LR4F
Light Rail for Freight

Presentation to
All-Party Parliamentary Light Rail Group


Neil Anderson  BSc BA MSc CMILT
Transportation Consultant
LRVs – Grenoble
Photographs: www.railway-technology.com
Trends in UK Freight

- HGV driver shortage
- VLCCs, super-ports, short-sea shipping
- Two-way flows (import, export + internal distribution)
- Implications for regional ports & environs
- Rising energy/delivery costs
- Environmental impact/global warming

- > Rationalised supply chains
- > Freight consolidation
- > Modal shift policies (road to rail)
Current urban deliveries

- Large trucks, multiple stops
- Low load factors; negligible backloads
- Variable and unreliable delivery times
- Poor vehicle utilisation; low speed
- High but potentially reducible costs

> negative impacts on air quality, safety, traffic congestion and public perceptions

- Powered by diesel; unsustainable?
Future urban deliveries - 1

- Large truck/container deliveries to break-bulk warehouses and freight consolidation centres (FCCs)
- Telematics supports automation of warehouses and FCCs, enables freight tracking, better security etc
- Consolidation of ‘ship-loads’ to ‘shop-loads’; final deliveries using trucks of appropriate size
- 58 subscribing stores in Bristol’s Broadmead have reduced truck deliveries by 76% (www.start-project.org)
- Higher load factors, fewer deliveries
Future urban deliveries - 2

- FCCs (or converted warehouses) are an essential component
- Consolidation to pallet-size loads permits delivery by light rail
- LR networks extended into FCCs
- Purpose-built freight-trams deliver to retail centre spurs/store sidings; precise delivery times
- Final kilometre by electric vans

> electrifying the supply chain...
Freight-Trams – Dresden v and Amsterdam >
Photographs: www.citycargo.nl
FCC + LR4F > optimal delivery

- Combines efficiencies of freight consolidation, electric traction, steel-on-steel, roro technology....
- Reduces truck movements in urban centres; better fleet utilisation
- Improves overall supply chain efficiency
- Higher utilisation of LR networks
- > air quality, safety, security, efficiency
- Powered by electricity; more sustainable
Unlocking this opportunity...

- Work with the private retail and freight sectors; seek Government facilitation

- **LR can serve the retail sector in three ways:**
  - by carrying customers and staff
  - by conveying freight...
  - by advancing their green agenda

- Support establishment of FCCs on peripheral sites
- Support investment in LR networks
- Ensure LR networks are designed for passengers and freight
London’s DLR …

**Courier service**: Canary Wharf <-> The City?

**Freight**: Lewisham > Canary Wharf, The City?

**Recyclables**: The City > Barking Reach?

Photograph: www.railway-technology.com
Is LR4F a distraction?

- Apparent fear that LR operations and delivery of new LR networks may be undermined
- Professional and conceptual barriers: passengers or freight; passengers and freight?
- Whither ‘integrated transport’? ‘making best use’?
- Freight complements business case for LR with an additional revenue stream
- Creates important allies
- LR + LR4F is the sustainable, low-impact, dual-use and popular urban transportation solution
- LR4F – the potential invites further investigation...
Next steps...

- Awareness and interest in UK/Ireland
- Further presentations upcoming
- Scoping study proposed *(academic and consultancy partners in place)*
  - Identify feasibility and potential
  - Understand distribution of benefits and disbenefits
  - Propose specific route additions in tram-cities
  - Augment the business case for LR in the UK
- Funding?
- EC involvement possible – a pan-European issue
Light Rail or Bus?

*Bus/guided bus/trolley-bus/ftr or LRV/tram?*

- Rail, metro and LR preferred by car-users
- *LR is capable of achieving substantial modal shift*
- LR - lower emissions and fewer sources
- *LR is more sustainable; improves the environment*
- *LR’s permanence optimises land use decisions;*  
  buses cannot provide that assurance
- *LR is freight-capable;*  
  buses are not
LRVs – Nantes > and Valenciennes v
Photographs: www.railway-technology.com
In conclusion...

- LR4F represents an unexploited middle-tier in urban logistics
- If LR4F were embraced, it would create significant cost savings and strategic advantages for UK importers, exporters, retailers, freight companies (and consultants)
- LR + LR4F is a silver bullet for urban liveability and accessibility, environmental improvement and traffic congestion
LRVs – Dublin > and Madrid v
Photographs: www.railway-technology.com
Contact…

Neil Anderson

Cel +44/0 7879 – 675 855

Em tndanderson@gmail.com