3. KENT AND MEDWAY IN 2050

In order to start to prepare for a longer time horizon, this refreshed version of the GIF starts to examine the challenges and opportunities likely to face Kent and Medway to 2050, by taking a scenario-based approach. This chapter will provide a framework to ensure that Kent and Medway are in a strong position to anticipate and plan for sustainable growth. The full 2050 report, written by ARUP, can be read as a separate document.

3.1 POPULATION AND TRENDS

The scenarios set out in this chapter use predicted metrics in population, housing and jobs numbers expected in 2050. The expected increase in population and growth in the demand for housing will intensify the infrastructure challenges, if growth is delivered in the same way as today.

METRIC	2031	2050	2031-2050 INCREASE	2031-2050 INCREASE (%)
Population	2,127,000	2,347,000	220,000	10%
Households	922,000	1,061,000	139,000	15%
Jobs	976,000	1,075,000	99,000	10%

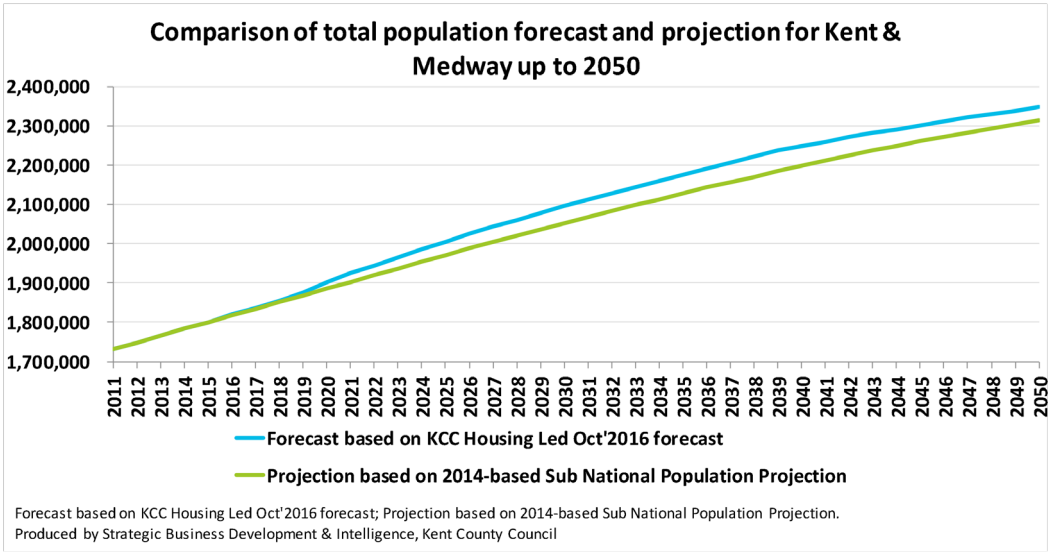


Figure 3.1: Long-term population forecast in Kent & Medway (KCC SBDI data)

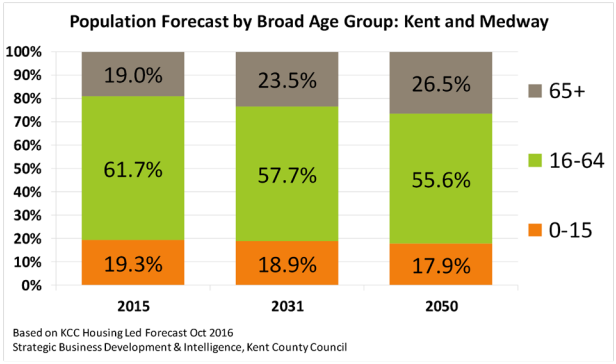


Figure 3.2: Long-term population forecast by age (KCC SBDI data)

2050 baseline for population, housing and employment

A predicted baseline expected in 2050 has been calculated using KCC's forecast for 2031 and employing the following assumptions:

- Households will rise at a similar rate as population (taken from the Kent 2050 population forecasts), with an adjustment made for the average household size reducing (trends taken from DCLG 2014-based household projections);

- Employment will rise at a similar rate as population, with no adjustment for changes in participation rates or the balance of commuting (instead, adjustments are made in each of the scenarios).

3.2 A SCENARIO APPROACH

This chapter provides a basis for county-wide conversations on how the area can ensure it is adaptable, resilient and connected in planning for a sustainable future.

Beyond these certainties, there are a number of "critical uncertainties" – trends that could go one way or another, based on current information. It is these trends against which the following scenarios have been developed.

'Climate Challenges' and **'Economic Growth'** have been chosen as critical uncertainties on which to base the scenarios. These factors are both highly uncertain and have the potential to be highly impactful or disruptive to 2050. Four scenarios have been developed based on these uncertainties and each scenario explores potential impacts on the County's infrastructure provision, in order to inform the development of effective strategies and responses.

Scenario D (page 21) is characterised by high economic growth and moderate climate challenge impacts – of the four scenarios, it is the one to aim for.

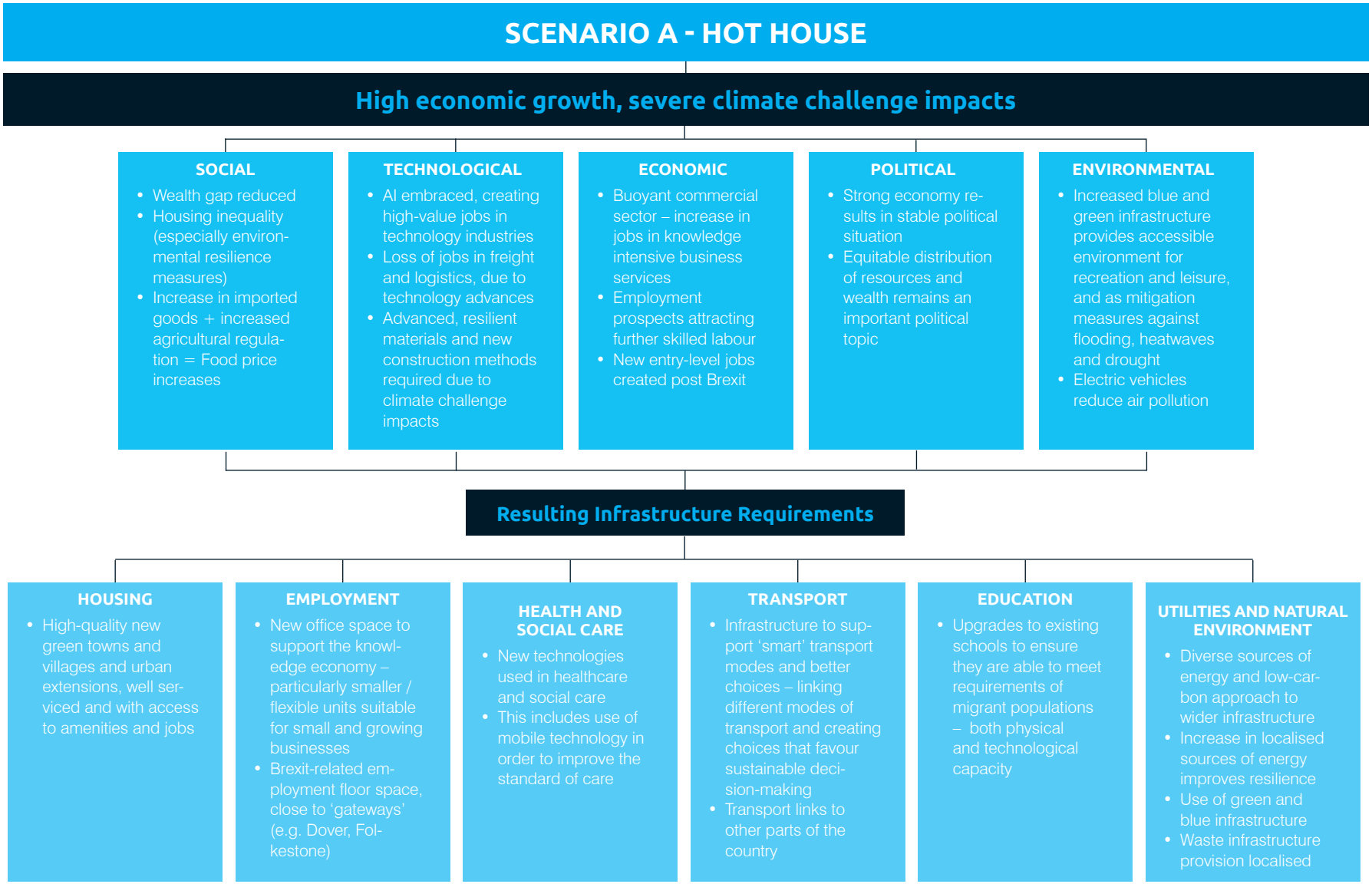
3.3 FUNDING, FINANCING AND GOVERNANCE CONSIDERATIONS

As well as creating demands for new types of infrastructure, there is likely to be an appetite and need for different forms of governance and for new models of funding and financing infrastructure. The table below sets out some of the funding and finance implications of "high economic growth and moderate climate challenges" vs. "low economic growth and severe climate challenges".

HIGH ECONOMIC GROWTH AND MODERATE CLIMATE CHALLENGES	LOW ECONOMIC GROWTH AND SEVERE CLIMATE CHALLENGES
Greater economic autonomy - local authorities have greater discretion over how much to invest	Shorter-term approach to investment
More investment in infrastructure from institutional investors	More borrowing from central government, more dependence on bidding for grants and more central government control
Central government offers more local control for creative and innovative funding and finance mechanisms	Increased competition between investments for climate challenge adaptation and mitigation
Economic stability leading to a longer-term approach to investment on behalf of local authorities	Local government rationalising estates and selling off assets
A higher proportion of foreign direct investment (FDI) from outside the EU	Greater collaboration with other public bodies for shared services and co-investment

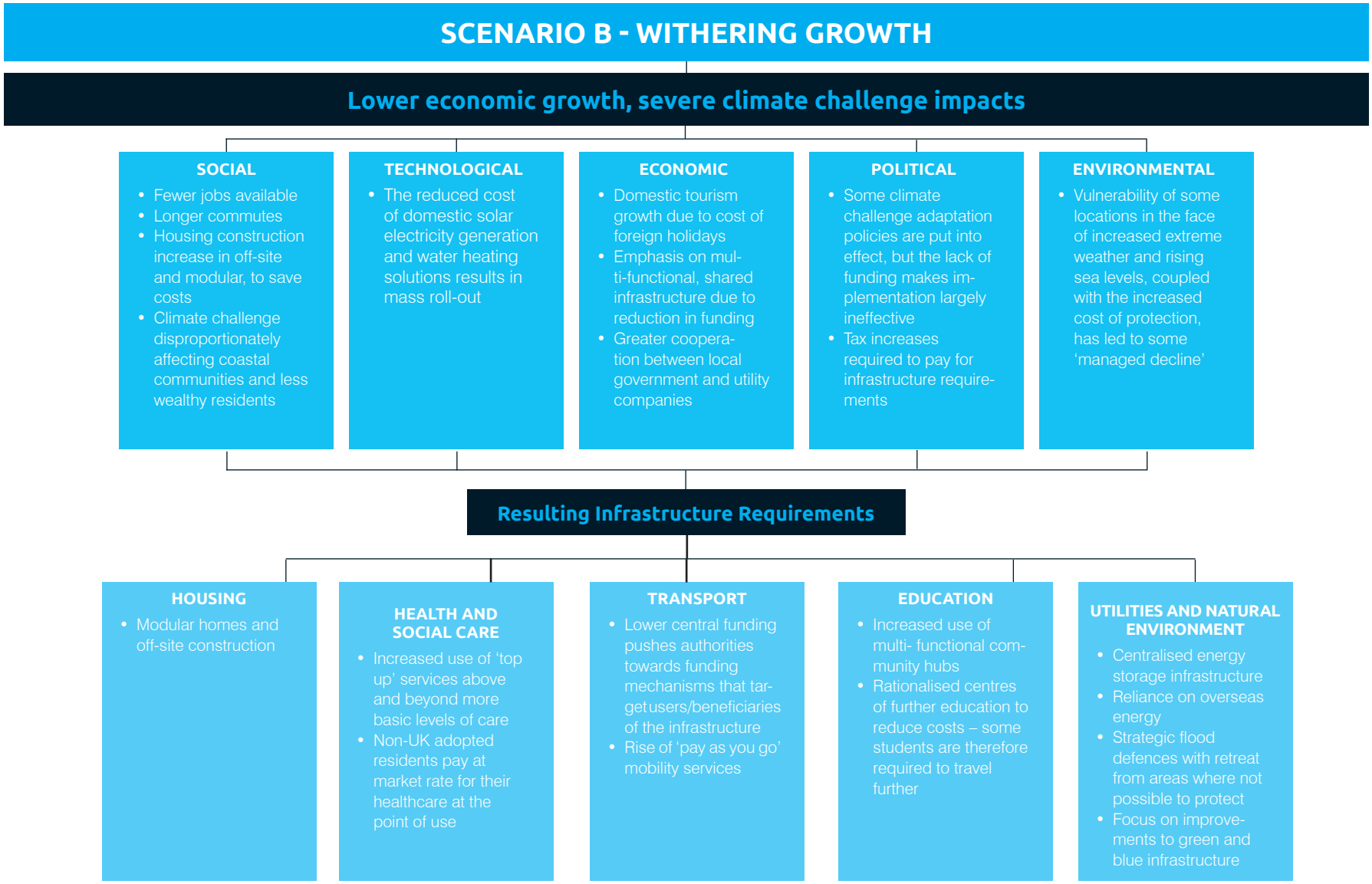
SCENARIO A – HOT HOUSE

This scenario is characterised by high economic growth and severe climate challenge impacts. Due to extreme levels of economic, environmental and political migration and the UK's buoyant economy as a pull factor, the County experiences a relatively high amount of immigration. There has been an increase in employment opportunities in London, as well as Kent and Medway, due to a strong local economy fuelled by increased entrepreneurial activity. This has also increased commuting within and out of the area.



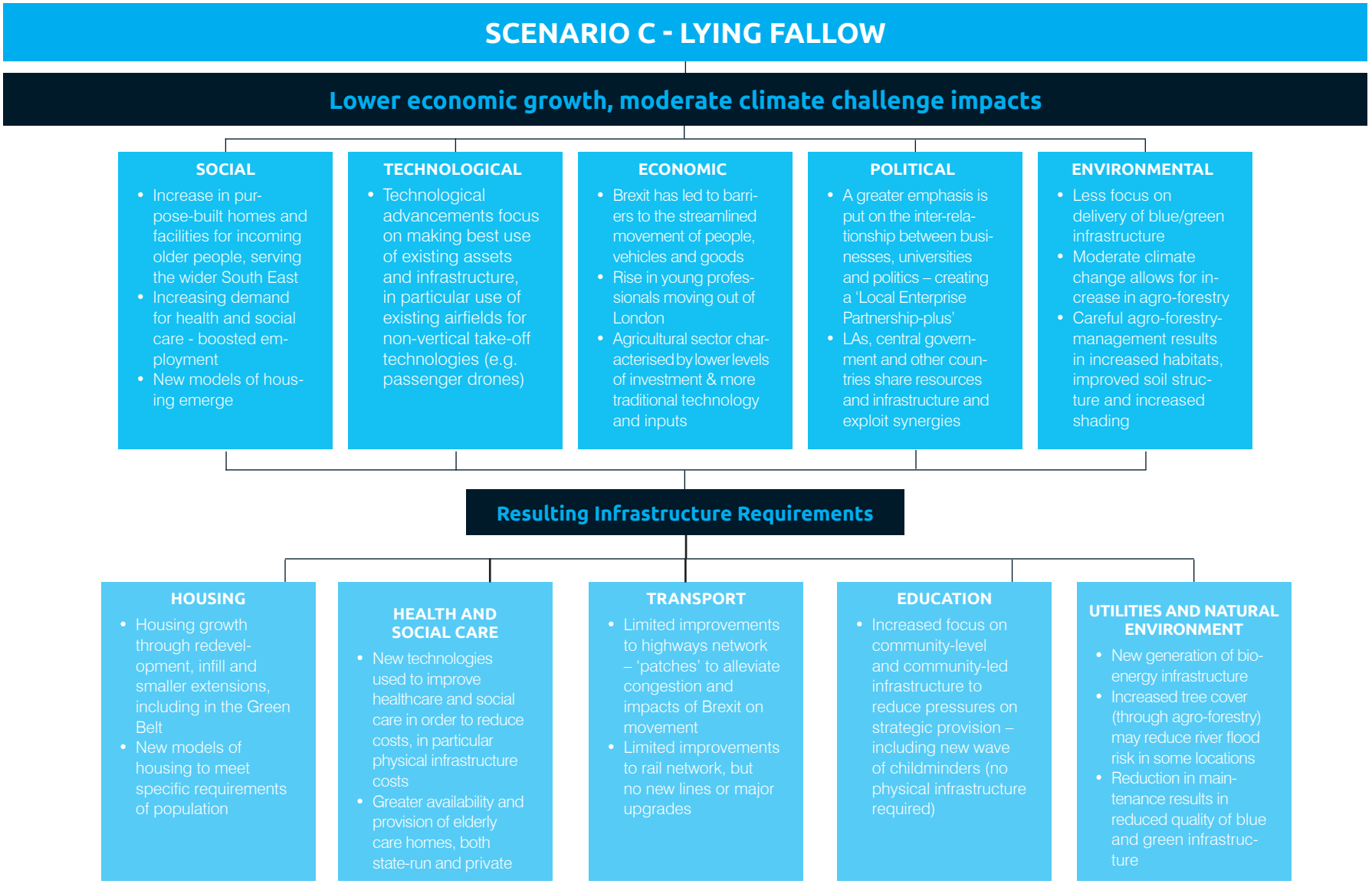
SCENARIO B – WITHERING GROWTH

Immigration has increased (briefly) – with associated pressure on the rental market, healthcare and schooling. Low economic growth has led to many falling below the poverty line and has increased the wealth gap. Severe climate challenges are increasing in frequency, as are the magnitude of extreme weather events such as heatwaves, droughts and flash floods from surface water.



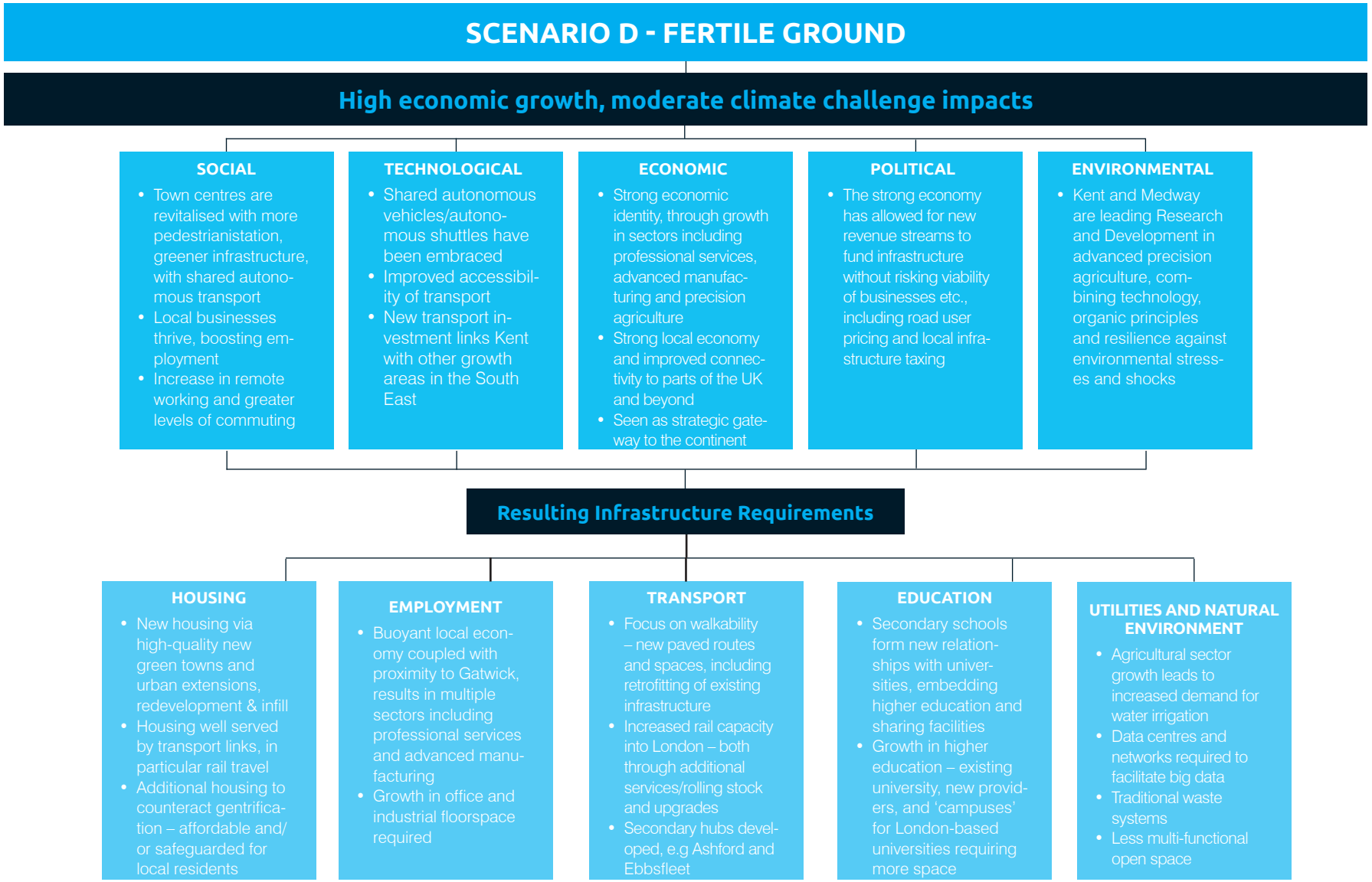
SCENARIO C – LYING FALLOW

This scenario is characterised by lower economic growth growth, and moderate (less severe) climate challenge impacts. Poor economic performance combined with technological advancement has led to fewer jobs. There is also limited funding for infrastructure, creating further congestion and poor service provision. This hardship leads to social unrest, heated public opinion and heightened political activism.



SCENARIO D – FERTILE GROUND

This scenario is characterised by strong economic growth and only moderate climate challenge impacts – it is therefore the most desirable of the four scenarios. The County has capitalised on its identity as the 'Garden of England', focusing on cultural identity, natural beauty and attractiveness as a tourist destination. Kent competes successfully for skills, investment and talent. The buoyant local economy creates new revenue streams to fund infrastructure, while new technologies are embraced to create efficiencies in service provision and delivery.



3.4 IMPLICATIONS AND NEXT STEPS

Whilst it is impossible to predict which of these scenarios is most likely, it is clear that there are certain inevitabilities that Kent and Medway need to start preparing for if they are to deliver sustainable growth.

- **The role and pace of technology in the delivery of new infrastructure will grow.** In every scenario, the role of technology will either enable infrastructure providers to provide more competitive forms of infrastructure or deliver more cost-effective infrastructure. How authorities enable this growing pace of technology in the future is a key challenge. The implication is that the County needs to build horizon scanning for new technology into the analysis phase, in the development of new infrastructure projects.

- **As a result of this increasing role of technology, the role of digital connectivity is vital.** Whatever outcome or scenario, the way in which information is gathered, analysed and communicated will become increasingly important to sustainable communities.

- **The critical necessity of a more sustainable solution to providing energy.** With an imminent influx in the adoption of electric vehicles, there will be significant implications for the way in which energy is delivered to support this new infrastructure. In addition, growth pressures, whether in a high- or low-growth scenario, will mean that pressures on the grid are exacerbated further. There will be a need to strategically plan the way in which electricity is generated and delivered.

- **Whatever scenario materialises, the funding of infrastructure will continue to present real challenges.** Whilst emerging technology has the potential to radically change the way that infrastructure is planned, delivered and maintained, this needs to be considered within the context of the County already being challenged in how to provide the necessary infrastructure for current growth.

Moving forward, partners will be using this scenario-based framework to test the approach on infrastructure types and developing a more consistent approach to future-proofing infrastructure through a series of workstreams. These work-streams will feed into more detailed iterations of this analysis.

KENT AND MEDWAY - PLANNING NOW FOR 2050

ADAPTABLE to new technologies, a rise in electric vehicles, a growing and ageing population, climate risks, decarbonisation and a growing energy demand;

RESILIENT to changes in climate, economic uncertainty (Brexit), population growth and increased financial pressure on services;

CONNECTED to growth in technology, AI and automation, broadband demand, changes in work patterns and employment.