FSF Competition Handbook 2025

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Changelog

Part	Version	Changes
-	1.0	Initial publication

FR 1 - General information

FR 1.1 - Formula Student France

Formula Student France (FSF) is part of the Formula Student competition series. It welcomes teams of students designing open-wheel vehicles.

FR 1.2 - Competition format

FSF 2025 will consist of 2 classes: Electric Vehicle (EV) class and Concept class (3C). Classes can be identified as separate competitions with their own ranking. The competition will be open to:

- 35 EV Class teams,
- 8 3C Class teams.

The EV Class dynamic events will consist of manual driving events only. However, FSF 2025 will host a Driverless Cup (DC), allowing 12 EV teams to participate in the category alongside the classic EV class. As a result, teams competing in the Driverless Cup will be ranked in both the EV Class and the DC Class.

Teams participating in the Concept Class will take part in the Design, Business Plan Presentation, and Cost & Manufacturing events. To enhance their project explanation, they may present a static display of the car or specific components. This category will have its own separate classification. The Design, Business Plan, and Cost events will adhere to the same rules as the regular (EV/CV) classes, with the Cost Report specifically requiring an estimation of the car's actual cost. Additionally, 3C teams will have the possibility to have driverless judges assessing their autonomous system during their Design event to provide an indicative DC design score. However, this score will be for reference only, with no ranking for 3C teams in the DC.

FSF 2025 will also be open to hydrogen cars, whether they have Combustion or Electric powertrains. There is not a defined number of slots for hydrogen cars. Please note that hydrogen teams will not be allowed to participate in the Driverless Cup.

FR 1.3 – Competition dates and place

FSF 2025 will be held from Tuesday 26th until Sunday 31st of August 2025, at Transpolis in France. Please refer to the time schedule for detailed timing.

Venue address:

> 620 Route des Fromentaux
>
> 01500, Saint-Maurice-de-Rémens
>
> France

The official competition website is: fs-france.com/. It is regularly updated as the organizational details of FSF 2025 are continuously formalized.

The Formula Student France official time is:

From	Till	Time
2024-10-27	2025-03-29	CET
2025-03-30	2025-10-26	CEST

FR 1.4 – Competition Language

The competition language is English.

FR 1.5 – Official contacts

Event Management is provided by:

- **Mathieu JACQUET**: +33 6 49 51 06 51 (mathieu.jacquet@fs-france.com)
- **Robin MESSIAEN:** +33 6 71 05 39 34 (robin.messiaen@fs-france.com)
- **Oïana CARETTI:** +33 6 58 88 08 47 (oiana.caretti@fs-france.com)

as the General Event Managers.

The Event Management should be contacted at the following e-mail address: contact@fs-france.com.

Inquiries must be raised via contact@fs-france.com(regarding FSF rules, the FSF event and anything related).Any information from an *@fs-france.com* mail address must be considered as an official response from FS France. Any information coming from another email address should be verified with the event Management.

FR 1.6 – Media consent

By participating to FSF 2025, teams hereby consent to the use of their image (including anything related to teams, i.e. team members, teams' car, etc...) in photographs, video recordings, and other media captured during the event for promotional and communication purposes. This may include press releases, marketing materials, and other publications related to the event.

FR 2 - Formula Student France 2025 Rules

FR 2.1 - Rule Exemptions and Alterations

The competition will be held in compliance with the **Formula Student Rules 2025**, available at the following link: https://www.formulastudent.de/fsg/rules/.

The Formula Student France Competition Handbook is to be considered part of the rules. In the event of any conflict between this document and the "*Formula Student Rules 2025*", the FSF rules prevail.

No autonomous system is required for the EV class. If a team does not participate in the Driverless Cup, autonomous system components may either be removed from the car or left in place at the team's discretion. However, a team participating in both EV and DC must keep the autonomous system in the car at all times during the event.

Points allocated to each event is detailed on the following table:

Event	EV	DC	3C
Engineering Design	150	150	150
Cost & Manufacturing	100	-	100
Business Plan	75	-	75
Acceleration (manual)	75	-	-
Driverless Acceleration	-	75	-
Skidpad (manual)	75	-	-
Driverless Skidpad	-	75	-
Autocross (manual)	100	-	-
Driverless Autocross	-	100	-
Endurance	325	-	-
Efficiency	100	-	-
TOTAL	**1000**	**400**	**325**

The Driverless Cup for FSF 2025 will consist of the following dynamic events: Acceleration, Skidpad, and Autocross. Please note that there will be no Trackdrive event for FSF 2025.

FR 2.2 - Team Manager

Each team must designate a Team Manager, who is required to attend all briefings, including driver briefings. It is recommended for them to be the team's legal representative, if applicable. The Team Manager is responsible for relaying official competition information shared during Team Manager meetings to the rest of the team. Team Managers are required to join a WhatsApp community for general competition announcements. **Any announcements by officials on the WhatsApp community is to be considered as part of the rules**. Joining the community will be done on site, during the check-in at the Welcome Centre.

FR 2.3 - Faculty Advisors

For FSF 2025, having a Faculty Advisor representing the team's university is not mandatory. However, if a Faculty Advisor attends the event, they must be registered as Team Members on the TMRF. Faculty Advisors are permitted to stay at the campsite with the team but are not allowed to participate in any events or perform tasks that can be handled by students. Additionally, Faculty Advisors are prohibited from accessing both the static and dynamic events, as well as the dynamic areas.

FR 2.4 - Visitors

Visitors will be accepted at FSF 2025. Please refer to the *Visitors* section of the official website for further information.

FR 2.5 - Prototypes numbers

All registered teams will be invited to choose a car number for the competition via their Team account:

- EV Class: 01-99, with an E added in front of the number (i.e. E99)
- 3C Class: 301-399
- Hydrogen cars: 01-99 with an H added in front of the number (i.e. H01)

Teams must select 5 car numbers in order of preference during their registration on the FSF official website. The final allocation of the numbers will be based on the quiz results.

FR 2.6 - Special measures

The event has subscribed insurance to cover participants for any accidental damages caused to third parties, whether by team members or their prototype. However, **all participating teams must ensure that each team member has individual health insurance coverage or that a comprehensive group health insurance policy is subscribed for the entire team.**

All team members have to agree to the Terms & Conditions (T&C) of FSF 2025, by signing the T&C sheet. The T&C and the T&C sheet will be published on the official website prior to the event, in the *Documents* section. The T&C sheet must be signed by all team members and brought at the competition check-in by the Team Manager.

Transpolis safety regulations tba; insurance details tbc

FR 2.7 - Prototypes transportation

Each team is responsible for transporting its prototype to the event site. Teams must present themselves with their prototype and equipment at the entrance of the competition site according to the time schedule released prior to the event on the official website.

Team pits must be emptied and cleaned before the competition site closes at the end of the competition.

Team vehicles will be allowed on the competition site for loading and unloading the prototype and equipment at the beginning and at the end of the competition. Outside these times, vehicles may be parked on site in the designated area and not be driven during the whole event (see competition site map), or must be removed from the competition site. **Running vehicles are not allowed onsite during the event**.

For specific requests, please contact the Event Management at contact@fs-france.com.

FR 2.8 - Event leaders

Each event (i.e. Design Event, Business Plan Presentation, Scrutineering, etc...) has a Leader at FSF. The final decision rests with them. Any relevant request or question should be brought to them. The Event Leaders are presented on the official website.

FR 3 - Registration

FR 3.1 – EV registration procedure

EV teams must have a FSG account as an EV team in order to pretend to a slot at FSF 2025. For documents reviewing, the use of online tools provided by FSG (Formula Student Germany) is required. To use these tools, a team has to be registered for the current FSG event. For teams not attending both FSF and FSG, registration for the end of the FSG waiting list is sufficient and no payment to FSG is required.

The **registration quiz for FSF 2025 will be held together with FSA** (Formula Student Austria) and starts on Friday, 2025-01-31 at 19:00. Keep in mind to register on https://fsaustria.at at least one day before the quiz starts. Refer to the FSA website and handbook for details. **All teams must have an EV FSA account to pretend to a slot at FSF 2025**.

During the quiz, teams will be given the choice to select which Formula Student event they wish to attend to (FSA, FSF or both FSA and FSF) and to choose the class they want to participate to (i.e. *"regular"* for EVs). EV teams willing to participate to FSF will also have to choose at that moment whether they want to participate in the *"Driverless Cup"* additionally to the *"classic category"*. Please note that there are only 12 slots in DC over the 35 EV cars, best ranked teams according to the quiz results will have the priority.

The quiz results order will give the FSF admission order. The Top-5 French teams that participate to the quiz will be moved to the top of the ranking to ensure French teams are given the opportunity to participate to FSF. The other 30 teams are taken according to the FSF admission order. The rest is placed on the waiting list, in the same order as the quiz results order. The quiz results will be published on the FSF official website.

As soon as we have processed the quiz results, the registered teams will receive an email with an invoice and bank details in order to pay the registration fee, together with a link to create a FSF account. **To confirm its participation at FSF 2025, a team must make its payment within 3 working days after receiving the invoice** (i.e. 72h, week-end excluded) **and must submit a proof of payment by creating a FSF account by the payment deadline** (the registration form for creation of a FSF account require a pdf document as proof of payment). **Failure to do so will result in the loss of the slot and the team being withdrawn.** Payment is accepted only by bank transfer.

A team moving up from the waiting list (due to the withdrawal of a registered team) will receive an invoice by email together with a link to create a FSF account. The same procedure as previously described applies (i.e. payment and account creation with proof of payment within 3 working days).

Once the proof of payment is checked by the Event Management, the successfully registered team will receive a confirmation email. Therefore, **having a FSF account is mandatory to participate to FSF 2025**.

Notes:

- *If one of the Top-5 French teams fails to send confirmation of the money transfer by the payment deadline, the next French team according to the quiz order will be given the slot, if possible. If not, the slot will be given to the next team on the waiting list.*
- *If one of the 30 international teams fails to send confirmation of the money transfer by the payment deadline, the slot will be given to the next team (either French or not French) on the waiting list.*
- *A withdrawn or not registered team can ask the Event Management to be placed at the end of the waiting list at any moment after the quiz results publication.*
- *There are no accounts for individual team members on the FSF website. Consequently, only one account is needed per team, and no team should create more than one account. 2024 accounts are not valid and will be deleted from the database.*

FR 3.2 –3Cregistration procedure

The regular 3C registration process follows the same steps as EV teams, with the following exceptions:

- 3C teams have to register as EV or CV teams on the FSG and FSA websites, depending on the type of car they are designing (i.e. they can't register as 3C teams on these platforms). This choice does not influence the ranking for FSF. As a result, points allocated to category specific questions of the quiz will not be considered. However, it influences the document reviewal: a 3C team registering as a CV team on the FSA and FSG websites won't be able to present an EV design at FSF 2025 (and vice-versa). **Teams are required to have a FSG and a FSA account type (EV/CV) consistent with the type of car they are currently developing**.

- Attending to FSA in 3C will not be possible (as there is no 3C category at FSA 2025).
- The class to select during the admission quiz is *"concept class"* (instead of *"regular"* for EVs).
- Only 8 slots are allocated to 3C teams compared to 35 for EV teams. However, the same Top French teams policy will be applied except that only 3 slots are reserved for French teams (compared to 5 in EV).
- There is no limit of admission to the DC among the successfully registered 3C teams.

Note:the EV ranking and the 3C ranking are entirely separate at FSF. Therefore, the quiz score of an EV team cannot influence the admission of a 3C team at FSF in any manner whatsoever.

FR 3.3 –DC admission rules

Any team (both 3C and EV) willing to participate in the Driverless Cup will have to tick the corresponding option during the admission quiz (i.e. "both classic category and Driverless Cup"): a specific question will be raised during the admission quiz of the 31st January 2025 (note that this question won't be taken into account for the quiz scoring).

Among the successfully registered EV teams at FSF willing to get into the Driverless Cup, only the 12 best teams according to the quiz results will access it.

All the successfully registered 3C teams at FSF willing to participate in the Driverless Cup will be able to.

FR 3.4 –Hydrogen vehicles registration process

Hydrogen teams, with either CV or EV powertrains, are likely to be welcome at FSF 2025 if they have the willing to. Hydrogen teams are asked to contact us at *contact@fs-france.com* as the admission will be processed on a case-by-case basis.

FR 3.5 –Registration fee

The registration fee for FSF 2025 is:

- EV teams: 2,300€
- 3C teams: 900€

The fee covers access to the competition site for up to 20 team members.

Additional members can be registered for:

- 30€ per person before the TMRF deadline
- 60€ per person after the TMRF deadline

After the TMRF deadline, teams will receive an invoice for the extra team members and the camping fee (see FR 3.6). Payment must be made by bank transfer.

For team members added after the TMRF deadline, the extra fee must be paid by card onsite during check-in. **Teams must update the TMRF to reflect the exact number of members onsite before their check-in**.

Note: There is no extra fee for participating in the Driverless Cup (DC).

FR 3.6 –Camping fee

The camping fee amounts to **70€/person** and includes 7 nights on the FSF campsite (from Monday 25th August to Monday 1st September 2025).

After the TMRF deadline, an invoice will be issued and sent to every registered team, with the amount to be paid corresponding to the number of team members registered for the campsite on the TMRF (and the additional team members onsite, see FR 3.5). **Payment of this invoice has to be done by bank transfer within 10 working days after receiving the invoice**.

Additional team members can be booked after the TMRF deadline for **140€/person**. The team will then have to pay the extra fee by card onsite during the check-in. The **TMRF will have to be updated by the team to exactly fit the team members actually on the campsite**.

FR 3.7 –Deposit

A deposit of 1000€ will be charged at FSF 2025. Team will be asked either to:

- give a check of 1000€, or
- proceed to a €1000 card pre-authorization

at the check-in during teams' arrivals.

FR 3.8 –Refund policy

In case FSF 2025 is cancelled by the organizers, the registration fee is 80% refundable and the camping fee is 100% refundable.

In case a team withdraws from FSF 2025 at any date for any reason, the registration fee can be fully refunded if and only if another team from the waiting list registers to fill the vacant slot. In case no other team registers to FSF 2025, the registration fee is not refundable. The camping fee is still 100% refundable.

Note:

- *Deregistration due to late submission or else is considered as a team withdrawal.*
- *The withdrawal of one or a few team members only cannot result in a refund of the registration fee or the camping fee.*

FR 3.9 –VAT

Registration fees for FSF 2025 are collected by an Association law 1901. In France, an association does not collect VAT (Value Added Taxes). Therefore, camping fees and registration fees for FSF 2025 are excluding VAT. No VAT is therefore recoverable, as well as no taxes will be required to be paid in addition to the fees aforementioned.

FR 4 - Deadlines and documents

FR 4.1 - Deadlines

All required documents and information must be uploaded prior to the following deadlines by all successfully registered teams. **There won't be any deadline reminder, teams are responsible for making sure deadlines are met.** Documents may be uploaded starting with the announcement of the registration results.

Date	Deadline	Submission	Document template	Document format	Class
Impact attenuator DATA (IAD)	2025-03-14 13:00	FSG account	FSG template	pdf	EV& H2
Structural Equivalency 3D Model (SE3D)	2025-03-14 13:00	FSG account	FSG template	iges	EV& H2
Structural Equivalency Spreadsheet (SES)	2025-03-14 13:00	FSG account	FSG template	xlsx	EV& H2
Accumulator Structural Equivalency Spreadsheet (ASES)	2025-03-14 13:00	FSG account	FSG template	xlsx	EV& H2EV
Electrical System Form (ESF)	2025-03-28 13:00	FSG account	-	pdf	EV& H2EV
Autonomous System Form (ASF)	2025-03-28 13:00	FSF account	-	pdf	DC
Hydrogen System Form (H2SF)	2025-03-28 13:00	FSF account	-	pdf	H2
Business Plan Pitch Video (BPPV)	2025-05-30 13:00	FSF account	-	mp4/avi	All
Design Spec Sheet (DSS)	2025-05-30 13:00	FSF account	FSF template	xlsx	All
Engineering Design Report (EDR)	2025-05-30 13:00	FSF account	-	pdf	All
Team Parts & Equipment (TPE)	2025-06-15	FSF account	FSF	pdf	3C

	13:00		template		
Electrical System Officer Qualification (ESOQ)	2025-06-20 13:00	FSF account	-	pdf	EV& H2EV
Autonomous System Responsible Qualification (ASRQ)	2025-06-20 13:00	FSF account	-	pdf	DC
Team Member Registration Form (TMRF)	2025-06-27 13:00	FSF account	FSF template	xlsx	All
Cost Report Documents (CRD)	2025-07-15 13:00	FSF account	FSG template	zip	All
Business Plan Report (BPR)	2025-07-15 13:00	FSF account	-	pdf/zip	All
Vehicle Status Video (VSV)	2025-07-30 13:00	FSF account	-	mp4/avi	EV
Autonomous System Status Report (ASSR)	2025-07-30 13:00	FSF account	FSF template	pdf	DC
Final dbc upload (DBC)	2025-07-30 13:00	FSF account	-	dbc	DC
Drivers licenses	2025-08-12 13:00	FSF account	-	pdf/zip	EV & H2

A team moving up from the waiting list has 7 days from the registration confirmation to upload the late documents without getting penalties.

All documents uploaded on the FSF account must comply with a maximum size of 50MB. For the uploads at the FSG account, the limits of FSG apply.

FR 4.2 - [3C Only] TPE

Every 3C teams have to publish the TPE on the FSF website. The document must list the equipment and parts they wish to bring to FSF 2025 in order to show them during the C&M and Design events. Especially, we expect the document to quantify the volume needed to store these parts and equipment. Please note that **by default, a 3C team won't be getting any pit space**. The Event Management will send a feedback by email after the TPE deadline to inform the 3C teams of their allocated space onsite (space will be allocated according to the actual available space). **Please note that 3C electric vehicles are not allowed to activate tractive system at the**

event site. The quality and content of the document won't be taken into account for the scoring of the team.

FR 4.3 - Late submission

FS Rules A 5.4 and A 5.5 are void. 10 penalty points are applied for each started 24 hours period after the submission deadline.

Penalties applied due to late submission of EDR, DSS, CRD, BPR and BPPV will be deducted from the team's final score of the respective static event. The minimum achievable final score in each static event is 0. If a team reaches 0 point in one of the static events due to late submission before the event, it will be deregistered from Formula Student France 2025.

The maximum possible sum of all penalty points applied due to late submission of the SES, ASES, SE3D, IAD, ESF, ASF, H2SF, ASRQ, ASSR, ESOQ and DBC 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. If a team fails to upload one of the previous documents within 14 days after the deadline, it will be deregistered.

Late upload for the VSV has no consequence. The deadline only indicates when a team should at the very least have its car already working. A team won't be deregistered if the VSV has not been uploaded before the event, it might even run for the dynamic events if the car passes scrutineering. In all cases, teams are requested to report for the static events, even if their car does not pass technical inspection or is not completed in time for FSF 2025.

There are no penalties for late submission of the TPE, drivers licenses and TMRF. However, late submission of the TPE results in no space dedicated to the 3C team. Consequences for late submission of the TMRF are described in FR 3 - Registration. **In particular, no TMRF submission before 13th August 13:00 results in the team being deregistered. Late submission of the drivers licenses might result in the team not being able to participate to the dynamic events.**

FR 5 - Technical Requirements and Inspections

FR 5.1 - Technical inspection sticker

A 150x150mm (HxW) spot shall be reserved on the upward-facing bodywork at the front of the car for the FSF technical inspection sticker.

FR 5.2 - Technical inspection order

The Technical Inspection Order (TIO), or scrutineering queue, is based on the order of submission of vehicles status videos. For teams that have not published their video before the deadline, they will be placed at the end of the queue and will be ranked according to their quiz results.

The TIO will be the basis for the assigning of the timeslots for Accumulator Inspection and Electrical Inspection. Mechanical inspection slots will also be assigned based on the TIO but not only, depending on the availability of teams. A team may begin the mechanical inspection before the electrical inspection is validated.

FR 5.3 - Technical inspection procedure

The technical inspection procedure will take place in the designated areas indicated on the map. First technical inspection attempts get pre-defined slots for each team. All subsequent inspection attempts follow a queuing system with no time slots. The inspection order is:

1. Accumulator Inspection
2. Electrical Inspection
3. Mechanical Inspection (including pre-inspection)
4. Autonomous System Inspection (DC only, according to IN 6)
5. Hydrogen System Inspection (H2 only)
6. Tilt test
7. Weighting
8. Rain test
9. Egress
10. Brake test
11. EBS test (DC only)

The FSF technical inspection will roughly follow the FSG inspection sheets. The final FSF 2025 checklist will be published on the official website prior to the event. **We**

highly recommend the teams to review these inspection sheets and practice inspection before participating to FSF.

FR 5.4 - Data logger

Data loggers will be provided by FSG. Their specifications will be available on both the FSF and FSG websites. For DC teams, refer to FR 8.2.

FR 5.5 - Fire extinguishers *(addition to Rules 2025/T13.4)*

In addition to the two dry-powder extinguishers prescribed by the rules, teams may bring any number and type of fire extinguishers to the event site and use them in case of emergencies. This includes most notably CO_2-type extinguishers and those specially designed for battery fires. Fire safety schooling is strongly encouraged.

FR 5.6 - Accumulator areas

Teams' accumulators are required to be stored in the charging area at all times until the accumulator and the electrical inspection are validated. Accumulators may only move from the charging area to the accu/elec inspection and vice-versa until then.

Once the accu/elec inspections are validated by FSF officials, the accumulator may be mounted on the car at all times and stored wherever teams want (i.e. charging area or pits).

Regardless of the accu/elec inspections being validated, working on accumulators is only allowed in the charging area and under scrutineers supervision.

FR 6 - Static events

FR 6.1 - Engineering Design Event

FR 6.1.1 - Event procedure

The Design event will take place in hard infrastructures, meaning solid walls can be used to hang any material. The space allocated will be of around 5x8m. 1 table and 1 screen (with HDMI cable) will be provided for the event. A screen presentation (ppt, pdf or equivalent) is expected to be shown to the judges, covering all the design review criteria.

Time slots will be allocated to each team prior to the event and published on the official website. Presenters are required to arrive on time, otherwise they may be penalized. Slots are 60 minutes long, including 10 minutes before the presentation to set up and 5 minutes after the event to uninstall. Slots include a 15 ±5min presentation, followed by 30 ±5min of individual design category discussion between team specialists and design judges(see design event scoring table).

Category	Duration (min)	Tolerance (min)	Comments and/or expectations
Initial team and vehicle set up	10	-10	Maximum allowable time for the team to install the vehicle, any part or item needed for presentation, any preparation of the vehicle itself (like bodywork removal, etc)
Design presentation	15	±5	General presentation with limited number of speakers (1 to 3 recommended) to introduce the vehicle, the team, the objectives and any topics that may not covered by a later specialist discussion
Design category discussion	30	±5	Design category discussion between team specialists and design judges to address specific items of the car and the design event scoring category. Note that some judges may cover several items. A minimum of 3 judges will be available to address different topics. Any presentation support or hardware is welcome to showcase team's knowledge/work to the judges.
Final team and vehicle wrap up	5	-5	Maximum allowable time for the team to uninstall the vehicle, any part or item needed for the presentation
Total	**60**	**N/A**	**-**

FR 6.1.2 - Design event scoring

Design scoring for the EV category will follow the following table:

Category	EV Points	Comments and/or expectations
Overall Vehicle Concept	20	Describe and justify why, how and what vehicle concept has been chosen to meet the 2025 season team objectives. Describe and justify the vehicle architecture and/or technologies and components choices related to the "make or buy" strategy in relation with the project skills, knowledges, costs, planning, quality,...
Vehicle Performance	30	Describe and justify the vehicle overall performance as a complete system to meet its objectives and specifications (possibly thanks to multi-physics models)
Mechanical / Structural / Aero Engineering	20	Describe and justify the vehicle mechanical design (structural as well as aerodynamics) under all its load cases and throughout all its life
Tractive System / Powertrain / Vehicle Dynamics	20	Describe and justify the vehicle propulsive system according to its expected performance and the design choices or design activities performed to achieve goals
LV-Electrics / Electronics / Hardware	20	Describe and justify the vehicle Low Voltage electrical system (hardware and software) related to its expected functions, performances and how the design, production, testing and validation were performed
Crew Interface	10	Describe and justify the vehicle crew interface (not limited to the pilot) in relation with the vehiclerequirements (rules, control, human capacities, competition needs, etc). Any crew interfaces should be considered (assembly, maintenance, racing, etc)
Carbon Footprint	10	Describe and justify the vehicle carbon footprint focused on CO_2 related to scope 1, 2 and 3 (scope 3 must be at least considered for FSF 2025)
Engineering Design Report	10	Describe and justify the vehicle in the Engineering Design Report - see report specifications in FS Rules
Engineering Project Management	10	Describe and justify the vehicle project methods related to organization, decisions, funding, test and learn experience, priority management, resource management
Total	**150**	**-**

The EV teams in DC will be evaluated both on the above electrical criteria and the autonomous criteria listed below:

Category	EV Points	Comments and/or expectations
Overall Vehicle Concept	20	Describe and justify why, how and what vehicle concept has been chosen to meet the 2025 season team objectives. Describe and justify the vehicle architecture and/or technologies and components choices related to the "make or buy" strategy in relation with the project skills, knowledges, costs, planning, quality,...
Vehicle Performance	30	Describe and justify the vehicle overall performance as a complete system to meet its objectives and specifications (possibly thanks to multi-physics models)
Vehicle Integration	20	Describe and justify the autonomous system integration (physical, electrical, etc) in the vehicle to accommodate both manual and driverless configurations
Autonomous System Architecture	30	Describe and justify the vehicle propulsive system according to its expected performance and the design choices or design activities performed to achieve goals; especially the functions enabled to reach autonomous drive level
Software / LV-Electrics / Electronics / Hardware	30	Describe and justify the vehicle Low Voltage electrical system (hardware and software) related to its expected functions, performances and how the design, production, testing and validation were performed
Sensors and technologies	20	Describe and justify the vehicle specific autonomous sensors and technologies required to achieve autonomous mode
Total	150	-

FR 6.1.3 - Guidelines

The following guidelines either mandatory or advisory shall be followed for the design event:

Category		Guidelines
Mandatory guidelines	Design report	The Design report must be submitted to the FS organization on the specified date; penalty will be applied otherwise
	Design review	The presentation will be performed in English
	Design review	A screen presentation (ppt, pdf or similar) is expected to be shown to the judges addressing all the design review criterion
	Hardware	In case a car (whatever the category) is intended to race during the competition, the car must be presented during the Design Review
Advisory guidelines	Hardware	Any hardware not directly related to the car but in relation with any of the Design Event criteria that may support the presentation might be presented to the design judges
	Hardware	It is recommended that any hardware used to support the design review (car, parts, whatever) shall be safely prepared for use and/or inspection
	Design review	It is recommended that the design review follows the "why/how/what" presentation philosophy for each design items. It is recommended that the design review addresses the specification, design and verification principles
	Design review	It is recommended that presenters feature a common dress code to be easily identified by the judges
	Design review	It is recommended to identify on top of the presenters a focal point for each of the design event criteria

FR 6.2 - Cost & Manufacturing Event

FR 6.2.1 - Rules

Please note that all rules from the FS 2025 Static Event Rules apply to this event (S1 and S3).

The system for the Carbon Costed Bill of Materials (CCBOM) (see S3.5) will remain the same as outlined in the FS Rules 2025.

FR 6.2.2 – Event location and setup

The Cost & Manufacturing (C&M) event will occur in hard infrastructure spaces, meaning solid walls will be available for hanging materials. Each team will be allocated a space of approximately 5x8 meters. One table will also be provided for the event.

FR 6.2.3 – Event schedule and time slots

Time Slots: Each team will be assigned a 60-minutes time slot, which includes:

- 10 minutes before the presentation to set up.
- 45 minutes for the presentation. Judges might choose to include a brief feedback session during the allocated timeslot.
- 5 minutes after the event to uninstall.

Time slots will be published on the official website before the event. Presenters are required to arrive on time to avoid penalties.

FR 6.2.4 – Preparation reminders

To prepare for the C&M event at FSF, keep the following in mind:

- The event is not merely a list of parts but an extension of the Design Event. Teams must demonstrate mastery of manufacturing processes and show that these have been integrated into the design, considering cost, quality, and delivery perspectives.
- Judges expect a critical evaluation of the design and manufacturing choices made. This includes understanding alternatives and explaining compromises (e.g., adjustments made due to machine availability, sponsor constraints, or production volumes).
- A state-of-the-art car is not required to succeed; the focus is on the rigor and understanding of decisions.
- Teams should ensure the Cost Report Document (CRD) includes all necessary information to help judges understand their cost models and decision-making process.

FR 6.2.5 – Real case topic

The real case topic for the event will be published on the official website at the latest on 31st July 2025, at 23:59.

FR 6.3 - Business Plan Presentation

FR 6.3.1 - Applicable Rules *(Change of Rules2025/S1)*

Teams must comply with FS Rules 2025 in addition to the rules specified in FR 6.3. Rules in FR 6.3 will take precedence over FS rulebook in case of discrepancy between the two sources.

FR 6.3.2 - Business Plan Procedure

The Business Plan Pitch Video and the Business Plan Report must be submitted beforehand according to the specifications in FR 4.

Through your Business Plan Pitch Video, teams need to convince the judges of your idea, in order to progress to the second part, which is the presentation. Teams that fail to do so, will not be eligible for points from or participation in the second part.

Up to 3 teams might be selected for the BPPfinals. The Business Plan Presentation finals consist only of a 10min public presentation without any Q&A session. A maximum of 3 teams will be selected for the finals.

All teams can request feedback on demand. The feedback will either be in the form of a written review, onsite or remote meeting.

FR 6.3.3 - Business Plan Pitch Video (BPPV)

The BPPV must not exceed a length of 30s but may be shorter and must be in a common video format (e.g. avi, mpg, mp4, wmv,…). Links towards streaming platforms (e.g. Youtube, …) will not be permitted.

The BPPV should be an exciting preamble of the Business Plan Presentation, depicting your business idea, giving a broad assessment of its profitability and what is offered to the investors. Regardless of the format itself, the video should have a cohesive storyline and be well-paced.

Two weeks after the submission deadline, teams will be informed if they have qualified for the Business Plan Presentation.

FR 6.3.4 - Business Plan Report (BPR)

Teams qualified for the Business Plan Presentation will need to submit a Business Plan Report (see FR 4 for the submission deadline).

The Business Plan Report consists in a written report (.pdf format) depicting your fledgling company's business plan and containing whatever information you deem

necessary for the investors to assess the viability, growth potential, and financial prospects of your venture (forecasted revenue, costs, financial simulation, market trends,…). The pdf document may eventually be completed with other documents (xlsx, jpeg, another pdf, or other common format) that the team feels necessary to bring to the judges attention. In this case, the uploading format must be .zip.

FR 6.3.5 - Business Plan Presentation (BPP)

Time slots will be allocated to each team prior to the event and published on the official website. Presenters are required to arrive on time, otherwise they may be penalized. Slots are 30 minutes long, including 5 minutes before the presentation to set up and 5 minutes after the event to uninstall (i.e. 10 minutes presentation + 10 minutes questions and answers).

The BPP event will take place in hard infrastructures. The presentation equipment provided will be either a large-screen TV or a data projector. The available connection will be HDMI. Teams are responsible for the performance of their equipment and connectivity.

All team members participating in the BPP must be introduced to the judges at the beginning of the presentation. A maximum of 4 people per team will be allowed inside the Business Plan Presentation room. Only team members who have been introduced may answer to the judges' questions even if they were not actively presenting.

FR 6.3.6 - Business Plan Scoring

Category	Points
Pitch Video	10
Content	15
Finances	15
Business Plan Report	10
Demonstration and Stucture	15
Delivery	10
Questions	10
General Impression	15
Total	**100**

The scoring is calculated as per FS rules 2025 (S 2.4.6 & S 2.4.7).

FR 7 - Dynamic events

FR 7.1 - Driver limitations

D 2.1.1 is void: a minimum of 4 drivers for each team are necessary if a team wants to run all its runs (but no team is required to run any dynamic event). A maximum of 6 drivers are allowed for each team.

FR 7.2 - Drivers briefing

All participating drivers must attend the mandatory driver briefings.

FR 7.3 – Cones

FSF cones pictures tba

For every dynamic event, included the DC ones, cones will generally be used as follow:

- yellow cones will be placed on the right side of the track,
- blue cones will be placed on the left side of the track,
- orange cones will be used in warm up areas, to delimit the starting/finishing line, stop and start areas, etc...

More details will be given during the driver briefing if necessary.

More details for DC tracks are available in FR 8.5.

FR 7.4 - Acceleration event

Each team has four runs, driven by two drivers with two runs each.

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

- T_{team} is the team's best time including penalties.
- T_{max} is 1.5 times the time of the fastest vehicle including penalties.

3.5 additional points are awarded to every team that finishes at least 1 valid acceleration run.

FR 7.5 - Skidpad event

Each team has four runs, driven by two drivers with two runs each.

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

- T_{team} is the team's best time including penalties.
- T_{max} is 1.25 times the time of the fastest vehicle including penalties.

3.5 additional points are awarded to every team that finishes at least 1 valid skidpad run.

The FSF 2024 skidpad track may be artificially wet.

FR 7.6 - Autocross event

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

- T_{team} is the team's best time including penalties.
- T_{max} is 1.25 times the time of the fastest vehicle including penalties.

5 additional points are awarded to every team that finishes at least 1 valid autocross run.

FR 7.7 - Endurance & Efficiency event

The Autocross finishing order (in reverse) will form the basis for the endurance running order. However, the running order creation can deviate from a speed-based approach to accommodate organizational needs. Officials may allow or require cars to run out of order if needed to finish the endurance event within the given time limits. At least the five next vehicles according to the running order must queue up at any time during the endurance. The queue must be continuously filled up by the following vehicles. When the queue runs empty (i.e. there is no vehicle in the queue) for more than 5 min, all vehicles after the last that actually started its endurance run in the running order are considered as running Out-of-order.

The running order for the endurance according to D 7.3 will be published before the start of the endurance.

The endurance event closes if all these conditions are met:

- the only cars that have not started yet are running Out-of-order,
- the last car to run finished its run,
- the queue is empty.

Officials may maintain open as well as close the endurance event at any time if considered necessary.

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

- T_{team} is the team's corrected elapsed time.
- T_{max} is 1.333 times of the corrected elapsed time of the fastest vehicle.

1 point is awarded every endurance lap completed and 3 additional points are awarded to teams that finishes endurance without DQ (i.e. a total of 25 points are assured if a team finishes endurance without DQ).

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

- EF_{team} the team's efficiency factor
- EF_{min} the lowest efficiency factor of all teams which were considered for efficiency
- EF_{max} is defined as 1.5 times EF_{min}
- $EF = E \times T^2$, with
  - T uncorrected elapsed driving time
  - E used energy

FR 8 - [DC only] Driverless Cup specifications

FR 8.1 – Autonomous System Status Report (ASSR)

The Autonomous System Status Report (ASSR) is a mandatory document for teams participating in driverless events at FSF25. It must be submitted as a PDF with a maximum length of 1 page. This report outlines your team's readiness for driverless events and helps us in the preparation of them. An ASSR template will be provided on the FSF official website.

The Autonomous System Status Report (ASSR) must include the following sections:

- Provide a summary of your progress and assign a preparedness level from 1 (totally unprepared) to 10 (all events completed in testing).
- Sensor and Software Integration: provide the status of sensor integration and summarize any in-loop tests, or simulation testing conducted. Include key details of your vehicle's testing program, such as mileage covered.
- State the overall status of your software development and indicate readiness for the following events:
  - Acceleration [Yes / No]
  - Skidpad [Yes / No]
  - Autocross [Yes / No]

Ensure all information are concise and accurately reflect your team's progress and readiness. The ASSR is not taken into account in the scoring of a team (as long as it is uploaded by the deadline).

FR 8.2 – Data logger specificities

CAN traffic logs will not be collected by officials at FSF 2025. However, upon request by the officials, teams must ensure they can provide logged data in a CSV format containing the parameters listed in the table below.

Signal	Unit	Decimals
Speed_actual	km.h^{-1}	1
Speed_target	km.h^{-1}	1
Steering_angle_actual	deg	1
Steering_angle_target	deg	1
Brake_hydr_actual	deg	1
Brake_hydr_actual	%	1
Motor_moment_actual	%	1
Motor_moment_target	%	1
Acceleration_longitudinal	m.s^{-2}	3
Acceleration_lateral	m.s^{-2}	3
Yaw_rate	deg.s^{-1}	2
AS_state	int	0
EBS_state	int	0
AMI_state	int	0
Steering_state	bool	0
Service_brake_state	int	0
Lap_counter	int	0
Cones_count_actual	int	0
Cones_count_all	int	0

A valid .dbc file containing the message definition of the AS messages must be uploaded (see DBC in FR 4).

Failure to make the data available within 4 hours after a request from an official due to the team's fault, is a violation. Each violation is a DQ for the concerned run.

FR 8.3 – Remote Emergency System

The RES according to T14.3 that has to be used for the competition is a GF2000icodec/T53R98 combination from Gross-Funk GmbH12.

FR 8.4 – DC design event

Points for the DC design event will be allocated in accordance with FS rules. The DC design event will be held at the same time as the EV design event for a team: specific driverless judges will be appointed during the team's EV design event time slot in order to judge the design of the autonomous system. Teams are therefore asked to allocate specific team members for the autonomous system design review.

FR 8.5 – Driverless Events Track Markings

The markings of all dynamic events will have the following characteristics:

- The track is marked with cones.
- The left borders of the track are marked with blue cones.
- The right borders of the track are marked with yellow cones.
- Exit and entry lanes are marked with orange cones.
- Orange cones will be placed before and after start, finish and timekeeping lines.
- If not defined otherwise in chapter D of the rules, the maximum distance between two cones in driving direction will be 5 m. In corners, the distance between the cones will be smaller for a better indication.
- The start, finish and timekeeping lines as well as keep out zones around the timekeeping equipment are marked with chalk/paint.
- Additionally, track limit lines on either side of the track and entry/exit lanes may be marked with chalk/paint.
- Timekeeping equipment may be surrounded by additional cones outside of the track boundary.

The following limitations can occur, mainly resulting from the Transpolis track conditions and organizational/authorizational issues:

- lines may not be perfectly and continuously drawn.
- There may be further markings to those mentioned above, that are not part of the track (e.g. cone position markings, lines from other events or different colored surface, etc.), on or close to the track which will not be removed by the officials.

- There may be (stacked) spare cones standing at the trackside at distinguishable distance.
- There is time keeping equipment next to the track that could be recognized as cone.
- No special artificial landmarks are provided by officials. The team must not place additional landmarks on the track or inside the dynamic area.
- No map data is provided by the officials.

The following figures visualize the track layouts for DC dynamic events.
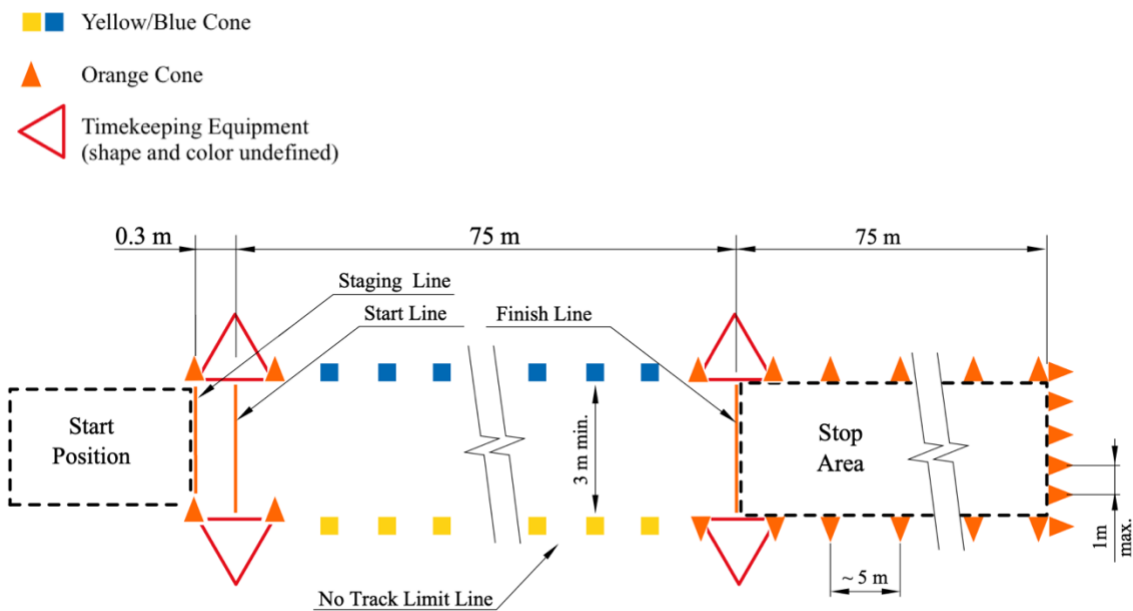

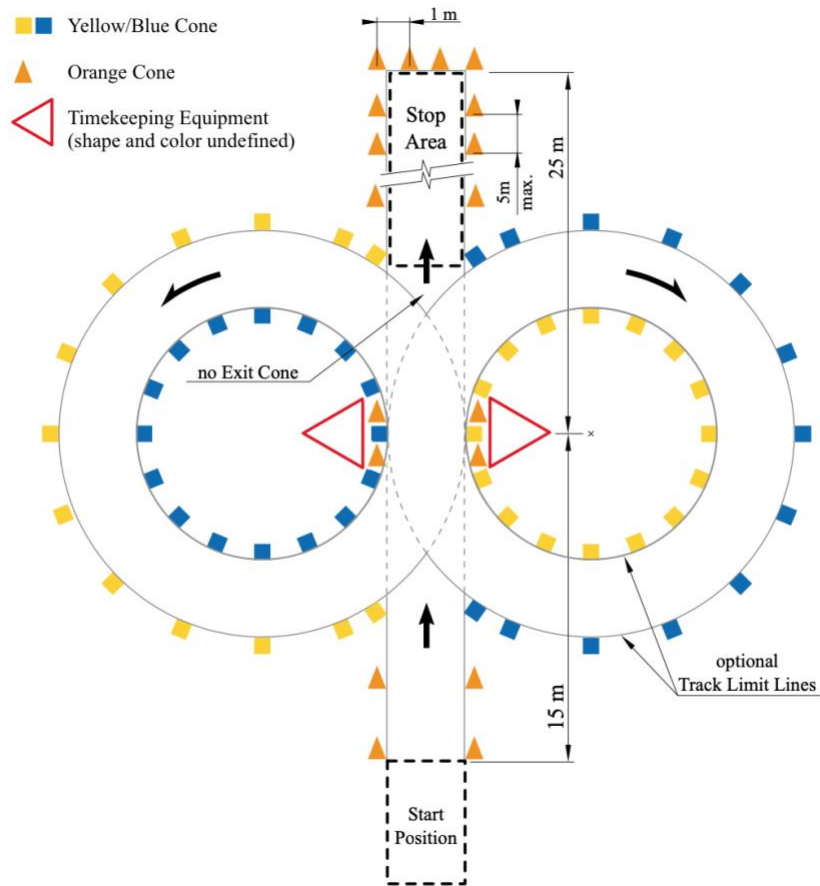*Figure 1: Driverless Acceleration track layout for FSF 25*

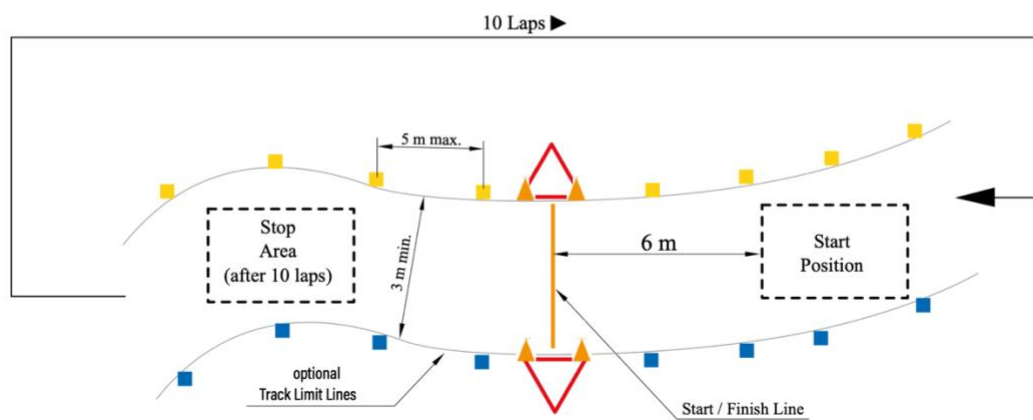*Figure 2: Driverless Skidpad track layout for FSF 25*

Figure 3: Driverless AutoX track layout for FSF 25

FR 8.6 – Driverless dynamic events

During the start-up procedure for driverless events, if the vehicle fails to cross the starting line within 2 minutes after being staged, the officials may send the team back to the preparation area. In such cases, the team will lose any starting priority. At autoX, the foremost part of the vehicle will be staged 5m – 15m in front of the timekeeping line. The vehicle will exit at the intersection moving in the same direction as entered and must come to a full stop inside the marked exit lane. The length of the finish line may be shorter than 25 m according to the real possibilities of the track. Latest and precise updates about the track layouts will be given during the autonomous briefing onsite. As soon as the vehicle moves under its own power, all associated team members within the dynamic area, with the exception of the ASR, must wait in a designated area until the run is finished. Usage of the EBS inside the marked exit lane will not lead to a DQ. After the run, the vehicle must be collected immediately at the exit by two team members and the push bar.

For each driverless events (skidpad, acceleration and autocross), each team has a maximum of two runs. **There will not be a driverless cup trackdrive event at FSF25.**

There will be a mandatory briefing for autonomous system responsible. All responsible involved in the autonomous driving systems must attend the mandatory briefings.

FR 9 - General onsite information

FR 9.1 - Emergency contacts

If you have an emergency that requires the police, fire department or an ambulance, you should call the emergency number 112. If you don't have an emergency, but you still need to contact the police, you can dial 17.

Always inform event officials about your emergency.

FR 9.2 - Campsite

A document specific to the campsite will be released prior to the event on the official website. It will provide all the information needed for the teams stay. This document is to be considered part of the rules.

FR 9.3 - Event site

The event site consists of all paddock areas, including the static event area, the scrutineering area, the pit garages, all dynamic event locations including spectator areas, the media center, the business plan presentation rooms and the welcome center.

The use of motorcycles, quads, bicycles, scooters, skateboards or other similar mobility devices as well as self-propelled devices in general by team members and spectators is prohibited. Teams utilizing any of the listed mobility devices may be penalized.

No vehicles are allowed on the event site, except for loading and unloading during pit construction and deconstruction times (**maximum authorized speed is 30km/h**). Teams with vehicles on the event site outside of these timeslots may be penalized.

The use of alcohol or any other drug is strictly prohibited. Team members may be asked to perform an alcohol test if doubts arise.

Tractive System (TS) cannot be activated in the pits without prior approvement of an electrical scrutineer. The approvement must be asked for by the Electrical System Officer (ESO) who will oversee the work done during TS activation. They must be able to clearly explain the goal and necessity of the activation, and the details of the planned work from start to finish.

Smoking (including electronic cigarettes) is prohibited outside smoking areas (see map).

An infirmary is located on the event site (see map). A first-aid kit is available as well as a defibrillator in case of emergency.

FR 9.4 - Arriving at FSF 2024

Details about arrival and check-in will be published on a specific document prior to the event. This document is to be considered part of the rules.

FR 9.5 - Driver Registration

Driver registration will take place at the Welcome Centre during the teams check-in. Every driver must have their government issued driver's license and national ID card as well as their student ID ready for inspection.

FR 9.6 - ESO Registration

Electrical System Officer registration will take place at the Welcome Centre during the teams check-in. Every ESO must have their national ID card as well as their student ID ready for inspection.

FR 9.7 - Pit garages

Each team will have a dedicated space of around 35m² to install its pit garage (about 5.8m by 6m). A list of pit garage allocations with their dimensions will be published prior to the event on the competition website.

Pit garages are equipped with electricity (230v 16A, CEE 7/7) but teams are required to bring cord extensions.

FR 9.8 - Team Managers meetings

Team Managers are required to attend all Team Manager meetings. These meetings will be held online if scheduled before the event or at the location specified in the time schedule if held during the event.

Team Managers meetings are mandatory. A Team Manager can be replaced by a team member if not available. Specifically, a security briefing might be given prior to the event: a team won't be accepted onsite if the Team Manager (or a representative) doesn't show up during the security briefing.

FR 9.9 - Warnings and penalties

Any violation of the rules may lead to a warning or penalty. Warnings can be issued in writing or verbally by event officials. Any penalties will be issued in writing and will be published publicly after the event.

FR 9.10– Livestreaming and live timing

There won't be livestreaming at FSF 2025.

Live timing will be available at FSF 2025. Live timing consultation details will be published as the event approaches. Points allocated to each event will be published progressively during the event, after processing by the judges, on the official website.

For teams taking part in the dynamic events, please return the transponder at the end of the event (it will be installed on the car by the scrutineers).

FR 9.11 - Event Photo

All teams are required to attend the event photo. Final timing and instructions will be given on the Team Managers WhatsApp conversation (please check the time schedule for preliminary timing).

FR 9.12 - Charging

The charging area is a designated dynamic area with restricted access. Only three members per team may enter the charging area at the same time. All of them must be Electrical System Officers (ESO). Inside the charging area, team members must not wear any conductive jewelry and must not wear any conductive objects of any kind which could touch the accumulator.

The power supply connector of the teams' **charger must be a 56mm 5 pin plug according to IEC 60309 (CEE-form plug)** and rated for 16A or according to CEE 7/7 (type F) and rated for 16A. Adapters are permitted.

After charging, TS accumulators must rest for 30 minutes. During this resting period, the AMS must be live and monitored by at least one team member.

FR 9.13 - Dynamic area

Dynamic areas are specified on the map and delimited by barriers onsite. Only 4 members of the same team can access a Dynamic area. Team members must wear a vest, which will be provided during check-in. Penalties will be applied in the event of non-compliance.

FR 9.14 – Crafting area

It is prohibited to carry out heavy work in the pits (e.g. welding, grinding, etc...). However, this type of work is permitted in the designated crafting area (see map). If you are in any doubt as to whether you are authorized to carry out a task in the pits, please contact the scrutineering crew who will provide you with an answer.

FR 10 -   Security briefing

FR 10.1 - General information

The competition is hosted on Transpolis' private site. In this context, the arrival of teams is partly supervised by Transpolis and must therefore follow the internal regulations in force.

further information tba

FR 10.2 - Points of attention

Any person onsite is required to stay on paved roads (i.e. not on grass), with the exception of unpaved but marked areas.

Wearing safety shoes is recommended. Should a person fail to wear safety shoes, they refuse the right to blame Transpolis or the event management in the event of an accident that could be prevented by wearing safety shoes.

The Endurance and Autocross viewers area is located on a slope. Teams are required to be careful and will be entirely responsible in the event of slips or scrambles.

FR 11 -   H₂ Concept Challenge

FSF 2025 will host a Hydrogen Concept Challenge, both EV and CV. The specific rules for this challenge are released on the official FSF website.

Every team participating in FSF 2025 can participate in this challenge free of charge. Teams not registered for FSF 2025 can also participate in this challenge but will be charged €200. In any case, if a team wishes to participate in the challenge at FSF, please contact the Event Management to apply for a slot (10 slots available) in addition to the terms already specified in the specific rules. The registration process is on a first-come, first-served basis and is only possible until the TMRF deadline.

A team can participate both in the FSF 2025 H_2 concept challenge and in another European event's H_2 concept challenge, there is no restriction on the number of participations in the challenge for a team.

A team participating in the FSF 2025 H_2 concept challenge but not registered as an EV, H2 or a 3C team will be granted access to the event site for the duration of the event and can claim a camping slot.

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