

## 2015 Annual Polis Conference

### OPTICITIES and the Birmingham Connection

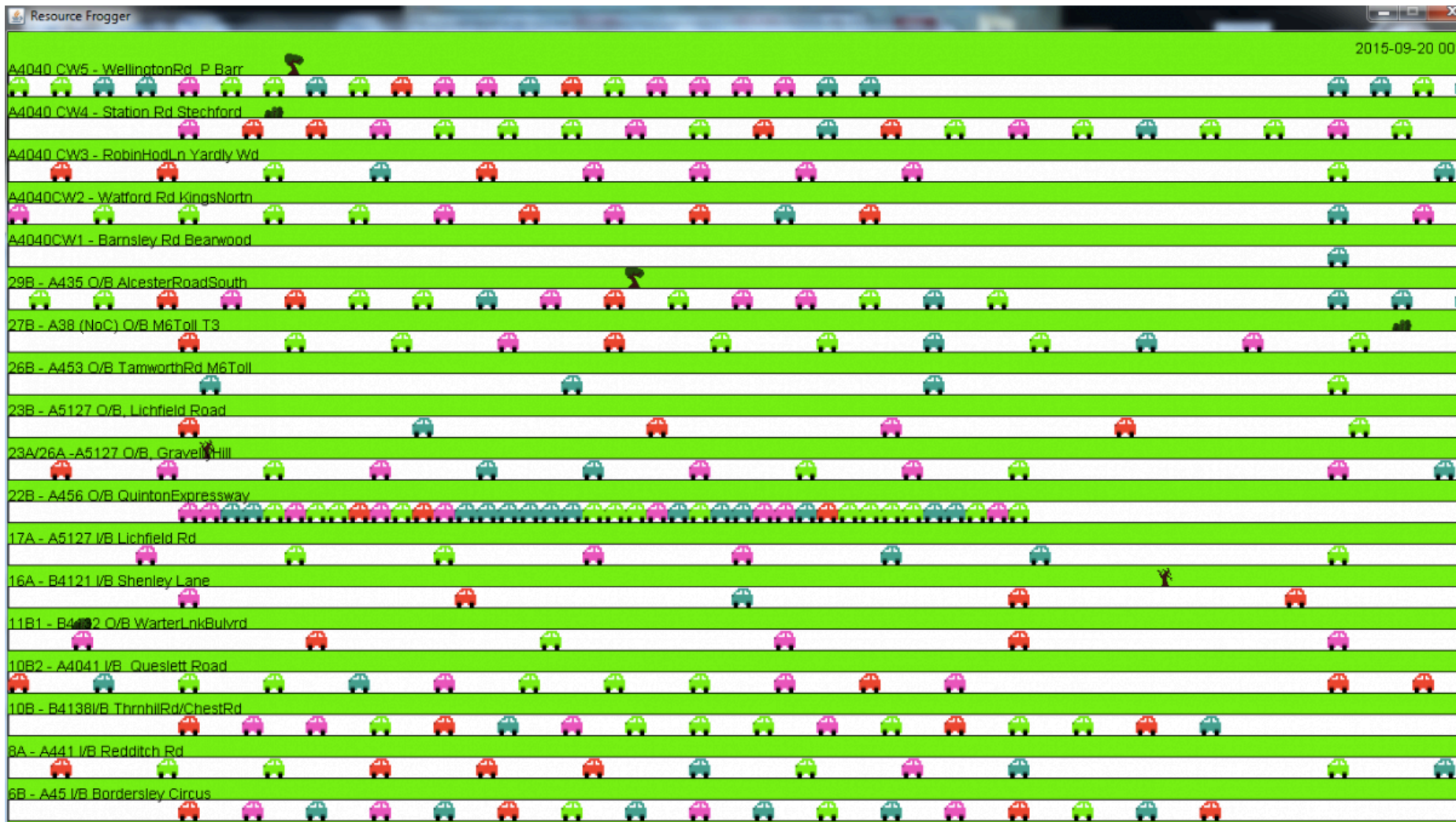
Birmingham City Council

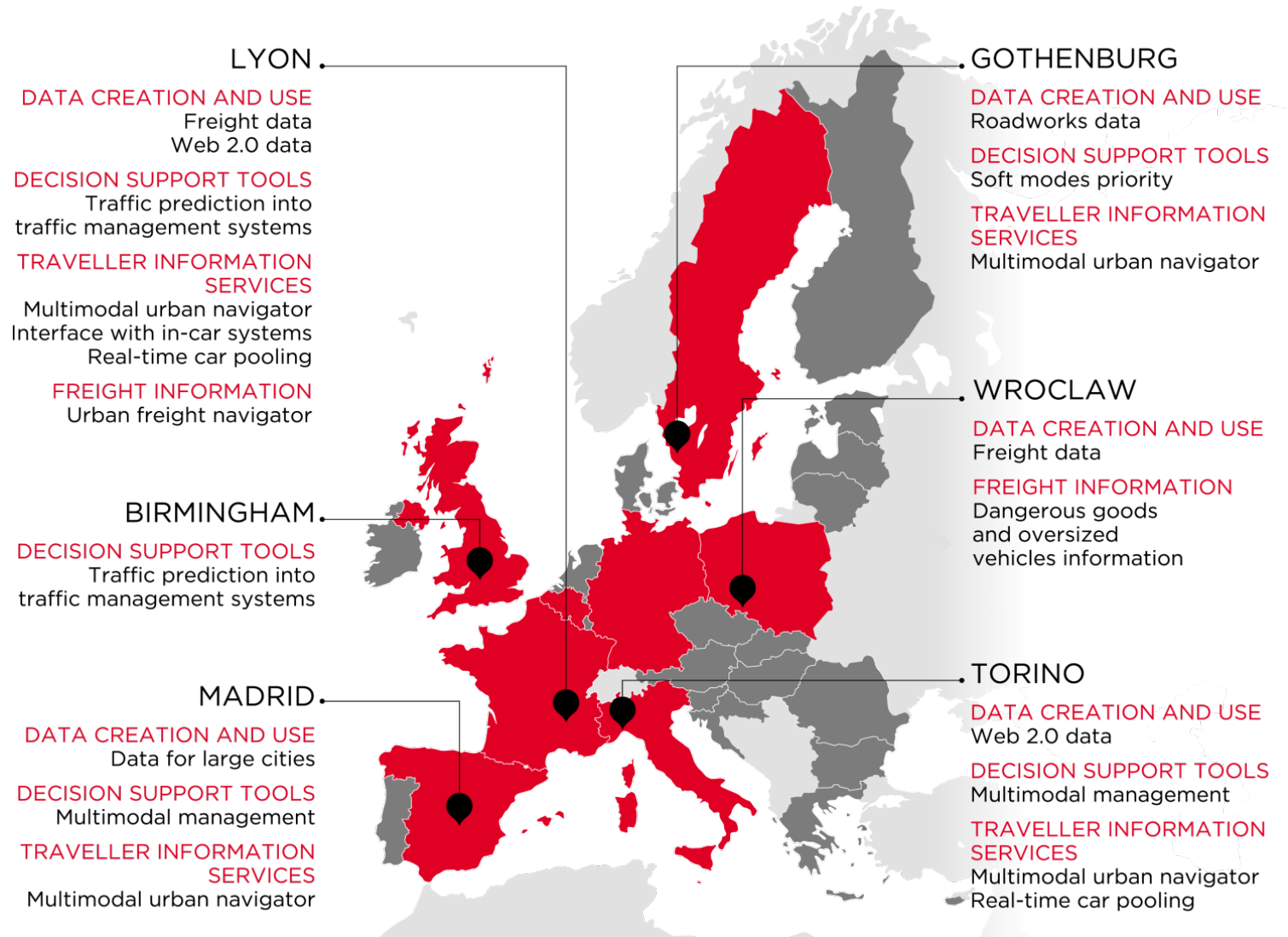


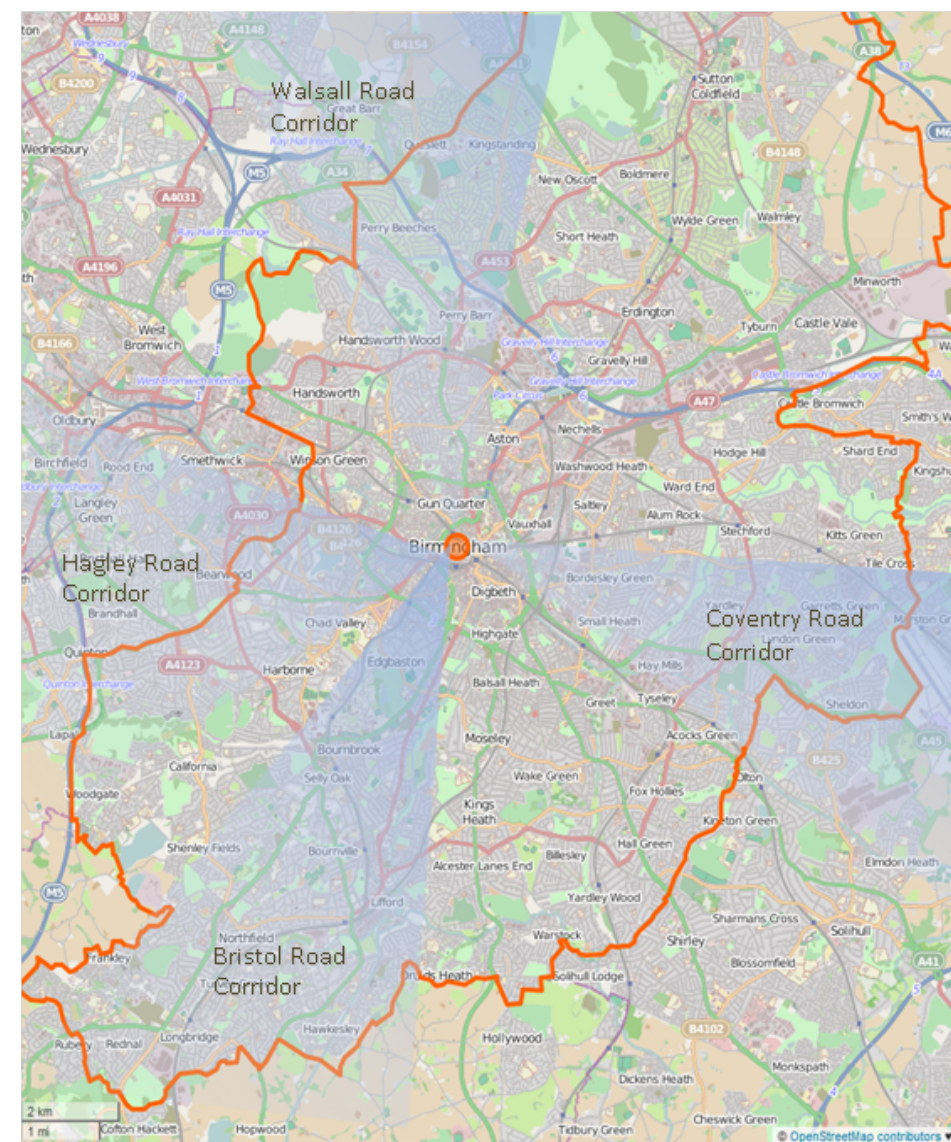
2015 Annual Polis Conference | 19 – 20 November 2014



## ■ UTM Frogger

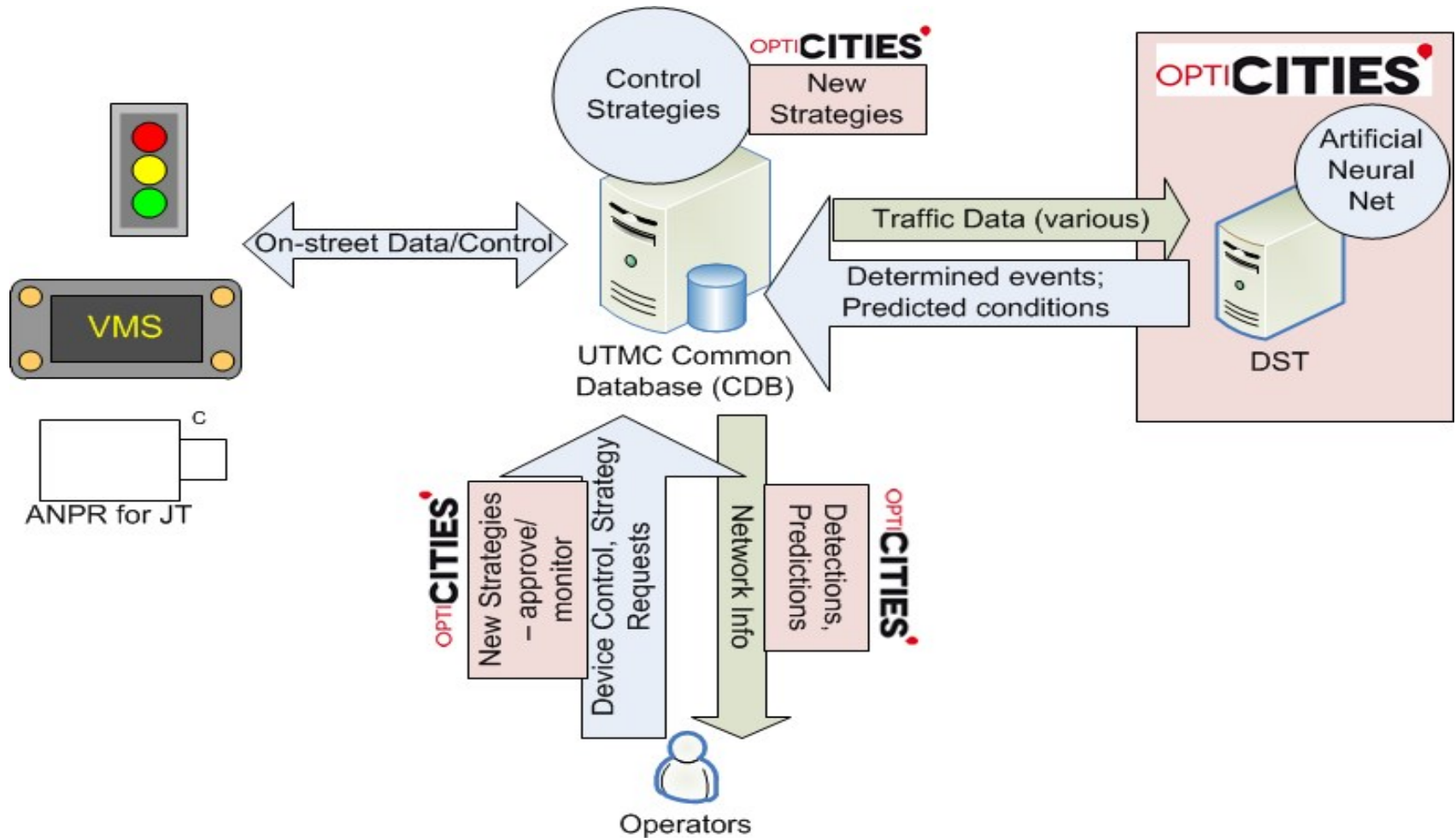






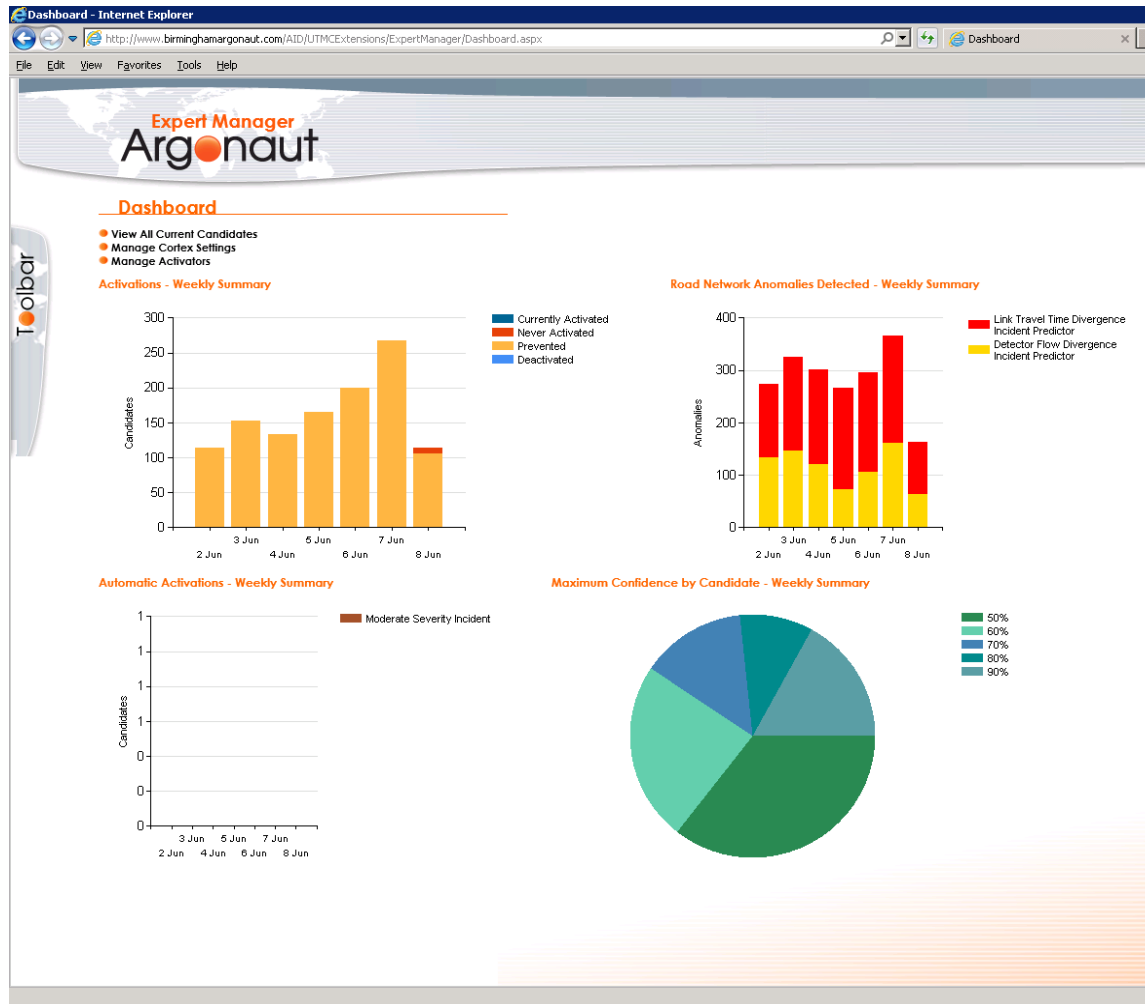
- **Partnership BCC, Amey, Cloud Amber**
- **Operates on key (congested) corridors**
- **Integrates with existing Traffic Management (UTMC)**
- **Managed through existing UTC Control Room**





- Decision Support Tool integrates into existing UTC Control Infrastructure (a UTMC Common Database – Cloud Amber Argonaut)





- Datasets (e.g. traffic flow, journey time) analysed in real time
- Each handled by an ANN Cortex
- Looks for anomalies and proposes candidate events
- “Level of Confidence” attributed to each candidate

Expert Manager  
**Argonaut**

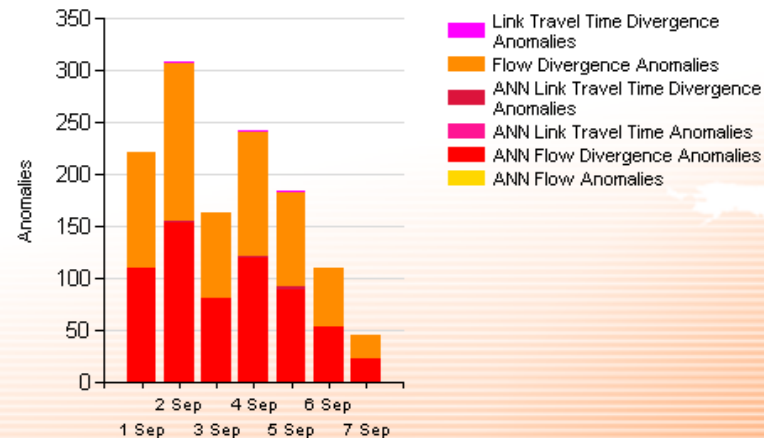
## Manage Cortex Settings

- Manage Days of Special Designation
- Dashboard
- View All Current Candidates
- Manage Activators

Each Cortex is a sub-system that can automatically detect road network anomalies.  
The influence each cortex has on the decision to activate a candidate can be configured.

Short Description	Decision Influence Percent
Flow Divergence Anomalies	100%
Link Travel Time Divergence Anomalies	100%
ANN Flow Anomalies	100%
ANN Link Travel Time Anomalies	100%
ANN Flow Divergence Anomalies	100%
ANN Link Travel Time Divergence Anomalies	100%

Road Network Anomalies Detected - Weekly Summary

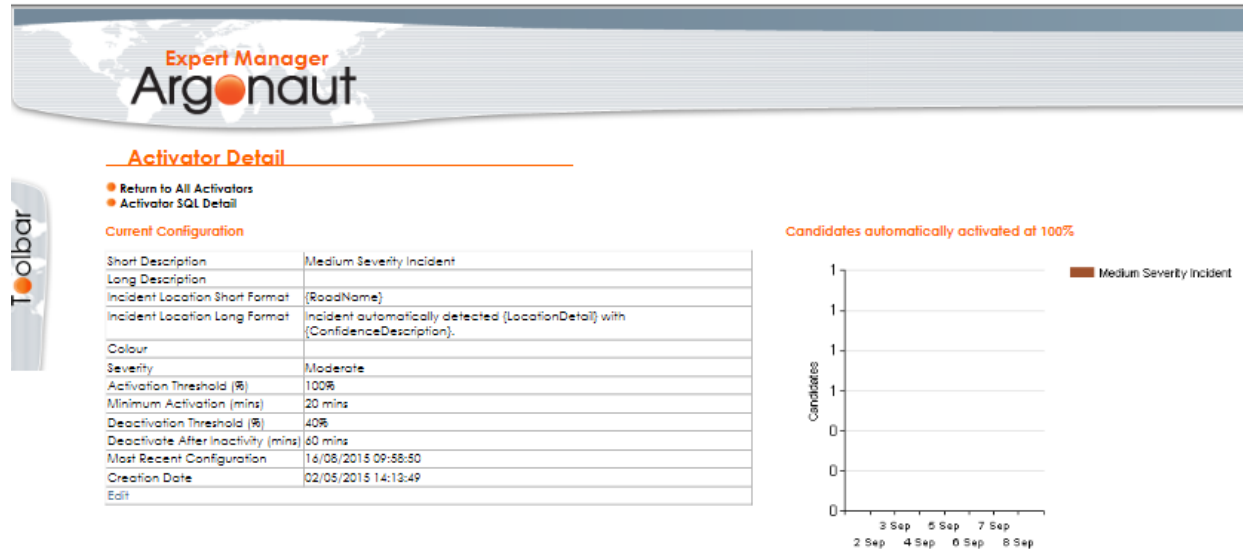


- Influence of each cortex is configurable (as are other parameters)



- Candidates reviewed and approved or rejected by experienced operators
- DST ANN uses feedback to learn adjust confidence level of candidate types

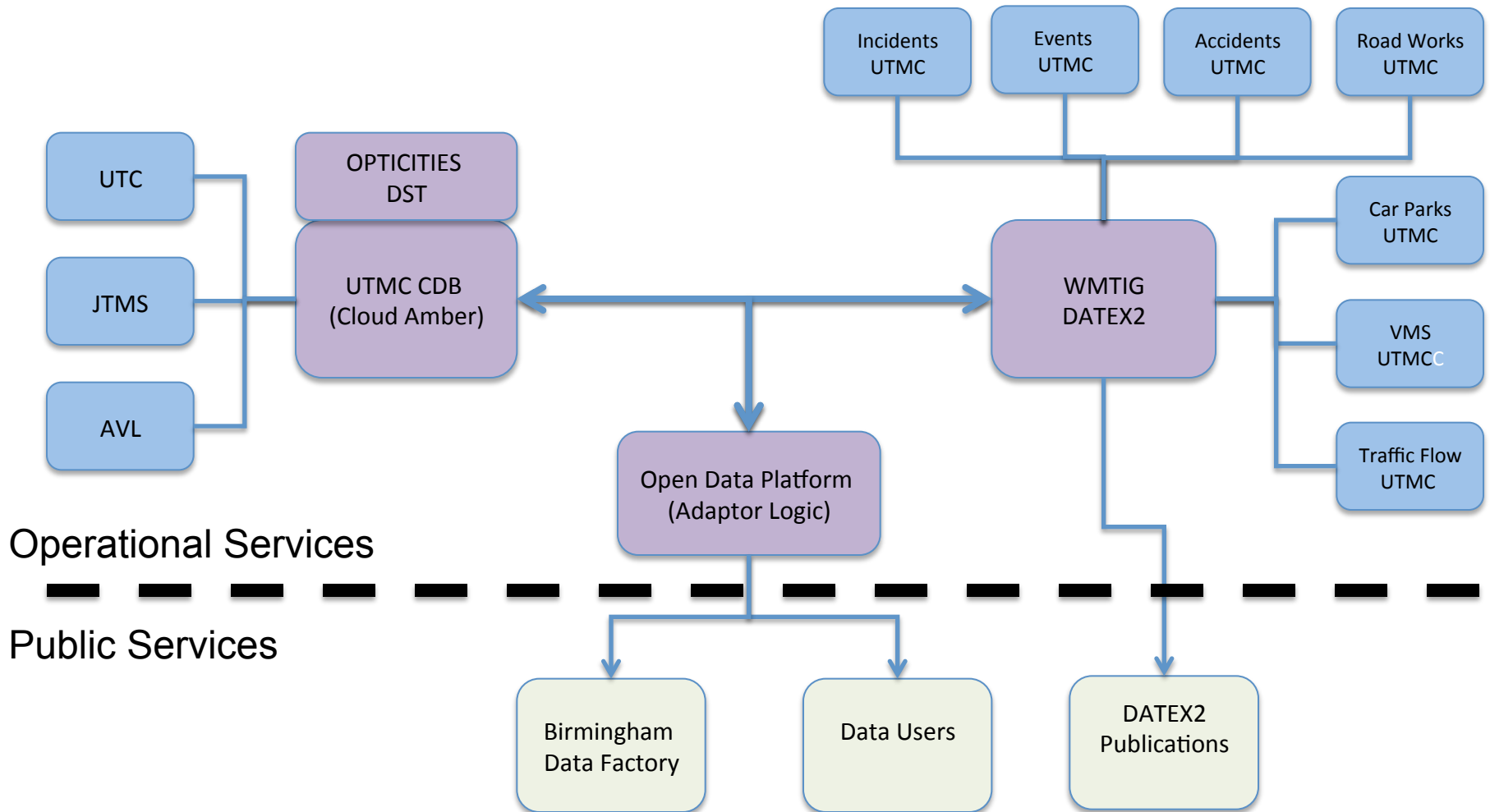




- **“Activators” translate cortex output into a event recognisable by the controlling traffic management system**
- **The existing control mechanisms in the controlling systems are used to implement responses to the incidents (e.g. in Birmingham using a UTMC Strategy Manager Application)**
- **Event clear/tear down uses the same overall process as event detection**

- **PROGRAMME**
- **Pre-trial data gathering Oct 14 – Sept 15**
- **DST learning April 2015 – October 2015**
  - Control room support and input
- **Trials & Evaluation Jan 16 (Apr 16)**
  - Active control room participation
  - Real-world on-street trials
  - Additional freight-focused trials Feb 16 - Apr 16
- **Data Analysis & Evaluation Jan 16 – Jul 16**

# BASIC DATA STRUCTURE





# OPEN DATA PLATFORM



## Open Data Sources - select the required data set

**Authority**   ☒ R ☐ F

**Data Class**   ☒ R ☐ F

**Attachment** ☐  ☒ R ☐ F

**UTMC AverageSpeed**

**UTMC Congestion**

**UTMC Roadworks**

**UTMC TravelTime**

	xml	json	xlsx	xls	csv		xml
	xml	json	xlsx	xls	csv		xml
	xml	json	xlsx	xls	csv		xml
datex2	xml	json	xlsx	xls	csv		xml
	xml	json	xlsx	xls	csv		xml
	xml	json	xlsx	xls	csv		xml

# OPEN DATA PLATFORM



## Open Data Sources - select the required data set

**Authority**

**Data Class**

**Attachment** ☐

**UTMC AverageSpeed**

**UTMC Congestion**

**UTMC Faults**

**UTMC Flow**

**UTMC Occupancy**

**UTMC Parking**

1	A	B	C	D	E	F	G
1	SCN	Description	MsgTxt	CP1	CP2	CP3	CP4
2	BIRM-V001	CCCP58 Smallbrook Queensway	856   671   1011   259	BHMBRCBRG01: 306 / 1010	BHMBRCBRG03: 500 / 849	BHMBRCBRG02: 620 / 1194	
3	BIRM-V004	CCCP536 Navigation St out-bound	82   357	BHMBCCPST01: 146 / 317	BHMAPCARC01: 334 / 508		
4	BIRM-V005	CCCP522 Suffolk St / Gough St	82   CLOSED   357	BHMBCCTHL01: -18 / 387	BHMAPCARC01: 334 / 508		
5	BIRM-V009	CCCP572 NIA/ICC	OPEN	BHMBCCPDC01: 592 / 610			
6	BIRM-V010	CCCP569 King Edward Rd	.   OPEN	NIA North: 455 / 550	BHMBCCPDC01: 592 / 610		
7	BIRM-V014	CCCP551 St Vincent St / Nelson	.   OPEN	NIA North: 455 / 550	BHMBCCPDC01: 592 / 610		
8	BIRM-V015	CCCP552 St. Vincent St Upper	.   OPEN   .	NIA South: 744 / 744	BHMBCCPDC01: 592 / 610	NIA West: -2550 / 862	
9	BIRM-V016	CCCP571 St Vincent St/Sheepcote	.   OPEN   .	NIA North: 455 / 550	BHMBCCPDC01: 592 / 610	NIA West: -2550 / 862	
10	BIRM-V017	CCCP585 Summer Hill St/Nelson St	.   OPEN   .   .   OPEN	NIA North: 455 / 550	BHMBCCPDC01: 592 / 610	NIA West: -2550 / 862	NIA South: 744
11	BIRM-V022	CCCP526 Brunel Street	CLOSED   82   357	BHMBCCTHL01: -18 / 387	BHMBBMMBX01: 50 / 685		
12	BIRM-V025	CCCP588 Sheepcote Street	.   OPEN   .	NIA West: -2550 / 862	NIA North: 455 / 550	BHMBCCPDC01: 592 / 610	NIA South: 744
13	BIRM-V026	CCCP5105a Hagley Road - service	OPEN   OPEN   2514   614   .   OPEN	Broad Street: -4590 / 690	Bull Ring: 1426 / 3053	Others-CCCP5105a: 120 / 1557	NIA Car Parks: -
14	BIRM-V028	CCCP5135v Parade / Summer Row	246   CLOSED   402   301   .   OPEN   3405	BHMBCCTHL01: -18 / 387	BHMBCCPST01: 88 / 485	Bull Ring: 1426 / 3053	Broad Street: -4
15	BIRM-V029	CCCP568a King Edwards Road downh	.   OPEN   .	NIA West: -2550 / 862	NIA South: 744 / 744	NIA North: 455 / 550	
16	BIRM-V030	CCCP582 Paradise Circus Queenswa	OPEN	BHMBCCPDC01: 592 / 610			
17	BIRM-V031	CCCP5130 Suffolk Street Queenswa	FULL	BHMBRTARC01: 161 / 496			
18	BIRM-V032	CCCP519 Holloway Head	154   2473   82   CLOSED   356	BHMBCCPST01: 88 / 485	Bull Ring: 1426 / 3053	BHMBCCTHL01: -18 / 387	BHMBBMMBX0
19	BIRM-V033	CCCP512 Bristol Street	155   CLOSED   2496   358   FULL   OPEN	BHMBCCPST01: 88 / 485	Bull Ring: 1426 / 3053	BHMBCCTHL01: -18 / 387	BHMBRTARC01
20	BIRM-V034	CCCP57 Hurst Street	155   656   CLOSED   84   358   840	BHMBCCPST01: 88 / 485	BHMBRCBRG03: 500 / 849	BHMBCCTHL01: -18 / 387	BHMBBMMBX0
21	BIRM-V036	CCCP5120 Gt Charles St Queensway	350   106   950   2473   130	BHMBCCSNH01: 785 / 863	BHMBCCPST01: 41 / 600	Shopping: 703 / 1920	Bull Ring: 1426
22	BIRM-V037	CCCP5133 Suffolk Street Queenswa	88   OPEN   .   3040   OPEN	BHMBCCTHL01: -18 / 387	BHMBCCPDC01: 592 / 610	Others-CCCP5133: 1564 / 4223	NIA Car Parks: -
23	BIRM-V038	CCCP597 Livery St jnt Great Char	350	BHMBCCSNH01: 785 / 863			
24	BIRM-V039	CCCP5119a Constitution Hill Sigh	2552   398   1005   OPEN   123	Bull Ring: 1426 / 3053	BHMBCCSNH01: 785 / 863	Shopping: 703 / 1920	BHMBCCPST01
25	BIRM-V040	CCCP598 O/S dental hospital (2	493   OPEN   SPACES	BHMBCCPST01: 41 / 600	BHMBCCSNH01: 785 / 863	Others-CCCP598: -1213 / 3326	
26	BIRM-V041	CCCP5113 A34 (Lancaster St) jnt	140   1052   435   2587	BHMBCCPST01: 41 / 600	Shopping: 703 / 1920	BHMBCCSNH01: 785 / 863	Bull Ring: 1426
27	BIRM-V043	CCCP5100a James Watt Queensway a	730   2473   220	BHMBCCPST01: 596 / 1200	Bull Ring: 1426 / 3053	BHMBCCPST01: 107 / 720	
28	BIRM-V044	CCCP5101 Dale End jnt Newton St	730   220	BHMBCCPST01: 596 / 1200	BHMBCCPST01: 107 / 720		

# OPEN DATA PLATFORM

# OPTICITIES

The screenshot shows the Birmingham Data Factory website. The header is dark blue with the logo on the left and navigation links (Datasets, Organizations, Groups, About) and a search bar on the right. Below the header is a large banner image of the Birmingham skyline. Overlaid on the right side of the banner is a 'Search Your Data' box with a search input field containing 'eg. Gold Prices' and a magnifying glass icon. Below the search box are 'Popular Tags' for 'council tax', 'birmingham', and 'arrears'. The main content area below the banner features several data categories: 'Council Business' (with a small image icon), 'HMO Public Register' (with a description and a CSV download button), 'Voluntary and Community Sector Funding Information', 'Birmingham City Council' (with a small logo icon), 'Payments to Suppliers over £500' (with a description and EXCEL/CSV download buttons), and 'Purchase Card Transactions'.

**Birmingham DATAFACTORY**

Log In Register

Datasets Organizations Groups About Search datasets...

**Search Your Data**

eg. Gold Prices

**Popular Tags** council tax birmingham arrears

**Council Business**  
Data that is produced by local councils as part...

**HMO Public Register**  
Information about Houses of Multiple Occupancy including: Public Register of Approved Licences...  
CSV

**Birmingham City Council**  
Birmingham City Council

**Payments to Suppliers over £500**  
At Birmingham we are committed to making our finances clear, so that everyone can see exactly how we are spending...  
EXCEL CSV

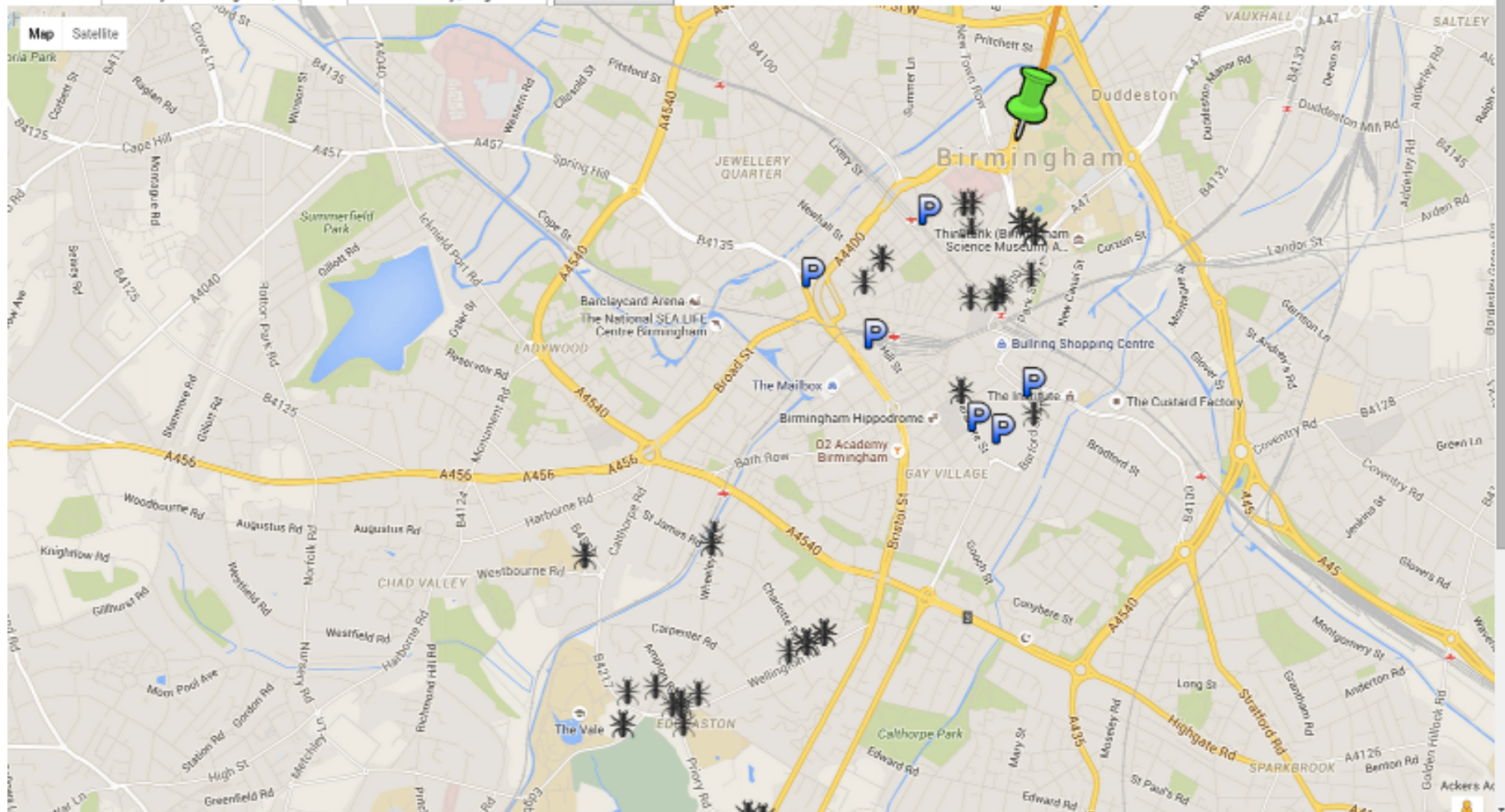
**Voluntary and Community Sector Funding Information**

**Purchase Card Transactions**



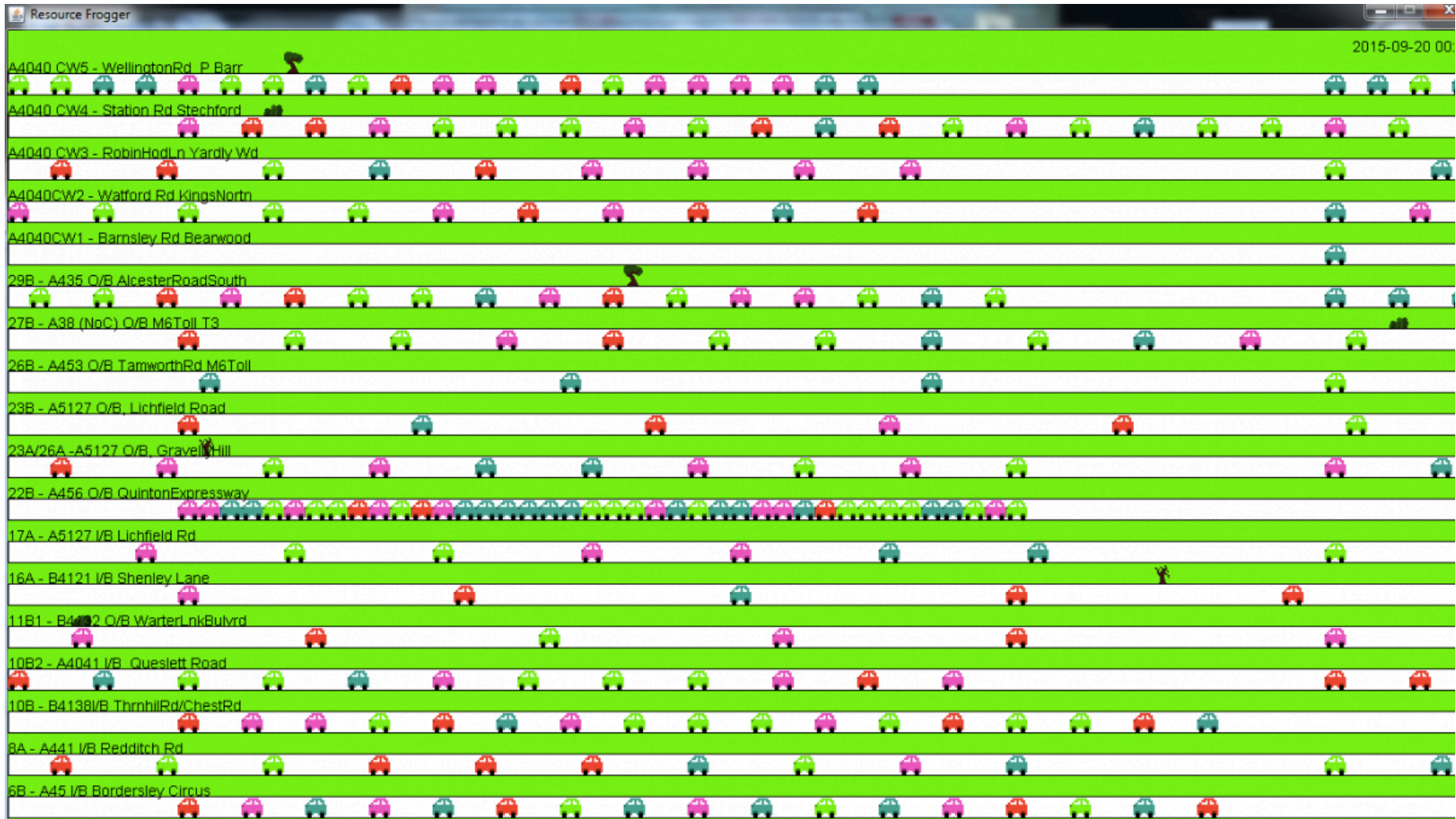
## Prime Mover

start: university of birmingham, en end: aston university, england Find best route



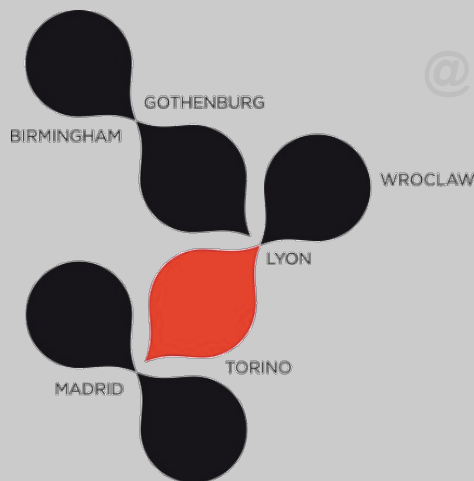


## Resource Frogger





**THANK YOU FOR YOUR ATTENTION!**



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