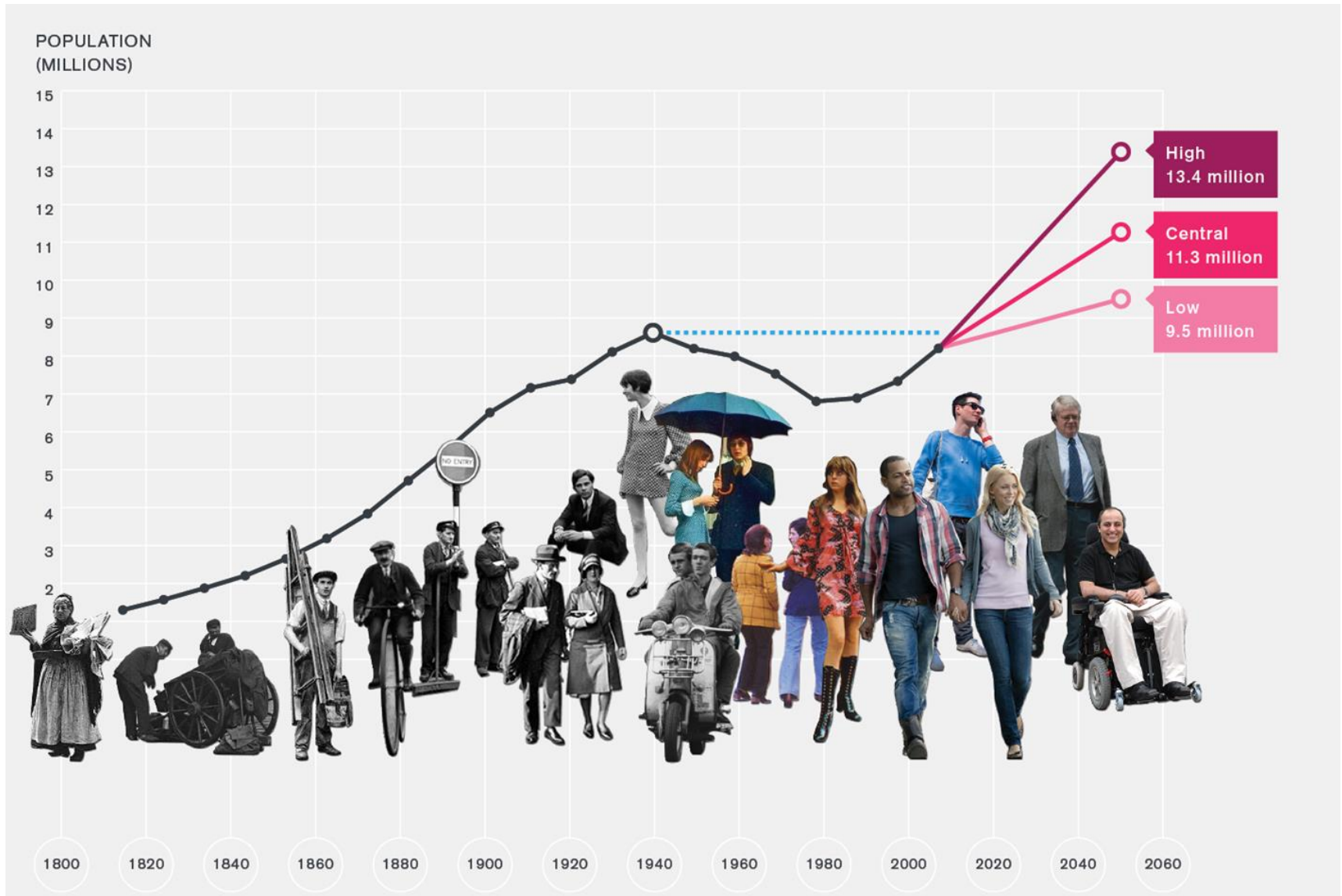


# London's strategic infrastructure needs – an evidence base to help deliver the London Plan

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26 June 2017



# London's population



# What are London's infrastructure requirements to 2050?

- Approximately 50,000 additional **homes** per year
- Up to a 70% increase in public **transport** capacity
- 20 % increase in **energy** supply
- New measures to address **water** supply shortages in Wider South East
- Keeping pace with advances in **digital** connectivity: 5G and high speed broadband
- Efforts to make London resilient and increase quality of life (flooding, drainage, green infrastructure etc.)

Four key cross-cutting challenges the Mayor is working to address:

**Coordination**

**Skills**

**Funding**

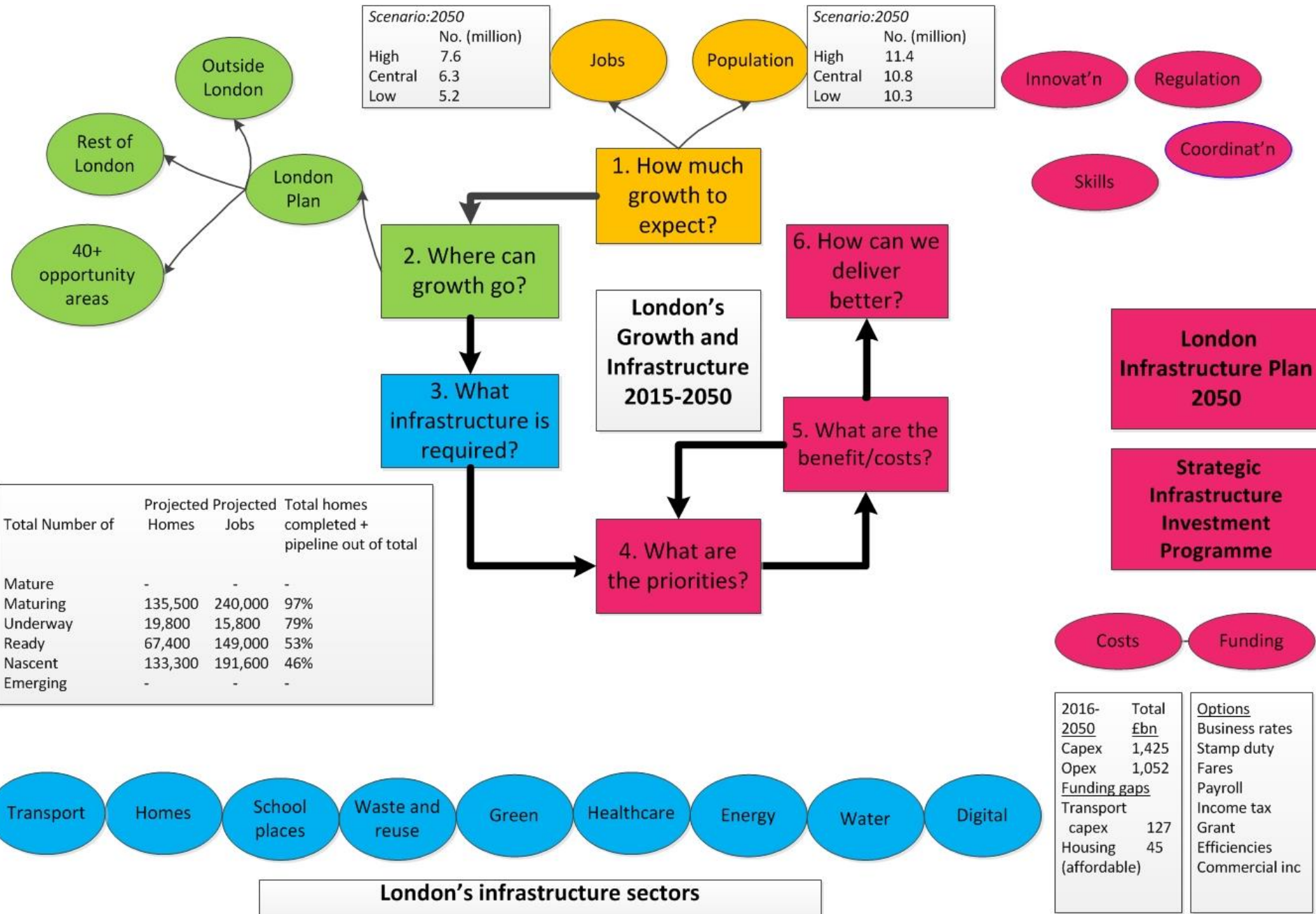
**Regulation**

**Fiscal devolution** is the key to addressing many of our infrastructure funding challenges, as it will provide London with the capacity to invest in new infrastructure

**Innovation** will enable us to do more with less, by making better use of existing assets.

# Our process for developing the London Infrastructure Plan 2050

MAYOR OF LONDON



# Developing a Strategic Infrastructure Investment Programme for London

- Provide a clear narrative about London's strategic infrastructure requirements
- Promote joined-up thinking
- Focus on delivery challenges and opportunities
- Support Mayoral strategies and policies



# What do we mean by strategic infrastructure? What are the key sectors?

Strategic infrastructure means...

those projects in the pipeline with >£100m in value (2017 prices)  
and/or critically important to facilitating growth

## Growth Drivers



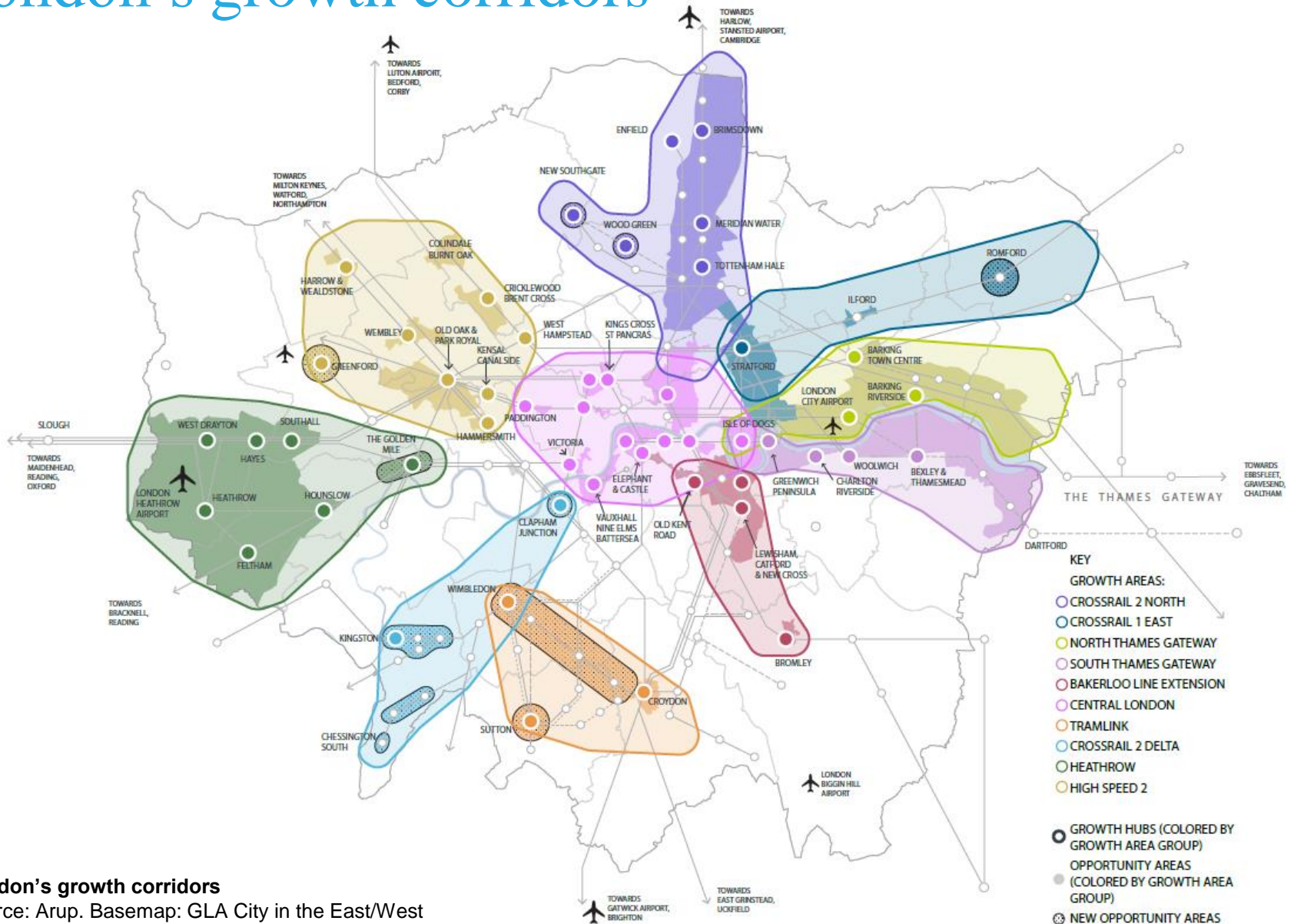
Projects that directly stimulate growth and are considered to be the primary pieces of infrastructure necessary to facilitate housing and/or commercial property delivery

## Growth Enablers



Projects that support or enable growth and without which housing and/or commercial property delivery would not be viable

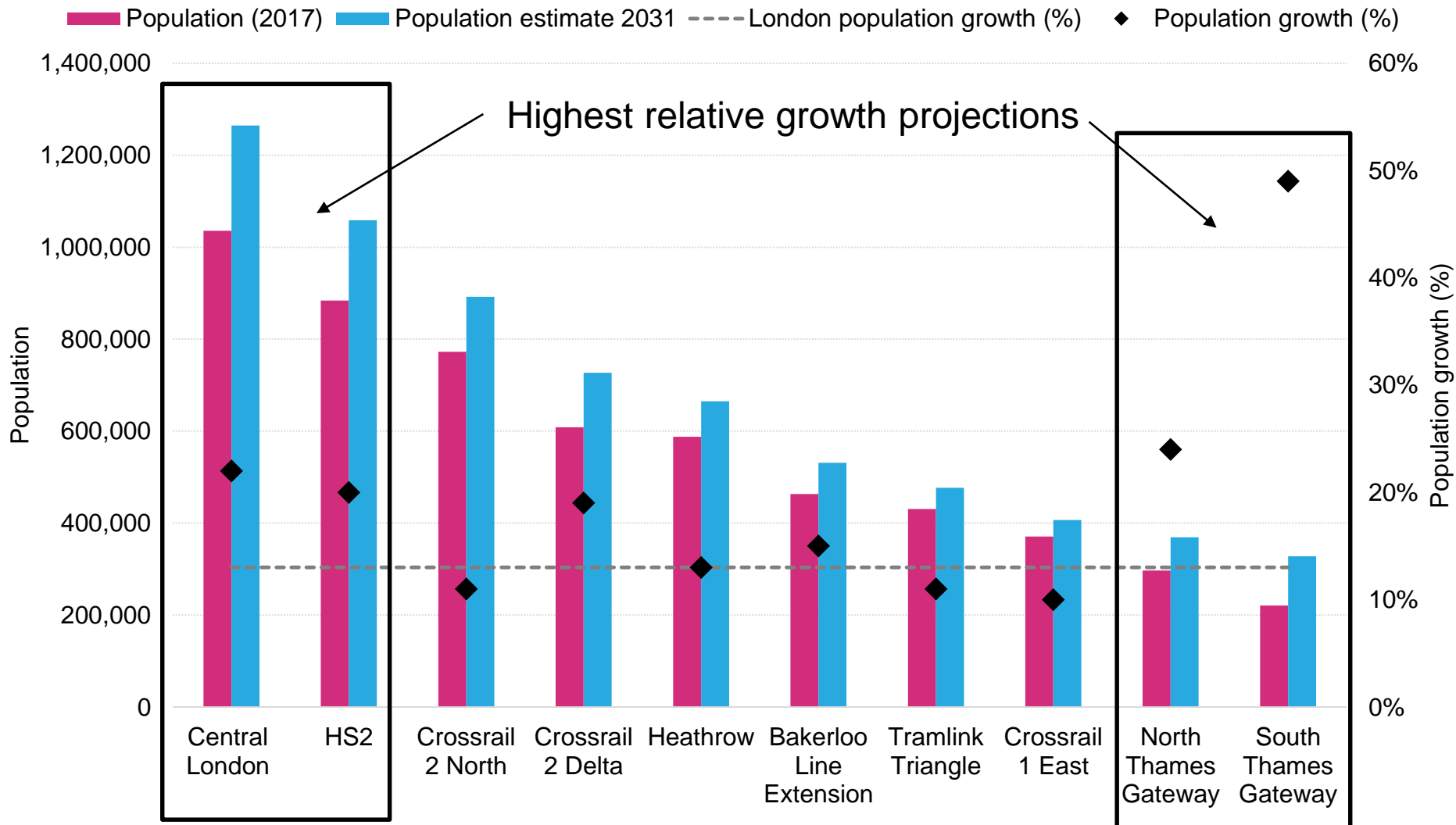
# London's growth corridors



## London's growth corridors

Source: Arup. Basemap: GLA City in the East/West

# Scale of the opportunity – population growth



8 **Figure: Growth corridors population growth to 2031.**

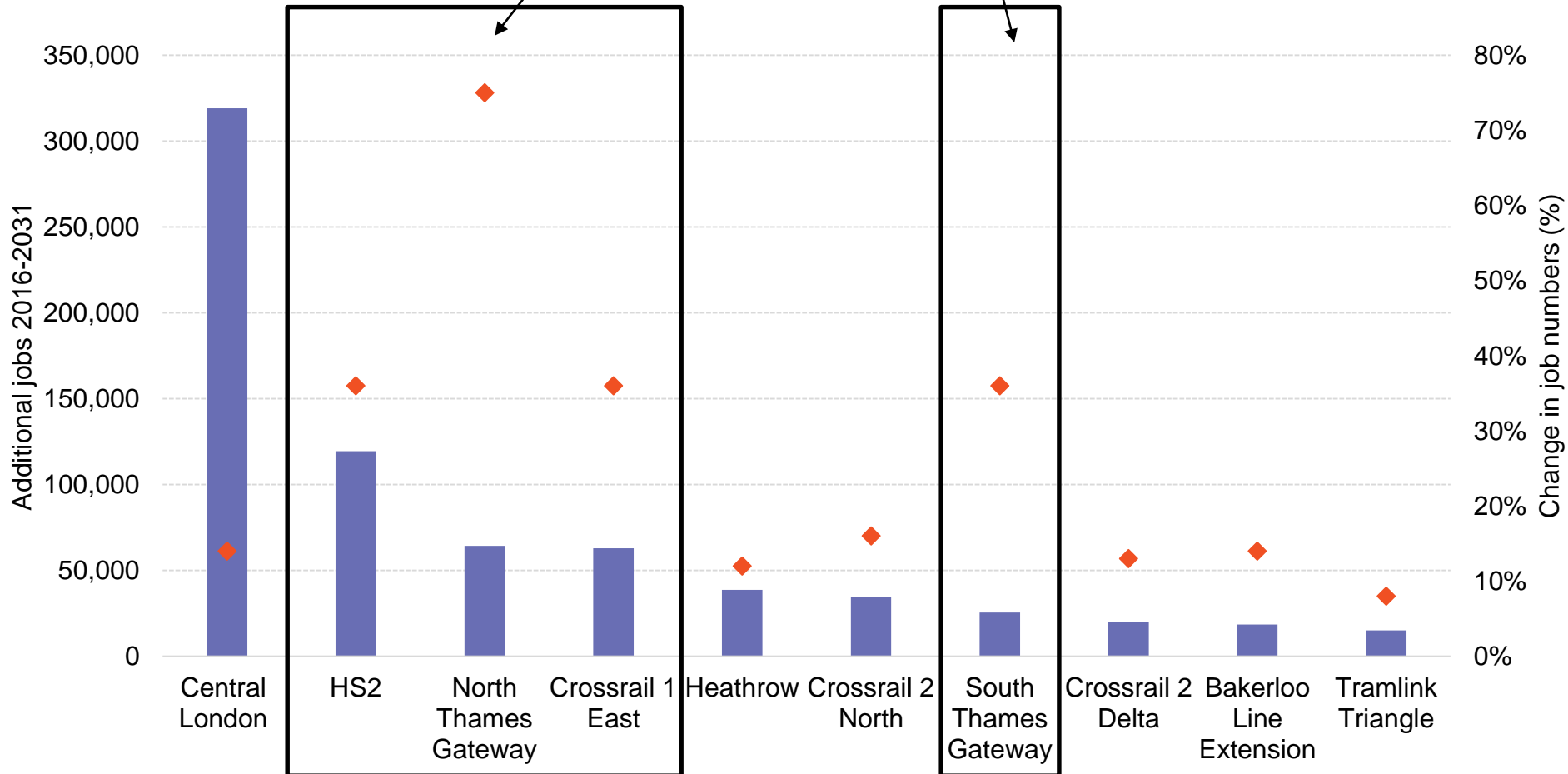
Source: GLA population projections for MSOAs not in Opportunity Areas, and OA DIFS for others



# Scale of the opportunity – employment growth

■ Additional jobs (2016-2031)    ◆ Change in job numbers (%)

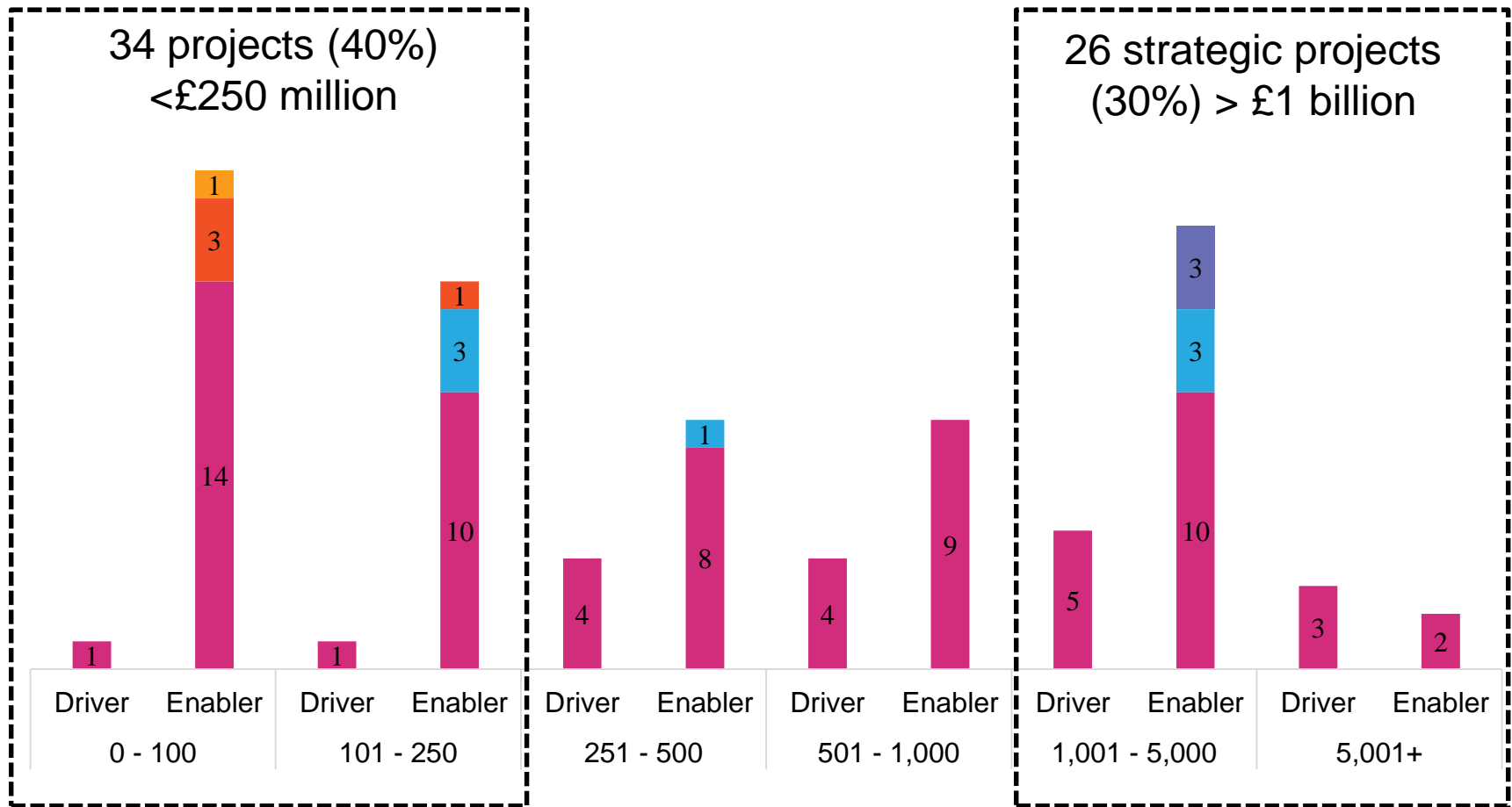
Highest relative growth projections



# Strategic infrastructure projects in the SIIP...

## Number of strategic projects - by cost, sector and type

■ Transport 
 ■ Water and Flood risk 
 ■ Waste 
 ■ Energy 
 ■ Digital



Cost band (£) and project type (Driver / Enabler)

# Infrastructure needs assessment - approach

*How ready are each of the growth corridors for development?*

1. Is there a significant need for infrastructure based on projected demand?

2. Are needs planned for (i.e. are projects included in relevant pipelines)?

3. Are projects deliverable (i.e. is there a project sponsor in place and funding secured)?

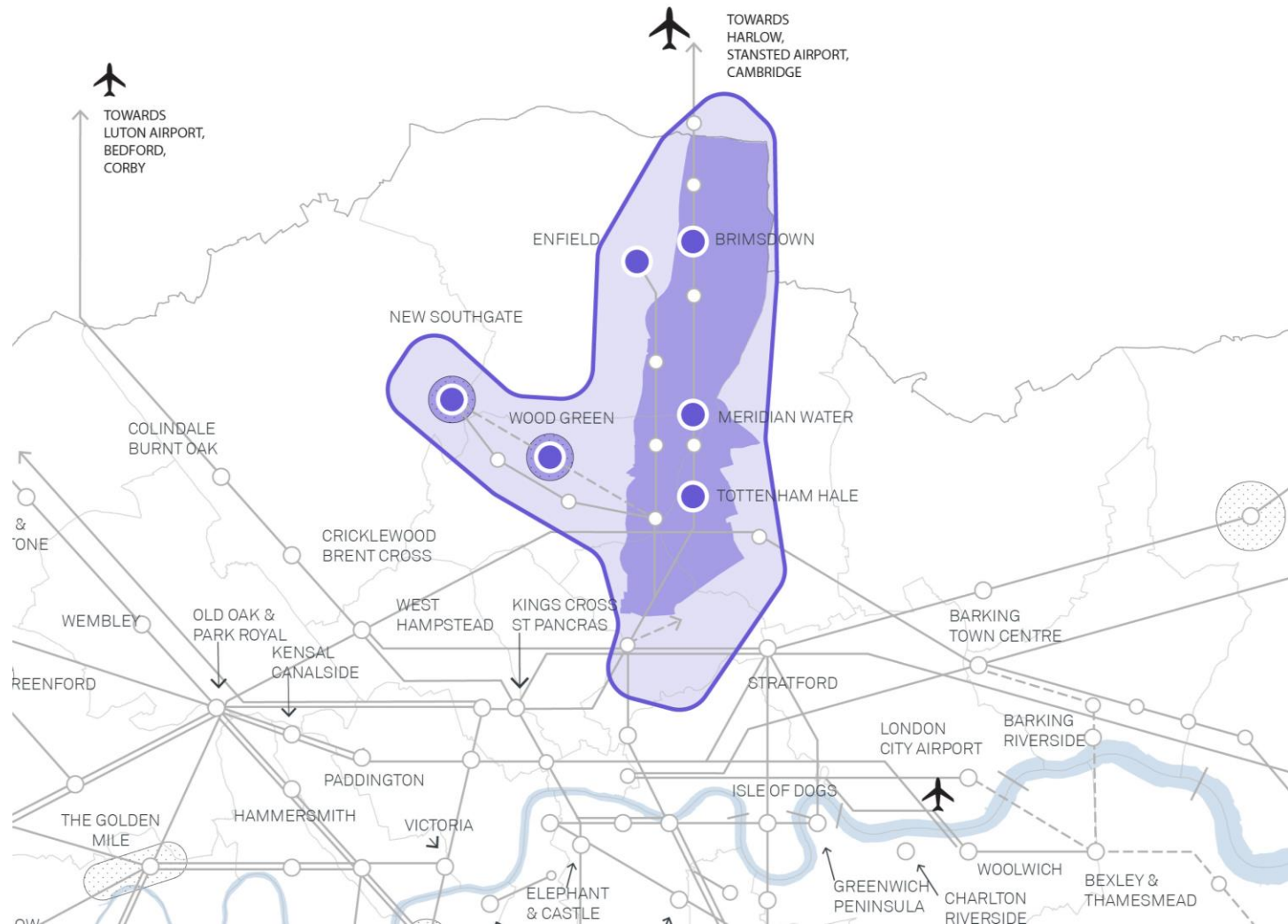


**Criteria**  
Defined and sector-specific

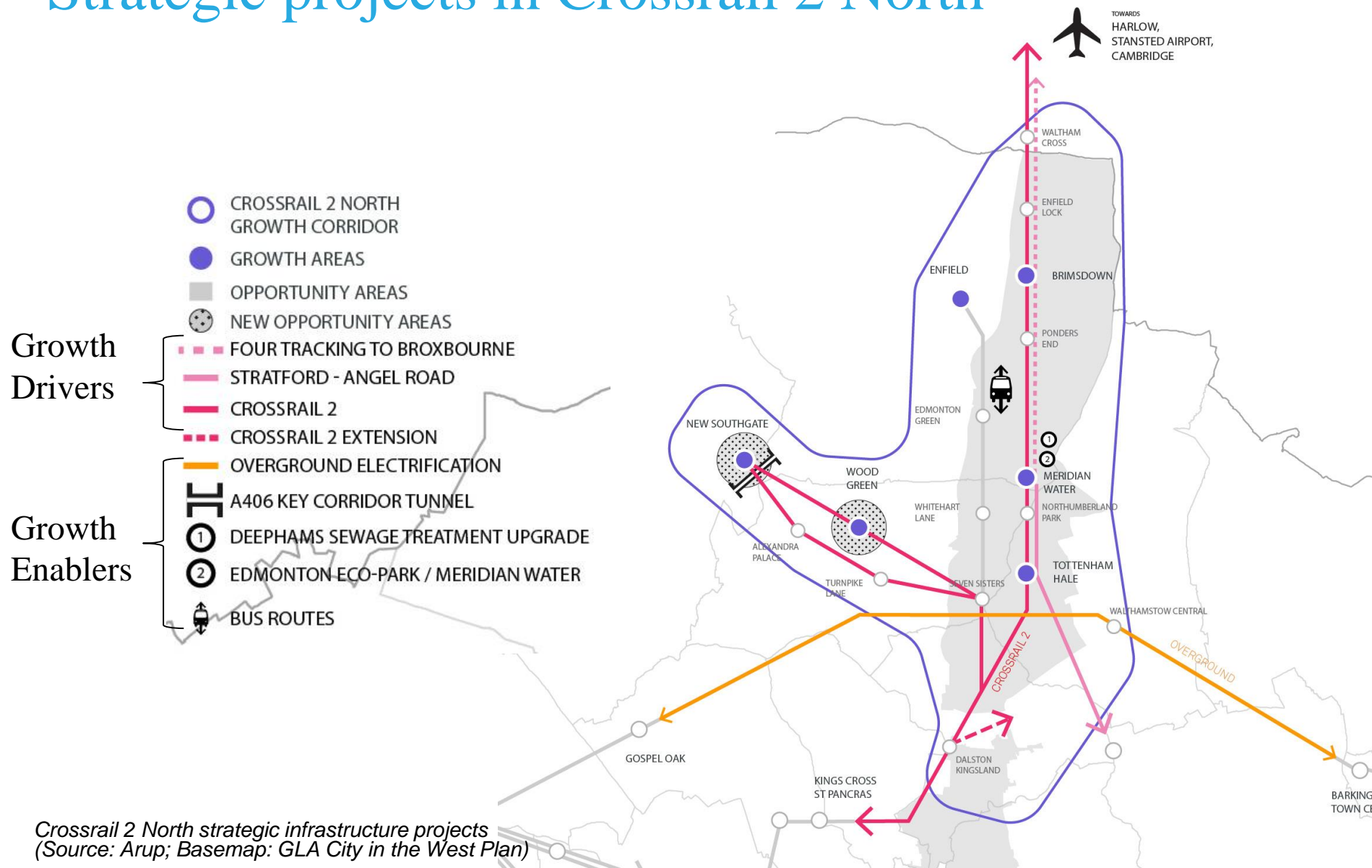


**RAG rating**

# Overview of a growth corridor infrastructure needs assessment – Crossrail 2 North



# Strategic projects in Crossrail 2 North



Crossrail 2 North strategic infrastructure projects  
 (Source: Arup; Basemap: GLA City in the West Plan)

# Strategic opportunities and challenges – Crossrail 2 North

## Strategic Opportunities for growth

- Major new residential developments and town centres unlocked by Crossrail 2. Investment and land-use changes will open up significant opportunities for the corridor.
- Transformation of connectivity between the growth corridor and Central London will support new employment opportunities for existing and new residents.
- Opportunities to introduce “good growth” principles into new developments such as Meridian Water, with investment in cycling and pedestrian infrastructure to alleviate severance issues.
- Link into broader London-Stansted-Cambridge corridor which is being supported by the West Anglia Taskforce.

## Strategic Challenges for growth

- Much of the expected growth is predicated on the successful funding and planning agreement for Crossrail 2, which currently is unfunded.
- Lack of permeability/severance caused by predominance of reservoirs, high voltage electricity lines, railway lines, roads and large industrial uses.

# Infrastructure needs assessment

## Priority Action



Needs level: **High**  
Planned needs: **Well identified**  
Deliverability: **Uncertain**



Unlikely to be resolved until Hybrid Bill confirmed and funding secured in principle.



Needs level: **High**  
Planned needs: **Incomplete assessment**  
Deliverability: **Under conditions**



Energy strategy for Crossrail 2 North.



Needs level: **Medium**  
Planned needs: **Incomplete assessment**  
Deliverability: **Under conditions**



Water supply strategy for Crossrail 2 North



Needs level: **Medium risk**  
Planned needs: **Well identified**  
Deliverability: **Uncertain**



Flooding infrastructure investment at undefended areas through the Lea Valley.



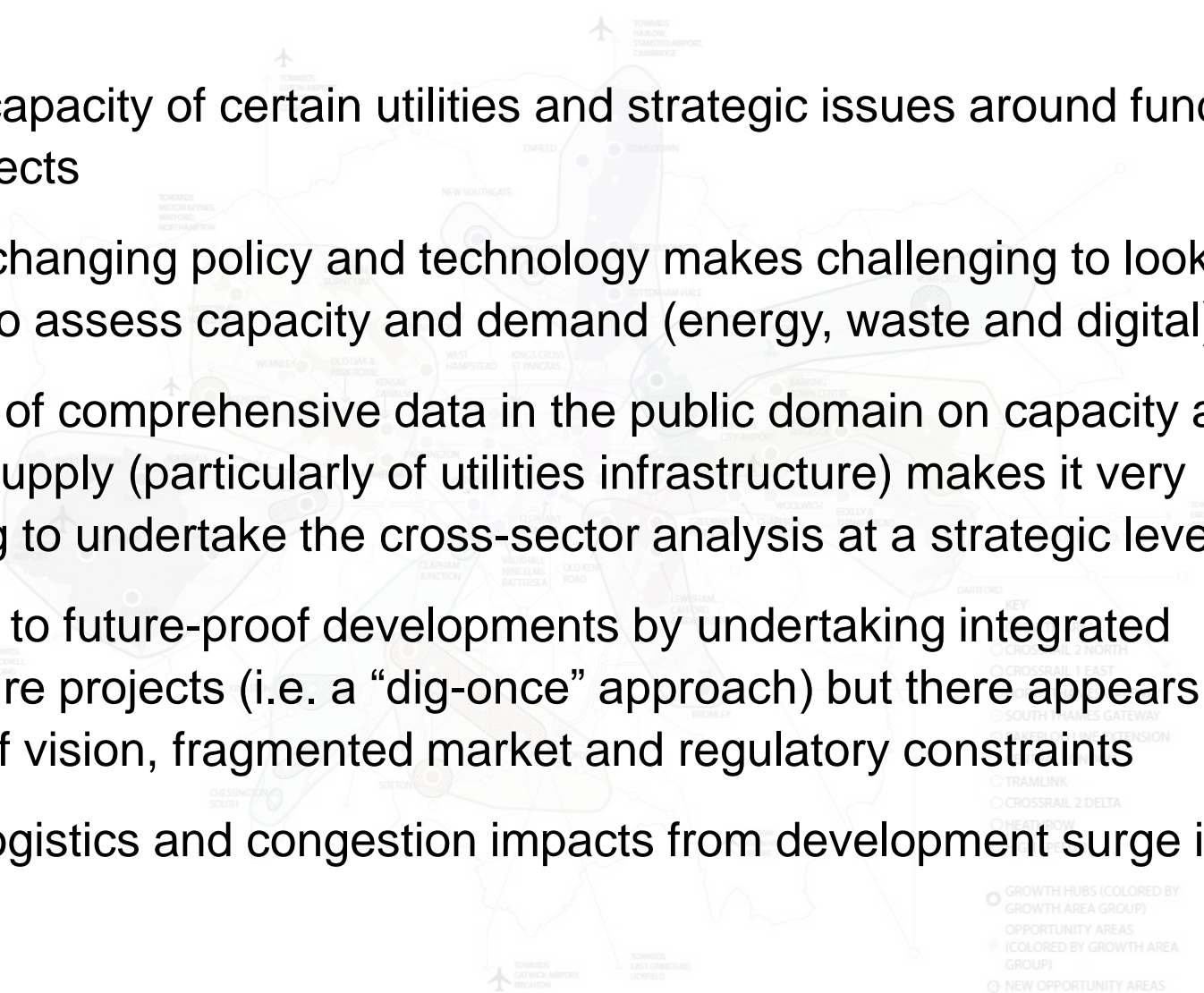
Needs level – NGA / SFBB: **Low**  
Needs level – NGA / SFBB: **High**



Support roll-out of UFBB and/or support obtaining better data on UFBB provision

# Emerging findings across all growth corridors

- Lack of capacity of certain utilities and strategic issues around funding for rail projects
- Rapidly changing policy and technology makes challenging to look too far ahead to assess capacity and demand (energy, waste and digital)
- The lack of comprehensive data in the public domain on capacity and projected supply (particularly of utilities infrastructure) makes it very challenging to undertake the cross-sector analysis at a strategic level.
- Potential to future-proof developments by undertaking integrated infrastructure projects (i.e. a “dig-once” approach) but there appears to be a lack of vision, fragmented market and regulatory constraints
- Risk of logistics and congestion impacts from development surge in the 2020s





# Infrastructure priorities by sector



## Mayoral Priorities

- Support 'good growth'
- Focus on incremental improvements and maximising capacity and efficiency

## Challenges

- Funding – no secured funding yet
- Infrastructure gap
- Capacity constraints

## Opportunities

- Funding – value capture mechanisms
- Dual-use infrastructure
- Automation



## Mayoral Priorities

- Net zero carbon emission city by 2050
- Local energy sustainable generation by 2050
- Solar Action Plan for London

## Challenges

- Electricity grid at capacity
- Generating more energy locally
- Trade-offs between zero carbon policies and supply capacity

## Opportunities

- DevCO and LicenseLite models
- Integrated Energy Strategies
- Zero carbon and "smart" electricity grid
- Integrated provision of infrastructure for growth corridors



## Mayoral Priorities

- Draft London Environment Strategy
- Sustainable Drainage Action Plan
- TE2100 (Thames Estuary 2100) plan

## Challenges

- Water demand and supply capacity
- London-wide resiliency and GLA boundaries interaction
- Funding mechanisms

## Opportunities

- Implement integrated water management strategies
- Water management and resources
- Cost-effective and more innovative solutions
- Develop long-term flooding plans



## Mayoral Priorities

- Getting "the basics right" and supporting future access for household and businesses in London

## Challenges

- Planning for the long-term
- Low ranking (#42) on European Index
- Lack of data on connectivity

## Opportunities

- Transparent investment environment for the private sector
- Innovative approaches to planning for street works and street furniture
- Installing shared ducts for fibre

# London's strategic infrastructure needs

## Next steps



## Next steps (the report)

- Soft launch the report – this is a technical report for a mostly technical audience
- 20 July – “Growth and infrastructure” summit hosted by the Mayor
- Discuss details with boroughs and other key stakeholders
- Systematically work through the delivery challenges
- Consider delivery structures – e.g. programme management or coordination units across London?



# Wider context

- Skills and automation
- Regulation
- Funding
- Impact of new technology
- Future proofing (multi-functional design, investment ahead of need)
- Information – infrastructure database and map
- Prioritisation of areas
- Integration with the Wider South East

