

Future Transportation (people & freight): how will we be moving in the future?

Think Deep UK is a group of built environment experts committed to creating resilient, sustainable and liveable cities through smart use of underground space. Led by a voluntary, multidisciplinary group of professionals, our Mission is:

- To promote an awareness of the value of underground assets and to create a policy framework that can enable their fair use.
- To inform and guide the general public, decision makers, politicians and professionals how the use of urban underground space can create better cities with socio-economic benefits for society.
- To encourage thinking deeply when making decisions and planning for the future of our cities.



From our Future transportation workshop

Executive Summary:

The second TDUK workshop centred around considering what future trends in transport would bring to city planning. Kindly hosted by PLP Architecture and attended by around 30 people from clients to planners and engineers in Europe and the UK, the workshop speculated on the future developments in transportation within and between cities affecting the use of community space, particularly but not exclusively underground space.

A future scenario exercise considered three scenario based time horizons and relevant issues moving forward. Current transport pressures faced by cities include addressing poor air quality, over-use, stress to use the system, reliability, capacity and safety amongst other. The new paradigm horizon considers ways to combat these pressures including new data structures, shared models and more passenger focussed mobility offers; with the new-paradigm horizon proposing mobility as a service model, point to point travel systems and technological advances that change travel expectations. **The real step change will require intervention planning to make best use of the opportunities arising from innovation in order to reach a higher paradigm.**

The workshop therefore considered fundamental questions for communities:

- What trends will we need to consider?
- How will infrastructure be spatially arranged?
- What should we as informed professionals be doing now and what will the key challenges be?

Trends that transport faces include wheel to air competition, new travel modes and level of energy use per mile amongst others. Combining two considerations, time horizons and trends shows us that three models of organisation are possible. An organic piecemeal model, a better planned model and a new paradigm model. **The degree of planning control (and predictive future visioning) we wish to consider will relate to how much future proofing we think is necessary to create an improvement to the current organisation.** The workshop groups proposed different planning approaches, from a spatial pro-active planned approach, a use class and underground use approach and a safeguarding model that plans for zones and corridors within our cities. The likely direction may involve a combination of these to achieve an innovative outcome.

Further discussion centred around the area of last mile travel and the zoning of journey speeds between cities and how the transport modes compliment and link between current and future systems. The balance of these future transport types and how they link between the use of above and underground space is an area that we believe needs more careful consideration. Some global cities safeguard transport corridors that are oversized in anticipation of future use. A consensus that the group reached was that underground space would be needed to improve transport uplift in cities in the future for both demand and to improve the quality of life in the city.



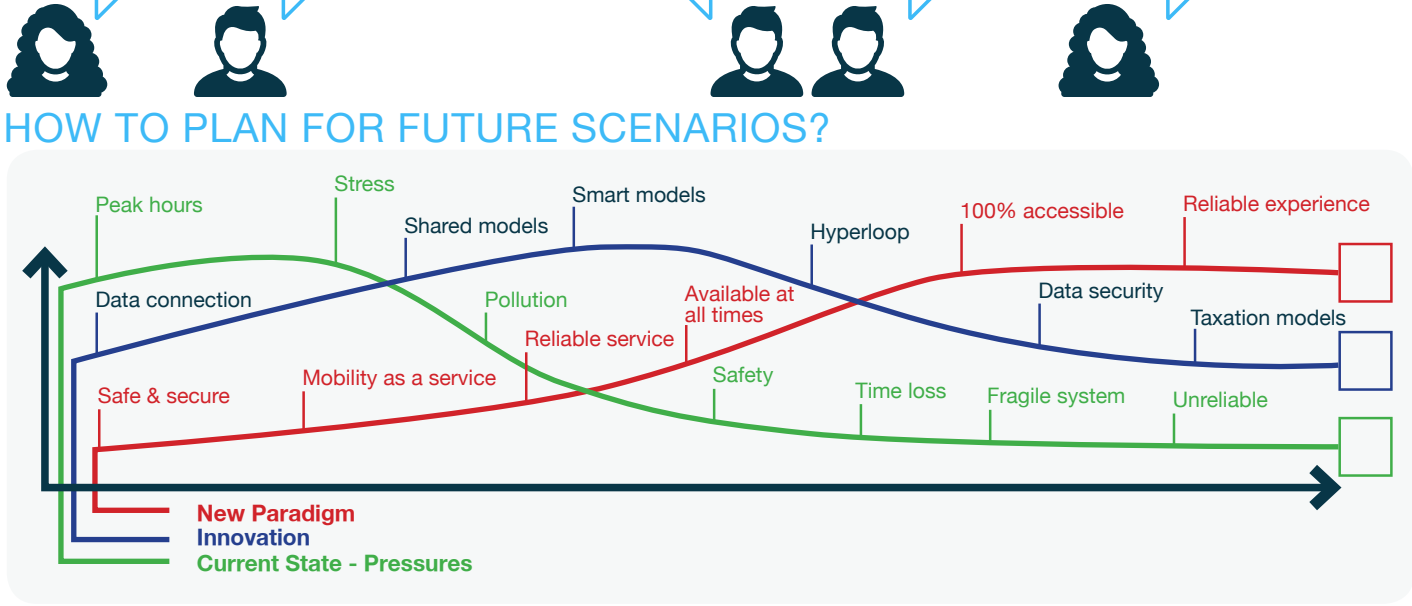
What trends do we need to consider?

What models should we consider moving forward?

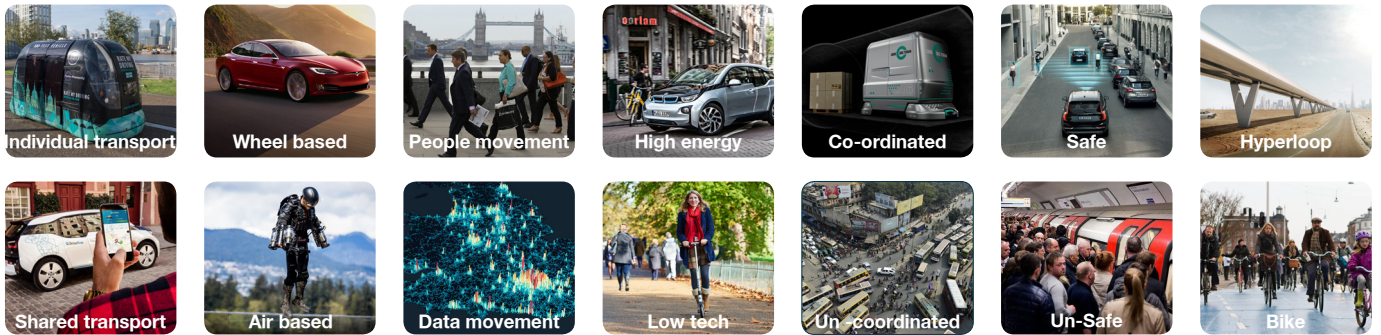
What are the scenarios we need to plan for?

Why will future transport planning make for better cities?

Will the underground play a part in this?



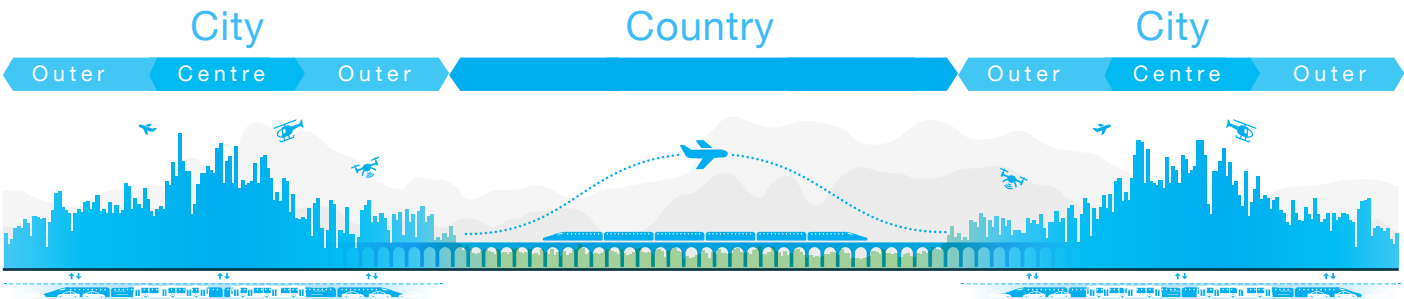
TRENDS TO CONSIDER IN THE FUTURE



HOW MIGHT THE SCENARIO'S DEVELOP?

<p>Scenario A</p> <p>Organic, Piecemeal</p> <p>Non-planned innovation → Little improvement</p>	<p>Scenario B</p> <p>Better Planned</p> <p>Planned innovation → Improvements</p>	<p>Scenario C</p> <p>New Paradigm</p> <p>Innovation & new paradigms → Solutions</p>
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POINT TO POINT TRAVEL - ABOVE GROUND vs BELOW



WAYS TO ORGANISE/SAFEGUARD CITIES

