

**Introducing a new fleet:
Lessons from Auckland
– Plans for Metro**




M

555003

STADLER

Tyne and Wear's new fleet in numbers



37,000
testing kms of
the new fleet

That's not far off the
length of the equator
and much more than
there and back to
Australia

£362m
value
of the
project



46
number
of trains

480
people that
require
training



23,000
responses to the
design
consultation



90k individual tests required
across the introduction
of the fleet



19,000
total hours
of training



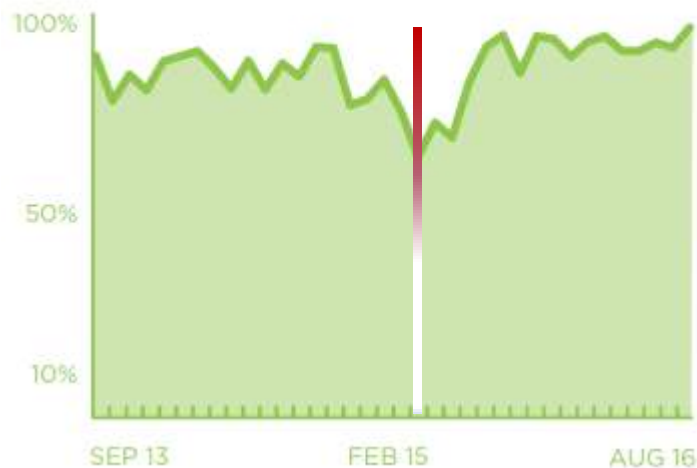
22,000

- standards
- and clauses
- to comply with

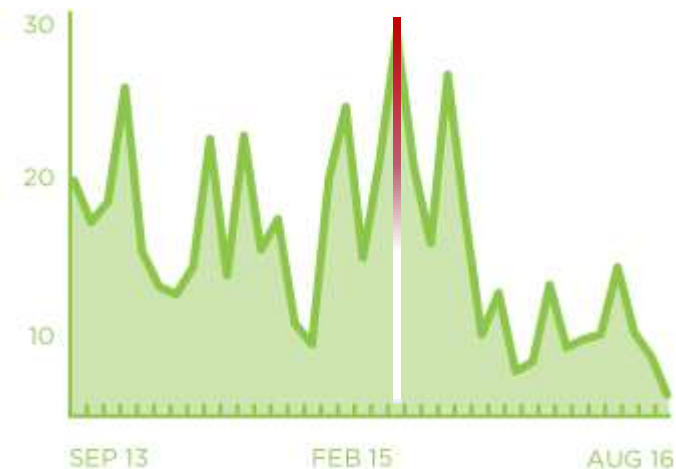


Lessons from Auckland...

Reliability



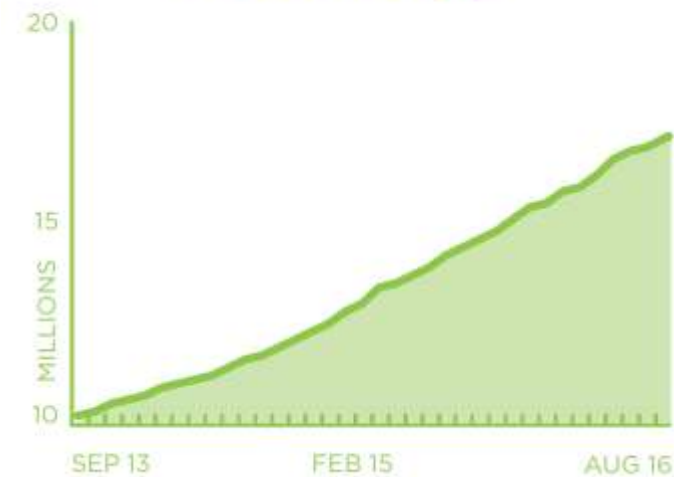
Complaints



Punctuality



Patronage



Lessons from Auckland...



Lessons from Auckland...



Plans for Metro

- 3 units in the UK on test
- 2 units in Europe on test
- Multiple units in development in Switzerland

	Start	End
Testing and Commissioning	Now	Late summer/ early Autumn 23
Training our teams	Sept 23	Nov 24
First train in service	Dec 23	
All trains in service	Mar 25	



Testing and commissioning update

TEST TYPE	Latest Version	STATUS
Air Pressure System	AL_4553269_a_Type Test Specification Air Pressure System	STATUS 1
Auxiliary and Low Voltage System	AL_4513183_a_Type Test Specification Auxiliary and Low Voltage System SRF	STATUS 1
Brake	AL_4443962_b_Type Test Specification Brake	STATUS 1
Coupling Operation (Part 1 - Mechanical)	AL_4562944_a_Type Test Specification Coupling Operation (Part 1 - Mechanical)	STATUS 1
Coupling Operation (Part 2 - Electrical)	AL_4562973_b_Type Test Specification Coupling (Part 2 - Electrical)	STATUS 1
Doors	AL_4445041_b_Type Test Specification Doors	STATUS 1
EMC	AL_4483567_d_Type Test Specification EMC/EMF	STATUS 1
Energy Metering	AL_4562995_a_Type Test Specification Energy	STATUS 1
External Light	AL_4393464_a_Type Test Specification External Light	STATUS 1
Fire Safety and Evacuation	AL_4542647_b_Type Test Specification Fire Safety System	STATUS 1
HVAC	AL_4444566_a_Type Test Specification HVAC	STATUS 1
Internal Light	AL_4445014_a_Type Test Specification Internal Light	STATUS 1
Noise	AL_4505097_c_Type Test Specification Noise	STATUS 1
On Track Fatigue	AL_4567783_b_Type Test Specification On-Track Fatigue	STATUS 1
OTDR	AL_4557464_b_Type Test Specification OTDR	STATUS 1
Pantograph	AL_4542941_a_Type Test Specification Pantograph	STATUS 1
Passenger Counting	AL_4543078_b_Type Test Specification Passenger Counting	STATUS 1
PS	AL_4493281_b_Type Test Specification PS	STATUS 1
Propulsion	AL_4542605_a_Type Test Specification Propulsion	STATUS 1
Radio (GSM-R, TETRA and RFID)	AL_4445099_a_Type Test Specification Radio (GSM-R, TETRA and RFID)	STATUS 1
Recovery and Rescue	AL_4561708_b_Type Test Specification Recovery and Rescue	STATUS 1
Safety Against Derailment	BU_4591579_b_Type Test Specification Safety Against Derailment	STATUS 1
Software TCMs DAS	AL_4753294_b_Type Test Specification Software TCMs DAS	STATUS 1
Start Up	AL_4543003_a_Type Test Specification Start Up	STATUS 1
Sway Test	BU_4591578_a_Type Test Specification Sway Test	STATUS 1
Traction Performance	AL_4543215_b_Type Test Specification Traction Performance	STATUS 1

		Passenger Train Interface																				
		CAB/Driver				CAB/Driver				CAB/Driver				CAB/Driver/DOO Operative/Driver				Driver/Operative				
Operative Required		Signal Lighting Close/Make				DOO				DOO				Close/Flag Deployment and level boarding								
Description		A. Closing of the CL, DOO stop marker, tested in the driver seat. Also the signal to close visible. Note any differences with the diagram.				B. Tested in the second person seat in the signal's display unit. Record all anomalies on the common sheet.				C. With the right side display window, all the DOO requests on the TCMs systems are fully visible. Record all anomalies on the common sheet.				D. Request door open, the DOO operative with 480 megagrams stand on the platform edge adjacent to the passenger door. Test door closure (DOO) request at the 2 indicators. Check correct flag status the DOO operative through the P.A. to ensure door does not anticipate the test. Record all anomalies on the common sheet.				E. Operate the internal door push button, when the door opens check the following: 1. Sliding door is deployed. 2. Measure the lateral distance between the leading edge of the sliding door to edge of the platform if it's more than 11mm accumulate distance on the common sheet and highlight in red on the PT record sheet. 3. Measure the central distance from the top of the sliding door to the top of the platform if it's more than 120mm record the distance on the common sheet and highlight in red on the PT record sheet. 4. When the door closes measure the sliding step height in red on the PT record sheet.				
Yellow Line Loop		Platform 1	Platform 2	Platform 3	Platform 4	Platform 5	Platform 6	Platform 7	Platform 8	Platform 9	Platform 10	Platform 11	Platform 12	Platform 13	Platform 14	Platform 15	Platform 16	Platform 17	Platform 18	Platform 19	Platform 20	
1	Dr James	UM																				
2	Management Briefing	MPV																				
3	Signals	MSB																				
4	Brake	BN																				
5	Chatterbox/Train	CCO																				
6	Chatterbox	CCO																				
7	Indicator	CCO																				
8	Monitor Panel	MR																				
9	Monitor	MR																				
10	Pantograph	PTC																				
11	Receptor Unit	MR																				
12	Signalling	PTB																				
13	Signalling	PTB																				
14	Signalling	PTB																				
15	Signalling	PTB																				
16	Signalling	PTB																				
17	Signalling	PTB																				
18	Signalling	PTB																				
19	Signalling	PTB																				
20	Signalling	PTB																				
21	Signalling	PTB																				



Challenges

- We have learnt from others
- Performance will be impacted
- The plan must be flexible
- We must respond to challenges
- Timescales will move

