



INVITATION TO TENDER FOR SOLE SUPPLY CONTRACT

TENDER SUMMARY AND ADDITIONAL TENDER REQUIREMENTS

The FIA's objective is to select an exclusive supplier whose task it will be to ensure the production and delivery of the **Tyre Pressure Monitoring System** (hereafter the "TPMS") in the 2021, 2022 and 2023 FIA Formula One World Championship (hereinafter "the Championship").

Interested parties are hereby invited to tender to become the exclusive supplier of the TPMS for the Championship.

The FIA reserves the right to make amendments to this invitation to tender at any time and to issue a new invitation to tender.

The selected tenderer will be invited to enter into a contract with the FIA that will establish the terms of the tenderer's appointment as exclusive supplier.

For reasons related to the regulatory stability of the FIA Formula One World Championship, the FIA may decide, at its absolute discretion and at the latest by 31 December 2022, that the exclusive supply contract may be extended to the 2024 and 2025 seasons. All bidders are invited to confirm that they would be prepared to accept such an extension if required by the FIA.

Bids must be submitted in accordance with the FIA's "Invitation to Tender for sole supply contract - tendering instructions" available on the FIA's website: www.fia.com, **apart from Article 1.1.8 and Article 3, which will not apply to the present invitation to tender.**

In the context of this invitation to tender, bidders are also invited to fill in the "Questionnaire Compliance – Due Diligence" attached in Appendix V.

Bids must be sent to the FIA Administration by e-mail to the following address: tenderingprocedure@fia.com. Bids which do not comply with these supply conditions will not be taken into consideration.

Publication of invitation to tender:

30 July 2019

Tender submission date:

30 August 2019

Notification of decision:

4 October 2019

DRAFT CONTRACT FOR SUPPLYING A TYRE PRESSURE MONITORING SYSTEM
IN THE 2021, 2022 AND 2023 FIA FORMULA ONE WORLD CHAMPIONSHIP

BETWEEN

THE FEDERATION INTERNATIONALE DE L'AUTOMOBILE (FIA)

8 Place de la Concorde

75008 Paris

hereinafter referred to as the "**FIA**"

ON THE ONE HAND,

AND

[•]

hereinafter referred to as the "**PROVIDER**"

ON THE OTHER HAND.

Hereinafter together referred to as the "**PARTIES**".

PART 1 - GENERAL CONDITIONS

RECITALS

- (A) The FIA's authority in relation to international motor sport has been recognised since 1904 when national automobile clubs came together to establish the FIA to provide, amongst other things, an international forum to regulate motor sport internationally.
- (B) The FIA is the sole body governing international motor sport and is recognised by its members as the sole authority having the sporting power with the right to organise international FIA championships, including the CHAMPIONSHIP.
- (C) The FIA has an absolute obligation conferred on it by its members to safeguard its authority over all safety, sporting, technical and disciplinary matters relating to the CHAMPIONSHIP, as well as traditional values.
- (D) The FIA will continue the publication annually of the GOVERNING RULES.
- (E) The FIA has determined that the interests of the CHAMPIONSHIP require that a single supplier of the PRODUCT should be appointed for a limited term.
- (F) It is intended that the FIA and the PROVIDER will enter into this CONTRACT pursuant to which the PROVIDER will be appointed as the sole supplier of PRODUCT to the CHAMPIONSHIP for the term set out herein.

1. APPOINTMENT AND SUPPLY

- 1.1 The FIA hereby appoints the PROVIDER to be the exclusive supplier of the PRODUCT to the COMPETITORS for the CHAMPIONSHIP and the PROVIDER hereby accepts this appointment and agrees to supply the PRODUCT to the COMPETITORS for the CHAMPIONSHIP in accordance with the terms of this CONTRACT and the terms of the SUPPLY AGREEMENTS.
- 1.2 Following from its appointment, the PROVIDER shall enter into a SUPPLY AGREEMENT with each COMPETITOR setting out the terms upon which the PRODUCT shall be supplied.
- 1.3 The PRODUCT that is supplied by the PROVIDER to the COMPETITORS shall be compliant with the TECHNICAL REGULATIONS and the TECHNICAL SPECIFICATIONS.

2. RELATIONS BETWEEN THE PROVIDER AND THE COMPETITORS

- 2.1 The PROVIDER shall treat all COMPETITORS in accordance with the PRINCIPLES OF SPORTING EQUALITY.
- 2.2 The PROVIDER shall supply the PRODUCT to all COMPETITORS on equivalent terms. It shall enter into a standard SUPPLY AGREEMENT with each COMPETITOR.
- 2.3 All SUPPLY AGREEMENTS shall be fully compliant with the PRINCIPLES OF SPORTING EQUALITY, the CONTRACT, the SPORTING REGULATIONS and TECHNICAL REGULATIONS.
- 2.4 Each SUPPLY AGREEMENT requiring a COMPETITOR to purchase the PRODUCT for use

at more than one COMPETITION shall include a clause permitting the COMPETITOR and/or PROVIDER to terminate the SUPPLY AGREEMENT without a penalty of any kind in the event of expiry or earlier termination of the CONTRACT.

- 2.5 If requested by the FIA, the PROVIDER shall supply a copy of each SUPPLY AGREEMENT in order to demonstrate that the PRINCIPLES OF SPORTING EQUALITY are maintained. With respect to the FIA, the PROVIDER hereby waives and confirms that it shall not assert or seek to rely on any confidentiality provision in any SUPPLY AGREEMENT or other agreement relevant to the supply of the PRODUCT to prevent the FIA from reviewing relevant agreements or carrying out its regulatory functions (including ensuring that the PRINCIPLES OF SPORTING EQUALITY are maintained).
- 2.6 The FIA may request amendments to a SUPPLY AGREEMENT if it considers that the SUPPLY AGREEMENT is not consistent or compatible with, or is otherwise contrary to, the PRINCIPLES OF SPORTING EQUALITY. For the avoidance of doubt, the PROVIDER's obligation to abide by the PRINCIPLES OF SPORTING EQUALITY shall not be limited or otherwise affected by the FIA's review of a SUPPLY AGREEMENT and/or a request for an amendment to be made.
- 2.7 In the event of uncertainty regarding whether any action taken or proposed to be taken by the PROVIDER may breach the PRINCIPLES OF SPORTING EQUALITY, the PROVIDER shall request guidance from the FIA, which shall make a determination in this regard. Where such a determination is made by the FIA, the PROVIDER's actions in complying with that determination shall be deemed to be in compliance with the PROVIDER's obligation in GENERAL CONDITION 2.1 to treat all COMPETITORS in accordance with the PRINCIPLES OF SPORTING EQUALITY.

3. LIABILITY

- 3.1 Without prejudice to the FIA's other rights, the PROVIDER shall indemnify and hold harmless the FIA from and against all reasonably foreseeable losses incurred by the FIA as a direct result of the PROVIDER's:
 - (a) failure to supply the PRODUCT of the requisite quantity;
 - (b) failure to supply the PRODUCT of the requisite quality;
 - (c) negligence in the supply of the PRODUCT;
 - (d) any other failure in the supply of the PRODUCT.
- 3.2 The PROVIDER represents and warrants that it is in a position to meet any liability that may arise under clause 3.1 of this CONTRACT and hereby covenants to maintain such position for the period of time during which the PROVIDER may be liable.
- 3.3 Notwithstanding GENERAL CONDITIONS 3.1 and 3.2 above, the PROVIDER that enters into a CONTRACT will produce an attestation certifying that an insurance policy has been contracted in its name with a top-ranking international insurance company for covering its liability as PROVIDER for any and all action which might be taken to obtain compensation for prejudice caused by a manufacturing defect affecting the PRODUCT used pursuant to the CONTRACT.

4. WARRANTIES

- 4.1 The PROVIDER represents and warrants that it has full power and authority to enter into and fully perform its obligations under the CONTRACT and the provisions of the CONTRACT, when executed, will constitute valid and binding obligations on the PROVIDER in accordance with its terms. The PROVIDER also represents and warrants that it has full power and authority to enter into and fully perform its obligations under the SUPPLY AGREEMENTS when executed.
- 4.2 The FIA represents and warrants that it has full power and authority to enter into and fully perform its obligations under the CONTRACT and the provisions of the CONTRACT, when executed, will constitute valid and binding obligations on the FIA in accordance with its terms.

5. TERMINATION

- 5.1 Notwithstanding any other provision hereof, either party may terminate the CONTRACT with immediate effect by written notice to the other if any of the following events occur:
- (a) the other party has committed a material breach of the CONTRACT which is not capable of remedy or, if remediable, has not remedied it within 30 days of the non-breaching party's written notice requiring the default to be remedied (for the avoidance of doubt, a breach by the PROVIDER of any of GENERAL CONDITIONS 1.2, 1.3, 2, 3 and 4.1 and any of SPECIAL CONDITIONS is acknowledged by the parties to be a material breach);
 - (b) steps (including any steps analogous to those following) have been taken to wind up the other party or to place the other party into administration or to have a receiver appointed over any of its assets, other than as part of a scheme of solvent reconstruction or amalgamation; or
 - (c) the other party shall cease or threaten to cease carrying on business or the other party shall make any composition or arrangement with its creditors or become subject to any other insolvency process or proceeding (other than as part of a scheme of solvent reconstruction or amalgamation) or have all or any of its assets or undertakings seized by a government or governmental agency or authority (including any acts analogous to the above).

6. GOVERNING RULES

- 6.1 The GOVERNING RULES constitute the legal, administrative and technical framework of the CHAMPIONSHIP and the conditions set forth therein shall have binding force and prevail among the parties to the CONTRACT.
- 6.2 The CONTRACT shall in principle be interpreted in a manner that gives effect to the provisions of the GOVERNING RULES, the intention of the parties being to construe the provisions of the CONTRACT in the context of the more general framework of the GOVERNING RULES.
- 6.3 The PROVIDER acknowledges that the TECHNICAL SPECIFICATIONS and GOVERNING RULES are subject to amendment from time to time. The PROVIDER will be responsible (at its own cost) for all research and development associated with the manufacture of

the PRODUCT, including the making of any changes to the PRODUCT to be supplied pursuant to the CONTRACT that may be necessitated by any amendment to the TECHNICAL SPECIFICATIONS or the GOVERNING RULES.

- 6.4 The PROVIDER acknowledges that the FIA may take decisions regarding the supply of the PRODUCT, this CONTRACT and any obligations accruing from the GOVERNING RULES through whatever structure it deems appropriate, including through its disciplinary structures. The PROVIDER shall not challenge the competence of an FIA disciplinary body acting in accordance with the GOVERNING RULES.

7. GOVERNING LAW AND LANGUAGE

- 7.1 The language that shall prevail for the interpretation of the CONTRACT shall be English and the CONTRACT and all documents connected with the CONTRACT shall be written in English. In the event of any conflict between the language of the CONTRACT and any translation thereof, the language of the CONTRACT shall prevail. In the event of any conflict between the language of any document connected with the CONTRACT and any translation thereof, the language of the document connected with the CONTRACT shall prevail.
- 7.2 The governing law of the CONTRACT shall be French law.
- 7.3 The Tribunal de Grande Instance de Paris, France, shall have sole jurisdiction to settle any dispute that may arise between the FIA and the PROVIDER in connection with the CONTRACT, subject at all times to the provisions of Article 6.4 above.
- 7.4 Without any prejudice to Article 7.3 above, the PROVIDER undertakes to strictly respect the Statutes and Code of Ethics of the FIA as well as the GOVERNING RULES. The PROVIDER hereby agrees to be subject to the internal judicial and disciplinary bodies of the FIA.
- 7.5 Each party undertakes to the other party that in the exercise of its rights and performance of its obligations under this CONTRACT, it shall comply with all applicable laws, including without limitation all applicable laws relating to anti-corruption measures. In particular, and in accordance with such laws, each party undertakes to abstain (and to cause its directors, employees and officers to abstain) from corruptly, directly or indirectly, offering, promising, giving, paying or accepting any Public Official's request for a gift, or authorising anyone to give or pay, directly or indirectly, any sums, other benefits or advantages or anything of value to or for a Public Official.

For the purpose of this clause:

"Public Official" shall mean (i) anyone who performs public functions in a legislative, judicial or administrative capacity; (ii) anyone acting in an official capacity for or on behalf of a Public Body; (iii) anyone in charge of providing a public service; or (iv) any other person, individual or entity at the suggestion, request or instruction or for the benefit of any of the persons or entities referred to in (i) to (iii) above; and

"Public Body" shall mean (i) a supranational, national, regional or local government, (ii) an agency, department or instrumentality of a supranational, national, regional or (partially) government-owned company, and/or (iv) a public international organisation.

8. GENERAL

- 8.1 Nothing in the CONTRACT guarantees or shall be construed as guaranteeing the solvency of a COMPETITOR. The FIA is not responsible for ensuring that the COMPETITORS satisfy the terms of the SUPPLY AGREEMENTS and the FIA shall not be liable for a failure by any COMPETITOR to satisfy the terms of a SUPPLY AGREEMENT.
- 8.2 No delay or omission or failure to exercise any right or remedy provided herein shall be deemed to be a waiver thereof.
- 8.3 The CONTRACT shall be binding on and enure to the benefit of the parties and their respective successors and permitted assigns. The PROVIDER shall not be entitled to assign or sub-contract its rights or obligations under the CONTRACT in whole or in part without the prior written consent of the FIA.
- 8.4 Any notice to be given under the CONTRACT shall be given in writing delivered to the other party by any one or more of the following methods:
- (a) personal delivery to one of its corporate officers, in which case notice shall be treated as having been given at the time of such personal delivery;
 - (b) first class registered post or courier delivery service (such as DHL or UPS) to the address mentioned above (or such other address as may be notified to the other party in writing from time to time), in which case notice shall be treated as having been given on the date of actual receipt at that address (or on the next local business day if delivered on a local non-business day or after 4.00 p.m. local time on a local business day), which shall rebuttably be presumed to be the second local business day after posting; or
- 8.5 Any variations of the CONTRACT shall be ineffective unless agreed in writing and signed by the parties.
- 8.6 If any term, provision or condition of the CONTRACT is held by a court of competent jurisdiction to be invalid, void or unenforceable such invalidity, voidness or unenforceability shall not invalidate the remainder of the CONTRACT, all of which shall remain in full force and effect.
- 8.7 The CONTRACT may be executed in any number of counterparts (whether original or facsimile counterparts) and upon due execution of all such counterparts by all parties, each counterpart shall be deemed to be an original hereof.
- 8.8 GENERAL CONDITIONS 3, 7 and 8 shall survive expiry or termination of the CONTRACT for any reason (but shall terminate at the time expressly provided in the relevant GENERAL CONDITION, if any).

PART 2 - SPECIAL CONDITIONS

1. SUPPLY OF THE PRODUCT

- 1.1 The PROVIDER shall supply such quantity of the PRODUCT as is required for each COMPETITOR at each:
- (a) COMPETITION (see **Appendix I**);
 - (b) OFFICIAL TESTING.
- 1.2 The PRODUCT supplied by the PROVIDER shall be of a strictly uniform quality throughout the duration of the CHAMPIONSHIP and strictly comply with the TECHNICAL SPECIFICATIONS detailed in **Appendix II**.
- 1.3 The FIA does not guarantee the PROVIDER a minimum quantity of the PRODUCT to be supplied.
- 1.4 The PROVIDER shall draw up and make available to the FIA a record of PRODUCTS supplied which may be consulted at any time by the FIA.
- 1.5 All PRODUCTS supplied must be suitable for use at all times during the COMPETITIONS.
- 1.6 The PROVIDER undertakes to report to the FIA any issues with the PRODUCT, the COMPETITOR concerned and the results of any associated investigations.
- 1.7 The PROVIDER shall loan and maintain free of charge one complete PRODUCT to the FIA, including two FIA portable off-car receivers (see **Appendix II**), with no usage limitations and replace any of its elements before the next COMPETITION or any reasonable period as agreed with the FIA if the FIA considers that they need to be replaced or checked.
- 1.8 The FIA portable off-car receiver may not be supplied to any party without the FIA's express prior written approval.
- 1.9 Any software tool needed to reprogramme any part of the PRODUCT may not be supplied to any party without the FIA's express prior written approval.

2. DELIVERY OF THE PRODUCT

- 2.1 By **15 November 2019**, one prototype sample of the PRODUCT shall be delivered to the TYRE SUPPLIER, subject to order, to support the testing of 2021 tyres in December 2020. It is accepted that the prototype sample may not be fully representative of the final PRODUCT.
- 2.2 By **1 January 2020**, COMPETITORS and the TYRE SUPPLIER will be requested to communicate to the PROVIDER a list of the expected order quantities and delivery schedule for each element of the PRODUCT for the 2021 season.

2.3 By 1 February 2020:

- (a) One pre-ordered sample of the PRODUCT shall be delivered to each COMPETITOR and the TYRE SUPPLIER. This must comprise at least 1 car set of wheel sensing units (4 sensors) and 1 on-car receiver/antenna set.
- (b) A sample of the PRODUCT shall be delivered to the FIA in accordance with SPECIAL CONDITION 1.7.
- (c) Subject to the FIA's express prior written approval, additional pre-ordered samples of the PRODUCT, comprising of a minimum of 7 car sets of wheel sensing units (28 sensors), receivers and antennae, shall be delivered to the TYRE SUPPLIER or COMPETITORS for the sole purpose of testing the 2021 tyres. This excludes the garage systems.

2.4 By 1 August 2020, COMPETITORS and the TYRE SUPPLIER will be requested to place orders for each element of the PRODUCT for the 2021 season.

2.5 Starting no later than **1 November 2020**, ordered PRODUCTS shall be delivered to the COMPETITORS and the TYRE SUPPLIER according to a staggered delivery plan subject to the FIA's express prior written approval.

2.6 Following the completion of the initial staggered deliveries, the PROVIDER will deliver additional ordered PRODUCTS to the COMPETITORS on request within the lead times provided in **Appendix IV**.

3. MANUFACTURING CONDITIONS OF THE PRODUCT AND TECHNICAL CONTROL

3.1 The PROVIDER shall provide to the FIA a detailed technical study of the PRODUCT, for the approval of the FIA ENGINEER. In the event that an amendment is made to the TECHNICAL SPECIFICATIONS or the GOVERNING RULES that requires an amendment to the PRODUCT supplied pursuant to the CONTRACT, the PROVIDER shall provide to the FIA a detailed technical study of the amended PRODUCT to be supplied pursuant to the CONTRACT to take account of such amendment.

3.2 The PROVIDER shall make such modifications to the PRODUCT necessary for its installation with the WHEEL RIMS.

3.3 The PROVIDER shall make such modifications to the PRODUCT to be supplied pursuant to the CONTRACT as the FIA ENGINEER may require.

3.4 The PROVIDER shall not make any change to the PRODUCT during the CONTRACT without the FIA's express prior written agreement.

3.5 Technical checks may be carried out on samples taken either directly from the PROVIDER or during the COMPETITION (PRODUCT used by the COMPETITORS during the running of the COMPETITION) comparing the quality and technical compliance of the PRODUCT distributed with that of the samples taken.

4. TECHNICAL SUPPORT

4.1 The PROVIDER shall be present on the COMPETITIONS as requested by the FIA for any problem-solving requiring the support of the PROVIDER at the circuit.

4.2 The PROVIDER shall be present at OFFICIAL TESTING as requested by the FIA for the installation of the PRODUCT and any subsequent problem-solving requiring the support of the PROVIDER at the circuit.

4.3 The PROVIDER shall ensure that any frequency bands of radio signals used by the PRODUCT are licenced at each COMPETITON and OFFICIAL TESTING.

5. PRICING OF THE PRODUCT

5.1 The price of the PRODUCT supplied shall be as detailed on the PRICING FORM, which amount shall be inclusive of all taxes and charges and which amount shall not be increased for any reason except in accordance with SPECIAL CONDITION 5.4.

5.2 The price of the PRODUCT supplied shall be inclusive of any technical support required during the term of the CONTRACT, notably the technical support described in SPECIAL CONDITIONS 4.

5.3 VAT (value added tax) shall not be charged to those COMPETITORS that are exempt from VAT and that have supplied proof of such exemption to the PROVIDER.

5.4 The price stated in SPECIAL CONDITION 5.1 may be adjusted for the seasons 2022 and 2023 in accordance with the indexation formula provided in **Appendix III**.

6. INTELLECTUAL PROPERTY

6.1 The PROVIDER shall supply the FIA with the requested amount and types of devices (documentation, software, specifications, looms, licences, etc.) that the FIA will need to freely and independently programme and use the PRODUCT and conduct all checks that the FIA deems appropriate. This includes the right for the FIA to access any logging data during bench, track testing and the COMPETITIONS.

6.2 The PROVIDER agrees and acknowledges that all rights, title and interest of the data and/or results generated by the PRODUCT are owned by the FIA.

6.3 The FIA acknowledges that the PRODUCT as provided by the PROVIDER, including the software as well as any related documentation, information, data, methodologies, know-how and materials, is the property of the PROVIDER.

6.4 Save for the purposes of providing the PRODUCT under this CONTRACT, the PROVIDER agrees and acknowledges that no parts of the PRODUCT and no DATA relating to a COMPETITION may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording, broadcasting means or otherwise to any other party than the FIA without the FIA's express prior written approval.

6.5 The PROVIDER agrees to use reasonable endeavours not to do anything or permit anything to be done at any time during and/or after the term which would in any way devalue, prejudice the ownership, management and/or exploitation of the data during and/or after the term of the CONTRACT.

7. ASSOCIATION RIGHTS

The PROVIDER shall have no rights to refer to itself or authorise any third party to refer to the PROVIDER (whether in marketing/promotional materials, on websites/social media platforms or otherwise) as a supplier or service provider (or similar) to the CHAMPIONSHIP or the Formula 1™ brand (or otherwise imply the same) without first entering into a separate written agreement with the Commercial Rights Holder of the CHAMPIONSHIP for the grant of this right.

PART 3 - DEFINITIONS

The following terms shall be understood to have the following meanings for the purposes of the "CONTRACT".

- 1.1 **CHAMPIONSHIP** means the 2021, 2022 and 2023 FIA Formula One World Championship. The FIA may decide, at its absolute discretion and at the latest by 31 December 2022, that the CONTRACT shall be extended to the 2024 and 2025 FIA Formula One World Championship under the exact same conditions.
- 1.2 **COMPETITION** (referred to as EVENT in the FIA Formula One World Championship regulations) means any race forming part of the CHAMPIONSHIP and entered on the International Sporting Calendar of the FIA. A COMPETITION is deemed to commence at the scheduled time for scrutineering and sporting checks and includes all practice, qualifying and the race itself and ends at the expiry of the deadline for the lodging of a protest under the terms of the International Sporting Code.
- 1.3 **COMPETITORS** means the racing teams that have been accepted by the FIA to take part in the CHAMPIONSHIP.
- 1.4 **CONTRACT** means the GENERAL CONDITIONS, the SPECIAL CONDITIONS and the DEFINITIONS.
- 1.5 **DEFINITIONS** means the definitions set out in this Part 3 of the CONTRACT.
- 1.6 **FIA** means the Fédération Internationale de l'Automobile (FIA).
- 1.7 **FIA ENGINEER** means the technician appointed by the FIA to carry out all technical checks and controls and to grant the necessary approval prior to the starting up of production.
- 1.8 **GENERAL CONDITIONS** means the provisions contained in Part 1 of the CONTRACT.
- 1.9 **GOVERNING RULES** means:
 - (a) the FIA International Sporting Code and the Appendices thereto;
 - (b) the SPORTING REGULATIONS applicable to the CHAMPIONSHIP;
 - (c) the TECHNICAL REGULATIONS applicable to the CHAMPIONSHIP;
 - (d) The FIA Code of Ethics;
 - (e) The FIA Judicial and Disciplinary Rules;
 - (f) Any other regulations applicable to the CHAMPIONSHIP.
- 1.10 **OFFICIAL TESTING** means tests as defined in and authorised in the SPORTING REGULATIONS.

- 1.11 **PRICING FORM** means the pricing form provided at **Appendix IV** stating the prices at which the PRODUCT will be supplied at the COMPETITIONS, the PRODUCTION SITE and the OFFICIAL TESTING to the COMPETITORS.
- 1.12 **PRINCIPLES OF SPORTING EQUALITY** means the equal treatment by the PROVIDER of all COMPETITORS with respect to:
- (a) anything which may affect the performance of the PRODUCT;
 - (b) the terms on which the PRODUCT is supplied;
 - (c) the support, access and information made available to COMPETITORS in relation to the PRODUCT; and
 - (d) any other matter which affects or may have an effect, however minor, on sporting performance.
- 1.13 **PRODUCT** means the Tyre Monitoring System as such word is described in the TECHNICAL SPECIFICATIONS.
- 1.14 **PROVIDER** means [•].
- 1.15 **PRODUCTION SITE** means the factory that will produce the PRODUCT supplied pursuant to the CONTRACT.
- 1.16 **SPECIAL CONDITIONS** means the provisions contained in Part 2 of the CONTRACT.
- 1.17 **SPORTING REGULATIONS** means the Sporting Regulations applicable to the CHAMPIONSHIP as published and amended by the FIA from time to time.
- 1.18 **SUPPLY AGREEMENT** means any agreement, and all amendments thereto, between the PROVIDER and a COMPETITOR pursuant to which the PROVIDER shall supply the PRODUCT to the COMPETITOR.
- 1.19 **TECHNICAL REGULATIONS** means the Technical Regulations applicable to the CHAMPIONSHIP as published and amended by the FIA from time to time.
- 1.20 **TECHNICAL SPECIFICATIONS (Appendix II)** means the technical requirements applicable to the PRODUCT as issued and amended by the FIA from time to time.
- 1.21 **TYRE SUPPLIER** means the supplier appointed by the FIA for the exclusive supply of tyres for the CHAMPIONSHIP.
- 1.22 **WHEEL RIMS** means the wheel rims used by the COMPETITORS, intended to be standard supply selected by the FIA for the CHAMPIONSHIP.

APPENDICES

I – CALENDAR

II – TECHNICAL SPECIFICATIONS

III – INDEXATION FORMULA

IV – PRICING FORM

V – QUESTIONNAIRE COMPLIANCE – DUE DILIGENCE

APPENDIX I

Calendar

The calendar of each season of the CHAMPIONSHIP will be available on the FIA website:
www.fia.com.

APPENDIX II

Technical Specifications

1 INTRODUCTION

A standard system to monitor Formula 1 tyre temperatures and pressures is planned to be introduced for the 2021 F1 season. The objective is to make the tyre running pressure and temperature data available to the FIA and the teams with a standard format and level of accuracy.

In addition, the use of a standard measurement chain will streamline the tyre identification process and tyre usage monitoring.

2 HOW TO FILE TECHNICAL DETAILS

The object of this document is to define the desired specifications for the complete system.

Potential suppliers are expected to fill in the following tables:

- “Compliance”: Express the level of compliance of the tendered system towards each requirement ;
- “Evidence”: Provide evidence to justify the stated level of compliance ;
- “Notes”: Additional information that may help to support or clarify the tender.

The FIA will evaluate offers even if not meeting all requirements.

Potential suppliers are encouraged to provide any additional information regarding the product, the associated production and development processes that may assist the FIA’s evaluation of the tender.

3 SYSTEM TO BE SUPPLIED

The system may comprise:

- *Wheel sensing unit* transmitting wirelessly to a remote receiver unit, a set of measurements as well as a series of metadata and diagnostics.
- Complete *on-car receiving system (incl. ECU, antenna and one or more potential additional remote antenna)* to collect the data of four wheel sensing units and forward those data via CAN to one or more designated FIA Electronic Control Unit. Data must be only accessible by the owner, identified by a unique team ID, and by the FIA.

- Complete *off-car receiving system (incl. ECU, antenna and one or more potential additional remote antenna)* to collect the data of all wheel sensing units and store them on a remote server on the team or FIA network. The device must only be able to access a unique team ID.
- Optional *portable off-car receiver* to collect the data of a single sensor. The device must only be able to access a unique team ID.
- *FIA portable off-car receiver* to collect the data of a single sensor. The device must be able to access any team ID.

4 WHEEL SENSING UNIT REQUIREMENTS

Lifetime		COMPLIANCE	EVIDENCE	NOTES
Battery autonomy	1 season shelf life Expected ≥ 250,000 transmissions			
Lifetime	Minimum 5,000 km on track			
Communication		COMPLIANCE	EVIDENCE	NOTES
Transmission range	Must cover the needs for on-car use and for typical F1 tyre storage garage areas. Offers to include details of the installation required for a typical garage layout. Price list to include cost of expected complete kit for a single garage storage area. Can accept multiple receivers and antennae.			
Transmission	Free-to-use frequency in all countries Offers to describe the frequency allocation scheme to guarantee no interference			
Encryption	All transmitted data should be encrypted by a protocol approved by the FIA			

Nominal transmission period	Production storage: no transmission Stationary mode: every 60 seconds Moving mode: every 1 second Transient mode: every 1 second for 10 seconds after a pressure change greater than 200 mbar/minute is measured.			
Transmission modes	Based on internal sensor signals. Should assume that tyre blankets will not be used, i.e. should not rely on temperature information. Ability to externally force each mode for garage or rig use.			
Diagnostics		COMPLIANCE	EVIDENCE	NOTES
Transmitted	Yes			
At nominal frequency	Team ID, Sensor ID			
Slow (e.g. 0.01 Hz)	Board temperature, battery voltage, remaining battery percentage, inputs diagnostics, sensor RSSI, sensor status, sensor serial number, hardware/software versions, Lifetime counter, Rx/Tx counter, Last Rx/Tx received, code checksum, configuration checksum, calibration checksum			
Mechanical		COMPLIANCE	EVIDENCE	NOTES
Weight	Max. 60g Sensor-to-sensor variation +/- 2g Integrated to wheel rim design for balancing			

Mounting on rim	Aim is to use a single design for all corners, subject to integration with the WHEEL RIMS.			
Anti-tampering	To be approved by the FIA			
Antenna	Internal to the sensor body			
Environmental		COMPLIANCE	EVIDENCE	NOTES
General	Resistant to typical motorsport fluids			
Operating temperature	+0°C to +160°C			
Vibration	70g peak from 0 to 2,500 Hz for 100 hours on 3 axes			
Shock	“Bump test” : 3 repetitions of 100g half sine on 3 axes			
Spin	100 hours with an emulated wheel speed profile between 125degC and 160degC			
Ingress protection rating	IP66 depends on where it is mounted			
Pressure measurement		COMPLIANCE	EVIDENCE	NOTES
Transmitted	Yes, at nominal frequency			
Units	Absolute psi			
Measurement range	5 – 70 psi			
Max pressure allowable	80 psi			
Resolution	≤ 0.1 psi/bit			
Accuracy	≤ 0.1 psi across the temperature operating range			

Calibration	Embedded in sensor. Only programmable by the supplier by protected method using internal sensor connection.			
Sensor internal temperature measurement		COMPLIANCE	EVIDENCE	NOTES
Transmitted	Yes			
Measurement range	Must match sensor operating conditions			
Used for thermal compensation	Yes			
Rim temperature measurement		COMPLIANCE	EVIDENCE	NOTES
Transmitted	Yes, at nominal frequency			
Number of point(s)	≥ 1 point			
Measurement range	0°C to +160°C			
Resolution	≤ 1°C			
Accuracy	≤ 1°C			
Internal air temperature measurement		COMPLIANCE	EVIDENCE	NOTES
Transmitted	Yes, at nominal frequency			
Range	0°C to +160°C			
Resolution	≤ 0.5 °C			
Accuracy	≤ 0.5 °C			
Inner carcass temperature measurement		COMPLIANCE	EVIDENCE	NOTES
Transmitted	Yes, at nominal frequency			

Technology	Preferred : Infrared			
Range	0°C to +200°C			
Resolution	≤ 1°C			
Accuracy	≤ 3°C			
Field of view	150 degrees			
Number of point(s)	≥ 7 points with option to measure and send only a subset			

5 ON-CAR RECEIVER UNIT REQUIREMENTS

INSTALLATION		COMPLIANCE	EVIDENCE	NOTES
Antenna and receiver	Preferred: 1 receiver with integrated antenna Acceptable: additional remote antenna or additional receiver			
Electrical		COMPLIANCE	EVIDENCE	NOTES
Supply voltage	8 Vdc to 16 Vdc			
Short circuit protection	Yes			
Reverse polarity protection	Yes			
Electrical connector type and pinout	Souriau connector. Motorsport circular high density. No push-pull connector.			
Lifetime	Minimum 20,000 km on track			

Communication		COMPLIANCE	EVIDENCE	NOTES
Protocol	CAN, 11bits identifier, 1Mb/s Optional: CANFD compatible			
Messages	TBD, with measurements, metadata, diagnostics			
Encryption	All transmitted data should be encrypted by a protocol approved by the FIA			
Max number of sensors per team	≥ 1000			
Typical number of sensors received at the same time	200 in the garage			
Sensor ID	Each sensor must have a unique identifier, including bit identification for front, rear, left and right. Corner recognition will be managed by the FIA standard ECU.			
Diagnostics		COMPLIANCE	EVIDENCE	NOTES
Transmitted	Yes			
At least twice the maximum nominal frequency	Board temperature, Supply voltage, Team ID, Receiver ID			
Slow (≥1 Hz)	Receiver serial number, HW/SW versions, Lifetime counter, Rx/Tx counter, Last Rx/Tx received, CAN bus diagnostics incl. error counts, RF errors and diagnostics, code checksum, configuration checksum, calibration checksum			

Mechanical		COMPLIANCE	EVIDENCE	NOTES
Weight	< 100g			
Anti-tampering	To be approved by the FIA			
Environmental		COMPLIANCE	EVIDENCE	NOTES
General	Resistant to typical motorsport fluids			
Operating temperature	+0°C to +115°C			
Vibration	10g peak from 0 to 2,500 Hz for 200 hours on 3 axes			
IP rating	IP65			

6 OFF-CAR RECEIVING SYSTEM REQUIREMENTS

Communication		COMPLIANCE	EVIDENCE	NOTES
Data transmission protocol to garage network	Ethernet preferably WiFi optional			
Data storage	Ability to store encrypted data on a designated remote server Ability to configure a custom IP address			
Encryption	All transmitted data should be encrypted by a protocol approved by the FIA			

Software tools	Provide a Software Tool, free-of-charge with the PRODUCT, to monitor the TPMS data and possibilities to raise alarms e.g. if the battery status in a sensor is low. The decrypted data format should be documented, open source and free of any licencing.			
Receivers and clients	Support for multiple receivers and clients			
Anti-tampering	To be approved by the FIA			

7 PORTABLE OFF-CAR RECEIVER REQUIREMENTS

Communication		COMPLIANCE	EVIDENCE	NOTES
Team receiver	To collect data from a single sensor. Device must only be able to access a <u>unique team ID</u> .			
FIA receiver	To collect data from a single sensor. Device must be able to access <u>any team ID</u> .			
Tyre identification	Offers must include solutions to automate linking the TPMS sensor to the tyre fitted, for example by transferring and storing the scanned sensor and tyre information at tyre fitting time. The selected supplier will be expected to implement such solution with the official tyre supplier.			
Anti-tampering	To be approved by the FIA			

8 SERVICING

Requirements		COMPLIANCE	EVIDENCE	NOTES
Software tools	Any software tools needed to programme any element of the TPMS must be provided free-of-charge.			
Receiver firmware reprogramming	By supplier or FIA			
Sensor firmware reprogramming	By supplier			
Battery replacement or recharging	By supplier if applicable By team only if not compromising the anti-tampering			
RF check	By supplier			
Calibration incl. IR alignment	By supplier			
Fault investigations	Support provided to FIA and Teams upon demand			

9 EMBEDDED SOFTWARE REQUIREMENTS

All programmable devices involved in the TPMS must have a mechanism that allows the FIA to accurately identify the software version or versions that are being used.

In order to satisfy this requirement, a range of procedures will need to be put in place:

- a) Boot code programming of any electronic unit provided to the teams should only be possible using a production process from the supplier and when the unit is open.
- b) A dynamic CRC logging methodology may be suitable; subject to using an FIA supplied random filler sequence. Any microprocessor with access to non-code memory of sufficient size to store additional program images may not be considered suitable for this method.

All units that can be reprogrammed via an external connector and/or that are connected to an Electronic Control Unit, as defined by the FIA, are expected to provide this mechanism.

- c) Reprogramming of electronic units must be restricted by a homologated mechanism that has been approved before the electronic unit is first used. The following is a non-exhaustive list of possible techniques:
- i. Depending on the design, FIA sticker or stickers may act as a seal e.g. where the reprogramming is via an internal connector or where the sticker seals some hatch that gives access to reprogramming;
 - ii. Password protection;
 - iii. Application list restriction: typically, a list of CRCs or MD5s or SHA-256s of all the allowed program versions that the unit can run. Updating the list must require knowledge of an FIA secret password. Any application code area should have a fixed size for each version.
 - iv. Signed application code. An FIA private encryption key must be securely stored in each unit. The code will not run unless it has been digitally signed by the FIA.

In all cases there must be a mechanism available to determine the software version in any reprogrammable device. Examples would be: 'program image' verification, upload of 'program image', CRC or MD5 or SHA-256 of the 'program image'.

Note that a simple version string communicated by the device is not sufficient. Also, security 'fuses' or other mechanisms that prevent access to stored 'images' should not be used.

One time programmable devices can be used but subject to the device having an acceptable mechanism for identifying the program version.

Any change in electronic unit software must be registered with the FIA in advance of use and source code must be provided.

10 TECHNICAL DOCUMENTATION

Proposals should include the following documentation:

- mechanical characteristics, including dimensions, weight, material, heat treatment, finish quality;
- hardware installation characteristics of all the on-car components, including mounting points, mounting torque, guidelines, drawings;
- environmental characteristics, including both storage and operating temperatures, thermal shock, tolerance to chemicals and humidity, vibration profile, electromagnetic compatibility;
- electrical characteristics, including supply voltage, current consumption, supply protection, insulation resistance;
- battery characteristics, including the effect of operating temperature and other conditions on lifetime;

- inputs characteristics, including type, quantity, circuitry, range, impedance, frequency range, resolution, accuracy, hysteresis, filtering, sampling rate, protection, diagnostics, configuration options;
- outputs characteristics, including type, quantity, circuitry, voltage and frequency ranges, resolution, impedance, accuracy, filtering, control rate, maximum voltage and current, protection, diagnostics;
- a detailed description of the complete hardware and software topology of the TPMS signal chain on and off-car, notably including the end to end data encryption;
- details of any redundant sub-systems;
- service and calibration intervals and details, life period, quality control;
- on and off-track handling procedures.

Each sensor should have a part number and unique serial number marked externally and transmitted along with the rest of the data.

11 CALIBRATION

Proposals should include for each subsystem a comprehensive description of the calibration process, calibration formula and calibration data supplied with the sensor, and a detailed analysis of the effects of:

- any supply voltage variations on the pressure and temperature measurements;
- any ground variations on the pressure and temperature measurements;
- the operating temperature of each sub-system on the pressure and temperature measurements.

Note that as for all FIA standard sensors, set up and calibration data must be verifiable by the FIA at any time, using a format agreed with the FIA. Appropriate communications equipment, software and analysis tools must be provided free-of-charge to the FIA.

12 QUALITY

Proposals should include a description of the following items:

- Design validation ;
- Production quality control ;
- Mean time between failure report of the PRODUCT, or existing system on which the design of the PRODUCT may be based ;

- Test equipment ;
- Calibration equipment ;
- FMEA and FTA of the product ;
- On-track and off-track support during the introduction and validation process and subsequently during test and race events.

APPENDIX III

Indexation Formula

Concerning the 2022 and 2023 seasons, the prices charged to COMPETITORS shall be the amount that equals the amount shown for 2021 in the PRICING FORM increased annually in accordance with the positive variation of the “Consumer Prices – All items” index published by the Organisation for Economic Cooperation and Development (OECD) in “Main Economic Indicators”. The indexation shall be in accordance with the variation between such base index and the index published in the October edition of “Main Economic Indicators” for the year to which the indexation applies and for the PROVIDER’s country.

APPENDIX IV

Price List

PRODUCT elements	Price before tax in euros	Price after tax in euros	Service price before tax in euros	Supply lead time
Wheel sensing unit				
On-car receiver ECU				
On-car antenna				
On-car remote antenna				
Off-car receiver ECU				
Off-car antenna				
Off-car remote antenna				
Portable off-car receiver				

The list of PRODUCT elements shall be adjusted to reflect the precise architecture of the PRODUCT.

Please specify currency referred to in the supply agreements with the competitors if not euros.

APPENDIX V

Questionnaire Compliance – Due Diligence



QUESTIONNAIRE

Questions	Answers	
1. GENERAL INFORMATION		
1.1. Type of partnership		
1.2. Name and country of the potential partner or stakeholder		
1.3. Name and country of the ultimate beneficial owners		
1.4. Name and country of the officers and directors		
1.5. Name and country of the bank		
2. INTERNATIONAL RELATIONSHIPS		
2.1. Will the relationship involve at any stage a High-Risk Country as per the list below?	Yes	No
2.2. If yes to Q2.1, will there be any transactions denominated in USD between the FIA and the potential partner?	Yes	No
2.3. If yes to Q2.1, are there any US citizens involved in the relationship?	Yes	No
2.4. If yes to any of the questions above, please provide more details		
3. PUBLIC AUTHORITIES		
3.1. Will the potential partner or stakeholder represent the FIA before any public authority?	Yes	No
3.2. Will the potential partner or stakeholder be authorized to make payments to any public authority on behalf of the FIA?	Yes	No
3.3. If yes to any of the two questions above, please provide more details		
4. PAYMENTS		
4.1. Will there be any payments through an Offshore Financial Center as per the list below?	Yes	No
4.2. If yes, please provide more details		



Compliance – Due Diligence Policy

5. CONNECTIONS	
5.1. Do you have any personal or business connections with any FIA Party (FIA members, FIA body members, consultants, officials, employees)?	Yes No
5.2. If yes, which?	
Stamp and signature	



High Risk Countries

- Syria
- Cuba
- Sudan
- Iran
- North Korea

Offshore Financial Centers

The International Monetary Fund has identified the following jurisdictions as Offshore Financial Centers. Any connections with those countries triggers money-laundering flags:

- Andorra
- Anguilla
- Antigua
- Aruba
- Bermuda
- British Virgin Islands
- Cayman Islands
- Gibraltar
- Guernsey
- Isle of Man
- Jersey
- Nauru
- Vanuatu