Leveraging Big Data to Optimise Network Performance and Construction Delivery

Pam Ward

Product Manager - Transport

Who is Qrious?

A software business unleashing organisational intelligence



Founded in 2013



Offices in Wellington and Auckland



65 People



Customers across: Transport | Govt | Tourism | Banking | Retail | Advertising



Backed by Spark



1.2+ Billion Captured Data Points Every Day



Areas to Innovate: Network Performance & Construction Delivery

Step 1 – Identify problems to solve that:

- Are high-intensity and value
- Have a sense of urgency
- Are common across the industry
- Align with our capability & strategy

Workshop 1: Traffic Management at Roadworks Sites

Pain Points:

- 1. Knowing the traffic disruption my site is causing
- 2. Planning optimal site layouts to minimise delays
- 3. Providing evidence for schedule negotiation
- 4. Monitoring and auditing 3rd party sites
- 5. Performance reporting and managing KPI's
- 6. Monitoring traffic speeds for worker safety





Pain Points:

1. Knowing the traffic disruption my site is causing

- 2. Planning optimal site layouts to minimise delays
- 3. Providing evidence for schedule negotiation
- 4. Monitoring and auditing 3rd party sites
- 5. Performance reporting and managing KPI's

6. Monitoring traffic speeds for worker safety



Pain Points:

1. Knowing the traffic disruption my site is causing

2. Planning optimal site layouts to minimise delays

3. Providing evidence for schedule negotiation

4. Monitoring and auditing 3rd party sites

5. Performance reporting and managing KPI's

6. Monitoring traffic speeds for worker safety



Pain Points:

- 1. Knowing the traffic disruption my site is causing
- 2. Planning optimal site layouts to minimise delays
- 3. Providing evidence for schedule negotiation
- 4. Monitoring and auditing 3rd party sites
- 5. Performance reporting and managing KPI's

6. Monitoring traffic speeds for worker safety

















Workshop 2: Traffic Management for Incident Response

Pain Points:

1. Knowing exact location or incident

2. Timely notification when incident occurs

3. Impact on traffic

4. Response Coordination

5. Best route to incident location

6. Impact of Traffic Management (Detour route performance







Abnormal Congestion vs Incident

↓ 5:49:47 pm	122	376	985	985	1011	879	561	198	32	17	17
↓ 5:54:48 pm Jan-19	90	337	985	985	1011	879	561	218	30	4	4
↓ 5:59:47 pm Jan-19	59	297	985	985	1011	879	561	178	42	12	12
↓ 6:04:47 pm Jan-19	81	429	1277	1344	1647	1445	1176	505	87	53	53
↓ 6:09:48 pm Jan-19	1270	1890	3393	3225	1647	1445	1176	505	72	50	54
↓ 6:14:48 pm Jan-19	1270	1890	3393	3225	1647	1445	1479	631	107	12	73
↓ 6:19:47 pm	1270	1638	2218	2184	1647	1445	1008	404	72	68	69

Abnormal Congestion vs Incident

↓ 5:49:47 pm Jan-19	6	270	376	985	1382	1223	833	630	138	80	138
\$ 5:54:48 pm Jan-19	244	1249	1593	1461	1382	1170	614	440	416	290	138
↓ 5:59:47 pm Jan-19	218	1249	1593	1461	1382	1223	833	630	436	290	112
↓ 6:04:47 pm Jan-19	403	800	905	1223	1382	1223	833	630	92	15	46
↓ 6:09:48 pm Jan-19	403	800	905	1223	1382	1223	833	630	92	15	32
↓ 6:14:48 pm Jan-19	244	614	720	1144	1382	1302	1587	1218	158	15	32
↓ 6:19:47 pm Jan-19	244	376	429	773	1011	800	138	90	19	8	19

