

Principal Considerations in Implementing ATN Applications

Austin Smith, Associate Director

Principal Considerations in Implementing ATN Applications

...primary observations

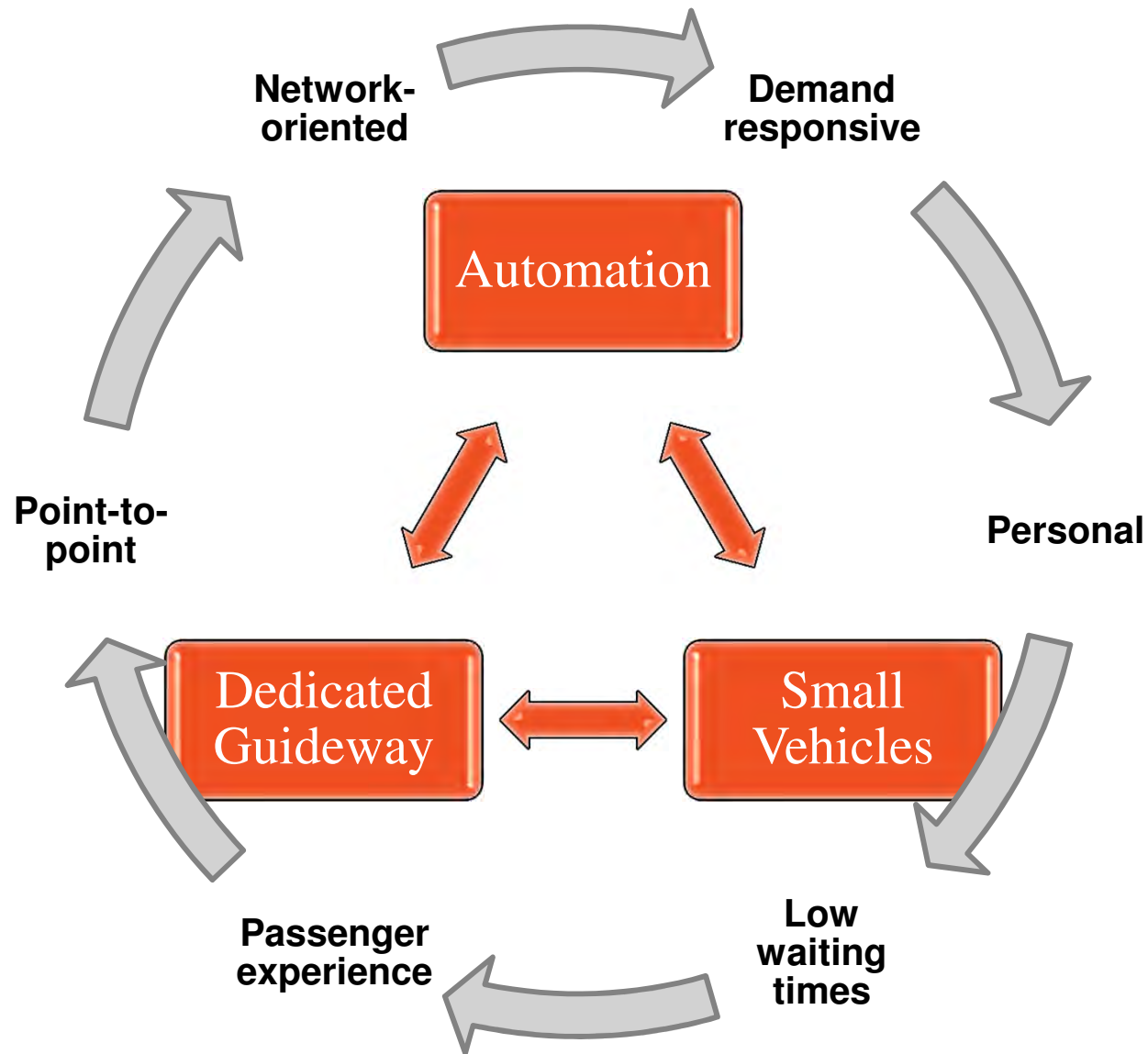
...applied to specific applications

...summary

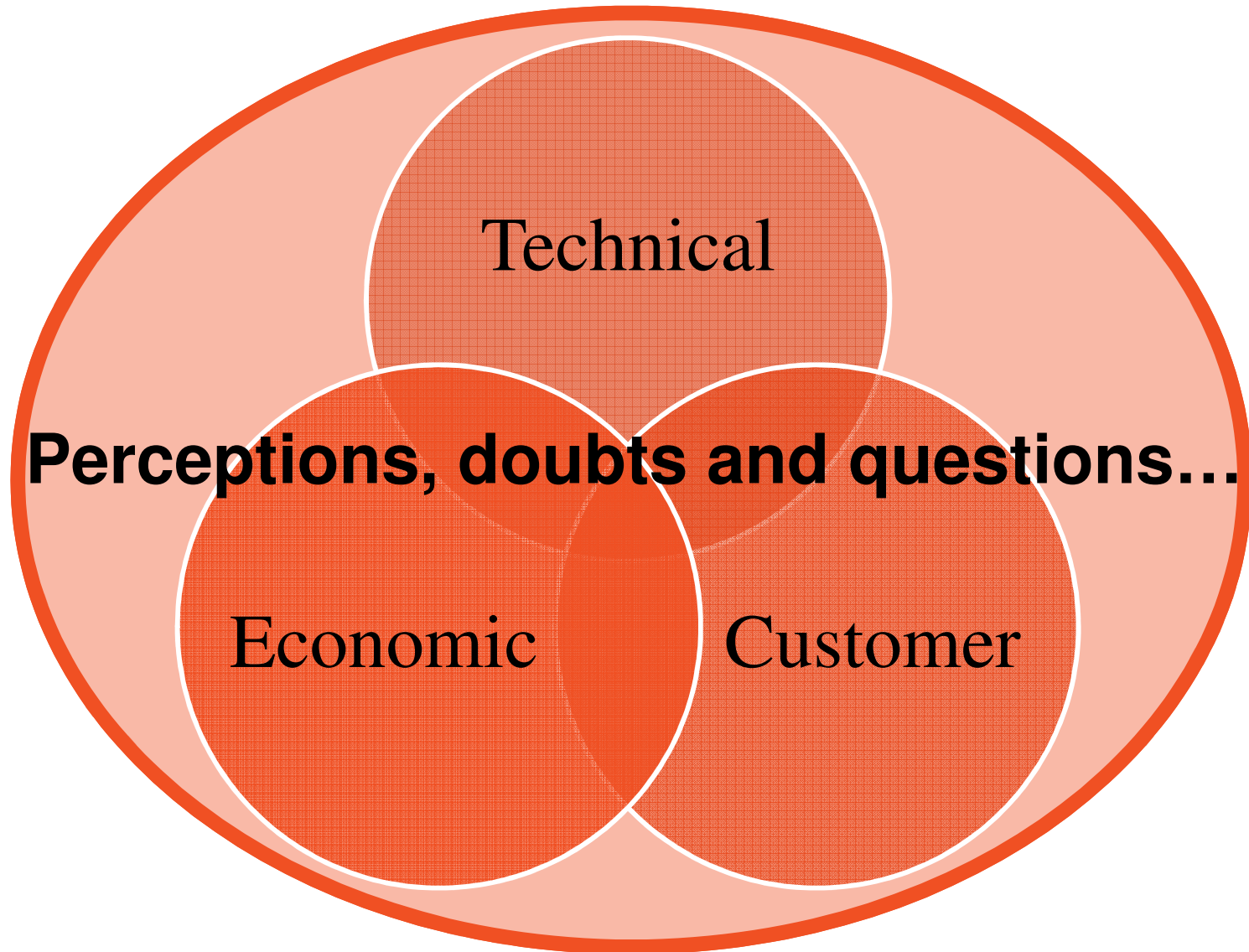
Primary observations... (levers)



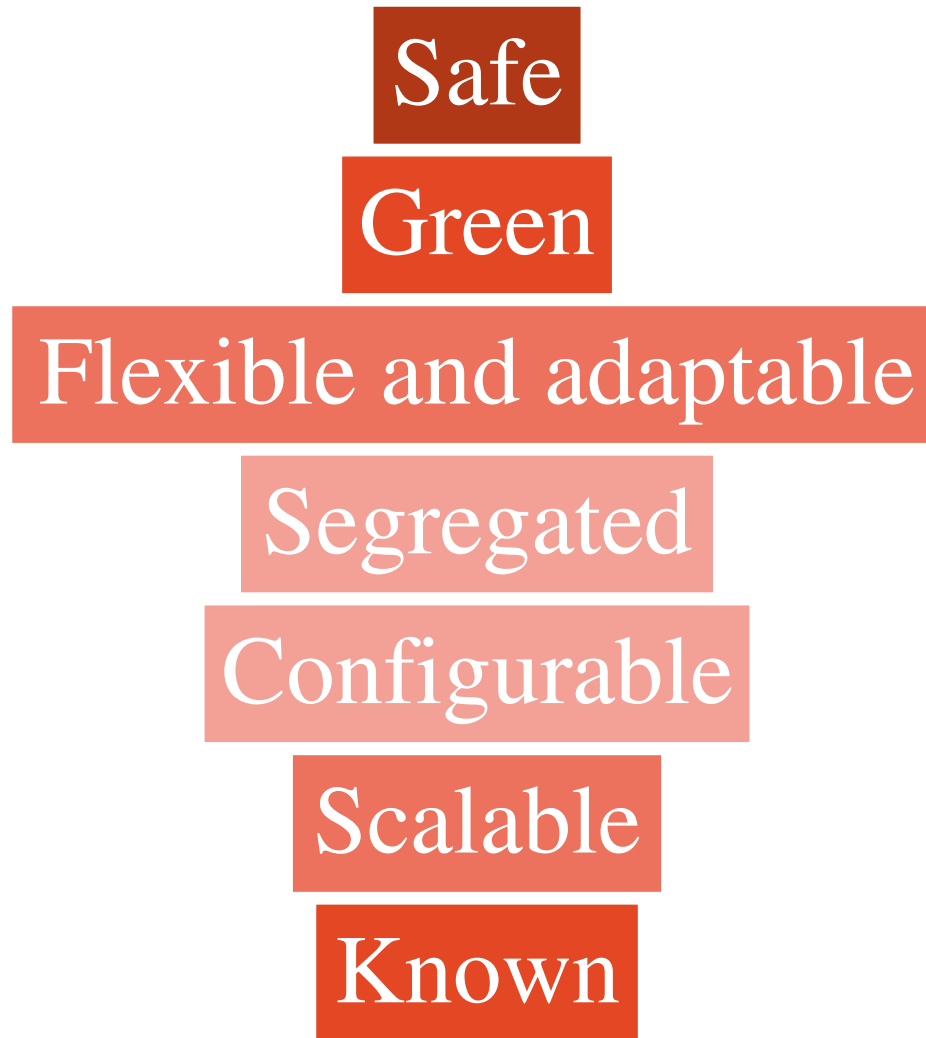
PRT Core Attributes



Principal drivers and levers in 'making the case'

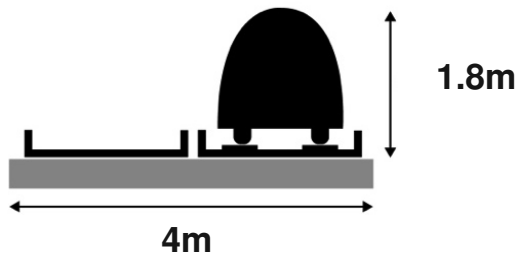


Principal technical levers...

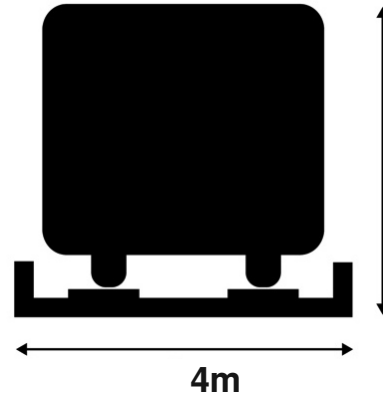




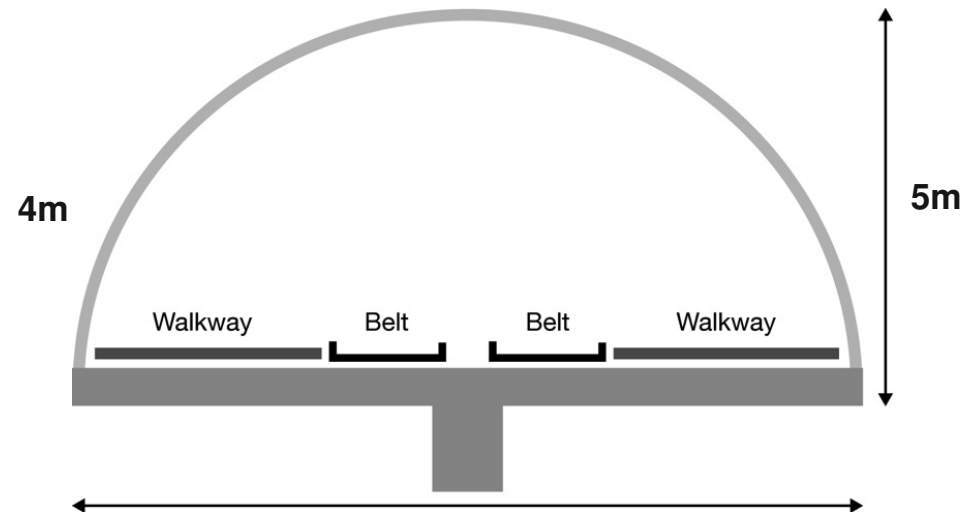
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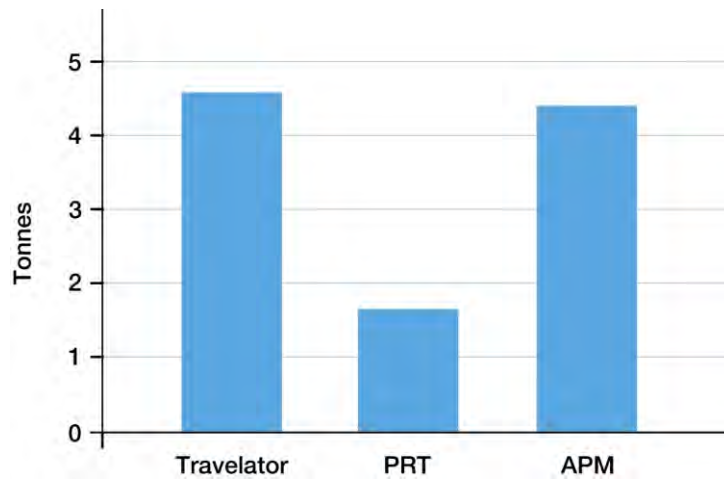
PRT double track 4m structure



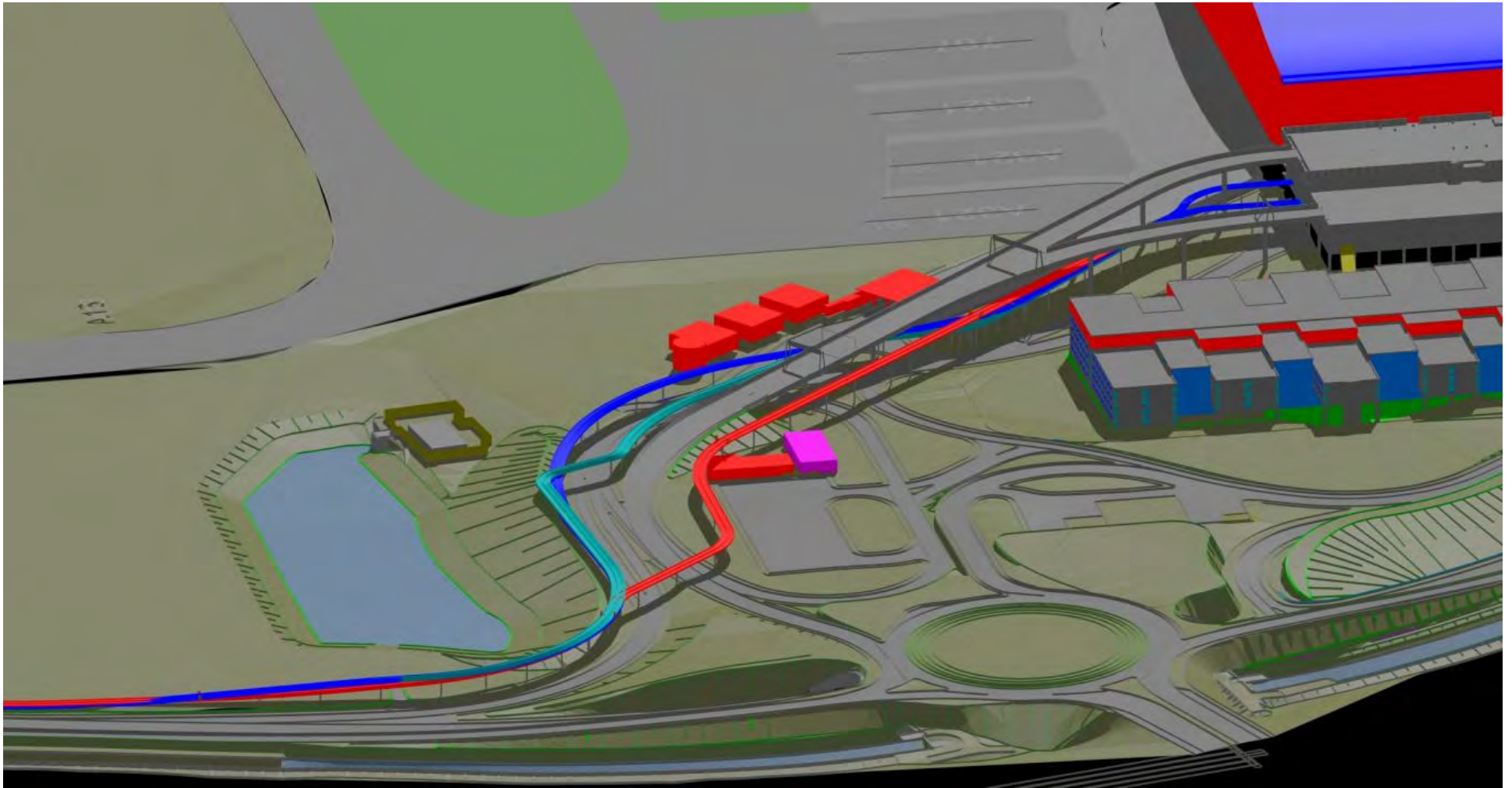
APM single track 4m structure



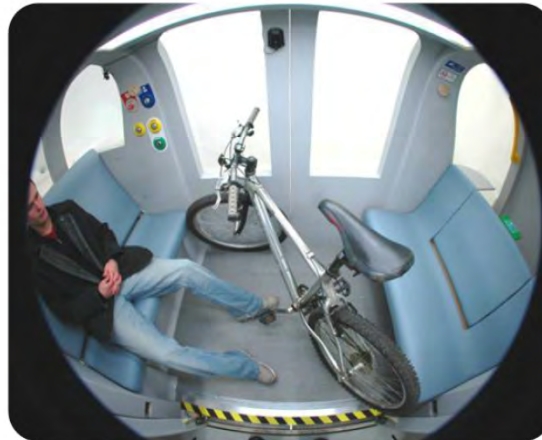
Travelator double belt with walkway 10m structure



Superstructure weight/m comparison









Principal customer levers...

Reliable and dependable

Predictable

Simple and enjoyable

Comfortable

Personal

Self-guided

Niche and innovative

Principal economic levers...

Light weight and scale

Easy installation and testing

Improved land-use

Reduced congestion

Increased accessibility / proximity effects

Comparatively low Capex and low Opex

Sponsorship and partnerships

...perceptions, doubts and questions...

Novel and immature technology

Capacity and throughput

Systems are not interchangeable

Power requirements

Approval and regulatory issues

Cost and risk estimation

Investment and financing

Principal levers summarised...

Safe	Green	Flexible and adaptable	Segregated	Configurable
Scalable	Known	Reliable and dependable	Predictable	Simple and enjoyable
Comfortable	Personal	Self-guided	Niche and innovative	Light weight and scale
Easy installation and testing	Improved land-use	Reduced congestion	Increased accessibility / proximity effects	Low Opex, Sponsorship and partnerships

Some applications...

Urban regeneration...



Specific Opportunities

- Use of space
- Proximity effects
- Land-use mix
- Cost efficiencies
- Improved access
- Differentiation
- Integration
- Last-mile connection



Specific Constraints

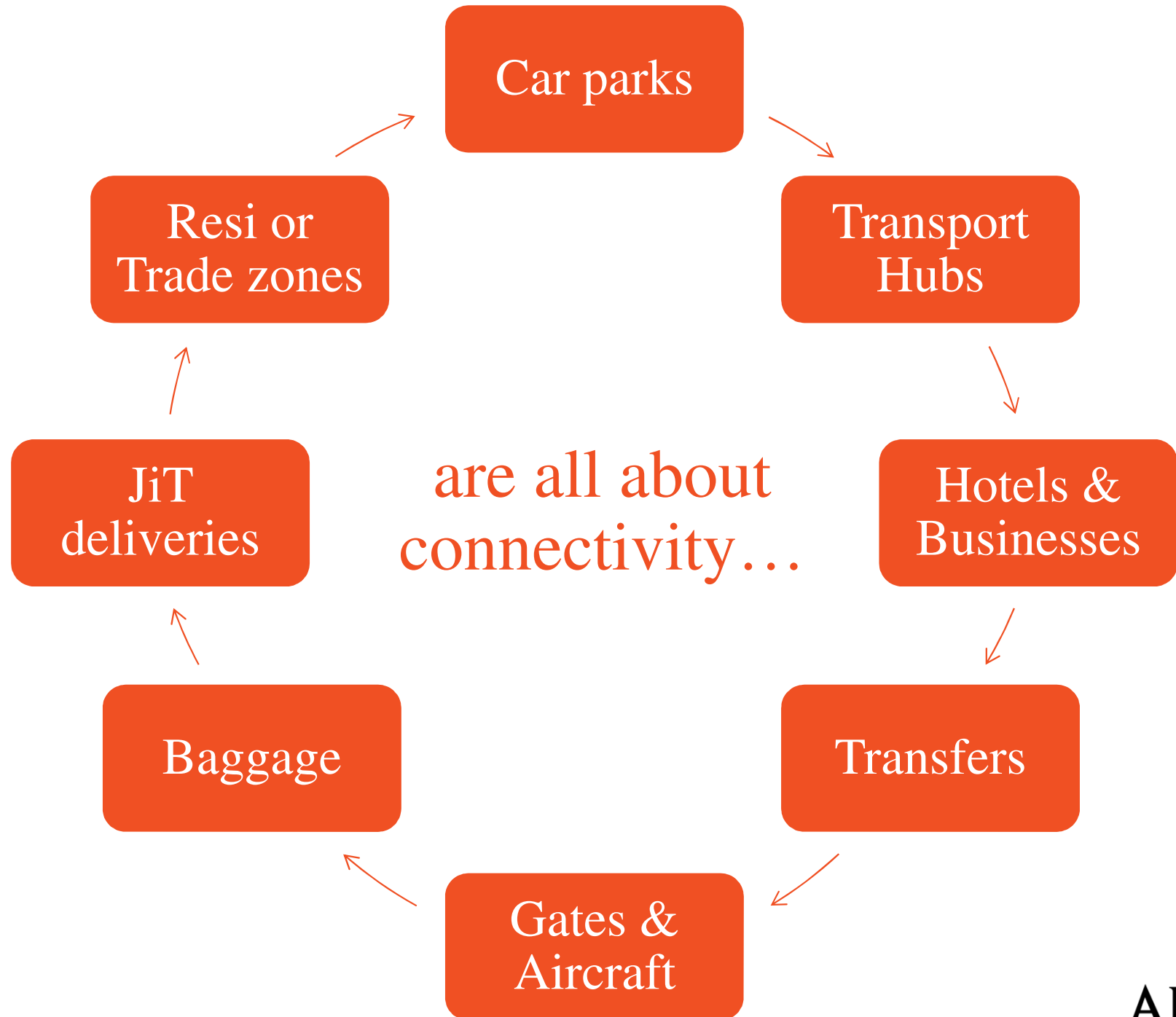
- Physical and practical
- Planning
- Lack of knowledge and experience
- Return on investment
- Revenue collection
- Capturing land value increase
- Well-being and urban vitality



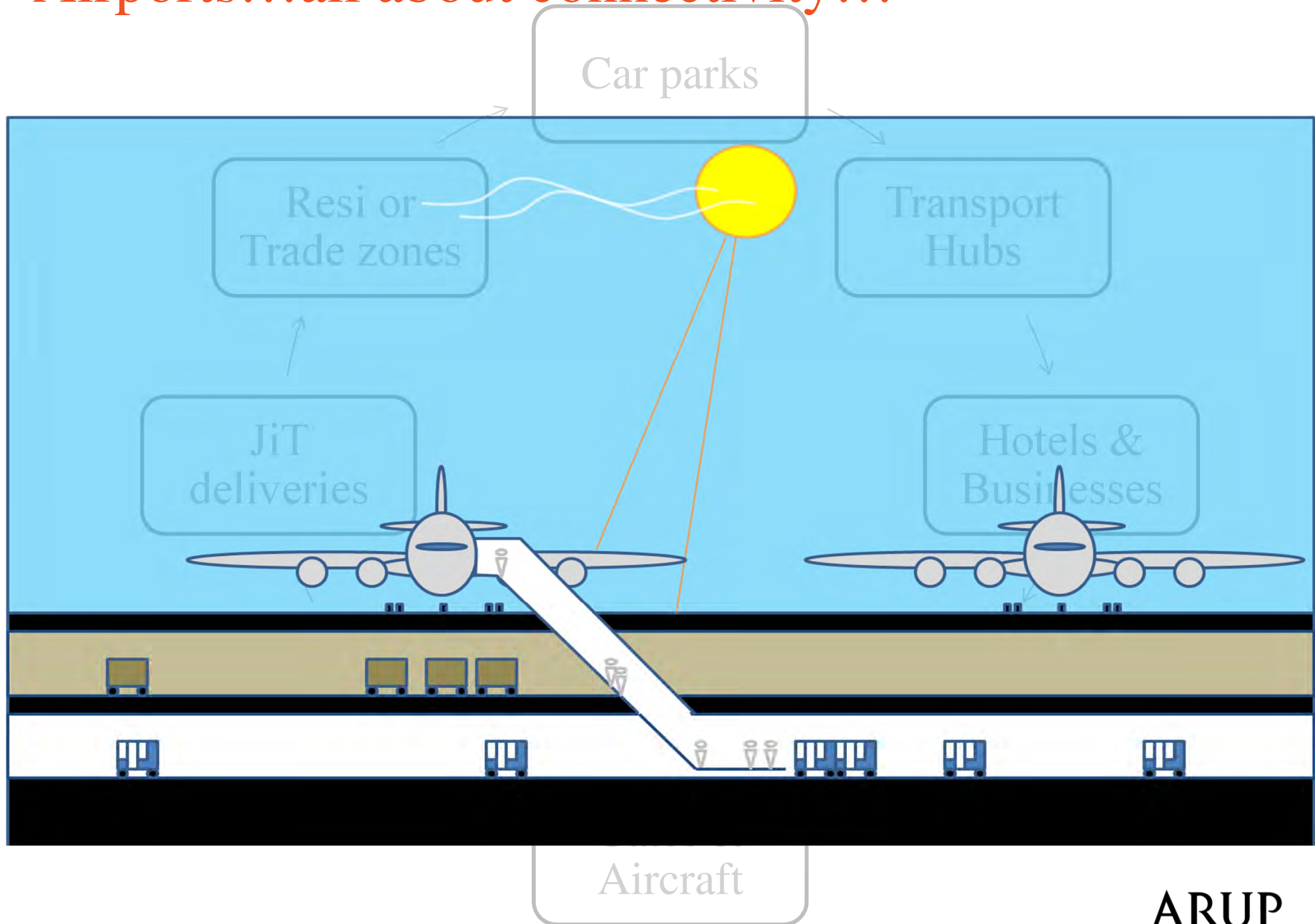
Airports...



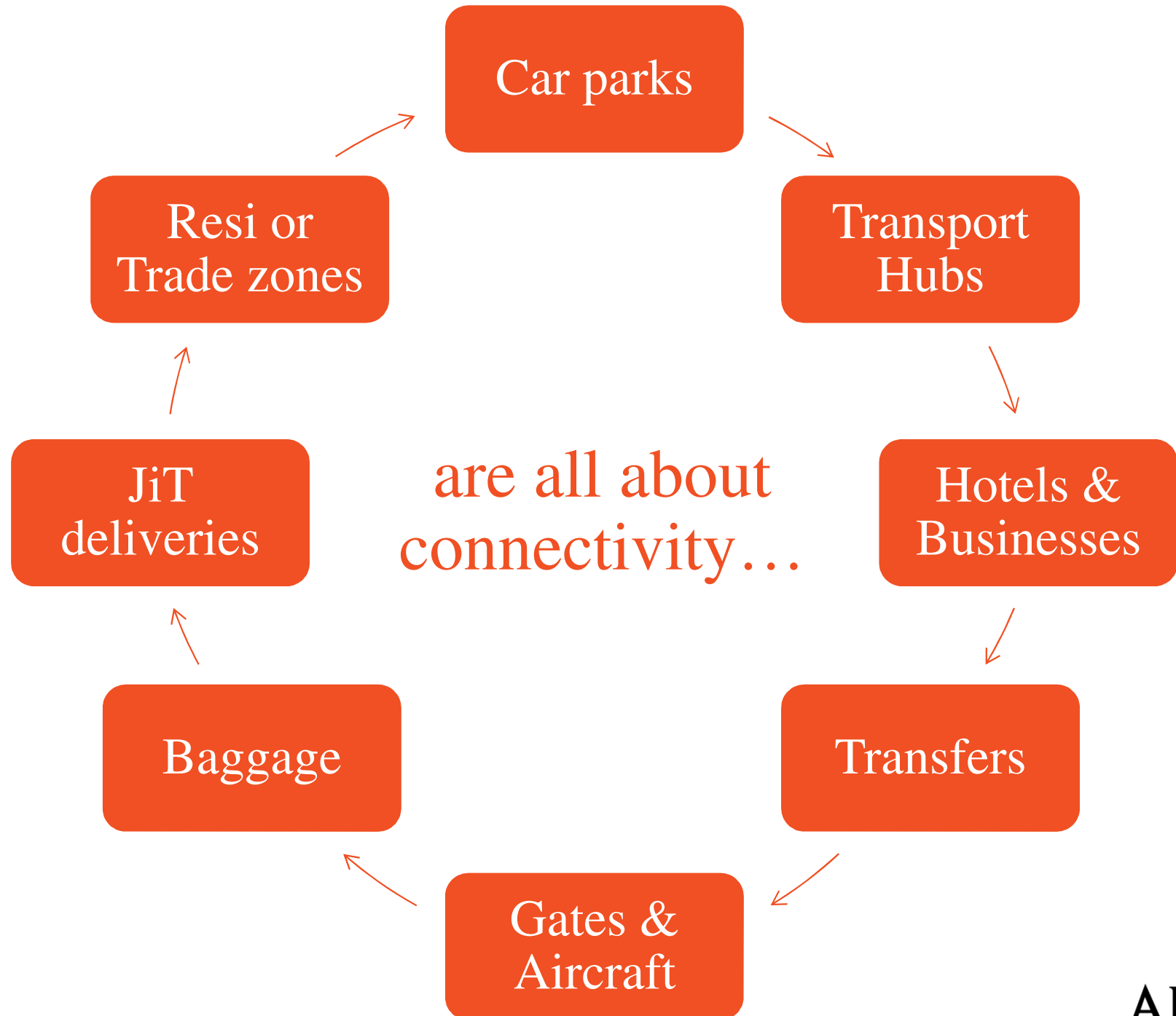
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Airports...all about connectivity...



Airports...



Specific Opportunities

- Making connections
- Simple ownership
- Time is highly valued



Specific Opportunities

- Integration



Specific Opportunities

- Making connections
- Simple ownership
- Time is highly valued
- Integration
- Check-in
- Wayfinding



Specific Constraints

- High point-to-point demand
- Security
- Revenue streams
- Link between investment and return
- Driverless benefit lower
- Integration into existing infrastructure



Campuses and business parks...



ATN at Masdar City, UAE © 2getthere



GRT at business park Rivium, Holland © 2getthere

Specific Opportunities – the last mile connector...

- Space
- Dispersed demand
- Car-free environment
- Manage access
- Simpler integration
- Developer benefits
- Connection to transport hubs
- Linking buildings



Specific Constraints

- Peak demands
- Lower land cost reduces value benefit
- Revenue generation



Legacy parks...



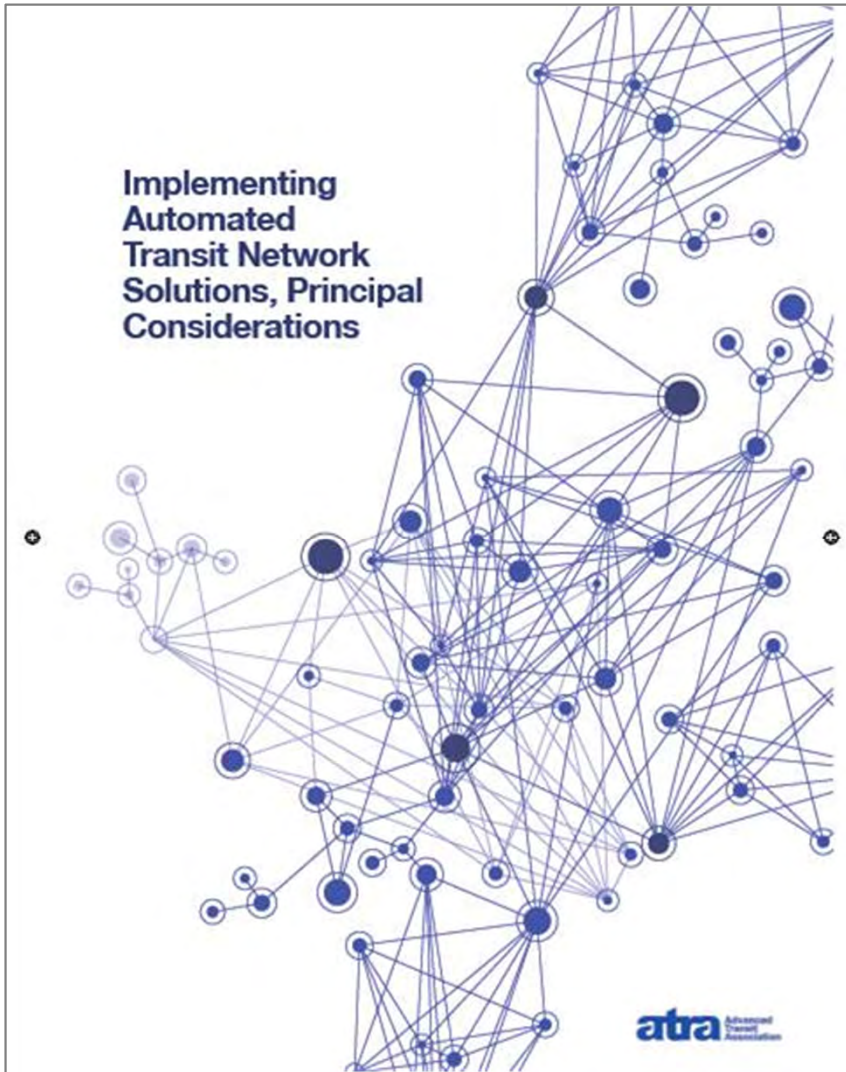
Summary

Principal levers summarised...

Safe	Green	Flexible and adaptable	Segregated	Configurable
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Summary

- Multiplicity of levers
- These lend themselves more to certain applications
- Some principal levers are hard to monetise
- Recognise limitations imposed by risks but avoid over-weighting
- Principal outstanding questions don't need to be blockers
- In the right setting PRT can step-change passenger experience
- Recognise the opportunities to rethink conventional solutions



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