**What the 6 Steps are and how they can be used?**

The Urban Digital Stack provides a framework for officials in metropolitan transport authorities and urban decisionmakers to think about how the landscape of multiple mobility platforms can be shaped for the public good.

The Urban Digital Stack can be used to:

* Structure and facilitate discussion in meetings between metropolitan transport system officials who are responsible for developing strategy and other relevant officials and stakeholders.
* As a device through which to communicate an authority’s position on mobility platforms, via policy and strategy documents.

We propose six steps to guide to help structure discussions and use of the stack. The steps are not intended to provide a rigid prescription but are meant to be used to organise debate around key questions. These six steps may be worked through sequentially but those using these steps are likely to move backwards and forwards between them as it helps them to shape strategy. The steps are:

**Step 1: Public priorities?**

What are the public priorities and objectives for urban transport policy? These might include regional integration and connectivity, tackling inequality, improving accessibility, reducing car use and emissions, and economic development.

* How is the system currently organised and governed and what opportunities and barriers does it present?
* How can platforms complement, enhance or connect existing networks to meet these goals?
* Who would benefit most and what risks do different kinds of platforms pose?

**Step 2: Pressures and opportunities?**

Transport authorities need to think about the impacts of increasingly volatile social, economic and environmental conditions. Examples might include extreme weather, pandemics, economic crises, demographic change, new governmental priorities.

* What are these forces and which are likely to be more prominent in the future?
* How will they affect the development and operation of the stack?
* What will determine the system’s durability and adaptability over time?

**Step 3: Organising the Urban Digital Stack?**

The Urban Digital Stack can be organised in different ways. At one end of the spectrum are decentralised, modular stacks comprised of loosely connected or fully independent platforms. At the other are more centralised and integrative stacks, where networks are tightly coupled and interdependent.

* How is the stack currently organised? How could and should it be organised?
* What are the advantages and limits of each model?
* What are the implications for governing multiple interests and objectives, and for shaping the overall system?
* What relevant expertise and governing capability does the public authority have or lack?

**Step 4: Who is in control?**

The Urban Digital Stack is a battleground for those seeking to shape urban mobility. Successful platforms enhance their power by setting the ‘rules of the game’ and through capturing, mining and using data to serve strategic objectives. Who controls them therefore has profound implications and transport authorities must consider how the public good is best served.

* Which elements of the stack are of most strategic importance and how are they governed?
* Who owns the data generated in the stack?
* What are the advantages and limits of different arrangements of public and private control?
* How might they be configured differently?

**Step 5: What geographies?**

What is the geography of the Urban Digital Stack? Platforms are both shaped by and shape spatial context. Transport authorities must consider the spatial logics and implications of the stack at different scales.

* Do they contribute to or hinder spatial priorities and regional integration?
* Does the stack enhance or fragment existing service provision?
* Does it extend access and connectivity or exacerbate exclusion and inequality?

**Step 6: What timeframes?**

How will the Urban Digital Stack be developed over time? Transport authorities must consider the sequencing and process.

* What are the key building blocks and priorities? Over what timeframes?
* How will learning, expertise and continuity be built over time and across projects?
* What role does vision-making play, and how can stack development respond to uncertainty and changing conditions?
* How can past experiences be learned from? What challenges can be anticipated in the future?