

November 2018

N2 Smart Place & Innovation Seminar

Workshop Report

ARUP

Contents

1. Introduction
2. Workshop Exercises
3. Summary of Trends
4. Summary of Implications
5. Summary of Ambitions

Appendix A: Implications

Appendix B: Ambitions

Introduction

The way we use places, infrastructure and key resources has seen a huge change over the last thirty years. As such we need to consider what the challenges of this changing world might mean for Nottinghamshire and what the solutions might be. This includes ensuring the workforce of the future has the required skills to meet changing demands.

To ensure that Nottinghamshire is in the best position to jointly drive forward ambitions and secure Government support and investment, it is critically important we have a joined up and coherent dialogue with all our partners. As such a seminar was held on the 12th November 2018 with Leaders, Chief Executives, relevant Government Officials and D2N2 LEP. The seminar provided an opportunity to come together and discuss the challenges and opportunities that the future could hold for Nottinghamshire.

As part of the full day event, Arup Foresight facilitated a series of workshop activities. This document summarises the outputs of the workshop and is intended to inform the production of a shared vision for Nottinghamshire.

Workshop Exercises

Two workshop exercises were undertaken by participants.

Exercise 1: Trends and implications

Participants were asked to identify the top five most impactful trends and associated implications for Nottinghamshire, looking out to 2030. The exercise was undertaken by five tables categorised by the STEEP domains (Social, Technological, Economic, Environmental and Political).

Exercise 2: Ambitions

Participants were asked to write ambition statements, drawing on the trends and implications that had been identified in Exercise 1.

Summary of Trends

Social

Employment // education // ageing society // community cohesion // public health

Technological

Cluster of energy efficiency, micro-generation and intelligent buildings // e-mobility // automation // additive manufacturing // cluster of artificial intelligence, remote services, intelligent transport systems, smart infrastructure and system integration

Economic

Skill shortages // finance // regional connectivity // ageing infrastructure // urban regeneration

Environmental

Extreme weather // motorisation // infrastructure usage // decarbonisation // waste minimisation

Political

Leadership // environmental policy // competitiveness // public opinion // system interdependence

Summary of Implications

1. Nottinghamshire will need to work hard to be **competitive**
2. **Automation and technological** developments will have significant impacts
3. Nottinghamshire will require **strong leadership**
4. Nottinghamshire will have different **skills, employment and education** needs
5. Nottinghamshire will need to respond to changes in **social fabric**, such as health, ageing and community cohesion
6. There are commercial opportunities using **data**
7. Nottinghamshire will require good **infrastructure and urban regeneration**
8. Nottinghamshire's **mobility** needs are changing
9. Nottinghamshire will be impacted by **environmental issues**

Summary of Ambitions

1. Deliver prosperity for the region
2. Be strategic in our approach to innovation
3. Develop a road map to achieve our vision, with clear practical steps and targets
4. Develop the skills we need for the future
5. Develop cohesive and healthy communities
6. Regenerate and build to create well designed homes which are fit for the future
7. We will make better use of data
8. We will improve our regional connectivity
9. We will be proactive in our approach to sustainability

November 2018

Appendix A: Implications

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A1. Nottinghamshire will need to work hard to be competitive

A.1.1 Retain and attract future-facing skills to increase competitiveness

A.1.2 Keep the county competitive by fostering regional connectivity

A.1.3 Attracting and retaining businesses and people

A.1.4 Attracting new ideas and funding post-Brexit

A.1.5 Competitiveness from being receptive to advancements and keeping ahead of the curve

A.1.6 Good infrastructure yields competitiveness

A.1.7 Incorporating new technology will help retention of and support for industries

A.1.8 The region has a history of manufacturing we can build on

A.1.9 This may require education for industrial stakeholders

A2. Automation and technological developments will have significant impacts

A.2.1 The use of new technology will help retention of and support for industries

A.2.2 It is important to facilitate innovation, to pull businesses in, and to make the most of assets and opportunities

A.2.3 Data-rich authorities need to find potential ways to apply these resources (open-sourcing)

A.2.4 Shortage in tech skills

A.2.5 Increasing automation will require Nottinghamshire to consider employment, efficiency and economic impact

A.2.6 Digital infrastructure will need to be accommodated and expanded

A.2.7 Encouraging uptake of 3D printing

A3. Nottinghamshire will require strong leadership

A.3.1 Strong, united, articulated leadership across tiers and boundaries

A.3.2 Pooling and aligning resources to increase capacity

A.3.3 Ability to work and plan together across institutions for the public good

A.3.4 Opportunities to influence public opinion

A4. Nottinghamshire will have different skills, employment and education needs

A.4.1 Retention, development and attraction of skilled staff

A.4.2 Ensuring skills and staff are future-focused

A.4.3 Fostering critical thinking and analytical skills

A5. Nottinghamshire will need to respond to changes in social fabric, such as health, ageing and community cohesion

A.5.1 Rethinking of community infrastructure

A.5.2 Urban regeneration to produce a stronger sense of place

A.5.3 Listening to stakeholders and officers and acting decisively on cogent input

A.5.4 There will be increasing mental health problems from alienation and isolation

A.5.5 Pressure will increase on health and wellbeing services

A6. There are commercial opportunities using data

A.6.1 Data-rich authorities can work with AI systems to cater to constituents

A.6.2 Understanding the risk appetite to go to market to design solutions e.g. – open source people's data. This can drive spending decisions

A7. Nottinghamshire will require good infrastructure and urban regeneration

A.7.1 Digital as well as physical infrastructure are required

A.7.2 All social housing needs to meet requirements, setting a high bar

A.7.3 Urban regeneration will help meeting housing targets

A.7.4 Ageing infrastructure and ability to be resilient

A.7.5 Delivery of infrastructure to involve partnerships between local authorities and private sector

A.7.6 Collaboration to bring forward autonomous vehicles, presenting an opportunity to improve social mobility and decrease social isolation

A.7.7 Gridlock in urban environments and hot spots

A.7.8 Sites and premises being renovated and reused

A8. Nottinghamshire's mobility needs are changing

A.8.1 To be maintained and developed through investment in infrastructure

A.8.2 To adapt to physical innovations and new mobility modes

A.8.3 The government will require e-mobility infrastructure

A9. Nottinghamshire will be impacted by environmental issues

A.9.1 Consideration of the future of the County's 3 coal-fired power stations

A.9.2 Looking into the potential for alternative power sources, including fracking

A.9.3 Protections and management of green space will be threatened

A.9.4 There is the potential to look into using household waste as an alternative power source

A.9.5 Optimisation of resource usage

A.9.6 Economic growth through improved and environmentally friendly recycling facilities

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Appendix B: Ambitions

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B1. We will deliver prosperity for the region

B.1.1 We will have a strong united industrial strategy for N2 considering food, tourism, logistics, HS2, town centres, energy, technology and universities

B.1.2 We will deliver on our purpose of prosperity, opportunity, quality of life, honesty

B.1.3 We will use Government funding pooling to attain more

B.1.4 We will create the conditions which attract both public and private finance: economic and social pipeline of propositions for investigation

B.1.5 We will ensure we are a viable business

B.1.6 We will encourage a top 5 digital company to have a physical presence in Nottinghamshire, acting as an anchor company (Silicon Sherwood Forest), making use of skills and asset in a collaborative manner.

B.1.7 We will have a clear plan for the future of coal fired power stations

B2. We will be strategic in our approach to innovation

B.2.1 We will set up an innovation board to deliver an innovation strategy for Nottinghamshire, linking with business and ensuring collaboration at its heart. We will allocate the resources needed and adopt good examples from elsewhere e.g. Cambridge

B.2.2 We will innovate more actively, encouraging business to realise the 'art of the possible' with technology – spend more on R&D

B.2.3 We will work together to develop our top priority infrastructure projects (digital and physical) we want to be seen as an area of innovation for infrastructure

B.2.4 We will take advantage of transport innovation and be a hub for green innovation, working with universities and business

B.2.5 Innovation in our economy is our passion and USP for Nottinghamshire

B.2.6 We need to consider the agglomeration effect

B3. We will develop a road-map to achieve our vision, with clear practical steps and targets

B.3.1 We will create a road map to achieve our vision over next 12 years, defining the practical steps and sitting above the political agenda

B.3.2 We will put in place specific policies to stretch attainable targets e.g. zero carbon, % recycling, number of trees, people walking more.

B.3.3 Embracing and being pro-active to change in a positive way, setting short, medium and long-term goals on education, employment etc.

B.3.4 We will bring about a step change for Nottinghamshire

B4. We will develop the skills we need for the future

B.3.5 We will create a road map to achieve our vision over next 12 years, defining the practical steps and sitting above the political agenda

B.3.6 We will put in place specific policies to stretch attainable targets e.g. zero carbon, % recycling, number of trees, people walking more.

B.3.7 Embracing and being pro-active to change in a positive way, setting short, medium and long-term goals on education, employment etc.

B.3.8 We will bring about a step change for Nottinghamshire

B5. We will develop cohesive and healthy communities

B.5.1 We will support and value our ageing population (enable them to “age well”)

B.5.2 We will create cohesive and healthy communities that respond to the modern world

B.5.3 We will deliver strong community leadership which is responsive and open to change and empowering and supporting communities to adapt

B.5.4 We will fully integrate and embeds quality of life factors into public policy, including health, environment, air quality and green space

B6. We will make better use of data

B.6.1 We will get a better understanding of assets, using a wider pool of data

B.6.2 We will open source all data, going to the market with issues and testing new technologies

B7. Regenerate and build to create well designed homes which are fit for the future

B.7.1 We will agree the USP for Nottinghamshire – heritage and history – as well as USPs for each of our urban centres/communities

B.7.2 We will create a Nottinghamshire build style and type, raising the bar around housing design and efficiency. We will use social housing as a driver for change in energy efficiency standards, adopt modular housing and non-brick buildings.

B.7.3 We will retrofit existing housing stock

B.7.4 We will deliver smart housing, harnessing technology and linking design to health monitoring

B8. We will improve our regional connectivity

B.8.1 We will improve our transport, including trains, HS2 and a 4th Bridge

B.8.2 We will capitalise on our geographical advantage through the Midlands Engine, prioritising connectivity and development in Nottinghamshire at all levels

B.8.3 We will make better use of existing legacy infrastructure

B9. We will be proactive in our approach to sustainability

B.9.1 We will be proactive in our approach to sustainability by enacting;

- A. A clear energy plan
- B. A strategic approach to use of resources
- C. Mapping opportunities
- D. Risks to opportunities

B.9.2 We will make a financially sustainable environmental economy

B.9.3 We will be a climate-proof county, taking account for building design, health, drainage and services