evaluated.
- EA 5.1.11 Submitted BPPV must comply with any other competition's rules that requires a BPPV. This competition must be clear from the title of the Youtube video.
- EA 5.1.12 Finalist teams will receive an additional Deep Dive Topic on the finalists' briefing that they should incorporate into their presentation on the Finals.
- EA 5.1.13 If there are 0 finalists in a class, the 70 in FS Rules S 2.4.6 is replaced by 75.

## EA 5.2 COST AND MANUFACTURING EVENT

EA 5.2.1 The scoring of non-finalists is calculated as followed:

$$COST\_SCORE = \left( \frac{P_{team}}{P_{max}} \right) * (100 - 3n)$$

Where:

$P_{team}$  is the score awarded to the team.

$P_{max}$  is the highest score awarded to any team not participating in the finals.

$n$  is the number of finalists in the class (can be 0).







## EA 5.3 ENGINEERING DESIGN EVENT

- EA 5.3.1 FS Rules S 4.1.3 does not apply to teams not participating in DC.
- EA 5.3.2 The EDR must only consist of A4 pages.
- EA 5.3.3 FSEast specific DSS template will be available on the FSEast website. This template must be used for submission of the DSS.
- EA 5.3.4 The maximum scores listed in Table 8 apply for the Engineering Design Event.

Category	CV & EV Points	DC Points
Overall Vehicle Concept	30	30
Team & Project Management	20	20
Chassis & Ergonomics	20	20
Vehicle Dynamics & Suspension	20	20
IC Powertrain / Electric Powertrain	20	20
Electronics & Control System	20	20
Aerodynamics	20	20
Perception	-	30
Mapping and Motion Planning	-	25
Trajectory Tracking	-	25
Actuators	-	20
<b>Total</b>	<b>150</b>	<b>250</b>

Table 8: Maximum scores in Engineering Design Event

- EA 5.3.5 The judges will score each category based on specific areas detailed in Table 9. It is the responsibility of the team to cover every area during the event. In general, points are uniformly distributed among the defined areas for a category, but there may be exceptions.

Notes for Table 9:

- <sup>1</sup> Design for Manufacturing/Assembly/Reliability/Testing/Serviceability/Cost.
- <sup>2</sup> Not part of the Engineering Design Event discussion, points based on pre-event document submission.
- <sup>3</sup> The score for this area is determined based on feedback from all judges.

- EA 5.3.6 Each category will be judged by a maximum of two judges.





Category	Areas to cover
Overall Vehicle Concept	<ul style="list-style-type: none"> <li>▪ Vehicle Concept &amp; Design Theory</li> <li>▪ Validation &amp; Testing Plan</li> <li>▪ Design for Excellence<sup>1</sup></li> <li>▪ Creativity</li> <li>▪ Quality of the EDR &amp; DSS<sup>2</sup></li> </ul>
Team & Project Management	<ul style="list-style-type: none"> <li>▪ Team Structure &amp; Motivation</li> <li>▪ Project Management</li> <li>▪ Documentation &amp; Knowledge Management</li> <li>▪ Presentation &amp; Aesthetics<sup>3</sup></li> </ul>
Chassis & Ergonomics	<ul style="list-style-type: none"> <li>▪ Understanding &amp; Presentation</li> <li>▪ Concept &amp; Design</li> <li>▪ Manufacturing &amp; Assembly</li> <li>▪ Validation &amp; Refinement</li> </ul>
Vehicle Dynamics & Suspension	
IC Powertrain / Electric Powertrain	
Aerodynamics	
Actuators	
Electronics & Control System	<ul style="list-style-type: none"> <li>• Understanding &amp; Presentation</li> <li>• System Architecture</li> <li>• Hardware Development &amp; Manufacturing</li> <li>• Software Development &amp; Implementation</li> <li>• Validation &amp; Refinement</li> </ul>
Perception	<ul style="list-style-type: none"> <li>• Understanding (in Perception) &amp; Presentation</li> <li>• Sensor Selection &amp; Packaging</li> <li>• Signal Processing</li> <li>• Design &amp; Implementation</li> <li>• Visualization &amp; Simulation</li> <li>• Validation &amp; Refinement</li> </ul>
Mapping and Motion Planning	<ul style="list-style-type: none"> <li>• Understanding (in SLAM) &amp; Presentation</li> <li>• Sensor Selection &amp; Signal Interpretation</li> <li>• Design &amp; Implementation of SLAM</li> <li>• Design of Motion Planning</li> <li>• Simulation &amp; Validation</li> </ul>
Trajectory Tracking	<ul style="list-style-type: none"> <li>• Understanding in Vehicle Dynamics</li> <li>• Understanding in Control Theory</li> <li>• Design &amp; Implementation</li> <li>• Simulation &amp; Validation</li> </ul>

Table 9: Evaluation areas within categories



**EA 5.4 STATIC FINALS**

- EA 5.4.1 Finalists will be notified in-person.
- EA 5.4.2 Finalists must attend a Finalists' briefing where officials will explain the procedure of the final. Finalists will be informed of the time and location of this briefing. The number of team members who may attend the briefing may be limited. Failure to attend the briefing will result in disqualification from the final.
- EA 5.4.3 The Engineering Design and Cost and Manufacturing finals are not public.
- EA 5.4.4 Maximum one team member per team may enter the judging area of the Engineering Design and Cost and Manufacturing finals for photography purposes. This team member must wear the *Media* identification which will be distributed during the finalists' briefing and must be returned to the officials after the final has ended.
- EA 5.4.5 The team's photographer must not speak to anyone in the judging area except officials (excluding judges). Violation of this rule will result in disqualification of the photographer's team from the final.
- EA 5.4.6 Nobody (except presenting team members and the Business Plan Presentation Event leader) may enter the judging area (the area between the stage and the judges) during the Business Plan finals.

## EA 6 DYNAMIC EVENTS

### EA 6.1 DYNAMIC EVENTS GENERAL

- EA 6.1.1 In total, a minimum of four and a maximum of six drivers are allowed for each team.
- EA 6.1.2 All team members entering the dynamic area must wear closed shoes. Long trousers are not mandatory, but strongly advised.
- EA 6.1.3 [EV only] The power limit specified in FS Rules EV 2.2.1 is a hard limit, there is zero tolerance for sensor error.

### EA 6.2 AVAILABLE FUEL TYPES

- EA 6.2.1 The available fuel types will be RON 100 petrol and MOL Racing Fuel DRX. Specification of available fuel types will be available on the competition website.
- EA 6.2.2 Measuring ethanol content during the competition is prohibited.

### EA 6.3 FLAGS

- EA 6.3.1 In addition to, and partially replacing FS Rules D 2.1.9, the following flag signals must be obeyed.
- EA 6.3.2 STATIONARY YELLOW FLAG – Danger, the driver must slow down, something has happened beyond the marshal post, no overtaking unless directed by the track marshals.
- EA 6.3.3 WAVED YELLOW FLAG – EA 6.3.2 + the driver must be prepared for a sudden stop.
- EA 6.3.4 WAVED YELLOW FLAG + STOP SIGN – The driver must immediately stop and perform an egress. Reserved for burning vehicles.

### EA 6.4 [DC ONLY] START-UP PROCEDURE FOR AUTONOMOUS RUNNING

- EA 6.4.1 If the vehicle does not enter “ASReady” state within **3 minutes** after being staged, the team may be sent back to the preparation area by the officials. In this case any priority is lost.

**EA 6.5 [CV AND EV ONLY] SKIDPAD EVENT**

- EA 6.5.1 Each team has four runs, driven by two drivers with two runs each.
- EA 6.5.2 Each driver has the option to make a second run immediately after their first run.
- EA 6.5.3 3.5 points are awarded to every team that finishes at least one run without DNF or DQ.
- EA 6.5.4 If a team's run time including penalties is below  $T_{max}$ , additional points based on the following formula are given:

$$SKIDPAD\_SCORE = 71.5 \left( \frac{\left( \frac{T_{max}}{T_{team}} \right)^2 - 1}{0.5625} \right)$$

$T_{team}$  is the team's best run time including penalties.

$T_{max}$  is 1.25 times the time of the fastest vehicle including penalties.

**EA 6.6 [DC ONLY] SKIDPAD EVENT**

- EA 6.6.1 25 points are awarded to every team that finishes at least one run without DNF or DQ.
- EA 6.6.2 If a team's run time including penalties is below  $T_{max}$ , additional points based on the following formula are given:

$$DC\_SKIDPAD\_SCORE = 75 \left( \frac{\left( \frac{T_{max}}{T_{team}} \right)^2 - 1}{1.25} \right)$$

$T_{team}$  is the team's best run time including penalties.

$T_{max}$  is 1.5 times the time of the fastest vehicle including penalties.

**EA 6.7 [CV AND EV ONLY] ACCELERATION EVENT**

- EA 6.7.1 Each team has four runs, driven by two drivers with two runs each.
- EA 6.7.2 Each driver has the option to make a second run immediately after their first run.
- EA 6.7.3 3.5 points are awarded to every team that finishes at least one run without DNF or DQ.
- EA 6.7.4 If a team's run time including penalties is below  $T_{max}$ , additional points based on the following formula are given:

$$ACCELERATION\_SCORE = 71.5 \left( \frac{\left( \frac{T_{max}}{T_{team}} - 1 \right)}{0.5} \right)$$

$T_{team}$  is the team's best run time including penalties.

$T_{max}$  is 1.5 times the time of the fastest vehicle including penalties.

**EA 6.8 [DC ONLY] ACCELERATION EVENT**

EA 6.8.1 25 points are awarded to every team that finishes at least one run without DNF or DQ.

EA 6.8.2 If a team's run time including penalties is below  $T_{max}$ , additional points based on the following formula are given:

$$DC\_ACCELERATION\_SCORE = 75 \left( \frac{T_{max}}{T_{team}} - 1 \right)$$

$T_{team}$  is the team's best run time including penalties.

$T_{max}$  is 2 times the time of the fastest vehicle including penalties.

**EA 6.9 [CV AND EV ONLY] AUTOCROSS EVENT**

EA 6.9.1 5 points are awarded to every team that finishes at least one run without DNF or DQ.

EA 6.9.2 If a team's run time including penalties is below  $T_{max}$ , additional points based on the following formula are given:

$$AUTOCROSS\_SCORE = 95 \left( \frac{\frac{T_{max}}{T_{team}} - 1}{0.25} \right)$$

$T_{team}$  is the team's best run time including penalties.

$T_{max}$  is 1.25 times the time of the fastest vehicle including penalties.

**EA 6.10 [DC ONLY] AUTOCROSS EVENT**

EA 6.10.1 FS Rules D 6.3 apply with the exception(s) detailed below.

EA 6.10.2 Each team has a minimum of two, a maximum of four runs consisting of one single lap. The exact number of runs available will be uniform among teams and will be announced before the start of the event.

EA 6.10.3 25 points are awarded to every team that finishes at least one run without DNF or DQ.

EA 6.10.4 If a team's run time including penalties is below  $T_{max}$ , additional points based on the following formula are given:

$$DC\_AUTOCROSS\_SCORE = 100 \left( \frac{T_{max} - T_{team}}{T_{max} - T_{min}} \right)$$

$T_{team}$  is the team's best run time including penalties.

$T_{max}$  is the time for driving the lap with 6 m/s.

$T_{min}$  is the fastest  $T_{team}$  of all teams.



## EA 6.11 ENDURANCE EVENT

- EA 6.11.1 FS Rules D 7.1.2 is void.
- EA 6.11.2 The running order will be published on the competition website the night before the Endurance event.
- EA 6.11.3 Detailed procedure of the running order will be published later.
- EA 6.11.4 If a vehicle's forward movement is physically blocked by an immovable obstacle for any reason, but otherwise the vehicle is capable of continuing the run, officials will power down the vehicle using shutdown buttons, push the vehicle to a safe location, and reset the shutdown buttons. The one lap period as per FS Rules D 7.7.3 starts when the officials confirm to the driver that he/she may restart the car.
- EA 6.11.5 25 points are awarded to every team that finish their run without DNF or DQ.
- EA 6.11.6 If a team's corrected elapsed time is below  $T_{max}$ , additional points based on the following formula are given:

$$ENDURANCE\_SCORE = 300 \left( \frac{\frac{T_{max}}{T_{team}} - 1}{0.333} \right)$$

$T_{team}$  is the team's corrected elapsed time.

$T_{max}$  is 1.333 times of the corrected elapsed time of the fastest vehicle.

## EA 6.12 EFFICIENCY EVENT

- EA 6.12.1 [CV only] The measured fuel mass of vehicles using MOL Racing Fuel DRX fuel is divided by 1.45 to be comparable to the vehicles using RON 100.
- EA 6.12.2 [CV only] The same limits specified for 98 RON and E85 in FS Rules D7.10.2 apply for RON 100 and MOL Racing Fuel DRX respectively.
- EA 6.12.3 Efficiency points are given based on the following formula:

$$EFFICIENCY\_SCORE = 100 \left( \frac{EF_{max} - EF_{team}}{EF_{max} - EF_{min}} \right)$$

$EF_{team}$  is the team's efficiency factor.

$EF_{min}$  is the lowest efficiency factor of all teams which were considered for efficiency.

$EF_{max}$  is defined as  $1.5 \cdot EF_{min}$ .







## EA 6.13 TRACKDRIVE EVENT

- EA 6.13.1 FS Rules D 8.2 is void. There will be no Trackdrive running order. The starting order is based on the time the team arrives at the Trackdrive Event. Teams on their first run will receive priority.
- EA 6.13.2 Each team has a minimum of one, a maximum of two runs consisting of ten laps each. The exact number of runs available will be uniform among teams and will be announced before the start of the event.
- EA 6.13.3 25 points are awarded to every team that finishes at least one run without DNF or DQ.
- EA 6.13.4 If a team's best corrected elapsed time is below  $T_{max}$  and the run was not DNF or DQ, points based on the following formula are given:

$$TRACKDRIVE\_SCORE = 175 \left( \frac{T_{max}}{T_{team}} - 1 \right)$$

$T_{team}$  is the team's best time including penalties.

$T_{max}$  is 2 times the time of the fastest vehicle including penalties.

- EA 6.13.5 An additional 5 points are awarded for every completed lap for the run with the most laps completed, independent of the corrected elapsed time. This is also applied for teams that do not finish either of their Trackdrive runs.

## EA 6.14 POST INSPECTION

- EA 6.14.1 Teams must proceed to Post Inspection each time they intend to leave the dynamic area and before changing drivers (except Endurance), given that they have completed at least one run that was not DNF.
- EA 6.14.2 Failing to show up to Post Inspection results in DQ since entering the dynamic area.
- EA 6.14.3 Immediately after finishing the Endurance the vehicle is placed in parc fermé. No team member may work on the car in parc fermé, unless the work was explicitly approved by an official.
- EA 6.14.4 All vehicles must be able to demonstrate all required functionalities of the LVS and TS during the entire time the vehicle is in parc fermé.
- EA 6.14.5 If the vehicle must remain in parc fermé for more than 5 minutes to complete the Post Inspection, the team will be allowed to connect a power supply to power the LVS. 230V AC power outlets will be available for this purpose.

