Crown Commercial Services

G-Cloud 11

oneTRANSPORT Data Marketplace

Service Definition Document

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Overview

The oneTRANSPORT Data Marketplace is a growing ecosystem of connected public & private sector organisations that are sharing data to enable "Smart" collaborative services.

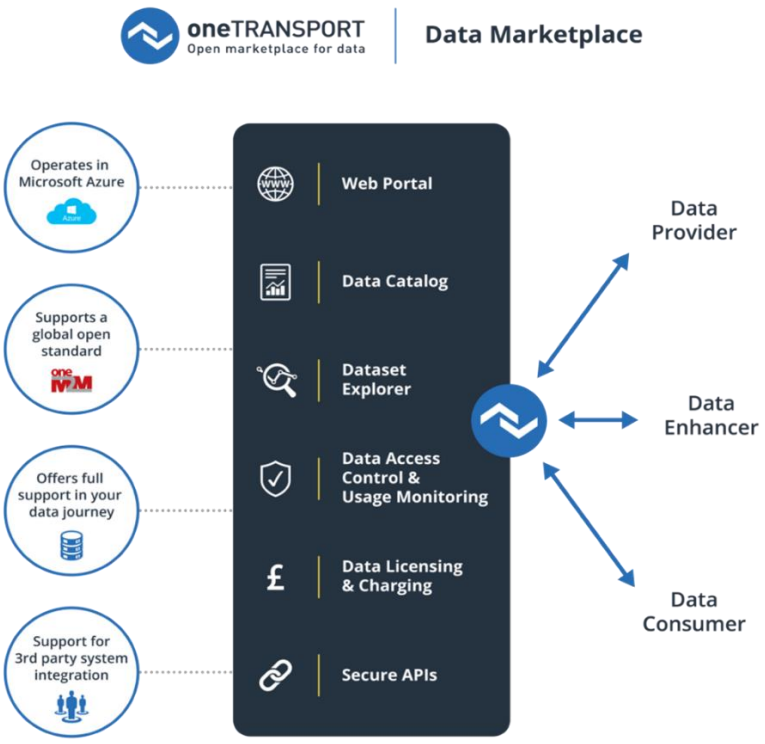
Previously isolated and inaccessible data about real-time operations of towns and cities is being opened to organisations to provide new insights, improve decisions and build intelligent services that significantly improve citizen life. Studies have shown that over £1Bn could be unlocked in the UK through the sharing and improved exploitation of data across the country.

The oneTRANSPORT Data Marketplace enables you to:

- Share your data across your organisation via web interface or through standardised APIs
- Publish your data to the Open Marketplace, making your real-time data discoverable and accessible to other organisations, and access reports on who is consuming your data
- Discover and consume data that others have published via clear license terms
- Share your data for free or set a price for your data, enabling monetisation of valuable information
- Store your real-time or other reference data in the cloud, with auto-archiving of historical real-time data to files

No Data Lock-In: oneTRANSPORT Data Marketplace does not require exclusivity to published data, so organisations can use and distribute their data through other means as well.

No Vendor Lock-In: oneTRANSPORT Data Marketplace technology and interfaces comply with the international oneM2M™ standard which does not lock you to a proprietary technology from a single vendor.



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Or visit our website at www.oneTRANSPORT.io

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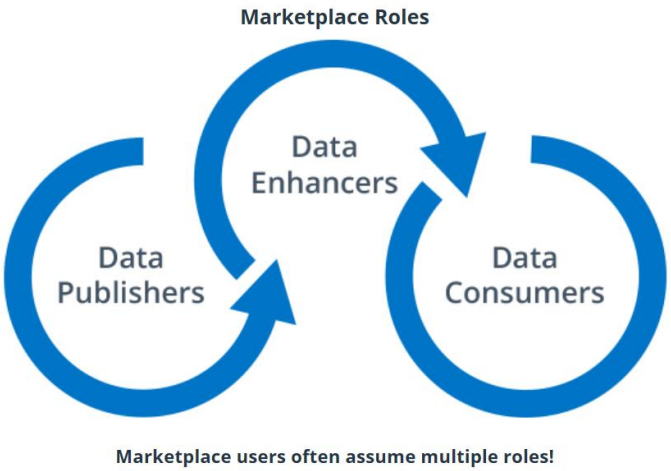
oneTRANSPORT Data Marketplace Service

Description

The **oneTRANSPORT Data Marketplace** makes data available through an open, oneM2M™ standards-based system with data licences, enabling the creation of new data-driven Digital Transport Solutions. It is a neutral digital infrastructure service for smart cities, regions, authorities and service providers that tackles many of the barriers that are preventing innovation and the growth of new Intelligent Mobility services.

The oneTRANSPORT Data Marketplace is a growing open ecosystem of connected organisations from different sectors, public and private, that are sharing real-time data to enable Smart collaborative services and enabling innovation.

The oneTRANSPORT Data Marketplace unlocks under-exploited data about the operations of cities, towns and regions that resides in a myriad of siloed systems across the UK. Organisations that use the marketplace often assume multiple roles, both publishing and using data to improve services and provide new solutions.



Data Publishers

Data publishers are public or private sector organisations looking to share data within their organisations or with others. Such data may be offered “free” or assigned a “fee” of the data publisher’s choosing. Data may be in its raw or refined forms.

Data Enhancers

Data enhancers are service providers that take existing data from the oneTRANSPORT Data Marketplace and enhance it to provide more value. For example, they may clean it up to remove anomalies, combine it with other data, or apply specific data schemas or analytics.

Data Consumers

Data consumers are public or private sector organisations, individuals, universities, and other educational and not-for-profit organisations that download existing data from the Open Marketplace, in order to deliver solutions and services.

Real Time Data

The oneTRANSPORT Data Marketplace is powered by the Chordant platform, an Internet-of-Things technology which is built from the ground up to support ***real-time*** data streams, together with meta-data and associated static data sets that give context to real-time data.

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oneTRANSPORT Data Marketplace Service Options

We offer two oneTRANSPORT Data Marketplace licence types through G-Cloud 11.

"G-Cloud Lite" Licence

- With our "Lite" licence, Buyer organisations can access the oneTRANSPORT Data Marketplace and can view and consume all data that has been published openly by others (free or paid-for).
- With a "Lite" Licence, Buyer organisations are not able to upload and publish their own data.

"G-Cloud Full Service" Licence

- With our "Full Service" licence, Buyer organisations can access the oneTRANSPORT Data Marketplace and can view and consume all data that has been published openly by others (free or paid-for).
- A "Full Service" licence additionally entitles Buyer organisations to upload their own data sets to the service, for sharing amongst Users in the same organisation and additionally for publishing to the Open Marketplace to enable consumption by other organisations, via agreed license terms.

Initial Set-Up Charges

- Initial Set-Up Charges apply to both of the above Licence types and are detailed in the Pricing Document which is available through the Digital Marketplace web portal.
- For "G-Cloud Full Service" license holders, and depending on the Initial Set-Up option selected, we include the integration of a number of the organisations own data sets up to a threshold as defined in the Pricing Document which is available through the Digital Marketplace web portal.
- For "G-Cloud Full Service" license holders, and depending on the Initial Set-Up option selected, we include a number of basic visualisations of supplied data feeds up to a threshold as defined in the Pricing Document which is available through the Digital Marketplace web portal. The precise nature of these visualisations will depend upon the particular type and quality of data sets provided.
- Additional integrations and visualisations can be quoted for and purchased using rates as defined on the SFIA rate card, which is available through the Digital Marketplace web portal.
- For "G-Cloud Full Service" license holders, organisations that choose to self-publish all datasets will only be charged the "Basic Set-Up" Initial Set Up Charge.

Additional Usage Charges

- Both "Lite" and "Full Service" licence types provide an inclusive amount of marketplace usage. Storage of data above inclusive amounts (for "G-Cloud Full Service" licences) and downloading of data above inclusive amounts (for both "G-Cloud lite" and "G-Cloud Full Service" Licences) attracts additional usage charges as defined in the Pricing Document which is available through the Digital Marketplace web portal.

Additional Services and Charges

- Some organisations specify charges for the data they make available via the oneTRANSPORT Data Marketplace and additional charges apply if you want to use these 'priced' data sets. There are a number of approaches taken to the way this data is priced and this is explained in detail in the Pricing Document which is available through the oneTRANSPORT Data Marketplace web portal.
- Charges for additional services are outlined in detail in the Pricing Document available through the Digital Marketplace web portal.

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Service Features and Benefits

The oneTRANSPORT Data Marketplace enables the interconnection of multiple oneM2M™ compatible platforms (vendor open) and interconnections with existing or new proprietary, open-source or API solutions to further enable data exchange and trading.

The G-Cloud Full Service Licence enables the full suite of features and benefits listed herein; the G-Cloud Lite Licence still provides many of the features and benefits, specifically the ability to view and consume all data that has been published openly by others benefitting from the open standards, legal frameworks, pan-authority views, and innovation capabilities of the oneTRANSPORT Data Marketplace.

Key Features

- Open standards-compliant solution for consolidating and publishing real time data
- Shares your data privately across your organisation via web interface or through standardised APIs
- Legal framework that enables open sharing of information with other organisations, with reports on who is consuming your data
- Auto-archiving of historical real time feeds for off-line analysis
- A choice of data licencing options for publishers and consumers
- Commercial models for monetising published data and sourcing commercial return
- Flexible real time visualisation of data
- oneM2M international open standard solution, avoids data or vendor lock-in
- UK based Microsoft Azure-hosted cloud service with scalable demand management

Key Benefits

- Unifies and shares national, inter-authority, inter-regional and pan geographic network data
- Enables pan-authority and private sector data integration, coordination and sharing
- Makes data non-proprietary, integrating from existing competing modal standards
- Data sharing service model negates pan-authority political alignment needs
- Visualisation of data enhances optimisation through insight and improved decision making
- Improves third party prediction, modelling and travel information services
- International standards increase commercial value and sustainability of solution
- Improved strategic network control through more efficient utilisation, prioritisation, policy enforcement, environmental adaptation and matching of services with changing journey requirements
- Scalable, flexible, secure cloud service adaptable to new data growth
- Extract value and monetise data through an accessible platform and technology
- Enables private sector Intelligent Mobility Services innovation to discover new service opportunities and efficiency savings
- Backbone of future adaptive control solutions, integrating new traffic data
- Exploit value from emerging complimentary CAV technologies in network control

Our experience has demonstrated that data resolution is enhanced by connecting oneTRANSPORT directly to sensor provider's (cloud-based) data collection systems, avoiding filtering by third party systems and reducing integration costs.

The cost to extend data coverage with new sensors is reduced by connecting sensor / gateway equipment directly to oneTRANSPORT (a oneM2M™ standards-based solution), reducing a need for duplicate infrastructure.

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Technical Features

oneTRANSPORT™ Data Marketplace is powered by the Chordant™ platform, which is compliant with the global oneM2M™ standard for Internet-of-Things systems. oneM2M™ defines an infrastructure architecture that enables data, collected from any IoT device or system, via any type of communications infrastructure, to be discoverable and consumable via open, standardised APIs (Application Programming Interfaces). oneM2M™'s provision of a standardised set of 'application enabling services', including real-time data discoverability, network abstraction, security, federation and semantic interoperability, makes oneM2M™ a comprehensive and internationally compatible approach to realising a national open transport data marketplace.

oneTRANSPORT™ Data Marketplace technology enables:

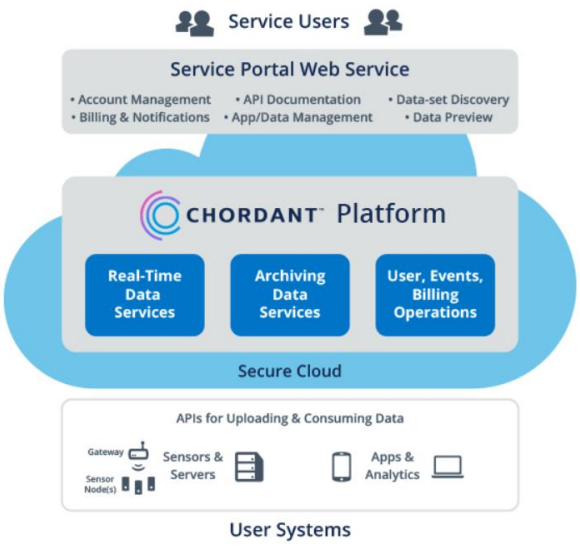
- The distribution of real-time transport data from any system, device or organisation
- UK-cloud-based storage for your real-time and historical data (not just a catalogue or front-end to another system)
- The extended platform capabilities that enable end-to-end Internet-of-Things (IoT) solutions

The oneTRANSPORT™ Data Marketplace allows you to:

- Upload your data
- Describe and tag your data
- Archive real-time data to files
- Set thresholds and notifications on data usage and access usage reports
- Distribute your data privately within your organisation or publish it via the open marketplace for other organisations to discover and access
- Send messages to your data consumers
- Search, discover and consume others' open data
- Price your data so others pay you to access it
- Delete your data

Data Protection

Data is secured in transit, encrypted when at rest, and hosted in the cloud, with the infrastructure meeting global and local standards. Strict permission controls allow users to share only the data they want, with whom they want.



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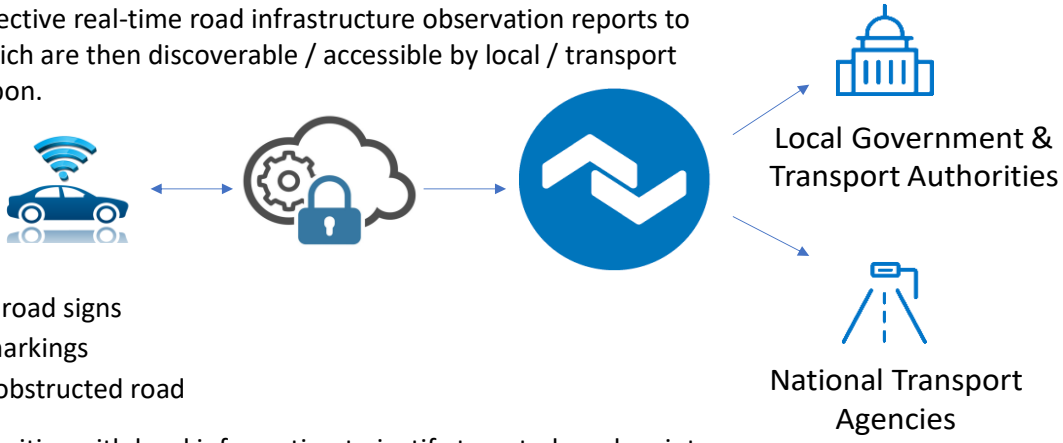
Example Service Applications

Implement a practical and scalable example of real-time communications between Connected Vehicles and Transport Authorities.

Vehicles provide selective real-time road infrastructure observation reports to oneTRANSPORT, which are then discoverable / accessible by local / transport Authorities to act upon.



Example use cases:

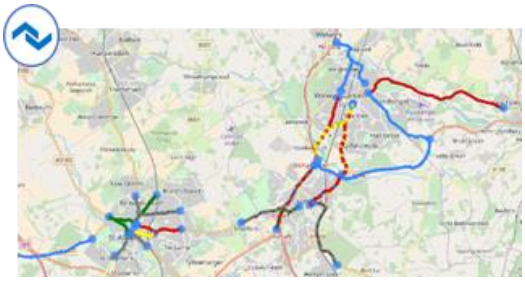
- Unreadable road signs
- Poor road markings
- Damaged / obstructed road

Provides Local Authorities with hard information to justify targeted road maintenance interventions.

'Integrated Urban Data' Dashboards

Real-time map-based display of road sensor locations, sensor data health, spot congestion/speed readings, average journey times and parking capacities for major towns in the county. This provides visual monitoring of both basic data parameters (sensor locations / coverage, data reliability & quality, alerts & alarms for data availability & abnormalities) and basic transport network operation in key locations. For example, the impact of car parks becoming full, roads being closed and abnormal traffic in a particular area. Additionally, the impact of specific interventions can be quantified through offline analysis of real-time data archives pre and post intervention.

Cross-boundary Traffic Dashboard (Early warning of disruptions coming from neighbouring counties or SRN)



Real-time map-based dashboard that extends local road network monitoring capabilities to include "look-ahead" of abnormal incoming traffic volumes from neighbouring counties and the SRN (where previously this data was unavailable or not fully integrated). This dashboard can also include the generation of automatic alerts that are sent to Highways England from any abnormal traffic event within a certain distance / time from the SRN.

For further details on the application of oneTRANSPORT, please see the white papers published on our website https://onetransport.io/about-us/resources/

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Onboarding and Offboarding Support

Onboarding

Organisations joining oneTRANSPORT will be provided with an "Organisation Administrator" account on the oneTRANSPORT service portal. The Organisation Administrator (a role that should be assigned to someone within the Buyers organisation) is then able to create additional User accounts for as many Users as is required within the Buyers organisation. The Organisation Administrator is responsible for providing billing information and monitoring the organisation's overall usage of the service.

For organisations that have not chosen the "Basic Set-Up" Initial Set-Up Charge, Chordant will coordinate with the Organisation Administrator to conduct an audit of the organisations' candidate data sets and data systems and interfaces, and then work with the organisation to integrate the data sets to the Marketplace and build the agreed visualisations.

Data Integration

Chordant's ability to integrate the Buyer's data into the oneTRANSPORT marketplace is dependent upon the Buyer providing adequate information about the data sets and the systems where they reside, the availability of suitable interfaces into these systems, and the provision of adequate access and support to integrate with such systems.

Data Visualisation

The provision of data visualisations depends upon the type and quality of data being provided, together with the capabilities of the underlying visual tools that Chordant uses for the provided displays. Chordant aims to provide displays that meet Buyers' needs, subject to constraints imposed by the data, tools and time available.

Further Support

Chordant are also able to help Buyer organisations beyond the support provided for by the Initial Set-up Charge, to integrate their systems, sensors and data. Chordant offers such services for public sector organisations where such expertise may not naturally exist, may not be accessible on short notice, or where data may involve very diverse sets (different systems, formats, and granularity). Further support is given at the day rates notified on the SFIA Rates Card or a negotiated variance depending on the level and extent of the activity required.

User documentation and developer tutorials are provided on the oneTRANSPORT website and also in the oneTRANSPORT Data Marketplace web portal.

Email support is also provided to assist Buyers with the use of the system and its APIs.

Offboarding

Chordant support clients through the Offboarding process by:

- Helping to export dynamic dataset lists – including a list of live feeds is provided so that users can redirect and terminate the connection(s),
- Exporting of archive and static data files,
- Deletion of dynamic data feeds, and
- Deletion of user and organisation data, information, service access rights and any confidential information in compliance with data standards.

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Technical Requirements

The oneTRANSPORT Data Marketplace is hosted on the cloud and can be accessed from any modern standards-compliant web browser and the majority of browsers on all mainstream mobile devices (see list provided on the Digital Marketplace). To share data from existing systems on the platform the Buyer will need to either:

- configure existing systems to upload data on the platform
- allow oneTRANSPORT services to import data from the existing systems. In this case the oneTRANSPORT service will need to be granted sufficient network privileges to query the Buyer's system

We handle / export data in any / all formats; inclusive of CSV, HTML, XML, DATEX 2, JSON and UTMC.

Buyer Responsibilities

Chordant will require the following from clients to ensure a successful Onboarding process and operation of the oneTRANSPORT Data Marketplace:

- A single point of liaison within the Buyer's organisation – with the authority to make decisions on behalf of the organisation in respect of the service provision.
- Administer account / add Users (administration is managed via the portal)
- Facilitating liaison with the Buyer's IT department
- Provision of access to the Buyer's data, data sources and data volumes where necessary to implement the data exchange with the oneTRANSPORT Data Marketplace
- Select datasets to publish on the open marketplace (including setting prices (optional) and licenses (mandatory))
- Maintain data feed continuity to the system (Importers)
- Ensure data feeds are free from personally identifiable information
- Adhering to licenses for consumed datasets

The oneTRANSPORT Data Marketplace is not intended to serve as an exclusive backup or failover data service for content. It remains the Users responsibility to maintain additional backup copies of, and failover services for any, content stored on the Service.

Service Levels

Chordant shall strive to make the services available to Users 24 hours per day, 7 days per week at least 99% of the time in any calendar quarter, except for scheduled maintenance or upgrades and excluding API interruptions. Support email contact is provided for accessing the service support with responses during UK office hours, Working Days 09:00 to 17:00.

- There will be an automated ticket number response within 24 hours (usually within a few minutes).
- Then second response within working 3 days, with either solution or estimate to a solution
- Email Support is available 24/7

Reports on request are provided on Users data usage and others usage of Users data.

All Buyers are advised by email of all planned maintenance activity on the service which is undertaken during quiet periods (normally overnight).

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Pricing Overview

- Pricing for the oneTRANSPORT Data Marketplace is detailed in the G-Cloud 11 Pricing Document available from the Digital Marketplace web portal.
- Ordering is initiated via the Digital Marketplace.
- Delivery of the service will commence on acceptance by Chordant of a completed G-Cloud 11 Call Off Contract and the service will commence on a mutually agreed date.
- Invoicing will occur on a monthly basis with payment terms as defined by the G-Cloud 11 Call Off Contract.
- Rates for additional labour-based services will be charged at the rates outlined in the SFIA rate card document available from the Digital Marketplace web portal.

Chordant

Chordant is passionate about innovation and a standards-based approach that stimulates thriving global ecosystems. Solutions powered by the Chordant platform address the fundamental challenges in Smart City deployments. Like a perfect chord of musical notes, the Chordant platform brings harmony to diverse devices, data and services. We have created one of the largest Smart City deployments integrating hundreds of transport data sources into a transport data marketplace. Our Smart City solutions have also been recognized by leading analyst firms and organizations.

oneTRANSPORT® Data Marketplace

The oneTRANSPORT data marketplace unlocks hidden data about the operations of towns and regions that reside in a myriad of closed siloed systems across the UK. It then makes this data available through an open, standards-based system with data licences, enabling the creation of new data-driven Digital Transport solutions.

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