Shell
Eco-marathon

2026 Official Rules

Chapter IV: Autonomous Driving Competition

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0. Amendments

Purpose

This page records all official changes, clarifications, and updates to Chapter IV after initial publication. Amendments ensure transparency and consistency for all participants.

Version: 1.1

Date of Issue: 26/11/2025

List of amendments:

Amendment No.	Article Affected	Amendment	Effective Date
1	402 b	Article Removed	26/11/2025
2	402 c	Renumbered sub-clause from Article 402(c) to Article 402(b) for consistency in section structure.	26/11/2026

Notes

- All amendments are binding from the effective date.
- Teams must review this page regularly for updates.

1. General

Article 401: Definition

a) The Shell Eco-marathon Autonomous Driving Competition (ADC) challenges student teams to integrate intelligent autonomous systems into Prototype or Urban Concept vehicles.

b) Set on a closed racetrack, the Competition mirrors real-world challenges in mobility, combining advanced software, sensors, and control systems to navigate a defined course safely and efficiently. It is a multidisciplinary test of teamwork, engineering, and innovation, where vehicles must drive themselves while demonstrating system integration, decision-making, and energy-aware driving.

c) The Shell Eco-marathon Autonomous Driving Competition consists of two components:

   i. On-Track Challenge: Evaluates vehicle energy efficiency.

   ii. Business Presentation: Assesses the Team's strategic, technical, and environmental approach, as well as presentation quality.

Article 402: Other Relevant Rules

a) Shell Eco-marathon 2026 Official Rules, Chapter I and the Event-specific Chapter II both apply to the Autonomous Driving Competition.

b) There are certain exceptions to Chapter I, listed below:

   i. Article 31. The vehicle does not need to be equipped with a horn.

   ii. Article 37i. A dead-man's safety device is not required. See Article 412e.

   iii. Articles 25c, 39, 45. The maximum dimensions may be exceeded only where strictly necessary to accommodate autonomous sensors or related equipment.

   iv. Article 46h. Luggage (space) for Urban Concept vehicles is not required.

   v. Article 66a. A purpose-built motor controller for the Battery Electric class is not required.

Article 403: Eligibility

a) The Autonomous Driving Competition is open to all Shell Eco-marathon vehicle categories and energy classes and can be entered by Teams from any region.

b) Applications to enter the Autonomous Driving Competition must be made independently from other Shell Eco-marathon Events via the Shell Eco-marathon registration site.

Article 404: Selection

Teams are selected by the Organisers, at their discretion, based on the Team's demonstrated readiness to participate in the Competition. To demonstrate their readiness, Teams will be asked to provide supporting materials during their registration.

2. On-Track Challenge

Article 405: Access to the Track

a) Teams must pass Technical and Safety Inspection to compete in the Autonomous Driving Competition.

b) Additional scrutiny will be applied to determine that the Autonomous System is attached securely, wired neatly, and does not compromise the safety of the vehicle. Teams will be required to demonstrate the engagement and disengagement of the Autonomous System.

c) Vehicles must have a driver in place when entering the track. The driver's purpose is only to intervene if the vehicle is behaving in an unsafe manner or in case of incident. This driver is referred to as the Safety Driver.

d) Safety Drivers and Team Managers are required to attend the Drivers Briefing. Failure to attend will result in the vehicle being denied access to the track.

e) During an attempt, the Safety Driver must always be inside the vehicle with their hands on the required safety devices and away from the steering wheel, and they must be ready to take control of the vehicle if necessary.

f) No vehicle will be allowed on track without successful completion of Technical and Safety Inspection, including the autonomous-specific checks.

Article 406: Track Layout

a) The challenge will take place on a racetrack.

b) The challenge area will be marked by a start line and finish line that span the width of the track.

c) One stop line will be placed at a fixed location between the start and finish lines.

d) Static obstacles will be placed on the track. These obstacles may be moved between attempts.

e) The edge of the track will be defined by a white line as in conventional motorsport competitions, by racing curbs, or by a transition to grass. Where the white line is not clear, traffic cones or barriers may be placed to define the edge of the track.

Article 407: Attempt

a) Two Team Members are permitted to accompany the vehicle and Safety Driver to the start line.

b) Prior to the start signal, vehicles must wait behind the start line.

c) After the start signal, Teams will have a maximum of 60 seconds to start their attempt.

   i. Team members, other than the Safety Driver, must be clear of the designated area before the vehicle starts its attempt.

   ii. If the vehicle cannot start within the time limit, the Team must leave the start queue.

d) The attempt begins when the entire vehicle body crosses the start line.

e) For the attempt to be considered valid, the vehicle must:

   i. Avoid contact with all obstacles or barriers.

ii. Come to a complete stop within 3.5 m of each designated stop line.

iii. Stay entirely within the track boundaries at all times.

iv. Complete the course and fully cross the finish line within the maximum allowed time.

v. Operate in Autonomous State from the moment its front crosses the start line until its rear crosses the finish line.

f) If the vehicle remains stationary for more than 30 seconds during the attempt, the attempt will be deemed invalid.

g) Only one vehicle will be permitted to perform an attempt on the track at any given time.

Article 408: Track Markings and Obstacles

a) Start line: 0.15-metre yellow line spanning the width of the track.

b) Track Boundaries: Solid white line, visual road edge markers, inflatable protection or traffic cones where necessary.

c) Track Exits: Broken white line, with orange cones.

d) Stop line: 0.15-metre orange line, spanning the width of the track.

e) Stop sign: Standard red octagon stop-sign on a yellow board, elevated 0.5–1 metre from the track surface.

f) Obstacle: 1.10-metre high, 0.45-metre diameter blue inflatable pin.

g) Finish-line: 0.15-metre yellow line, spanning the width of the track.

h) Finish area: A safe zone between start and finish where Teams must retrieve their vehicle after the attempt.

Article 409: Additional Information

Track characteristics, time limits, practice sessions, and number of attempts will be communicated in Chapter II.

3. Autonomous System Design

Article 410: Definition of Autonomous System

The Autonomous System is the integrated assembly of computer hardware, software and sensory apparatus installed within a Competition vehicle, including all cabling, connectors and additional components used to accomplish autonomous driving.

Article 411: Internal Computer System

a) The Internal Computer System (ICS) refers to the onboard computing hardware and software responsible for controlling all autonomous functions of the vehicle.

b) The ICS must be powered directly by the vehicle and must be securely mounted.

c) All autonomous driving decisions must be made solely by the ICS. Any form of remote control, external computing, or wireless intervention during an attempt is strictly prohibited.

Article 412: Communication of Autonomous State

a) The vehicle is considered to be in Autonomous State when it is exclusively controlled by the ICS.

b) Disengagement of the Autonomous State during an attempt will render the attempt invalid.

c) The Autonomous State shall be disengaged immediately if the Safety Driver provides any input that influences vehicle control, such as braking or accelerating.

d) An orange indicator light must be installed on top of the vehicle to signal Autonomous State. The light must be clearly visible from all directions at a minimum distance of 50 metres in bright daylight. It must be controlled exclusively by the ICS and cannot be manually operated by the Safety Driver or through any external input. The light must be illuminated only while the vehicle is in Autonomous State.

e) The ICS must provide information on the Autonomous State via a normally open relay for use by the Organisers. This contact must be closed when the vehicle is driven autonomously, and it must be open when driven manually by the Driver.

f) Two independent safety devices must be mounted directly on the vehicle within the driver's compartment, one for each hand. These devices must require continuous manual activation by the Safety Driver to initiate and maintain Autonomous State. Releasing either device must result in immediate disengagement of the Autonomous State. The devices must not be mounted on the steering wheel and must be positioned such that the Safety Driver cannot reach or operate the steering wheel while the devices are being activated.

Acceptable solutions include, but are not limited to push buttons or hand grips.

g) The Organisers may require the Team to install a camera inside the vehicle to monitor the Safety Driver during the attempt, including their interaction with the safety devices and to confirm that the Safety Driver does not interfere with the vehicle's controls while in Autonomous State.

Article 413: Telemetry

Teams may be required to install a telemetry system provided by the Organisers. The telemetry system supplied will communicate the Autonomous State to the Competition judges.

4. Presentations and Scoring

Article 414: Business Presentations

a) The Business Presentation requires Teams to use effective verbal and visual communication skills to describe the engineering processes behind their autonomous vehicle, their approach to energy and environmental considerations, and the execution of their project.

b) Teams must participate in the Business Presentation to be included in the overall Competition results. Teams that choose not to present will not be ranked.

c) Teams will be required to present their technical approach to the various challenges. The technical approach should include, but is not limited to, sensor selection, algorithm selection, mechanical design, electrical design, software design, fault tolerance/error recovery, testing approach, and safety approach.

d) Teams are asked to reflect on how their strategy or approach changed from the beginning of the project through the On-Track Challenge.

e) Teams should present environmental considerations that affected their strategies. These considerations should include, but are not limited to, energy efficiency, sustainable sourcing and supply chains, and the circular economy.

f) Teams must submit their presentation (in PDF format) prior to the start of the On-Track Challenge.

g) Up to four Team Members will be permitted to present. Only student members are allowed to respond to questions from the judging panel.

h) Presentations may be observed by all ADC Participants.

i) Teams that choose not to participate in the Business Presentation must notify the Organisers prior to the start of the On-Track Challenge. Failure to notify the Organisers may result in a suspension of their Educational Institution in the Autonomous Driving Competitions globally for one year.

Article 415: Competition Scoring

a) The winner will be the team that ranks first place in efficiency and achieves the highest score in their business presentation.

b) Teams must complete all sectors of the on-track challenge to receive an efficiency score.

c) Teams who receive an efficiency score will be ranked within their vehicle category and energy class.

d) The complete ranking will be done in the following order:

1. Rank in vehicle category and energy class
2. Number of track sectors completed.
3. Business presentation score.

Example leader board:

Rank	Team	Vehicle Category	Energy Class	Efficiency Ranking	Sectors completed	Business Presentation
1	Team A	Urban Concept	ICE	1 387 km/l	3/3	74.5
2	Team B	Urban Concept	H2	1 63 km/m3	3/3	72.0
3	Team C	Prototype	BE	1 100 km/kWh	3/3	58.5
4	Team D	Prototype	BE	2 87 km/kWh	3/3	89.5
5	Team E	Urban Concept	H2	2 36 km/m3	3/3	84.0
6	Team F	Prototype	ICE	-	2/3	67.5
7	Team G	Prototype	ICE	-	1/3	74.0
8	Team H	Urban Concept	BE	-	1/3	69.0
9	Team I	Urban Concept	ICE	-	0/3	86.5
10	Team J	Prototype	BE	-	0/3	79.0