UK Cities DNA *A Tale of 10 Cities*



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The sixth of twelve insight papers in our UK Cities DNA initiative – putting real estate supply and demand in the context of the economic direction of travel.

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UK Cities DNA: a Tale of 10 Cities

WORDS: STEPHEN SPRINGHAM - HEAD OF UK MARKETS RESEARCH

- Every town and city in the UK has its own unique DNA. This DNA is also subject to constant evolution.
- Nationally, the two fastest growth industries over the next 25 years are forecast to be Information & Communications (+111.2%) and Utilities (+94.9%) and this will impact over a wide geography.
- By 2050, the dominant industries by UK city are forecast to be: Finance & Insurance (Edinburgh, Cardiff), Human Health & Social Work (Birmingham, Newcastle, Aberdeen), Information & Communications (Leeds, Glasgow, Sheffield) and Professional, Scientific & Tech (Manchester, Bristol).
- UK cities DNA will dictate the direction of real estate markets, which likewise need to evolve to stay in step.

MM

DNA /di:ɛn'eɪ/ noun Deoxyribonucleic acid

The building blocks of life. A biological blueprint that determines how an organism is structured and functions, guiding its development through its entire lifecycle. UK Cities DNA. What defines our towns and cities, what shapes their identity, what makes them tick? What is the lifeblood for local employment, what provides the livelihood for their residential base? What makes them unique? And what does the real estate market need to do to not just reactively reflect, but to proactively support, nurture and drive these genetic patterns?

The DNA of UK Cities mutates and evolves continually. Local economies ebb and flow, specific industries rise while others recede, some may enter terminal decline, new ones emerge to take their place. Our towns and cities have all evolved from different economic starting points, their current economic compositions will vary dramatically, as will their future directions of travel. Not all will grow at the same rate, nor necessarily down the same industry paths.

Again, real estate markets need to be dancing to the same tune, adapting and evolving accordingly. This process of constant evolution will no doubt also bring challenges for property markets, with some assets rendered obsolete as the world moves on from what formerly made them fit-forpurpose. But the process of evolution will also bring opportunity, both for new development and potentially repositioning or repurposing existing stock to alternative use.

Understanding the (changing) DNA of a town or city holds the key to mapping out its (changing) real estate requirements.

THE ECONOMIC DNA OF THE UK

A potted summary of the UK economy post the Second World War. Post-war reconstruction and nationalisation during the late

1940s and 1950s giving way to huge deindustrialisation from the 1960s. The UK transitioning from a global economic and manufacturing leader in the wake of the Industrial Revolution to the sick man of Europe in less than 150 years, the latter status exacerbated by the backdrop of a worldwide energy crisis in the 1970s. A new period of neo-liberal economics from the late 1970s ushering in a wave of industry privatisations, before a consumer boom in the 1980s and the UK (London in particular) cemented the county's status as a global leader in financial services. Significant economic retrenchment in the wake of two global recessions in the early 1990s and the Global Financial Crisis, before widespread destabilisation on the back of Brexit and then COVID-19. And now, re-emerging as a global leader in new dynamic industries such as technology and life sciences.

A bit more colour than the somewhat facile 'decline in manufacturing, rise in financial services' narrative, but even this potted history does scant justice to the scale of economic change that the UK has undergone in the relatively short space of time that is the last 80 years. The changes in the country's economic DNA have been seismic.

Our analysis focusses on a slightly shorter time window of 60 years, consistent with the base data that we are using from Oxford Economics, but comprises both an historic (1991-2023) and forward-looking (2024-2050f) view. In essence, what have we seen over the last 35 years and what can we expect over the next 25 years?

The current constitution of the UK economy may surprise many. Of the 19 ONS UK Standard Industrial Classification (SIC) categories, Real Estate is the largest contributor to UK GVA (13.1%). More than anything, this underlines the fundamental and multi-dimensional role that property has to play in the UK economy. As well as being an important cog and support mechanism to many other aspects of the national economy, real estate is a major direct contributor in its own right.

Wholesale & Retail Trade is the second largest component of the UK economy (10.0%). Again, this may surprise, given the perennially negative press afforded to the retail sector. Whatever the narrative may say to the contrary, underlying retail sales continue to grow on the back of two key and very fundamental dynamics – population growth and increasing per capita consumption. Retail is also the second largest employment sector in the UK behind the public sector and its contribution to the UK economy is often criminally overlooked.

Equally surprisingly, Manufacturing remains the third largest contributor

to the UK economy (9.8%). Although this may be substantially lower than pre-deindustrialisation highs of 20%+, it is significant nonetheless. Perhaps more tellingly, the figure masks a more granular shift within the catchall definition of Manufacturing. A move away from heavy to light manufacturing, the former a remnant of the UK's industrial past, the latter a pathway to a more diversified economic future.

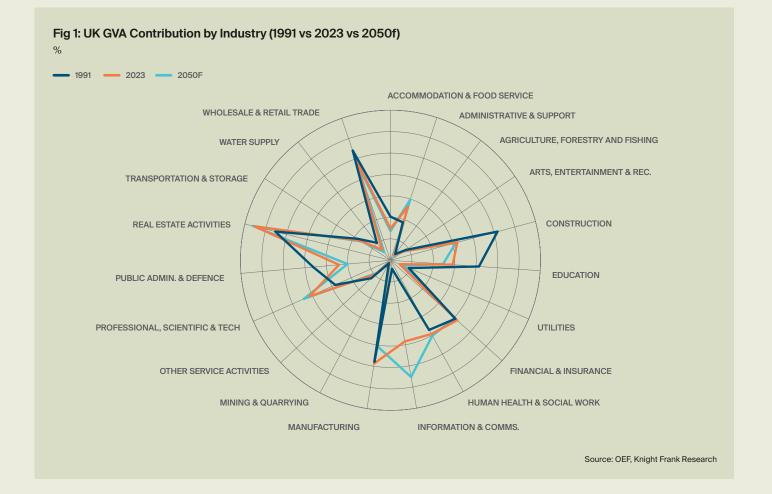
Finance & Insurance Services actually make up just 8.4% of the UK economy, a figure that may appear light for those with a large Londonbased lens. But the reality is that Finance & Insurance Services tend to be heavily concentrated in the very largest UK cities and form only a small proportion of most towns' DNA.

Timeseries changes are perhaps even more revealing as to the changing nature of the country's economic DNA. Although most industries experience at least some degree of growth (with a few notable **9.8%**

contributor to the UK economy

exceptions) over the full 60 year timeframe (1991-2050), their relative share of the UK economic 'pie' may shift considerably.

By far the largest shift in the UK's economic DNA is the rise of Information and Communication Services. Back in 1991, these accounted for just 0.8% of the UK's GVA. By 2050, this figure will have risen to 11.1%, an increase of a full +10.3 percentage points. This explosive growth has been both historic (1991-2023 +6.9 percentage points) but is far from exhausted (2024-2050f +3.4 percentage points).



11110/6 Information and Communication Services

will rise to contribute 11.1% to the UK's economy by 2050

Other industries set to substantially increase their share of the national economy include Professional, Scientific & Tech (1991: 5.6%, 2050f: 8.9%) and Administrative & Support (1991: 3.7%, 2050f: 5.9%), a telling banner wave of the direction of travel of the economy, as well as a reflection of heavy investment in infrastructure, current and future.

In contrast, the two industries to experience the sharpest losses in share are Education (1991: 8.3%, 2050f: 4.9%) and Construction (1991: 10.3%, 2050: 6.3%). The latter perhaps surprising given the relative resilience of its sister category Real Estate Activities (1991: 11.1%, 2050f: 13.2%), but maybe a reflection of a deceleration in construction activity from exceptionally high water marks in the late 1980s.

The economic DNA of the UK is most definitely diversifying as much as it is evolving. And multiply that out across every town and city in the land.

INDUSTRY TRAILBLAZERS

Taking a purely forward-looking view (2024-2050f) underlines the variable growth rates of industry sub-sectors. Information & Communications remains the trailblazer, with total GVA growth of +111.2% forecast over the next 25 years (equivalent to a CAGR of +2.8%). Utilities (Electricity, Gas, Steam and Air) are likewise forecast to witness stellar growth (+94.9%, +2.5%), followed by Administration & Support (+65.6%, +1.9%) and Professional, Scientific & Technology (+57.4%, +1.7%).

All industries are forecast to experience some degree of positive growth, with the sole (but understandable) exception of terminally-declining Mining & Quarrying (-45.1%, -2.2%).

REGIONAL VARIATIONS

In the trailblazing industries, growth will be substantial across all the 10 UK Cities, albeit not evenly distributed. Utilities is a strong case in point, with Manchester poised to experience significantly higher than average growth (+259%) over the next 25 years, nearly three times the national average rate (+95%). In contrast, Leeds will see the lowest rate of growth (+75%) of the 10 UK Cities, its growth instead spearheaded by a mix of other industries, including Information & Communications (+111%), Administration & Support (+77%) and Professional Services (+61%).



Fig 2: UK Forecast GVA Growth by Industry (2024-2050f)

A very different picture in the other high growth category of Information & Communications. For one thing, the growth range between the 10 Cities is far narrower (Sheffield +111% – Aberdeen +84%). Furthermore, of the 10 UK Cities, only Sheffield (+111.3%) exceeds the national average growth rate (+111.2%) and even then, only very marginally. The fact that the other nine UK regional cities 'underperform' is interesting in that it suggests that the highest rates of growth in Information & Communications will be away from the UK's biggest cities and maybe concentrated more in other regional hotspots.

259%

Manchester poised to experience significantly higher than average growth (+259%) in Utilities over the next 25 years

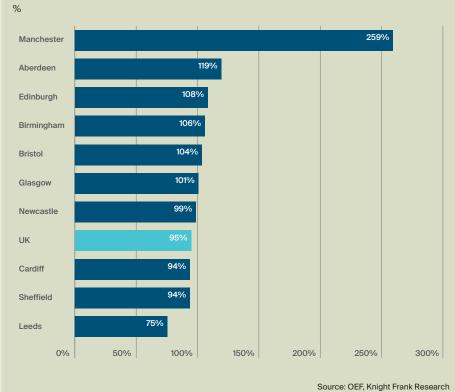
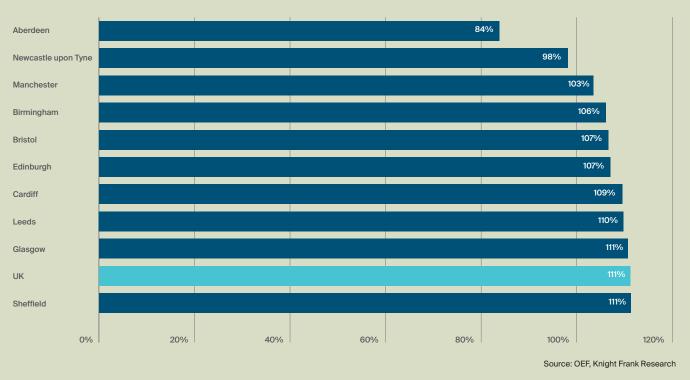


Fig 3: Utilities - Forecast GVA Growth by Regional City (2024-2050f)

Fig 4: Information & Communications – Forecast GVA Growth by Regional City (2024-2050f) %



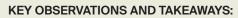
A Tale of 10 Cities

The economic DNA of the 10 Knight Frank Regional Cities is fundamentally different, as illustrated in the accompanying matrix (Fig. 5). Featuring select data from our UK Cities DNA Model, the matrix includes:

- 1. Contribution to UK economy – 2023 Gross Value Added (GVA)
- 2. Largest industry contributor – historic, current, forecast
- 3. Biggest industry shifts (positive and negative)
- f
- industries (£)

4. Highest forecast growth

5. Highest forecast growth industries (%)



- The most predictable and consistent message is the growth (in % terms) of Utilities and Information & Communications across all 10 cities. These are the top two growth industries in virtually every market, albeit the pecking order may alternate by city.
- The one exception to this is **Leeds**, where Administration & Support (+77%) is forecast to achieve marginally higher growth than Utilities.
- A slightly different and more diversified picture emerges in absolute (£) terms, underlining that Utilities growth, however stellar in % terms, is being leveraged off a relatively low base.
- Information & Communications is one of the two largest engines of absolute (£) growth in all cities bar Edinburgh. In six, it is the largest,

but in **Aberdeen, Manchester** and **Newcastle** it is second behind Human Health & Social Work or Professional, Scientific & Tech.

- Edinburgh is the outlier in that Real Estate (+£2.3bn) and Finance & Insurance (+£2.2bn) are forecast to be the key drivers of GVA growth (in £ terms) over the next 25 years.
- The diversity of the UK cities' DNA is beautifully illustrated in the Key Industry Contributor timeseries comparisons. Across the 10 cities, six different industries were represented as the key contributor to local GVA back in 1991.
- The changing DNA of the UK cities is abundantly clear in the timeseries comparisons. In only two cities (**Edinburgh** and **Newcastle**) is the key industry contributor constant across the three touchpoints (1991/2023/2050f).
- Perhaps unsurprisingly, Finance & Insurance remains the backbone of **Edinburgh's** economy, although the level of contribution does fluctuate over the timeseries and is forecast to reduce from 24.1% to 21.5% over the next 25 years.
- A different economic pillar and a contrasting direction of travel in Newcastle. Human Health & Social Work is the dominant force in the local economy and this continues to intensify rather than recede (1991: 12.9%, 2023: 14.9%, 2050f: 15.8%).
- The greatest DNA 'pivoters' are arguably Glasgow, Leeds, Manchester and Sheffield, on the basis that the key industry contributor changes at each of the three touchpoints.
- Despite the meteoric rise of Information & Communications generally, it is forecast to be the highest contributor to GVA by 2050f in just three cities – Glasgow, Leeds and Sheffield.
- Interesting juxtaposition of the directions of travel in DNA of Cardiff

and Bristol. Finance & Insurance was historically the main contributor to **Bristol's** economy (1991: 13.2%), but this share is forecast to have eroded by 5.5 percentage points by 2050f, with Professional, Scientific & Tech emerging as the dominant force within the local economy (13.5%, +6.0 percentage points).

• **Cardiff** has gone in the opposite direction, with Finance & Insurance now the largest contributor to the local economy. Its current share of GVA (18.7%) is the second largest of the 10 UK regional cities, behind only Edinburgh (24.1%).

BALANCING THE EQUATION

Macro-economic movements and trends tell a very interesting story. But it is not the full story. And they form only one half of the equation.

The Oxford Economics data and forecasts provide but a highlevel macro view and are obviously constrained by the 'catch-all'/generic limitations of the ONS UK Standard Industrial Classifications (SIC) 2007, whereby all businesses are shoehorned into 19 broad groups.

This 'top down' view needs to be complemented by a 'bottom up' perspective that 1) takes into account what is actually happening on the ground and 2) is more granular in its scope and its classifications. This is essentially where this Insight paper dovetails with the one that follows ('Discovering Dynamos'). These two papers are complementary and the aggregated view effectively completes one side of the DNA equation.

18.7%

Finance & Insurance now the largest contributor to the local economy in Cardiff

City	1. Contribution to UK economy	2. Key Industry Contributor (% of total GVA)		
	(2023 GVA)	Historic (1991)	Current (2023)	Forecast (2050f)
ABERDEEN	£9.0bn	Construction (12.2%)	Human Health & Social Work (12.2%)	Human Health & Social Work (13.6%)
BIRMINGHAM	£28.5bn	Manufacturing (11.7%)	Human Health & Social Work (12.1%)	Human Health & Social Work (12.6%)
BRISTOL	£16.6bn	Finance & Insurance (13.2%)	Professional, Scientific & Tech (12.4%)	Professional, Scientific & Tech (13.5%)
CARDIFF	£13.2bn	Real Estate (11.8%)	Finance & Insurance (18.7%)	Finance & Insurance (17.1%)
EDINBURGH	£25.2bn	Finance & Insurance (15.3%)	Finance & Insurance (24.1%)	Finance & Insurance (21.5%)
GLASGOW	£22.9bn	Construction (17.1%)	Human Health & Social Work (12.1%)	Information & Comms (13.0%)
LEEDS	£28.2bn	Construction (13.0%)	Real Estate (10.8%)	Information & Comms (13.5%)
MANCHESTER	£27.9bn	Education (14.1%)	Finance & Insurance (13.5%)	Professional, Scientific & Tech (13.9%)
NEWCASTLE	£9.8bn	Human Health & Social Work (12.9%)	Human Health & Social Work (14.9%)	Human Health & Social Work (15.8%)
SHEFFIELD	£13.7bn	Human Health & Social Work (15.5%)	Wholesale & Retail (11.4%)	Information & Comms (15.0%)

Fig 5: The UK Cities DNA Model Matrix





City	3. Biggest DNA shifts 1991 - 2050:	4. Highest forecast growth industries	5. Highest forecast growth
	change in % share	2024 - 2050f (absolute/£)	industries 2025 - 2050f (%)
ABERDEEN	Human Health & Social Work (+6.1ppt)/ Information & Comms (+4.8ppt)	Human Health & Social Work (+£397m)	Utilities (+126%)
	Construction (-7.3ppt) / Education (-7.3ppt)	Information & Comms (+£276m)	Information & Comms (+87%)
BIRMINGHAM	Information & Comms (+9.7ppt) / Professional, Scientific & Tech (+4.4ppt)	Information & Comms (+£2,259m)	Information & Comms (+108%)
	Construction (-5.9ppt) / Manufacturing (-5.9ppt)	Human Health & Social Work (+£1,953m)	Utilities (+106%)
BRISTOL	Information & Comms (+10.6ppt) / Professional, Scientific & Tech (+6.0ppt)	Information & Comms (+£1,626m)	Information & Comms (+106%)
	Public Admin & Defence (-8.0ppt) Finance & Insurance (-5.5ppt)	Professional, Scientific & Tech (+£1,559m)	Utilities (+105%)
CARDIFF	Information & Comms (+9.0ppt) / Finance & Insurance (+8.0ppt)	Information & Comms (+£1,024m)	Information & Comms (+112%)
	Construction (-5.3ppt) / Public Admin & Defence (-8.0ppt)	Finance & Insurance (+£1,019m)	Utilities (+97%)
EDINBURGH	Finance & Insurance (+6.2ppt)/ Information & Comms (+6.0ppt)	Real Estate (+£2,323m)	Utilities (+111%)
	Education (-6.9ppt) / Construction (-6.4ppt)	Finance & Insurance (+£2,230m)	Information & Comms (+108%)
GLASGOW	Information & Comms (+12.4ppt) / Admin & Support (+5.0ppt)	Information & Comms (+£2,522)	Information & Comms (+113%)
	Construction (-12.4ppt) / Education (-5.4ppt)	Human Health & Social Work (+£1,717m)	Utilities (+104%)
LEEDS	Information & Comms (+12.7ppt) / Admin & Support (+5.3ppt)	Information & Comms (+£3,057m)	Information & Comms (+111%)
	Construction (-7.3ppt) / Water Supply (-3.3ppt)	Professional Services (+£1,607m)	Administration & Support (+77%)
MANCHESTER	Information & Comms (+11.1ppt) / Real Estate (+4.7ppt)	Professional Services (+£2,918m)	Utilities (+278%)
	Education (-8.9ppt) / Construction (-3.6ppt)	Information & Comms (+£2,813m)	Information & Comms (+106%)
NEWCASTLE	Information & Comms (+11.Oppt) / Real Estate (+3.3ppt)	Human Health & Social Work (+£936m)	Utilities (+98%)
	Construction (-5.0ppt) / Manufacturing (-3.4ppt)	Information & Comms (+£879m)	Information & Comms (+97%)
SHEFFIELD	Information & Comms (+14.7ppt) / Admin & Support (+3.0ppt)	Information & Comms (+£1,592)	Information & Comms (+113%)
	Manufacturing (-5.6ppt) / Construction (-5.3ppt)	Human Health & Social Work (+£713m)	Utilities (+96%)

%

The other side of the DNA equation is the real estate – or rather the real estate requirement that is needed to balance the equation.

There are some relatively clear and obvious linkages between the macroeconomics and property sub-sectors. For example, 'Accommodation & Food Services' and Hotels / Living Sectors are obvious bedfellows (pun intended), as are 'Transportation & Storage' and Industrial / Logistics. While not a watertight link, 'Professional, Scientific & Technology' obviously speak to Life Sciences, as does 'Human Health & Social Work' to Healthcare.

Many, indeed most, of the SIC industries relate to Offices in some

shape or form, either directly or indirectly. But in a highly nuanced form as the requirements in terms of location and specification will vary dramatically between sectors. Again, understanding the sources of potential demand will be central in aligning the real estate supply, rather than adopting a 'one size fits all approach'.

UK Cities DNA is instructive, but it is not wholly prescriptive. Nor is it binary. While growth and potential demand may lend itself to one specific real estate sector directly, there are likely to be multiplier effects across others. For example, historically residential development may have proved to be the by-product of demand for other commercial uses, housing being required for those working within a wider industry or project (the building of the railway network in London standing out as a particularly good example). Property uses tend to be synergistic and work off each other, rather than operate in splendid isolation.

DNA is vastly complex. DNA profiling is a complex, but highly useful and applicable skill. Actual genetic engineering another dimension of complexity altogether. UK Cities DNA is complex. Understanding UK Cities DNA is a complex, but highly useful and applicable skill. Genetic engineering of the real estate...

We like questions, if you've got one about our research, or would like some property advice,



Stephen Springham Partner, Head of UK Markets Research stephen.springham@knightfrank.com

we would love to hear from you.



Darren Mansfield Partner, Head of UK Offices Research darren.mansfield@knightfrank.com



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