

Open Data

Nimbus provide Open Data Services to many of our customers, Open Data means different things to different people, to us it is all about making data available so that public transport information can be as available wherever and whenever the traveling public want

Readily available information to the public has been proved to be an important factor in the decision making process to take a bus. The more places and formats this can be made available in the more likely it is to meet the needs of a specific customer. No longer is it possible to just provide a display on street or a website, a multi-channel and format approach is needed to ensure that expectations are met.



Data Formats

Using the experience of our in-house development team we can support a wide range of formats from industry standard formats to bespoke APIs to meet a specific customer requirement.

We regularly supply CEN TS 15531 SIRI interfaces including SIRI SM, SM, SX, ET and PT to a wide range of different 3rd parties including TraveLine and ITOWorld for Google.

We support data feeds in both Subscription and one-shot modes enabling users to choose the best method for their application.

Many of our systems have feeds to MxData for the National TraveLine Nextbuses services.

We have worked with ITOWorld and Google to become the first supplier of live information into Google Transit in the UK achieving the objectives of our customers to increase the availability of information.

←

Central Business Exchange (...)

×

2	Newport Pagnell	11:19
7	Wolverton	11:23
7	Wolverton	11:52
C11	Bedford	11:53
1	Newport Pagnell	12:13
2	Newport Pagnell	12:18
7	Wolverton	12:23
90	Central Milton Keynes	12:41
7	Wolverton	12:53
1	Newport Pagnell	13:13

NextBuses

Home Feedback Info

Departures

23/08/2017 16:09:47

Central Business Exchange (Stop R4), on Midsummer Boulevard, Central Milton Keynes

[Refresh Departures]

300	Westcroft, Westcroft District Centre DUE
7	Rail Station in 4 mins
2	Grange Farm, Dunthorne Way south at 16:14
8	Westcroft, Westcroft District Centre in 5 mins
300	Westcroft, Westcroft District Centre in 8 mins
7	Blotchley, Bus Station at 16:18
7	Blotchley in 10 mins
11	Central Milton Keynes, Central Railway Station in 17 mins
8	Oxley Park, Holden Avenue in 17 mins
G10	Central Milton Keynes, Central Railway Station at 16:28

[Show Stop on Map]

[Show Nearby Stops]

Next

Margaret Powell House

Milton Keynes City Centre Management

Central Business Exchange (Stop Q3)

Central Busi Exchange (S

In this screen shot from Google Maps the GREEN times are real time provided by Nimbus in our Milton Keynes system:

Management and Security

Having a managed and secure Open Data Service is critical to being able to provide a reliable service to data users.

Through the use of our Open Data Service, 3rd parties once they have an account can manage access to the APIs and SIRI feeds themselves to enable them to setup, manage and use standard interfaces such as SIRI SM without needing support. This reduces the overhead on Authorities and Operators

enabling more open data users to be supported whilst reducing cost.

Open Data Service

This page lists the available API and subscription services.

API services Subscription Services

API Services

These API services are available via simple URL calls using

Open Data Service

This page lists the available API and subscription services. Many of the services must be requested using your allocated API Key. Please see details of each service for instructions on how to receive information. Your API Key is [\[API Key\]](#)

API services Subscription Services

My Subscriptions

Displaying 1-6 of 6 results.

Name	Type	Ref	URL	Last Delivery	Daily Count	Parameters	Statistics
SMPROVIDE			http://10.12.1.250:8080/siriconsumer.php	2016-09-05 16:44:31	1	Parameters	Statistics
SMPROVIDE			http://nimbusdds.ddns.net/web/siriconsumer.php		1	Parameters	Statistics
SMPROVIDE			http://nimbusdds.ddns.net/web/siriconsumer.php		1	Parameters	Statistics
SMPROVIDE			http://nimbusdds.ddns.net/web/siriconsumer.php		1	Parameters	Statistics
SMPROVIDE			http://nimbusdds.ddns.net/web/siriconsumer.php		1	Parameters	Statistics
VMPROVIDE			http://nimbusdds.ddns.net/web/siriconsumer.php	2017-07-27 04:56:23	1	Parameters	Statistics

Displaying 1-12 of 22 results.

Service	Description	Example Request URL	Example Request URL	Manage Subscriptions	Parameters	Statistics
System Health Check	iConnex Site Health status showing performance diagnostics, tracking performance etc	api/connex/health&key=qr5g2g2H	Example	Manage Subscriptions	Parameters	Statistics
SIRI Situation SX	Traffic, congestion and other incidents affecting services	api/SIRI/situation&key=qr5g2g2H	Example	Manage Subscriptions	Parameters	Statistics
SIRI Stop Monitoring	Live and scheduled predicted departures and messages at bus stops	api/SIRI/stopmonitoring&key=qr5g2g2H&location={LOCATION}	Example	Manage Subscriptions	Parameters	Statistics
SIRI Stop Monitoring	Live and scheduled predicted departures and messages at bus stops	api/SIRI/stopmonitoring&key=qr5g2g2H&location={LOCATION}	Example	Manage Subscriptions	Parameters	Statistics
SIRI Stop Monitoring	Live and scheduled predicted departures and messages at bus stops	api/SIRI/stopmonitoring&key=qr5g2g2H&location={LOCATION}	Example	Manage Subscriptions	Parameters	Statistics
SIRI Stop Monitoring	Live and scheduled predicted departures and messages at bus stops	api/SIRI/stopmonitoring&key=qr5g2g2H&location={LOCATION}	Example	Manage Subscriptions	Parameters	Statistics
Locations	List of locations/bus stops covered by this system	api/timeTableAPI/locations&key=qr5g2g2H	Example	Manage Subscriptions	Parameters	Statistics
Service List	List of bus services covered by this system	api/timeTableAPI/services&key=qr5g2g2H	Example	Manage Subscriptions	Parameters	Statistics
Service Patterns	List of stops on services in order	api/timeTableAPI/services&key=qr5g2g2H&service={Service}	Example	Manage Subscriptions	Parameters	Statistics
Service Status	Bus operation service status indicating on time and delayed services	api/timeTableAPI/status&key=qr5g2g2H	Example	Manage Subscriptions	Parameters	Statistics

Users can only access the APIs and feeds by using security keys, this enables us to track and manage usage as well as monitoring system performance.

Nimbus or its customer is able to administer and monitor the subscriptions through a single interface. Administrators can enable or disable feeds, unsubscribe/re-subscribe to feeds and view the statistics we log against each feed (number of messages processed, x-day logs of SIRI

transactions etc., throughput stats messages received per minute, message lag figures etc.).

The single view allows any problems to be rapidly identified and dealt with, in this screenshot one outgoing feed has not been able to deliver data for too long so has raised a fault and shows as red.

iConnexWeb

Dashboard Reports Admin Logout Nimbus

System Status

System Lag: 0 seconds

Vehicle Traffic: 396 messages / minute

Stop Traffic: heartbeats / minute

SIRI Subscriptions Inbound

Name	Type	Subscriber	Provider	Ref	Subscribed	Heartbeat Sent	Heartbeat Received	Location	Last Delivery	Disabled
CONNECTIONS	VMCONSUMER	NIMBUS	http://nimbusdds.ddns.net	4	2016-05-29 02:21:10	2016-05-29 15:08:00			2016-05-29 15:11:41	
CONNECTIONS	VMCONSUMER	NIMBUS	http://nimbusdds.ddns.net	5	2016-05-29 02:21:10	2016-05-29 15:08:04			2016-05-29 15:11:37	
CONNECTIONS	VMCONSUMER	NIMBUS	http://nimbusdds.ddns.net	206	2016-05-29 02:32:02	2016-05-29 15:11:12			2016-05-29 15:11:39	
CONNECTIONS	VMPROVIDE	CONNECTIONS	NIMBUS	150	2016-05-29 15:11:36	2016-05-29 15:08:49			2016-05-29 15:11:36	

SIRI Subscriptions Outbound

Name	Type	Subscriber	Provider	Ref	Subscribed	Heartbeat Sent	Heartbeat Received	Location	Last Delivery	Disabled
SMPROVIDE	SIRI-Status	NIMBUS	2245075-9975-4413-4748-202316wvksa		2016-05-29 05:11:22	2016-05-29 15:11:36	2016-05-29 06:46:59	3400000981	2016-05-29 15:11:42	
SMPROVIDE	SIRI-Status	NIMBUS	4202517-4603-4646-4646-4646707460		2016-05-29 05:11:22	2016-05-29 15:11:36	2016-05-29 06:46:59	3400000981	2016-05-29 15:11:36	
SMPROVIDE	SIRI-Status	NIMBUS	ca17406-8405-4748-5024-47484033946		2016-05-29 05:11:22	2016-05-29 15:11:36	2016-05-29 06:46:59	3400000982	2016-05-27 23:10:00	
SMPROVIDE	SIRI-Status	NIMBUS	4040406-1004-4754-4754-475470847084		2016-05-29 05:11:22	2016-05-29 15:11:36	2016-05-29 06:46:59	3400000983	2016-05-29 15:08:58	

Though this tool we can ensure that a user's is unable to consume all the system's capacity as well as detect when a subscription drops allowing us to let them know so that information to customers is as reliable as possible.

The capacity and volume of data we are able to support through our Open Data Service is only limited by our customer's imagination – by using the latest cloud services we can scale to meet any

requirement. For example, the Open Data Service we are currently building for Yorkshire will be able to scale up from their current base requirement of 5 million requests per month.

Lessons Learnt

We ensure that as early as possible in a project we engage with the 3rd parties who will want access to data to understand in detail what they are trying to achieve as understanding likely enquiry volumes. Through making sure this happens early we can advise them on the most effective, and easy to use data format to use to achieve their outcomes.

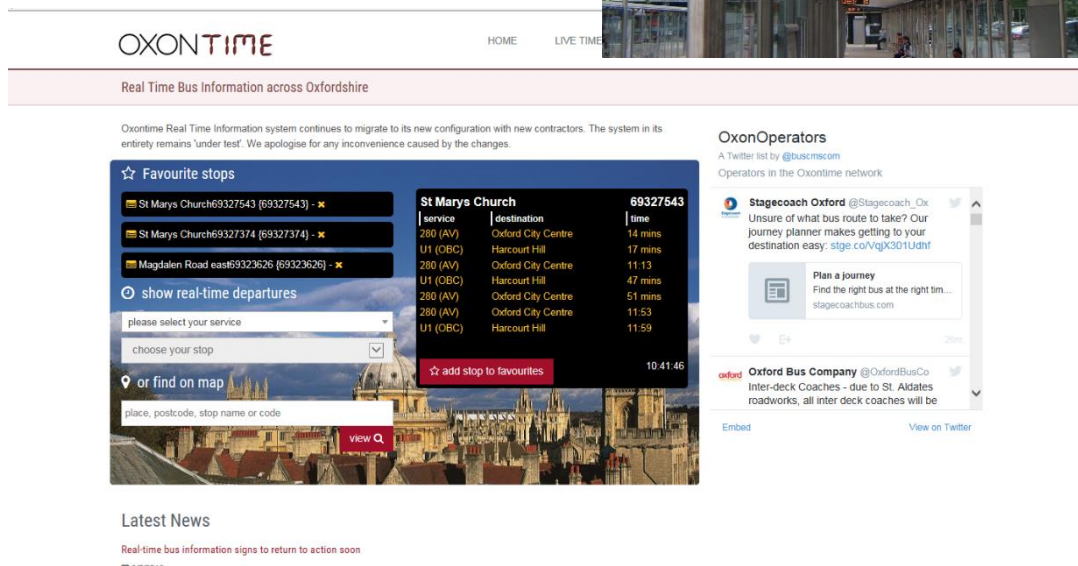
Even though SIRI is an CEN standard it is possible to interpret data within a feed in a range of different ways resulting in different information outputs. Ensuring each parties interpretation and agreeing a consensual approach ensures that the information to the public is as expected and consistent across all outputs.

Outcomes

We are committed to our Open Data Service, so much so that we it to feed our own customer information products.

Our displays, websites and Apps all use the Open Data Service to obtain their information. By doing this we can be sure that our services are reliable and secure.

Customers expect that information available on one channel matches another. Its not uncommon to find someone waiting at a bus stop with a display using their mobile phone to check on an App.

OXONTIME HOME LIVE TIME

Real Time Bus Information across Oxfordshire

Oxontime Real Time Information system continues to migrate to its new configuration with new contractors. The system in its entirety remains 'under test'. We apologise for any inconvenience caused by the changes.

Favourite stops

- St Marys Church 69327543 (69327543) - ✖
- St Marys Church 69327374 (69327374) - ✖
- Magdalen Road east 69323626 (69323626) - ✖

show real-time departures

please select your service

choose your stop

or find on map

place, post code, stop name or code

view

St Marys Church

service	destination	time
280 (AV)	Oxford City Centre	14 mins
U1 (OBC)	Harcourt Hill	17 mins
280 (AV)	Oxford City Centre	11:13
U1 (OBC)	Harcourt Hill	47 mins
280 (AV)	Oxford City Centre	51 mins
280 (AV)	Oxford City Centre	11:53
U1 (OBC)	Harcourt Hill	11:59

69327543

10:41:46

add stop to favourites

OxonOperators

A Twitter list by @busmcom
Operators in the Oxontime network

Stagecoach Oxford @Stagecoach_Ox
Unsure of what bus route to take? Our journey planner makes getting to your destination easy: stge.co/VqgX301Udnf

Plan a journey
Find the right bus at the right time...
stagecoachbus.com

Oxford Bus Company @OxfordBusCo
Inter-deck Coaches - due to St. Aldates roadworks, all inter deck coaches will be

Latest News

Real-time bus information signs to return to action soon

6/7/2016

If information is different between the display and App the customer will have reduced confidence in the information from both sources. Because we use the Open Data Service for our information products we can reduce the risk that a 3rd party app is showing different information as both will source the data from the same place.



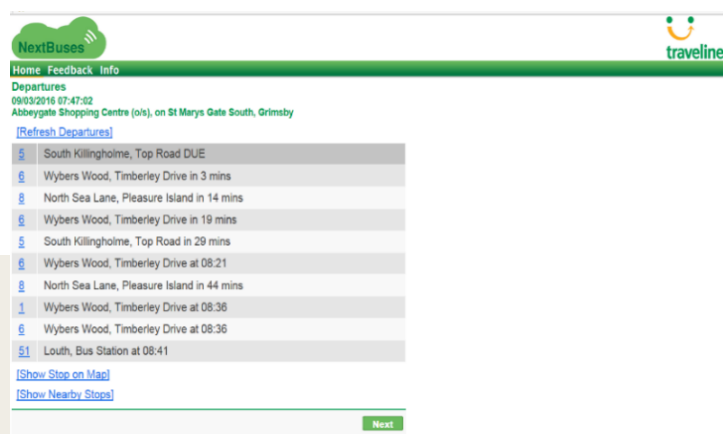
We are proud to play a part in the Reading Buses Tech Lab providing data to individuals and companies to explore and try and test ideas and products in a supported environment. This lab has already resulted in the development of new commercial products by startups as well as a number of different proof of concept ideas. Through the lab we have supported hack events organised by organisations as varied as the European Centre for Medium-Range Weather Forecasts to the Department of Transport and Hacktrain.



Our Open Data Service is used across many of our customers to provide information to the public,

For example we provide SIRI SM data to MXData for use in the Traveline Next Buses services in Reading, North East Lincolnshire and Milton Keynes as well as SIRI ET to ITOWorld for use

Central Business Exchange (...)		
2	Newport Pagnell	11:19
7	Wolverton	11:23
7	Wolverton	11:52
C11	Bedford	11:53
1	Newport Pagnell	12:13
2	Newport Pagnell	12:18
7	Wolverton	12:23
90	Central Milton Keynes	12:41
7	Wolverton	12:53
1	Newport Pagnell	13:13

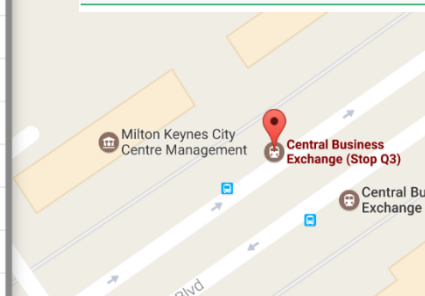


NextBuses
Home Feedback Info
Departures
09/03/2016 07:47:02
Abbeygate Shopping Centre (o/s), on St Marys Gate South, Grimsby
[\[Refresh Departures\]](#)

5	South Killingholme, Top Road DUE
6	Wybers Wood, Timberley Drive in 3 mins
8	North Sea Lane, Pleasure Island in 14 mins
6	Wybers Wood, Timberley Drive in 19 mins
5	South Killingholme, Top Road in 29 mins
6	Wybers Wood, Timberley Drive at 08:21
8	North Sea Lane, Pleasure Island in 44 mins
1	Wybers Wood, Timberley Drive at 08:36
6	Wybers Wood, Timberley Drive at 08:36
51	Louth, Bus Station at 08:41

[\[Show Stop on Map\]](#)
[\[Show Nearby Stops\]](#)

Next



by Google

In Oxfordshire not only do we use it to provide data for our services, it is used by a wide range of 3rd parties to provide information including mobile phone apps including M-Tickets, websites as well as nearly 300 on street displays.

Summary

Using Open Data enables an Authority or Operator to work with its community and industry to innovate and develop new information products to meet the customers constantly increasing expectations.

The Nimbus Open Data Service provides the reliability, control and data quality to enable you to provide the excellent information across all the locations and channels you would wish and the customer expects.

Contact Us

Call us: +44(0) 1293 887308
Email us: sales@nimbusjourneyinfo.co.uk

Find us:
Nimbus Journey Information
Unit 1 Charlwood Court,
Merlin Business Centre,
County Oak Way, Crawley,
West Sussex, RH11 7XA

