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# A Framework for Developing a Regional Freight Transport Observatory

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Expanding the logistics Scope



# Overview

- Background
- Study Framework
- Overview of the Case Studies
- Major Findings and Ideas for the RFTO
- Conclusions

# Background

## Growth in Online Shopping

- Increases in urban delivery trips
- Extra pressures on congested road networks, kerbside accesses, environmental concerns

## Need to balance

- Accommodate growth in consumer demand
- Negative impacts: reduce carbon and vehicle miles in the urban areas

## Freight Blindness

- **Lack of freight data** for quality freight traffic analysis
- Making freight transport policy a piecemeal

# Motivation of this Study

- Funded by the Future Transport Zone (FTZ) Programme of the Transport for West Midlands (TfWM)
- Possibility for a Regional Freight Traffic Observatory (RFTO) to address the freight blindness issues
- **Innovations:**
  - Advocates **partnerships between public and private sectors** to share data
  - Collectively address the issues of freight blindness issues
  - Directly inform freight policy development
- **This Study:**
  - **Review State-of-the-Art practices**
  - **Requirement Analysis for developing RFTO**

# Study Framework

## Data Stickiness Dimensions

Data Sharing Willingness

Data Sharing Ability

Data Articulatability

Data Residence

Data Absorptive Capacity

## Urban Logistics Data Sharing Case Studies Review Framework

Stakeholder Engagement

How stakeholders are Connected

Data Requirements

Data Governance

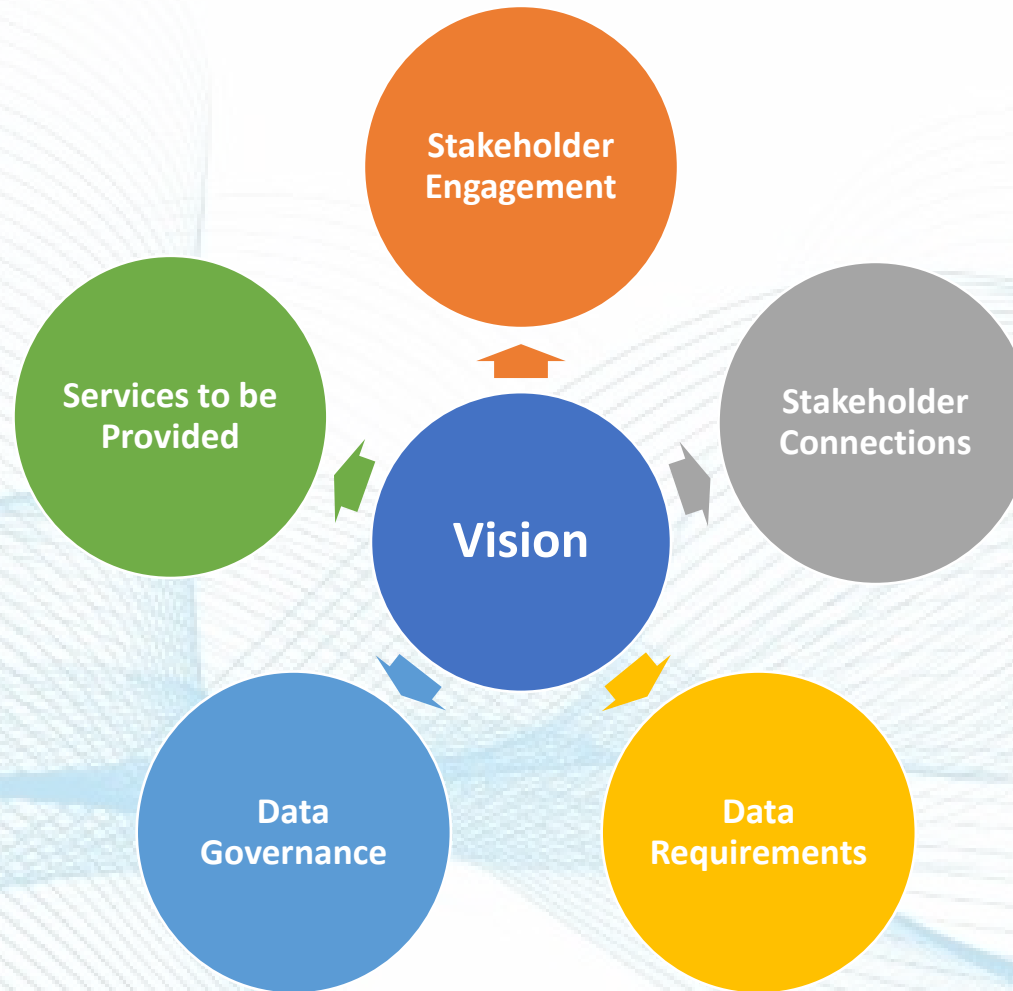
Services to be Provided



# Reviewed Cases

Project Name	Location
Architecture for EurOpean Logistics Information Xchange (AEOLIX)	EU
Collaborative Urban Delivery Optimisation (CUDO)	Singapore
An Intermodal Transport Data Sharing Programme (Data Trust)	Hong Kong
Freight Logistics Optimisation Network (FLOW)	United States
iSHARE Scheme	The Netherlands
Shared European Logistics Intelligent Information Spaces (SELIS)	EU
Freight Traffic Control 2050 (FTC2050)	London, UK
FreightShare Lab (FSL) Platform	Edinburgh, UK

# Major Findings for the RFTO



# Major Findings for the RFTO

## Vision of RFTO:

- To facilitate and manage data sharing between stakeholders collaboratively;
- To provide improved visibility along the supply chain;
- To support business logistics operations;
- To improve evidence-based reporting; and
- To inform transport and logistics policy formulation.

Stakeholders' motivation to participate is directly related to the **BENEFITS** they can obtain.



# Major Findings for the RFTO

## Stakeholder Engagement:

- End Users, Public Authorities, Service Providers and Developers, Service Enablers and Technology Suppliers
- Adopt an Evolution Approach:
  - **Stage I:** Identify Key Challenges and Issues
  - **Stage II:** Work on functional, technical, operational and legal issues to establish an initial set of agreements
  - **Stage III:** Overall Governance, data integrity and sustainability issues



# Major Findings for the RFTO

## How Stakeholders are Connected:

- **Trusted Third-Party Model:**
  - Building a trusted system for data sharing
  - Balancing data providers' commercial interests
- **US Passive Data Sharing Model:**
  - Government Driven
  - Data Sharing is completely voluntary
- **Special Attentions:**
  - Identify and Access Management
  - Data owners retain controls of their own data



# Major Findings for the RFTO

## Data Requirements:

- **Freight Vehicle Data:** vehicle manifest level data is needed;
- **Delivery job data:** time, data, volume and cost information;
- **Other data:** parcel barcodes, delivery addresses, etc.



# Major Findings for the RFTO

## Data Governance:

- **Independent, neutral, third-party Trustee**
- Governance should be done through a set of agreements with clear membership terms and conditions that fully safeguard commercial interests and privacy concerns
- A Supervisory / Advisory governance structure can be considered to
  - Monitor the performance of the Trustee
  - Providing inputs / guidance to the operations of RFTO
  - Constituency should ensure transparency



# Major Findings for the RFTO

## Services to be Provided:

- **Generic Services:**

- Basic Statistically Aggregated Information
- Available in statistical reports or graphical displays
- E.g. supplier demand information, freight flow information, statistical utilisation indices, etc.

- **Specific Services:**

- For individual End User or Public Authority
- Specifically developed services for individual user
- E.g. user oriented optimisation services, routing optimisation, delivery round prediction, etc.





# Conclusions:

- A research framework was developed for data sharing cases analysis;
- Cases reviewed were commonly not for supporting public policy formulation;
- RFTO should pay special attention to the platform's Identity and Access Management and Data Ownership issues;
- The Independent, Neutral, Third-Party Trustee is a common approach for the proposed RFTO;
- A Pilot should be developed using the existing data.





Thank You!

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