

# Integrating the UK Industrial Strategy: A Comprehensive Mapping of Key Sectors to Industrial Classification Frameworks

Fatima Garcia-Elena and Andrew Purdy (The Data City)

Raquel Ortega-Argiles (The Productivity Institute, TPI Productivity Laboratory)

Late last year, the UK government published the latest version of the UK Industrial Strategy, titled “[Invest 2035: the UK's modern industrial strategy](#)”. This document identifies eight critical industrial sectors essential for ensuring the UK’s economic growth in the coming decades.

However, detailed information on how these sectors align with existing industrial classification frameworks is lacking. This alignment is necessary for acquiring meaningful insights about the sectors. To address this issue, the [TPI Productivity Data Lab](#) at The Productivity Institute and [The Data City](#) have developed a methodology and a corresponding lookup table. This tool makes possible the interpretation of the eight industrial sectors outlined in the latest UK Industrial Strategy as Standard Industrial Classification (SIC) codes<sup>1</sup> and [Real-Time Industrial Classification \(RTIC\)](#)<sup>2</sup>.

The goal of this resource is to facilitate the cohesive acquisition of data for these sectors by policymakers, investors and researchers.

## The UK’s Industrial Strategy Sectors

The UK’s Industrial Strategy, as outlined by Invest 2035, identifies several growth-driving sectors: advanced manufacturing, clean energy industries, creative industries, defence, digital and technologies, financial services, life sciences, and professional and business services. While there is a general understanding of the activities that fall within each category, we can gain further insights into company-level data by examining SIC codes and RTICs, which are existing industrial classification frameworks. In the following paragraphs, we will discuss the methodology that enables the mapping of the eight industrial sectors against RTICs and SICs.

## Data

The Data City supplies company-level industrial classification data necessary for this methodology. This data includes detailed information on industrial classifications at the company level. The Data City organises this data according to different criteria, including a series

---

<sup>1</sup> The [Standard Industrial Classification of Economic Activities \(SIC\)](#) is the framework of reference used by the government to classify economic activity in the UK. They are a set of codes companies choose to describe their activity when registering with Companies House.

<sup>2</sup> Real-Time Industrial Classifications are classifications of economic activity based on company website text data, machine learning and sector expertise developed by The Data City. Companies are provided an industrial classification considering how they describe their economic activity on their website.

of sectoral classifications. By default, The Data City provides data on companies' SIC and RTIC classifications, allowing for analysis of the RTIC distribution within a SIC code and vice versa.

In addition to these fundamental building blocks, The Data City released a development last year, called [Real-Time SICs](#)<sup>3</sup>. This update significantly improves SIC classifications for companies and, therefore, will be used in this project.

For this project, we will use RTIC and RSIC classifications to identify and depict the most relevant SIC codes covering each of the 8 industrial sectors.

## Methodology

. For creating an industry classification translation table, we follow the next steps. First, we mapped the 8 industrial sectors in the UK Industrial Strategy qualitatively against RTICs and existing SICs. Second, we extracted the Real-Time SIC distribution for each RTIC grouping. In other words, we counted how many times a Real-Time SIC was assigned to the companies in an RTIC grouping. Third, we normalised the Real-Time SIC distribution for each group and identified the significantly prevalent codes. Below, you will find a more detailed explanation of each step.

### *1. Qualitative mapping*

A singular SIC code does not directly represent some sectors highlighted in the UK Industrial Strategy. Still, it has been classified by The Data City through RTICs with the support of industry experts (e.g., an Advanced Manufacturing RTIC). Central government organisations such as DSIT have consistently used the output company-level data in policymaking and strategy development, indicating that RTICs offer insights into new emergent sectors or industrial activities that SICs fail to provide. For each of the eight industrial promoting-growth sectors, we reviewed RTICs and selected those that better defined their activity.

Other sectors highlighted in Invest 2035 have traditionally been included in SIC codes, especially Professional and Business Services and Financial Services. We combined a range of RTIC and Real-Time SIC codes for these sectors to comprehensively overview these industries.

### *2. Real-Time SIC code counts for sector groupings*

Once we have qualitatively identified the RTICs and SIC codes representing the eight industrial promoting-growth sectors, we produce the summary statistics of their Real-Time SIC classifications. As far as we can see, this is a key step in the most frequent Real-Time SICs for the Advanced Manufacturing RTIC. We repeated the same process for all industrial sectors, obtaining counts of Real-Time SIC codes for each. This data enabled us to find the sectors' most relevant SIC codes.

### *3. Normalising Real-Time SIC distribution and finding statistically significant concentrations in each sector*

Real-time SIC data is insufficient on its own. For example, Advanced Manufacturing companies were assigned more than 300 different RSIC codes. This presents a challenge: we require a method that finds the statistically significant SICs that apply to other distributions. Rigid, consistent thresholds do not work well as far as the sectors investigated are very different.

---

<sup>3</sup> Real-Time SICs are a re-classification of companies' existing SIC considering the latest website data available by The Data City. Companies sometimes change or expand their activity over time and, while this is represented on their website, they do not update their SIC codes in Companies House. This situation leads to outdated SIC codes for companies. Hence, Real-Time SICs are not a new classification framework, they are a reassignment of SICs for companies through companies' website text data analysis.

Consequently, a single threshold will not be appropriate for all distributions. We decided to normalise Real-Time SIC counts and find the most relevant SIC codes following these steps:

- i) For every Real-Time SIC distribution, we calculate the location quotient values for each sector and SIC code. This allows for the identification of SIC codes with a higher relative prevalence within the eight industrial strategy sectors.
- ii) Next, we calculate the raw percentage of companies in each SIC code to determine the share of companies represented by each SIC.
- iii) We compute a combined score by multiplying the location quotient value by the raw percentage value for each SIC. This results in a list of SIC codes ranked by the combined score for each of the eight industrial sectors.
- iv) Finally, we identify the statistically significant SIC codes by converting the combined score into normalised (z) scores and selecting all SIC codes with a z score above a certain threshold (e.g. value over 1).

These three steps help translate the eight sectors identified by the government into existing RTIC and SIC classifications. Below is a table containing all the details.

Industry Strategy Sector	Qualitative selection of sectors (RTICs/SICs)	Statistically significant SICs
Advanced Manufacturing	Advanced Manufacturing (RTIC) Design and Modelling Tech (RTIC) Advanced Materials (RTIC) Robotics and Autonomous Systems (RTIC) Electronics Manufacturing (RTIC) Space Autonomy and Robots (RTIC) In-Orbiting Servicing and Manufacturing (RTIC)	71129: Other engineering activities 25990: Manufacture of other fabricated metal products n.e.c. 32990: Other manufacturing n.e.c. 25620: Machining 71122: Engineering related scientific and technical consulting activities 25110: Manufacture of metal structures and parts of structures 71121: Engineering design activities for industrial process and production 22290: Manufacture of other plastic products 25610: Treatment and coating of metals 46720: Wholesale of metals and metal ores 28990: Manufacture of other special-purpose machinery n.e.c. 26511: Manufacture of electronic measuring, testing etc. equipment, not for industrial process control 27900: Manufacture of other electrical equipment 26110: Manufacture of electronic components 25730: Manufacture of tools 26120: Manufacture of loaded electronic boards 28490: Manufacture of other machine tools 95210: Repair of consumer electronics

		26512: Manufacture of electronic industrial process control equipment 95120: Repair of communication equipment
Clean Energy Industries	Battery Supply Chain (RTIC) CleanTech (RTIC) Net Zero (RTIC) Energy Management (RTIC) Energy Generation (RTIC)	74901: Environmental consulting activities 43210: Electrical installation 35110: Production of electricity 74909: Other professional, scientific and technical activities n.e.c. 38110: Collection of non-hazardous waste 39000: Remediation activities and other waste management services 38210: Treatment and disposal of non-hazardous waste 38320: Recovery of sorted materials 35140: Trade of electricity 38120: Collection of hazardous waste
Creative Industries	Digital Creative (RTIC) Agency Market (RTIC) Gaming (RTIC) Immersive Technology (RTIC) Media and Publishing (RTIC) Adtech (RTIC)	73110: Advertising agencies 62090: Other information technology service activities 74100: specialised design activities 62020: Information technology consultancy activities 59112: Video production activities 90030: Artistic creation 62012: Business and domestic software development 59111: Motion picture production activities 59113: Television programme production activities 18129: Printing n.e.c. 70210: Public relations and communications activities 59120: Motion picture, video and television programme post-production activities 90020: Support activities to performing arts 73120: Media representation services 59200: Sound recording and music publishing activities 58190: Other publishing activities 62011: Ready-made interactive leisure and entertainment software development 17230: Manufacture of paper stationery 18140: Binding and related services 58210: Publishing of computer games
Defence	Marine and Maritime – Defence (RTIC) Cyber (RTIC)	62020: Information technology consultancy activities

	<p>Defence (RTIC)</p> <p>84220: Defence activities (SIC)</p> <p>30110: Building of ships and floating structures (SIC)</p> <p>30300: Manufacture of air and spacecraft and related machinery (SIC)</p> <p>30400: Manufacture of military fighting vehicles (SIC)</p> <p>84210: Foreign affairs (SIC)</p> <p>25400: Manufacture of weapons and ammunition (SIC)</p>	<p>62090: Other information technology service activities</p> <p>62012: Business and domestic software development</p> <p>62030: Computer facilities management activities</p> <p>80200: Security systems service activities</p> <p>61900: Other telecommunications activities</p> <p>80100: Private security activities</p> <p>33150: Repair and maintenance of ships and boats</p> <p>95110: Repair of computers and peripheral equipment</p> <p>52220: Service activities incidental to water transportation</p> <p>84220: Defence activities</p> <p>30110: Building of ships and floating structures</p> <p>30300: Manufacture of air and spacecraft and related machinery</p> <p>30400: Manufacture of military fighting vehicles</p> <p>84210: Foreign affairs</p> <p>25400: Manufacture of weapons and ammunition</p>
Life Sciences	<p>Engineering Biology Applications (RTIC)</p> <p>Engineering Biology Supply Chain (RTIC)</p> <p>Life Science (RTIC)</p> <p>Biopharma(RTIC)</p> <p>MedTech (RTIC)</p> <p>Pharma (RTIC)</p> <p>Omics (RTIC)</p> <p>Agritech (RTIC)</p> <p>Neurotechnology (RTIC)</p> <p>21100: Manufacture of basic pharmaceutical products (SIC)</p> <p>21200: Manufacture of pharmaceutical preparations (SIC)</p>	<p>86900: Other human health activities</p> <p>74909: Other professional, scientific and technical activities n.e.c.</p> <p>86220: Specialists medical practice activities</p> <p>86210: General medical practice activities</p> <p>72110: Research and experimental development on biotechnology</p> <p>86230: Dental practice activities</p> <p>72190: Other research and experimental development on natural sciences and engineering</p> <p>74901: Environmental consulting activities</p> <p>46460: Wholesale of pharmaceutical goods</p> <p>86101: Hospital activities</p> <p>32500: Manufacture of medical and dental instruments and supplies</p> <p>47730: Dispensing chemist in specialised stores</p>
Digital and Technology	<p>FoodTech (RTIC)</p> <p>Artificial Intelligence Applications and Technologies (RTIC)</p> <p>Artificial Intelligence Ecosystem (RTIC)</p> <p>Cloud Computing (RTIC)</p> <p>Computer Hardware (RTIC)</p> <p>Internet of Things (RTIC)</p> <p>Data Infrastructure (RTIC)</p> <p>Data Intermediary (RTIC)</p>	<p>62090: Other information technology service activities</p> <p>62020: Information technology consultancy activities</p> <p>62012: Business and domestic software development</p> <p>61900: Other telecommunications activities</p> <p>63110: Data processing, hosting and related activities</p>

	EdTech (RTIC) Geospatial Technologies (RTIC) Space (RTIC) Quantum Technologies (RTIC) Quantum Economy (RTIC) Sensors (RTIC) Photonics (RTIC) Software as a Service (RTIC) Software Development (RTIC) Streaming (RTIC) Telecommunications (RTIC) FemTech (RTIC) Wearables and Quantified Self (RTIC) Future Telecoms Supply Chain (RTIC)	61100: Wired telecommunications activities 61200: Wireless telecommunications activities 62030: Computer facilities management activities
Professional and Business Services	Research and Consulting (RTIC) B2B Services (RTIC) 69101: Barristers at law (SIC) 69102: Solicitors (SIC) 69201: Accounting and auditing activities (SIC) 69202: Bookkeeping activities (SIC) 69203: Tax consultancy (SIC) 70210: Public relations and communications activities (SIC)	71111: Architectural activities 70229: Management consultancy activities other than financial management 74909: Other professional, scientific and technical activities n.e.c. 41100: Development of building projects 71129: Other engineering activities 41202: Construction of domestic buildings 71122: Engineering related scientific and technical consulting activities 74100: specialised design activities 71112: Urban planning and landscape architectural activities 72110: Research and experimental development on biotechnology 73200: Market research and public opinion polling 72190: Other research and experimental development on natural sciences and engineering 58141: Publishing of learned journals 69101: Barristers at law 69102: Solicitors 69201: Accounting and auditing activities 69202: Bookkeeping activities 69203: Tax consultancy 70210: Public relations and communications activities
Financial Services	Fintech (RTIC) 64192: Building societies (SIC) 64201: Activities of agricultural holding companies (SIC) 64302: Activities of unit trusts (SIC)	64999: Financial intermediation not elsewhere classified 62012: Business and domestic software development 62090: Other information technology service activities 62020: Information technology consultancy activities

	64303: Activities of venture and development capital companies (SIC) 64304: Activities of open-ended investment companies (SIC) 64305: Activities of property unit trusts (SIC) 64306: Activities of real estate investment trusts (SIC) 64910: Financial leasing (SIC) 64991: Security dealing on own account (SIC) 64992: Factoring (SIC) 65201: Life reinsurance (SIC) 65202: Non-life reinsurance (SIC) 65300: Pension funding (SIC) 66110: Administration of financial markets (SIC) 66210: Risk and damage evaluation (SIC) 66220: Activities of insurance agents and brokers (SIC) 64191: Banks (SIC) 70221: Financial Management (SIC)	66190: Activities auxiliary to financial intermediation n.e.c. 66300: Fund management activities 64929: Other credit granting n.e.c. 66120: Security and commodity contracts dealing activities 64921: Credit granting by non-deposit taking finance houses and other specialist consumer credit grantors 64192: Building societies 64201: Activities of agricultural holding companies 64302: Activities of unit trusts 64303: Activities of venture and development capital companies 64304: Activities of open-ended investment companies 64305: Activities of property unit trusts 64306: Activities of real estate investment trusts 64910: Financial leasing 64991: Security dealing on own account 64992: Factoring 65201: Life reinsurance 65202: Non-life reinsurance 65300: Pension funding 66110: Administration of financial markets 66210: Risk and damage evaluation 66220: Activities of insurance agents and brokers 64191: Banks 70221: Financial Management
--	--	---