

Application for Additional Services Licence

INRIX UK LIMITED

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1. GENERAL INFORMATION

a) Name of applicant, Address, Telephone and email address

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Station House
Stamford New Road
Altrincham
Cheshire WA14 1EP

Telephone 0161 9273600
Email aileen.holohan@inrix.com
(Aileen Holohan, Finance Director)

All references to INRIX in this document are to INRIX UK Limited

Certificate of Incorporation on Change of Name is provided at Annex 1

b) Brief Description of Proposed Service

Broadcasting of a commercial RDS-TMC (Radio Data System-Traffic Message Channel) service, compliant with EN ISO 14819 standardisation.

c) Cash bid

£200,000 per annum.

d) Main contact (For Public Purposes)

Aileen Holohan
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Stamford New Road
Altrincham
Cheshire WA14 1EP
Telephone 0161 9273600
Email aileen.holohan@inrix.com

e) Main contact (For Ofcom Purposes)

Aileen Holohan
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2. TECHNICAL ARRANGEMENTS

INRIX currently operates a commercial RDS-TMC service (the "INRIX Service") using the existing Additional Services Licence. This technical plan describes the existing INRIX Service as, if INRIX successfully secures the Additional Services Licence currently being auctioned, then INRIX will continue to operate the same service using the new licence.

a) RDS Capacity

3A Groups

The INRIX Service is broadcast using the ODA feature signalled in 3A groups.

The Registered ODA is AID = CD46 – RDS-TMC service

The 3A groups (2 variants) are used to transmit details about the service and are used by the receivers to validate the service based on a combination of Country Code (from the PI), Location Table Number and the Service ID.

3A groups also provide details such as the AF availability to indicate if the receiver may use the Audio programme AF list to follow the TMC service. Since all of the Classic FM network is used to carry the INRIX Service this is signalled as such. (AFI =1)

TMC services can also utilise the following ODA registered AIDs (Application ID)

- CD47 - *TMC service with explicit LTCC transmission (New ODA)*
- *OD45 - RDS-TMC TEST SERVICE*

The INRIX Service does not use these ODAs. INRIX will always use CD46.

8A groups

The traffic data content within the INRIX Service is provided by the 8A groups.

The ISO specifications governing the transmission require that at least 2 repeated 8A groups are transmitted for each traffic message (1 immediate repetition). Due to the relatively low deviation level available INRIX has chosen to increase to 2 immediate repetitions of the 8A groups (total 3). This ensures a robust reception of the service.

Service Encryption

The ISO standard (ISO14819) covering the definition of RDS-TMC, in part 6, allows for a service to be encrypted. Encryption is normally used to allow a service provider to use a publicly available location table and protect access to the data being provided through the use of a "service key."

The INRIX Service in not encrypted. It is sent technically as a "free-to air" service, instead the INRIX Service utilises a proprietary location table and thus encryption is not required. Devices that wish to receive the INRIX service must be integrated with the INRIX Location Table to be able to decode the Location codes, this table is provided to contracted OEMs and device makers to integrate into their receivers.

Group Sequence

The following group sequence is set up on the Classic FM encoders:

3A	0A	**8A**	14A	2A	0A	**8A**	0A	2A	14A	0A	**8A**	2A	0A	0A	14A	0A	**8A**	2A	0A
0A	**8A**	14A	2A	0A	**8A**	0A	14A	0A	0A	2A	**8A**	**3A**	0A	2A	0A	**8A**	0A	2A	14A
8A	0A	0A	2A	**8A**	0A	0A	14A	0A	**8A**	2A	0A	14A	0A	2A	**8A**	0A	…Repeated…		

Group Sequence Timings

The following shows the group timings:

	Basic	Radio Text	EON	ODA	TMC	Total
Group Type	0A	2A	14A	**3A**	**8A**	ALL
No. per 5 seconds	24	11	8	2	12	57
Per minute	288	132	96	24	144	684
Ave per sec	4.8	2.2	1.6	0.4	2.4	11.4
%	42%	19%	14%	4%	21%	100%

Bit Rate

The Service uses 16 bits in Blocks 3 and 4, and 5 bits in Block 2.
Using this value (ignoring checksums) the bit rate is as follows:

8A bit rate = 32 bits x 12 groups/5sec = 76.8 bits/sec
3A bit rate = 32 bits x 2 group/5sec = 12.8 bits/sec

Total bit rate = 89.6 bits/sec

Clock time

CT (Clock Time – 4A grp)
Clock time is a requirement for all TMC–services (ISO requirement) as some features may rely on a time to be known by the receiver. Classic FM encoders transmit the CT (4A group) every minute as a high priority group; this is sent by the free running clock in each of the RDS encoders.

This free running clock is synchronised by a CT synchronising UECP message sent from the INRIX data servers as part of the agreement in place with Global Radio/Classic FM.

Time is derived based on local time in UK, from the INRIX domain server which itself is synchronised to a public internet based time source.

Compliance with IEC 62106:2016 for RDS

All encoders used in the distribution of the INRIX Service are compliant to the RDS Specifications. The UECP data sent to the encoders and the data added to the network by INRIX makes no demands on the encoders outside of normal compliant operation.

b) Transmitter Network

The full network of 42 transmitters provided by Classic FM will be used to carry the INRIX Service are listed below. (Transmitter list provided by Global Radio).

Transmitter	Grid Ref	Power (kW)	Classic FM
Arfon	SH476493	20	100.7
Bath	ST769655	0.2	100.2
Belmont	TF217837	7	100.5
Black Hill	NS828647	250	101.7
Blaen Plwyf	SN569756	20	101.1
Bow Brickhill (Milton Keynes)	SP914342	10	100.4
Bradford	SE164374	0.5	100.3
Brighton	TQ330045	0.5	101.9
Bristol	ST610764	0.2	101.4
Crystal Palace	TQ339712	2	100.6
Darvel	NS557341	10	101.3
Divis	J286750	250	101.9
Douglas (Isle of Man)	SC373746	1	100.2
Dover	TR274397	7	101.8
Fenham (Newcastle)	NZ216648	0.05	101
Great Ormes Head	SH766834	2.5	101.6
Holme Moss	SE095041	250	101.1
Kilvey Hill (Swansea)	SS672940	1	101.3
Leeds	SE237350	1	101.6
Londonderry	C404176	31	100.5
Meldrum	NJ760329	150	100.5
Morecambe Bay	SD239781	10	101.8
Mounteagle (Inverness)	NH639580	10	101.4
North Hessary Tor	SX578742	160	100
Oxford	SP567105	46	101.3
Peterborough	TL127913	40	101.9
Pontop Pike	NZ148526	150	100.3
Preseli	SN176306	20	100.5
Reading	SU746705	1	101.8
Redruth	SW690394	17	101.5
Ridge Hill (Gloucester)	SO630333	10	100.4
Rowridge(Isle of Wight)	SZ447865	250	100.3
Sandale	NY266398	250	99.9
Selkirk (Borders)	NT500294	10	100.9
Sheffield	SK324870	0.3	101.7
Sutton Coldfield	SP113003	250	100.1
Swindon	SU143900	0.72	100.8
Tacolneston	TM131958	250	101.5
Teeside	SE553962	2	101.6
Wenvoe	ST110742	250	101.7
Wrotham	TQ595604	250	100.9

Additional Non-AS/1 Networks

As well as the AS/1 (Classic FM) transmitters INRIX also transmits the Service through transmitters provided by several additional commercial radio stations. These transmitters provide redundancy or fill-in coverage. Connectivity is provided by Arqiva in 2 ways: through off-air retransmission of 3A and 8A groups from Classic FM onto other networks, and through direct feed IP connection via an Arqiva IP router housed at the INRIX data centre.

Service Date

The INRIX Service is already provided using all the existing AS/1 license transmitters. If the Additional Services licence is awarded to INRIX then the service will continue to use all of the listed transmitters and there will be no interruption of service.

Transmitter Site Equipment

No additional equipment or modification to existing equipment at the transmitter sites is expected for the service under the new AS/1 License. INRIX will operate the service using the same equipment as is already installed (other than replacing individual items of equipment that might fail), thus reducing risk to both INRIX and Global Radio due to unnecessary changes. Over the period of the last license, INRIX upgraded and simplified the equipment installed at Global Radio's site in Leicester Square, London, to provide improved robustness and to simplify maintenance.

c) Technical Contractors

INRIX uses its own staff for the provision, operation and maintenance of equipment used to generate the INRIX Service data content.

The connectivity to deliver the INRIX data onto the Classic network involves multiplexing the Classic FM specific UECP data (TA signalling, PI Code Changes during adverts and Radio Text changes) together with the INRIX data before passing it to the Classic FM transmitter network.

INRIX has an agreement with Global Radio, under which Global Radio provides access to the Classic FM RDS broadcast network through a data insertion point at Classic FM's Leicester Square studios, and a backup (disaster recovery) site at Global Radio's offices in Bristol. This agreement will be continued for the term of the license, if INRIX secures the new Additional Services Licence.

As well as an agreement with Global Radio for access to the Classic FM's infrastructure, INRIX has separate agreements with Arqiva, Global Radio, Signal Radio, Bauer Radio, and Communicorp for access to several secondary transmitters. These transmitters provide additional coverage and redundancy.

Arqiva provide connectivity to these secondary transmitters, both through off-air retransmission and direct line fed transmitter sites.

2WCOM is a German company providing broadcast equipment and services. 2WCOM are the suppliers of the multiplexer software utilised to combine the INRIX and Global Radio UECP data feeds before being fed to the Classic FM distribution network. 2WCOM also provide the off-air monitoring units used to monitor the TMC broadcast.

d) Operations Centres

The INRIX data utilised to support the UK RDS-TMC service is collated from server sites in multiple locations as part of the INRIX Worldwide traffic data system. Traffic speed and congestion data is collected, processed and provisioned from two Tier-1 data centres in Seattle and Denver in the USA, ensuring twin-site live failover redundancy. Incident data, including roadworks, road closures and accidents, is collected at INRIX's Global Incident Gathering operation based in Birmingham, UK. These data elements are combined and the broadcast UECP feeds generated at INRIX's UK broadcast data centre which is hosted at LDEX based in Manchester, UK.

The Service is monitored by INRIX's Technical Operations Centres, based at Altrincham in Greater Manchester and at INRIX Headquarters in Seattle, which between them provide 24/7/365 "follow the sun" live system monitoring.

INRIX's Altrincham offices hosts the IT team, technical development/R&D team, finance and HR support.

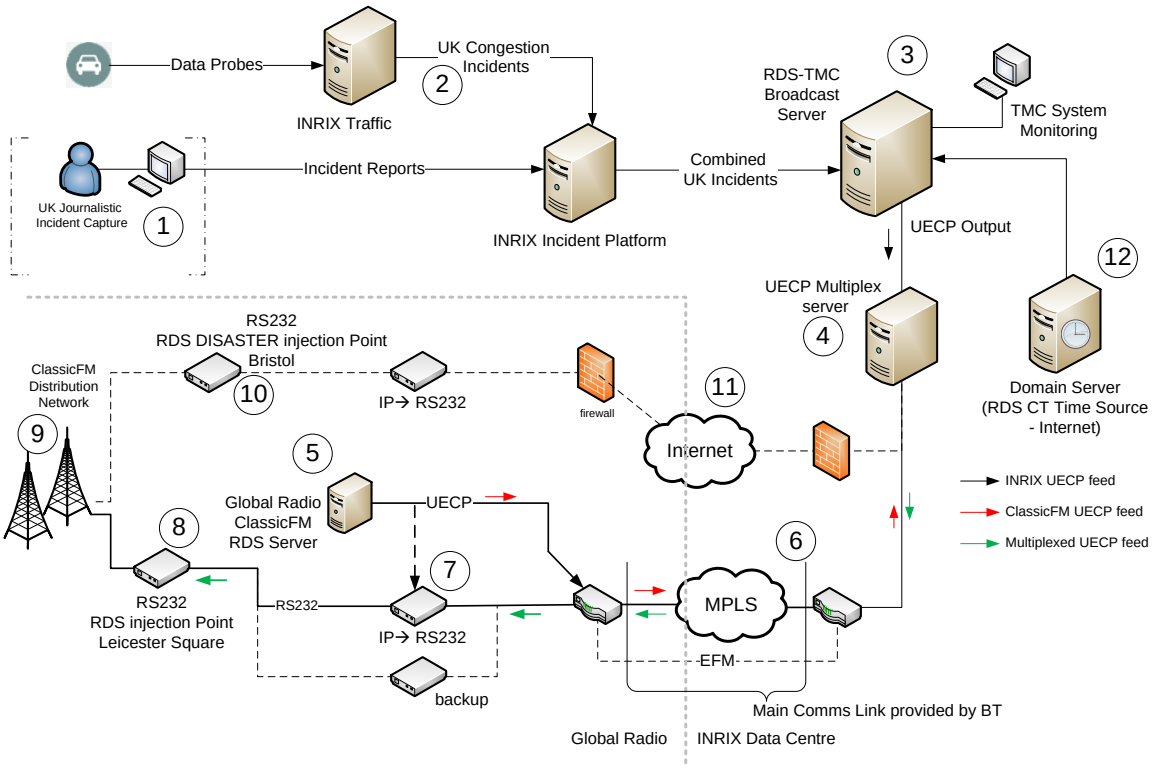
INRIX has recently moved its UK Data centre operations to a new site in Manchester, the LDEX Data Centre, which provides improved operational security and enhanced communications capability along with technical staff on site.

The LDEX Data Centre provides INRIX with the following:

- 24 hour on site security with CCTV and technical staff
- 4MW of electrical power from two independent primary upstream substations
- N+1 Generators
- N+N UPS protection
- Diverse A+B power to every rack
- N+1 cooling resilience
- Meshed internet connectivity (from multiple ISPs across diverse fibre entry points)
- 24x7 Remote hands support
- Uptime SLA of 99.999%
- VESDA and FM200 fire protection
- ISO27001 accredited and EU Code of Conduct members

e) Distribution

The full architecture diagram for the INRIX Service is set out below:



Journalistic data from the INRIX Incident Gathering team in Birmingham (1) and congestion data derived from the INRIX Floating Vehicle Data probes (2) are combined and sequenced into a UECP (Universal Encoder Communication Protocol) data feed by the broadcast Server (3). This UECP data is sent to a multiplexing server (4) which combines the INRIX UECP TMC feed with a dynamic RDS UECP feed from Classic FM.

The Classic FM UECP feed is used to toggle the TA flag and change the PI code during advert breaks. This is provided from a Server hosted and operated by Global Radio (5).

The multiplexed UECP feed is fed back to Global Radio at Leicester Square via an MPLS managed IP Network connection and an IP-to-RS232 converter (7) feeds the data to the RDS insertion point (8) for distribution through the Classic FM transmitter network (9).

Duplicated connectivity is provided through EFM (Ethernet First Mile) connection to Leicester Square and the duplicate IP-to-RS232 converter allows for remote failover switching without the need for on-site personnel at Global Radio in the event of a hardware failure.

The alternative insertion point at Global Radio's site in Bristol (10) is also available as a disaster recovery site. This is connected via ADSL (11).

Connectivity to the Leicester Square site is duplicated for robustness. Connectivity is normally provided via managed IP (MPLS) network (BT IP-Clear) but also via a backup EFM connection (6).

Addressable Encoders are used at each of the Classic FM transmitter sites, UECP data is applied to the inputs of all encoders; but the address defined in the UECP data frame causes only the appropriate encoder to act on the data.

The Classic FM rebroadcast transmitter sites receive the off-air broadcast from one of the line feed sites and retransmits the same RDS data. This is part of the normal Classic FM distribution and INRIX has no direct input on these sites.

f) Technical monitoring

The service is monitored on several levels:

Data Quality

Content of the traffic information provided by the Service is continually monitored, measured and assessed for qualitative and quantitative accuracy. Both automated quality analysis and ground truth testing methodologies are employed.

The assessment of congestion quality is based on a Quality Metric called “Q-Bench” devised by INRIX in conjunction with BMW and adopted by TISA as an industry standard measure of service quality. This is monitored continually by the INRIX Quality Engine to ensure a high quality of road speed, congestion, delay and travel time data.

Content

The INRIX traffic incident capture and input centre for the UK is manned and operational 24/7/365.

The numbers and type by event code of traffic messages included in the Service and delivered by TMC are anticipated to be within certain limits. Automated detection of abnormal levels or unexpected changes in incident counts trigger alerts to enable fast response for investigation and timely correction.

The services run on the servers to provide the Broadcast system are automatically monitored (24/7/365) and provide alerts to operations and on-call staff if message numbers fail to reach certain thresholds

Distribution

The delivery of data to the Classic FM network is monitored by checking the broadcast using “off-air” decoders monitoring the Live FM RDS content.

The broadcast is monitored using 2Wcom RDS decoders situated at offices in London, Birmingham and Manchester. An independent backup monitor is duplicated at the Manchester (Holme Moss) site. The system monitors for RDS reception, 8A groups, 3A groups and the number of live messages.

An archive of all the transmitted traffic messages is also maintained for approximately 2 months to allow field queries from INRIX’s OEM customers to be investigated.

The insertion of the INRIX UECP data can only affect the RDS transmission of INR1 service; there is no possible connection route that can affect the Programme Audio signal.

The adjustments to the RDS broadcast are limited to the TMC data by the fact that the output from INRIX systems can only provide 3A and 8A data groups and Clock Sync. No UECP data can be generated from INRIX systems for other aspects of the RDS functionality.

The Broadcast rate of the 3A and 8A groups is limited by the group sequence set at each of the encoders. INRIX has no access to these settings. All RDS settings changes are controlled/performed by Global Radio and their network operator Arqiva.

It is impossible for the INRIX Service to adversely affect the INR1 programme signal in any way. If the INRIX systems failed completely, with neither of the backup solutions or connectivity available, Global Radio will be able to direct their dynamic UECP feed directly to their RDS network insertion point without utilising the INRIX systems. The INR1 service with full RDS functionality can be run independently in the event of any serious failure of the INRIX systems.

g) Service equipment maintenance

Systems Resilience and backup

All Critical systems are duplicated with a failover solution to ensure continuity of service. Data feeds are duplicated through different medium: BT MPLS with backup and IPSEC VPN.

Critical equipment such as servers and communications equipment and routers/switches are supported with manufacturers onsite warranty. Equipment will be replaced or upgraded before the expiry of the warranty/support agreement.

Server based systems either have duplicate hardware or are virtualised across physical servers and can be immediately and automatically moved to different physical servers in the case of a problem with a specific physical server/hardware.

On Call Support

INRIX has a full-time IT operations team which provides support on a 24/7/ 365 basis for operations within the data centre and all deployed systems.

Outside of normal UK office hour's support is covered, with nominated team members on-call and by INRIX's TOC and US based Infrastructure team overnight. The INRIX systems generate automated alerts which are sent, via e-mail, to mobile devices to on-call staff. In addition, there is also a service desk through which issues can be raised and escalated manually.

The on-call staff have remote access to all information on the systems and can address routine issues autonomously. If additional support is needed there are other on call staff who can be contacted, according to a structured escalation plan, to give assistance. In the event of a major failure, this will be escalated to the Director of Infrastructure Operations personally.

IT Operations Team Personnel are as follow:

IT Engineering personnel responsible for 24/7 operations across two sites

1x Director of Infrastructure Operations

1x Network Engineering Lead

2x Senior Networking Engineers

1x Systems Engineering Lead

2x System Engineers

1x Dedicated RDS-TMC software specialist

2x Database Administrators

10x First-line Technical Operations Centre personnel

Change Control and Tracking systems

Queries, change requests and work requests are controlled through INRIX's internal TOC system, this ensures all issues raised are allocated to appropriate personnel, progress-monitored and tracked to resolution and completion.

h) Standby Arrangements

All servers used to provide the INRIX Service are duplicated to failover systems to ensure a fully robust operation.

Incoming data feeds are provided with duplicated connectivity and are fully monitored.

All systems are monitored 24/7/365 with on call and TOC staff receiving automated alerts if required to ensure prompt resolution of issues.

Additional Information

THE FOLLOWING SECTION PROVIDES ADDITIONAL INFORMATION ABOUT THE OPERATION AND CONTENT OF THE SERVICE CURRENTLY PROVIDED BY INRIX. THIS SECTION AIMS TO PROVIDE SOME CONTEXT TO THE SPECIFIC TECHNICAL QUESTION RAISED IN THE ADVERTISMENT.

INRIX is the holder of the current Additional Services (AS-1) Licence and uses it to provide a world leading traffic information service. INRIX launched the first UK commercial RDS-TMC service using the AS-1 licence in 2001 with Toyota and then BMW, both of whom remain customers today. This service is provided to drivers directly from automotive manufacturers (who sell integrated satellite navigation devices in their vehicles) or personal navigation device manufacturers. INRIX TMC customers include (among others) BMW, Ford and Toyota, Jaguar Land Rover, Renault, Nissan, Suzuki.

There are around four million devices activated to receive the INRIX RDS TMC service with a high percentage of these being used on a regular basis to provide vital traffic information and journey planning to UK drivers. No other service provider would be able to continue to service these in field systems without massive cost to update each device to use a different service.

Since the introduction of the service, INRIX has continued to improve the quality and content of the service which continues to be regarded as a mature high quality service and this view is supported by the longevity of the contracts INRIX has with its customers.

Continuing Investment and innovation

There are two types of real-time traffic information data provided by the INRIX Service:

1) Incident/Event Data – this comprises events that have happened on the road which are not normal and have an impact on either journey times or safety to road users; and

2) Congestion/Flow data – this data shows reduced traffic flow speeds from the normal expected speed (due to either an incident or traffic volume).

INRIX is the leading provider of traffic Information to the UK media. INRIX has contracts with the BBC and the majority of the UK commercial radio stations to provide over 900,000 voiced traffic bulletins each year. INRIX leads the market in UK incident data collection and quality, providing the country's canonical road incident dataset to power the INRIX Broadcast and connected services. INRIX has recently made further investments in this area, opening a 6,000-square foot, 75-desk global traffic incident collection centre in Birmingham. From here the UK incident editorial team of 55 people provide 24/7/365 collection, curation and management of the incident data that informs the users of the INRIX broadcast services (RDS-TMC & DAB-TPEG), the BBC, AA, RAC and numerous other trusted UK organisations.

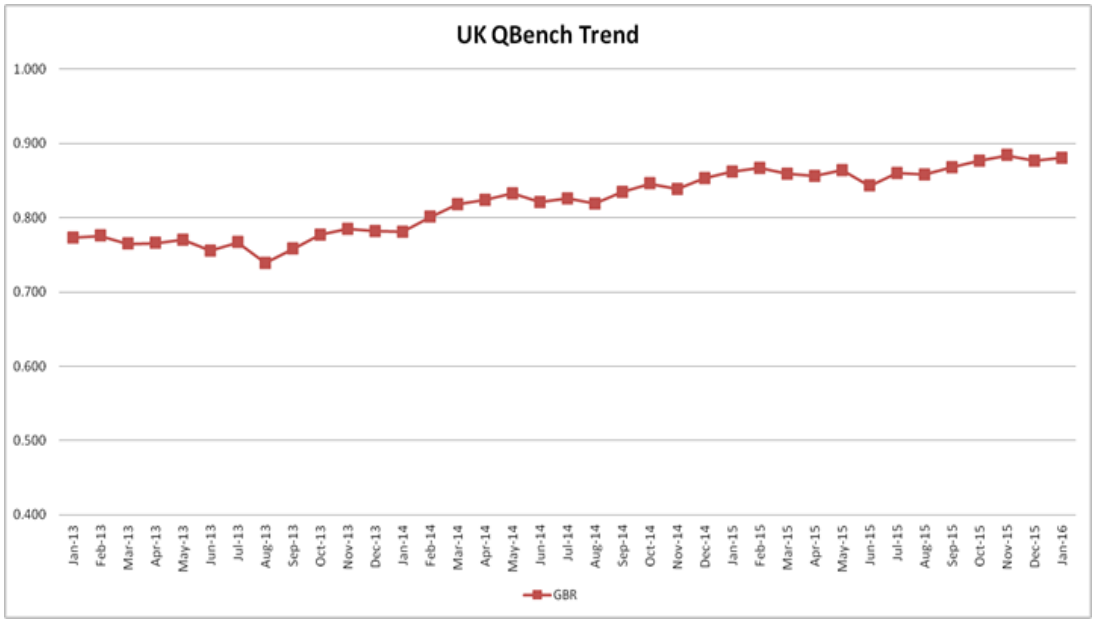
INRIX flow data comes from "Floating Vehicle Data" probes. INRIX utilises over 50 different sources of probe data for the UK alone. Fleet management systems operated by large companies collect GPS position data from their fleets using it to help their logistical operations. Many of these companies sell this data and INRIX uses it as one of the key inputs to its systems.

The ingestion of this data and combining it to create high quality traffic reporting is a very sophisticated process. Providing correct and timely reporting for Motorways, although still specialised, is relatively straight forward compared to providing the same quality of reporting on smaller roads (arterials and country roads) where data probes are less prevalent and have different behaviours.

INRIX has an expert Data Quality Team working to constantly improve the algorithms within INRIX's traffic data systems, improving the use of all available data.

This continuous improvement is only possible through the specialised knowledge and understanding that INRIX has built up over many years. The drive for improvement comes from INRIX's determination to provide the best quality data to its OEM customers.

The following graph show the trend of data quality in the UK. INRIX's continuous data quality monitoring forms part of the SLA's INRIX provides to its customers. QBench is the industry standard methodology for traffic flow data quality.



Location Table

The perceived quality of INRIX traffic data displayed by OEM's vehicle systems to their drivers ultimately relies on INRIX's ability to report the position of issues accurately. The decoding of the messages to give the correct positioning within the navigation system relies on a Location Table. This table is used both in the encoding process within INRIX systems and within each receiver.

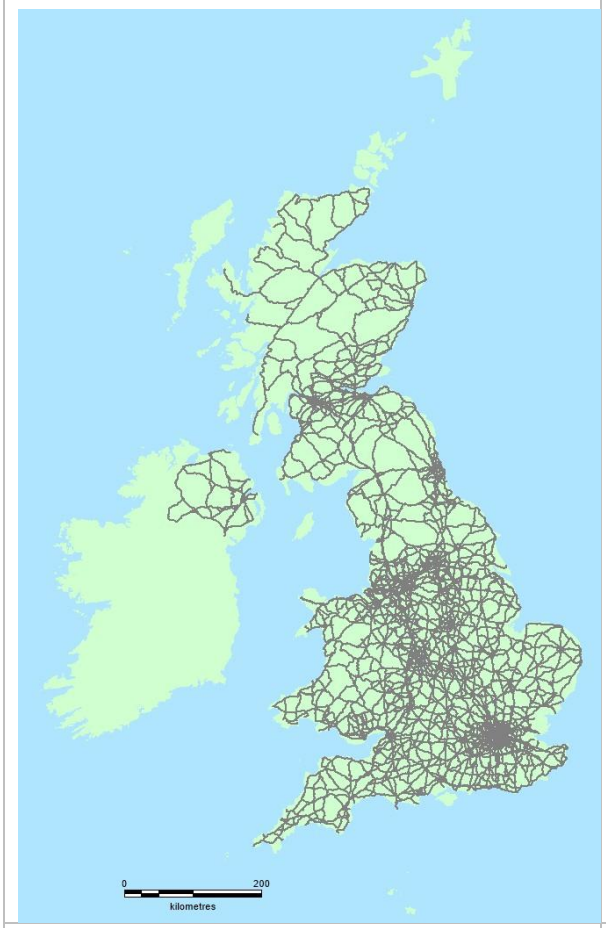
The Table is proprietary and copyrighted to INRIX and receivers using the INRIX service must integrate INRIX's table to be able to decode the service.

INRIX has recently invested more than £250,000 in the upgrade to a new INRIX Location Table version 6.1, which further enhances its coverage of roads throughout the UK.

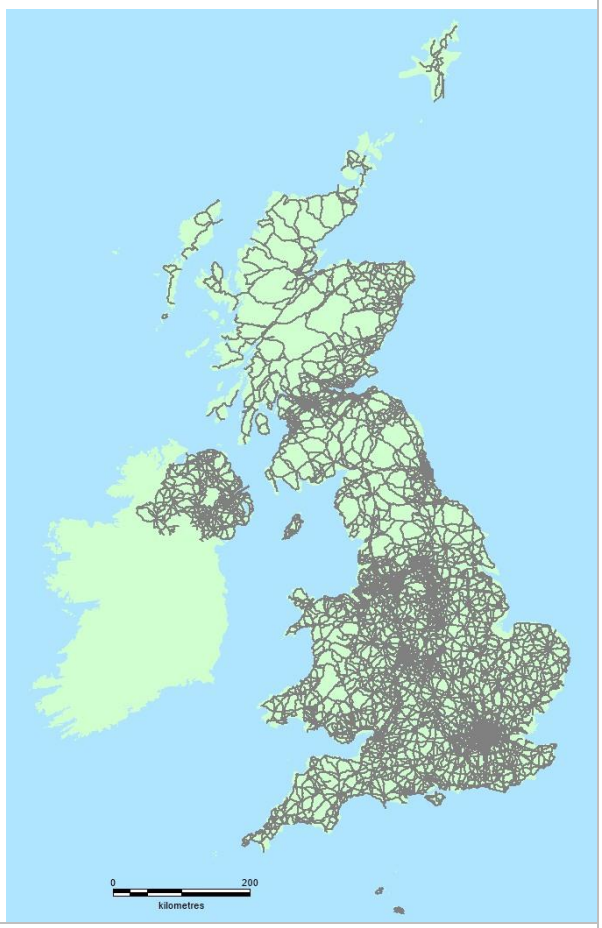
Although it remains backward compatible to ensure no loss of service to existing users of the older table, the new Location Table has been enhanced to more than double the number of referenceable locations.

The Motorway and A-road networks are fully covered, with 100,000 KM of the B-road network also addressable. Significant increase in the coverage in Northern Ireland has also been enabled, increasing coverage from 43,000 KM of the road network to 146,000 KM.

The maps below show the network coverage enhancement from Location table version 5.2 to version 6.1.



Location table – version 5.2



Location table – version 6.1

Location Table 6.1 supports the full and accurate reporting of incidents on slip roads by including location codes specified for each (and every) slip road on Motorway and A roads throughout the UK. (6,500 separate point codes). This includes slip roads and connecting roads that split or merge allowing closures/incidents to be addressed more accurately, where “exit closed” may previously have been ambiguous due to multiple slips at a single junction.

In addition, INRIX has included ferry routes and over 100 Points of Interest including airports, stadia, racetracks and amusement parks, allowing major traffic-affecting events to be communicated to users.

Location table Statistics

The new version (6.1) will be deployed into service by Q4 2017 to match the availability of the table in OEM mapping.

	Number of Road Links	Distinct TMC Codes	Road Classification (Length KM)				
			Motorway	A Road	B Road	Lower	Total
LTN10 (v5.2)	440,613	16,189	3,496	38,964	389	129	42,978
LTN10 (v6.1)	828,889	37,888	3,777	40,842	98,355	3,200	146,175

The INRIX location table for the UK is proprietary to INRIX and is produced in accordance with the ISO standards and is certified in line with the TISA Certification process before being released to customers for integration with their mapping.

3. ABILITY TO MAINTAIN PROPOSED SERVICE

[Submitted in confidence]

4. OWNERSHIP AND CONTROL OF COMPANY WHICH WILL OPERATE THE LICENCE

a) Board of Directors

Name	**Bryan Mistele**
Occupation	Chief Executive
Other Directorships	Director – INRIX Holdings UK Limited Director – INRIX Media Limited Managing Director – INRIX Europe GmbH Director – Discovery Institute
Other Media Interests	None

Name	**Adrian James Beach**
Occupation	Chief Financial Officer
Other Directorships	Director – INRIX Holdings UK Limited Director – INRIX Media Limited
Other Media Interests	None

Name	**Aileen Holohan**
Occupation	Finance Director
Other Directorships	Director – INRIX Holdings UK Limited Director – INRIX Media Limited Managing Director – INRIX Europe GmbH Managing Director – ITIS Deutschland GmbH Managing Director – MILE traffic and Travel GmbH
Other Media Interests	None

As INRIX is the existing holder of the Additional Services Licence relevant experience of each Director has not been provided.

There are no plans to appoint additional Directors

b) Investors and Shareholding Structure

[Submitted in confidence]

c) Involvement of the Applicant in Specified activities

[Submitted in confidence]

5. REGULATORY HISTORY

- Please provide details of any matter that might influence Ofcom's judgment as to whether the applicant is, or will remain a "fit and proper person" to hold the licence.

  INRIX is not aware of any formal complaints to Ofcom regarding its existing service and is confident that it can continue to provide a similar service under the new AS-1 Licence

- Details of licenses to provide a licensed service:

  i. INRIX currently holds the A/S1-2 under which it transmits traffic and road travel data to in-car navigation devices/portable navigation devices using the space capacity within the signals on the FM frequencies used to broadcast Classic FM.

  ii. INRIX currently holds a digital additional sound service licence (Licence No. DA030) which is uses to transmit traffic and road travel data to in-car navigation devices/portable navigation devices using the national radio (digital) multiplex.

  iii. INRIX Media Limited has held a local digital sound programme licence (LICENCE NO. DP 102) to provide local digital sound programme services.

6. OTHER INFORMATION

INRIX is the holder of the current Additional Services (AS-1) Licence and that licence is due to expire on 28th February 2018. INRIX is currently making maximum use of the spectrum currently available under the AS-1 Licence.

Using the AS-1 Licence, INRIX has successfully developed a service which is utilised by over four million users. This service was built from a zero base and INRIX and customers of INRIX have invested considerable time and resources in building up the UK's leading RDS-TMC service which is widely regarded as the best quality service in Europe.

[Confidential information removed.]

INRIX has held the current AS-1 licence since 2012 and has throughout the term of the licence met all its payment obligations to Ofcom within terms.

INRIX' customers pay a one-off fee for each navigation device sold which contains the INRIX Location Code Table. This Location Code Table enables the devices to interpret the INRIX service. If INRIX is not awarded the AS-1 licence, then all devices containing the INRIX Location Code Table (which is proprietary to INRIX) will no longer be able to receive any traffic information service and the existing 4 million users will cease to benefit from this service.

If a new traffic and road travel service was broadcast on the spare capacity currently being auctioned, none of the devices currently in use would receive this service without a prohibitively expensive and time consuming software update.

If INRIX is not awarded the AS-1 Licence, then there will be considerable consumer detriment caused to users of the current INRIX service who will lose functionality in the navigation devices they have already purchased. The only way drivers will be able to receive a new service (should one be available) will be to purchase a new device or undertake a software upgrade (if available). According to INRIX's automotive customers, these options are both prohibitively expensive.

Should INRIX be successful in winning the AS-1 Licence, it would continue to provide this service to new customers until Digital switchover, and existing consumers would automatically also continue to benefit from the ongoing service and any enhancements made, at no additional cost to them.

7. DECLARATION

INRIX hereby confirms that, to the best of its knowledge and belief:

a) INRIX is not a disqualified person in relation to the licence by virtue of the provisions referred to in section 143 (5) of the Broadcasting Act 1996 (relating to political objects);

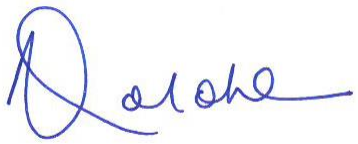
b) INRIX is not otherwise a disqualified person in relation to the licence by virtue of Part II of Schedule 2 to the Broadcasting Act 1990;

c) Holding the licence would not place INRIX in contravention of requirements imposed by or under Schedule 14 of the Communications Act 2003;

d) No director or person concerned directly or indirectly in the management of the company or the applicant group is the subject of a disqualification order as defined by section 145(1) of the Broadcasting Act 1996;

e) No person (corporate or natural) involved in the application has been convicted within the past five years of an unlicensed broadcasting offence and INRIX will do all it can to ensure that no person (corporate or natural) so convicted will be concerned in the provision of the service, the making of programmes included in it, or the operation of a wireless telegraphy station, if INRIX is granted a licence; and

(f) Any and all matters which might influence Ofcom's judgement as to whether the applicant is a fit and proper person to hold the licence have been made known to Ofcom.



Aileen Holohan (Finance Director)
For an on behalf of INRIX UK Limited

Date 23 May 2017

APPENDIX A

FINANCIAL INFORMATION

[Submitted in confidence]