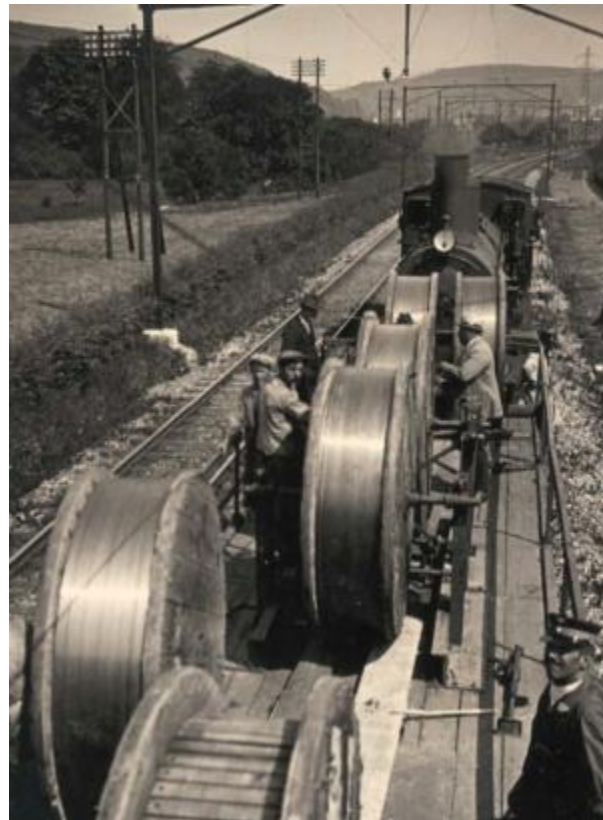


Challenges of Electrification in Urban Areas

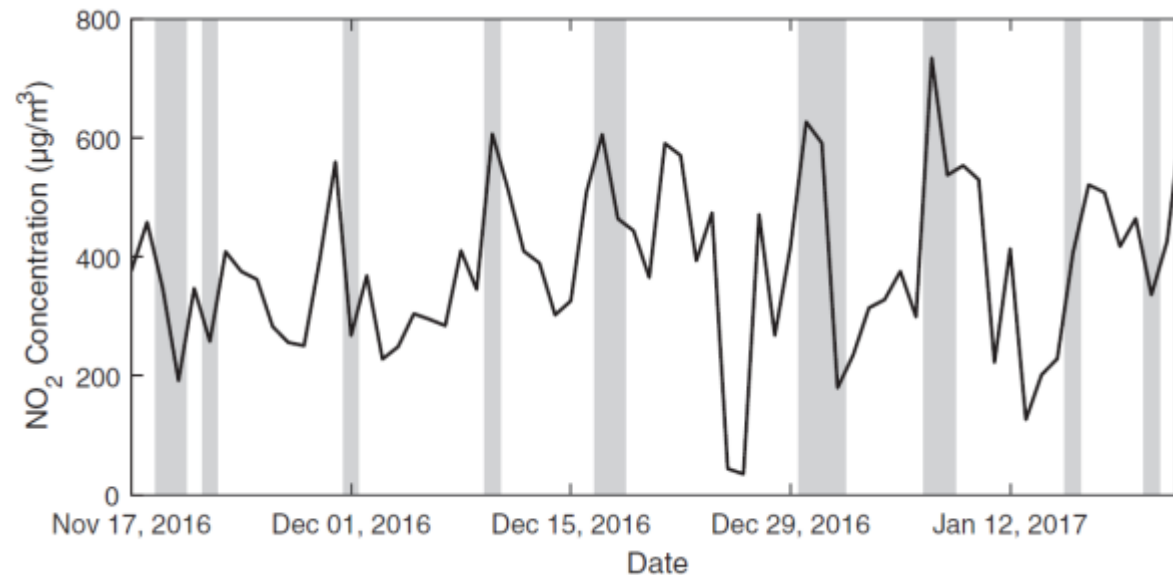


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Overhead contact lines





The case for electrification

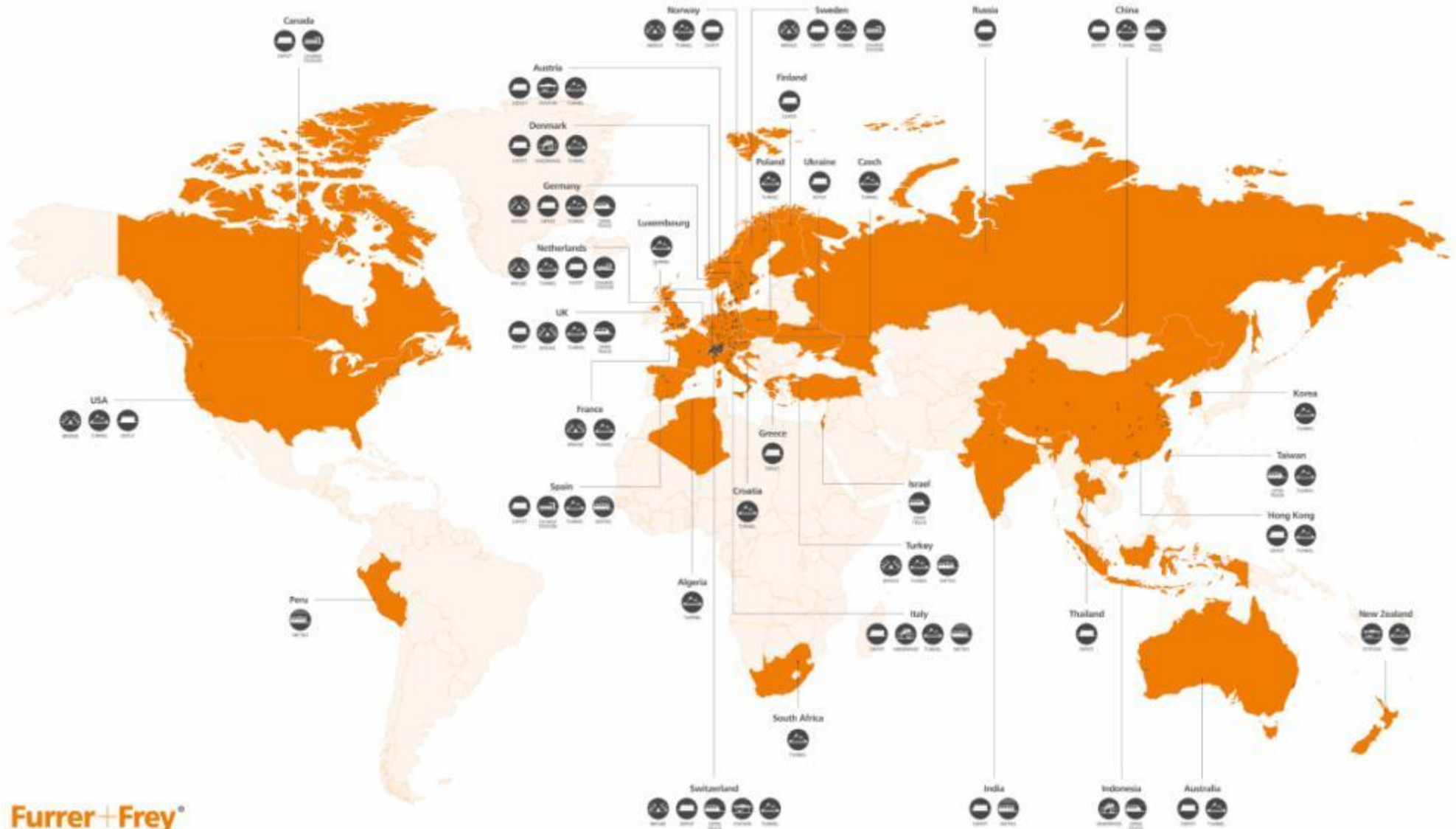


Evaluation of air quality at the
Birmingham New Street Railway Station
AL Hickman, CJ Baker, X Cai, JM Delgado-Saborit and JE Thornes

Worldwide Installations

30+
countries

300+
projects





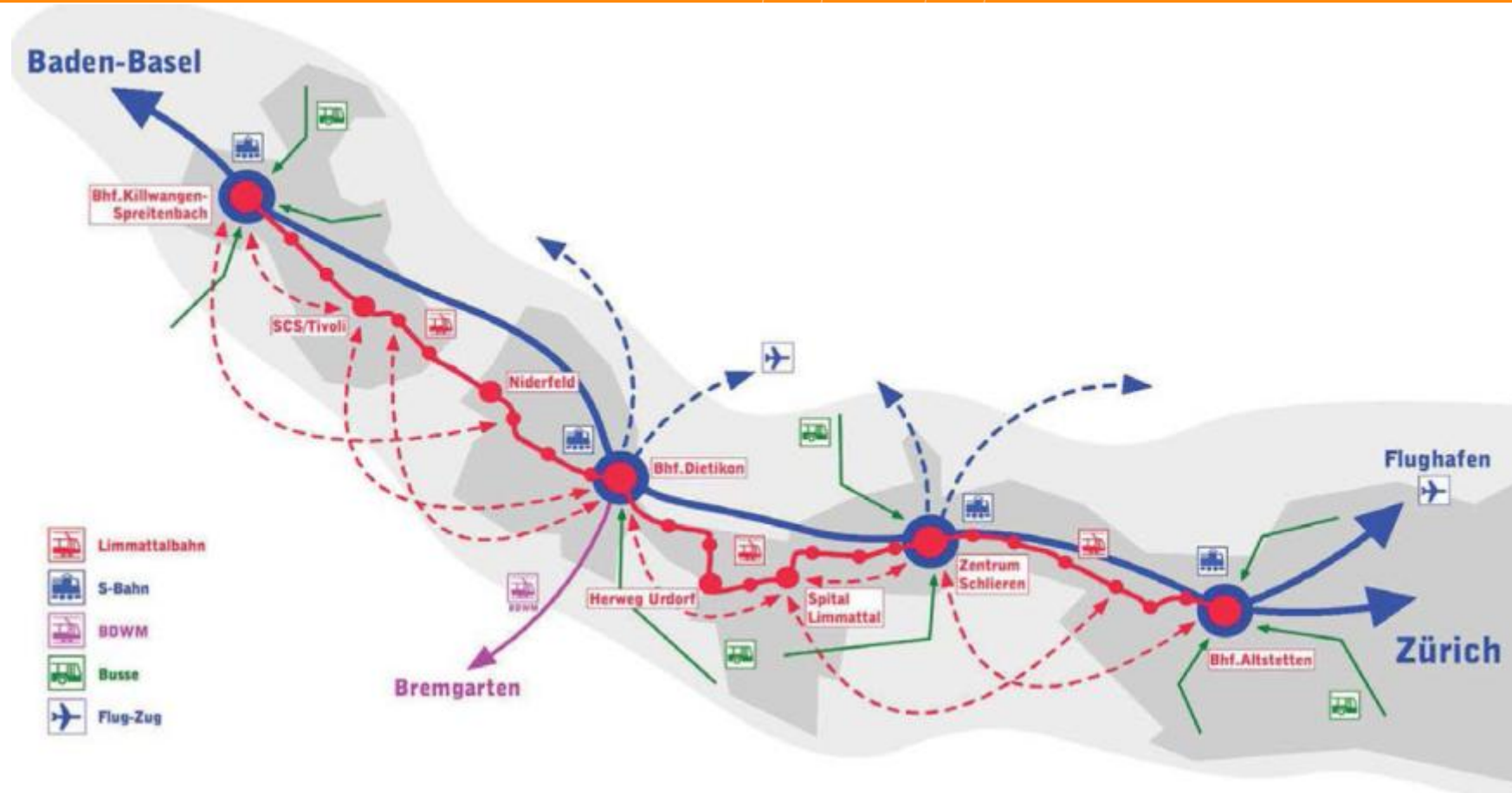
What are the challenges?

- + 4 case studies
 - + Communities
 - + Environment
 - + Complexity
 - + Technology

Case Study Limmittalbahnhof



Limmattalbahn

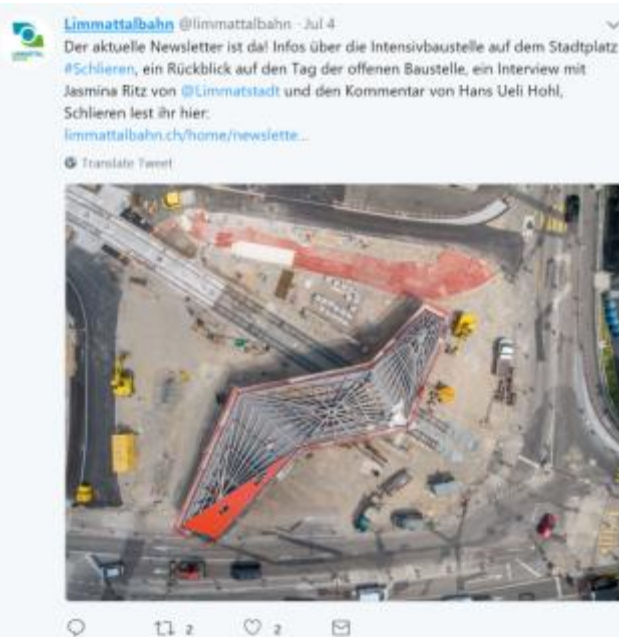


Key Facts

- + Total length: 13.4km
- + Number of stops: 27
- + Voltage: 600V DC inner-city areas, 1200V suburban areas
- + Maximum Speed: 48km/h (30mph) on mixed traffic areas. 60mph (37mph) on the segregated tramway
- + 90% of track on the segregated tramway.
- + 10% Shared road use.
- + Incorporation of street lights
- + Working with architects, local government, local civil society groups.



Communities



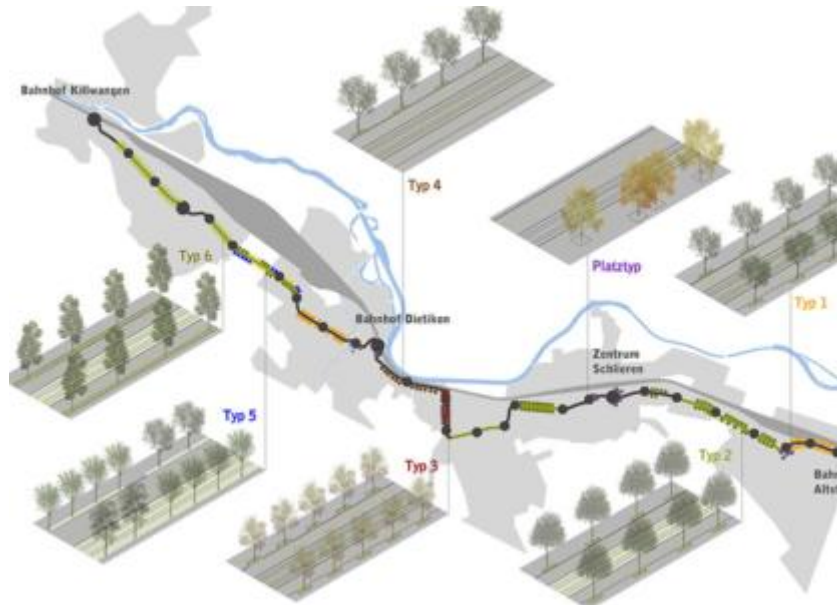
Limmittalbahn



Limmittalbahn



Limmittalbahn



Limmittalbahn



Bern

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Bolligenstrasse Depot



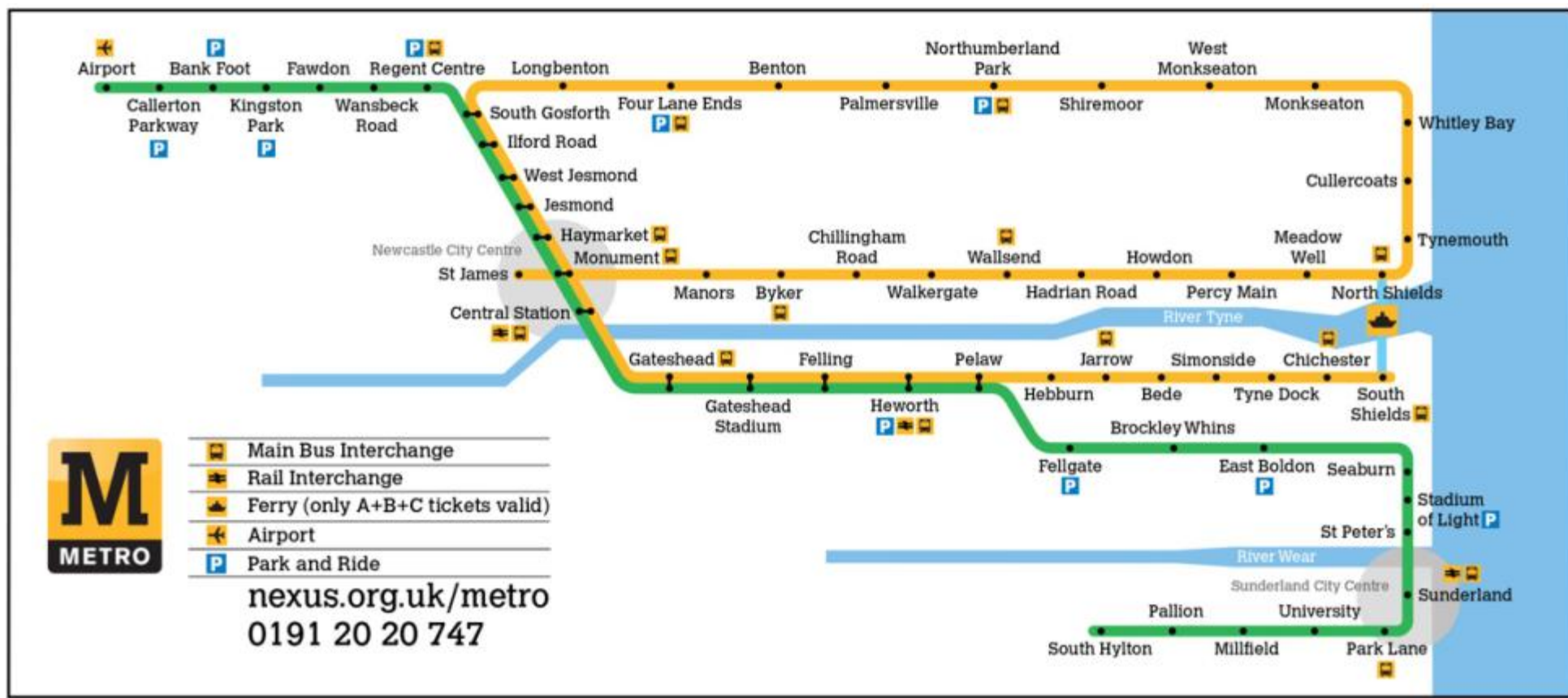
Integration



Nexus Tyne & Wear



Tyne and Wear



NEXUS Renewal



What it means



Conclusion



Thank you for listening?

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