



YHODA

Yorkshire & Humber
Office for Data Analytics



University of
Sheffield



Economic
and Social
Research Council

Yorkshire Engagement Portal (YEP) Launch Event

Driving **local growth** through data.

17th June, University of Sheffield



Joining us ONLINE?

Welcome!

Get comfortable.

Feel free to introduce
yourself in the chat.

Please make sure you are
muted.

Let us know if you need
anything!

Joining us IN-PERSON?

Welcome!

Grab some refreshments.

Take a seat.

Have a chat with your
fellow attendees.

Let us know if you need
anything!

Welcome

Professor Gary Dymski

Principal Investigator for YPIP

G.Dymski@leeds.ac.uk



UNIVERSITY OF LEEDS

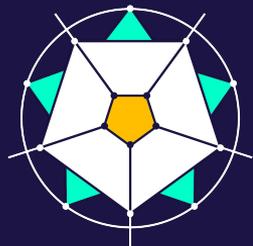
Introduction to YHODA & YEP

Professor Vania Sena

Lead for YHODA

Guifré Ballesté Santacana

Research Associate for YHODA



YHODA

Yorkshire & Humber
Office for Data Analytics

Driving **local growth** through data.

The new **regional data analytics hub**
based at the University of Sheffield.

Supports YPIP's aims of inclusive,
place-based, and sustainable policy
innovation by addressing longstanding
data challenges across **Yorkshire and the
Humber** region.



What are the regional challenges?

- ❖ Community-generated data often lacks legitimacy or recognition.
- ❖ Some regional and local data can be outdated, incomplete, or hard to access.
- ❖ No single platform to access local authority or community insights.
- ❖ Limited guidance on how to interpret or apply data-based insights.



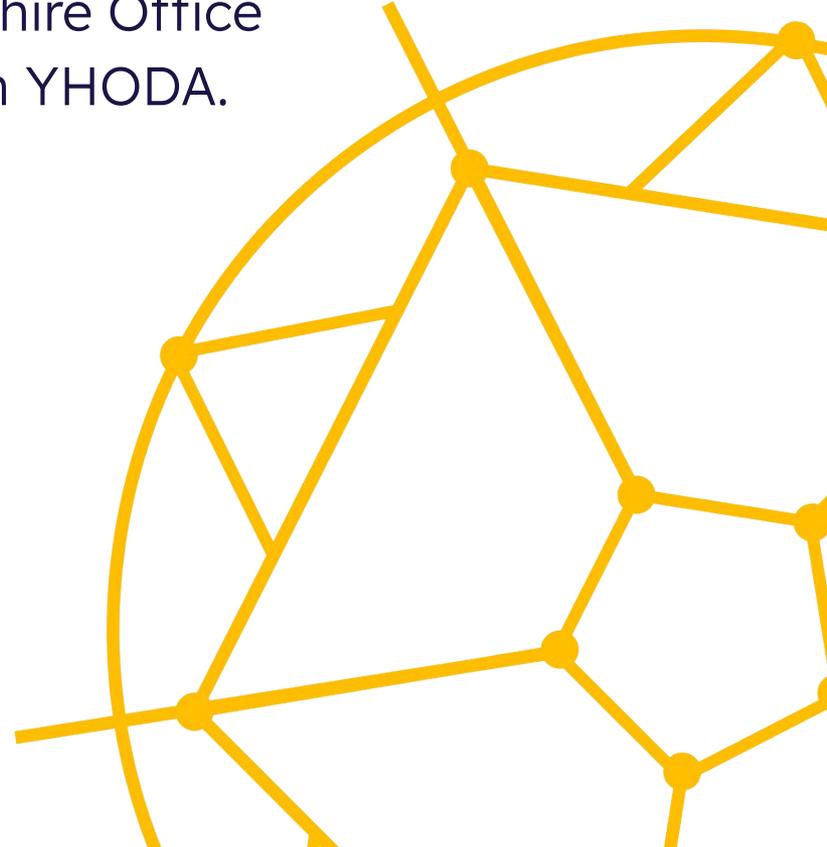
Why is this a problem?

- ❖ Reduced community voice in policy processes.
- ❖ Poor coordination across regional initiatives.
- ❖ Wasted resources, duplicated efforts, and public distrust.

YPIP's Solution

Build on the success of the South Yorkshire Office for Data Analytics (SYODA) to establish YHODA.

- ❖ An **integrated informatics hub** that consolidates reliable data at regional and local levels.
- ❖ **YEP**, a go-to source of knowledge for regional intelligence and analysis.
- ❖ A **scalable model** that connects local insights to regional and national policy initiatives.



Yorkshire Engagement Portal (YEP)

YHODA's free data analytics platform.

Hosts a suite of data dashboards and resources.

Insights into the region's economic, environmental,
and social vitality status.



Yorkshire
Engagement
Portal by **YHODA**

Open Data

YEP utilises publicly available data from trusted sources like the ONS, DWP, and Defra.

- ❖ **Traceability** - know where data is coming from.
- ❖ **Transparency** - know what we have done with the data.
- ❖ **Reusability** - make the most of existing datasets.



Policy Support

Insights designed to help you make evidence-based decisions.

- ❖ Data insights tailored to local contexts.
- ❖ Tools to support early-stage policy planning.
- ❖ Bridge for the gap between data producers and policy practitioners.



Regional Collaboration

We believe that data works best when it is shared. That is why YEP is being built to support collaboration across councils, universities, community groups, and regional organisations.

- ❖ Shared knowledge
- ❖ Reduced duplication
- ❖ Stronger regional alignment



Yorkshire Vitality Suite (YVS)

Interactive Dashboards

- ❖ Observatory
- ❖ Jobs
- ❖ Industry
- ❖ Neighborhoods
- ❖ Forecasting
- ❖ Policy Simulator (coming soon)



YPIP Project Showcase

- ❖ Inclusive Business & Creative Industries
- ❖ Sustainable Living
- ❖ Communities in Their Place

Resources

- ❖ Links to data sources.
- ❖ User guidance and articles.



Break for Refreshments

Please be seated by 11am



Keynote

Kersten England CBE

Co-Director of YPIIP

Chair of The Young Foundation

Chair of Bradford 2025 UK City of Culture

youngfoundation.org

bradford2025.co.uk

Q&A

**Reflection on Regional Data
Challenges**

with

Kersten England CBE





Lunch & Networking

Please be seated by 1pm



Guided Demonstration of YEP

Guifré Ballesté Santacana

Research Associate for YHODA



YEP Dashboard

Discovery

Session



Getting Started

1. Open your device and connect to the WiFi (instructions available on tables).
2. Open your browser and go to yorkshireportal.org
3. Select any dashboard from the **Validity Suite** dropdown menu.

Note: YEP is still in development. Content, dashboards, look, and functionality may be missing or incomplete.

Have **Feedback** to Share?

Post-it notes (on tables)

Chat to us (online and in-person)

Form

tinyurl.com/YHODA-feedback



Tell us more about...

- ❖ If and how you may use YEP and the Vitality Suite in your work.
- ❖ What you would add to YEP and the Vitality Suite dashboards.
- ❖ Any information that may be missing from the dashboards.
- ❖ Your opinion of the dashboard interfaces.
- ❖ Anything else you feel is important.

What's Next?

Guifré Ballesté Santacana

Research Associate for YHODA

Closing Remarks

Professor Vania Sena

Lead for YHODA

Here is what's coming next...



Observatory

Improved correlations

New indicators

Jobs and Industry

Job-creation / loss trends

Neighbourhood

Insights from energy indicators

New indicators

Forecasting

Improved models

More variables

Other

Policy Simulator dashboard

Dataset updates

Automation

Feature improvements

Testing and bug fixes

YEP is possible thanks to...

Our YPIP Colleagues & Partners

Management Board

Jonathan Wright (Research,
Partnerships and Innovation; UoS)
Suvodeep Mazumdar (Information
School; UoS)

Grace Simmonds (SYMCA)

Patrick Harrison (Sheffield City
Council)

Advisory Board

Representatives from local and
combined authorities, NHS,
Y-PERN, and Opus
Independents.

More info:
yhoda.sites.sheffield.ac.uk/partners

YEP is possible thanks to...

Ongoing Technical Support

Hive IT (hiveit.co.uk)

IT Services (UoS)

Sam Vardy (IT Services)

Abbie Martin (IT Services)

Operations Support

University of Sheffield

University of Leeds

Design and Publicity Support

Dave Jackson (Print & Creative Services; UoS)

Nifty Fox Creative
(niftyfoxcreative.com)

Lauren Cox (YPIP)

Pip Strafford (Research, Partnerships and Innovation; UoS)

YEP is possible thanks to...

Technical and Knowledge Support

Dan Olnier (Research Fellow YPERN)

Joe Heffer (Senior Research Data Engineer at UoS)

Andrew Etherington (ONS Local - Yorkshire)

Will Haste (ONS Clustering Team)

Lisa Groves (Thriving Places)

Fraser Bell (Thriving Places)



YEP 1.0

Officially Launches on

30th June 2025

at

yorkshireportal.org



Thank you for coming!

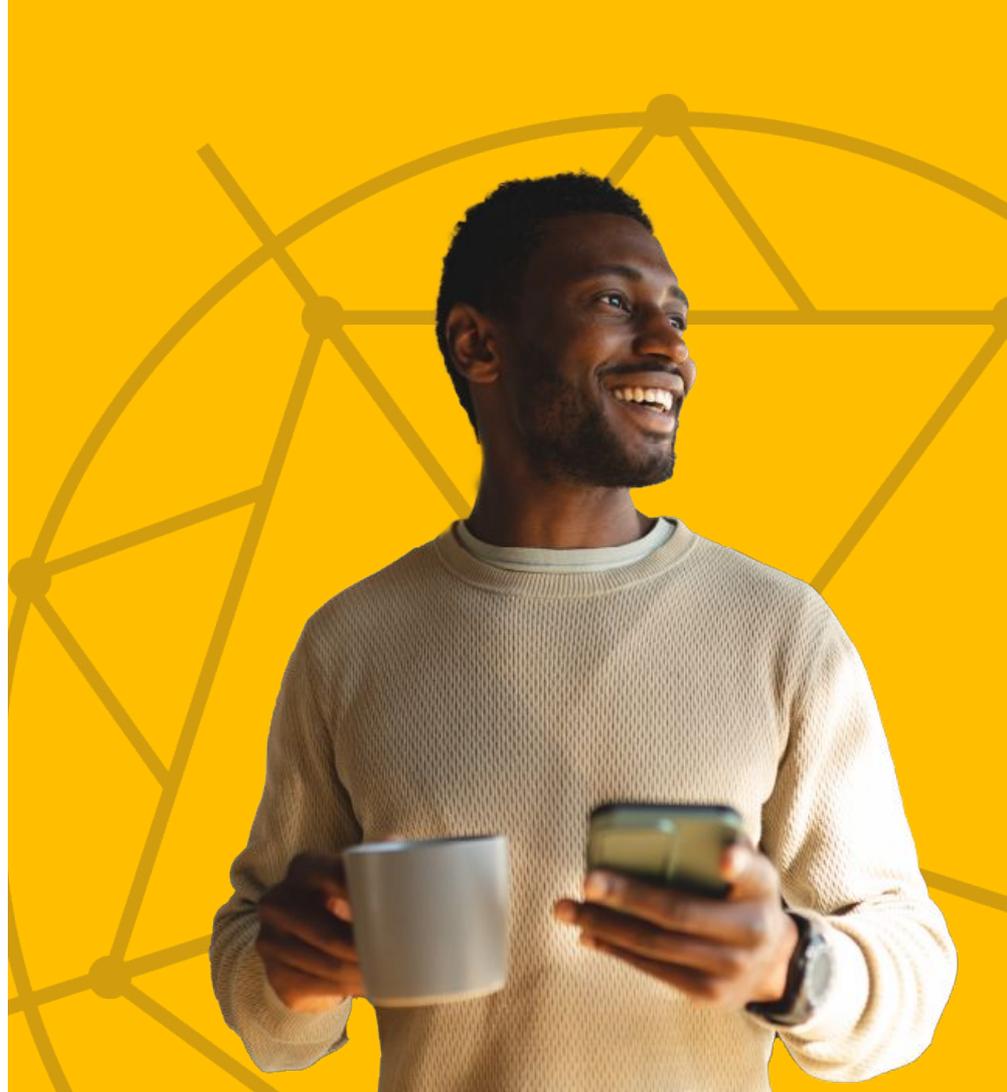
Keep up with news and updates
from YPIP and YHODA via:

y-pern.org.uk/ypip

yhoda.sites.sheffield.ac.uk

linkedin.com/company/yhoda

yhoda@sheffield.ac.uk



Yorkshire Vitality

Observatory



Yorkshire Vitality Observatory

v.1.0

[Front Page](#)

[Overview](#)

[Observatory](#)

[Correlation Matrix](#)



Welcome to the Yorkshire Vitality Observatory (YVO)

The Yorkshire Vitality Observatory (YVO) is an interactive dashboard that enables users to explore, compare, and correlate key economic, social, and environmental indicators across the **15 Local Authorities** in the **Yorkshire and the Humber** region.

Data spans from **2010 to 2024**, depending on the indicator, some with up to **15 years of data**, others with just **4 or 5 years** available.



Economic
and Social
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YHODA
Yorkshire & Humber
Office for Data Analytics



Step 1: Select Your Local Authority

Before exploring the dashboard, please **select a Local Authority** from the **slider on this page**.

This selection will be applied across all pages, ensuring a consistent and tailored view throughout your analysis.



Select a Local Authority

- Barnsley
- Bradford
- Calderdale
- Doncaster
- East Riding of Yorkshire
- Hull
- Kirklees
- Leeds
- North East Lincolnshire
- North Lincolnshire
- North Yorkshire
- Rotherham
- Sheffield
- Wakefield
- York

Local Authority Selected: **Sheffield**

Pages in the Yorkshire Vitality Observatory:

Overview

Explains the dashboard structure and purpose. Allows you to select the **Local Authority** you want to focus on.

Observatory

Explore **50 indicators** organized into **13 domains**: *Business and Economy, Civic Participation, Community Safety, Connectivity, Demographics, Earnings and Income, Education and Skills, Employment and Jobs, Gas Emissions, Health, Housing, Waste and Recycling, Wellbeing.*

Compare two indicators side-by-side for the selected Local Authority. Example comparisons: Average Weekly Earnings (Pounds) (*Earnings and Income*) vs Gross Value Added (Millions Pounds) (*Business and Economy*). Also, Deaths under 75 from preventable causes (*Health*) vs Percentage of adults inactive in sports (*Wellbeing*).

Also, a **textual summary** describes the correlation between your selected indicators.

Correlation Matrix

Displays a **50 × 50 matrix** of correlations, that's **1,250 pairwise relationships**. Correlations are computed across **all Local Authorities combined** to ensure statistical strength. We used **Spearman's rank correlation**: Detects non-linear trends, and it is robust to outliers.

Data Sources

Most data originates from the **Office for National Statistics (ONS)**, along with contributions from other official UK departments: Department for Education, Department for Work and Pensions (DWP), Department for Business, Energy and Industrial Strategy; Department for Levelling Up, Housing and Communities, Sport England (Active Lives Survey), and Defra (Waste Management)

Note: Some indicators are updated more frequently than others; data availability and time coverage vary.

Tip

Click the **▶ or ▼ triangle icon** next to a domain name to **expand and view its indicators**.

Select the Indicator 1

Indicator 1

- Business and Economy
 - Business Churn Rate per 100,000 inhabitants
 - Deaths of Business
 - Gross Value Added in Millions of Pounds
 - Labour Productivity (Pounds per hour worked)
 - Number of Business Counts per 10000 inhabi...
 - Number of New Business
- Civic Participation
 - Percentage of adults who volunteered in the ...
- Community Safety
 - Public order offences per 1,000 people
 - Theft offences per 1,000 people
 - Violent incidents per 1,000 people

Indicator 1 selected: **Business Churn Rate per 100,000 inhabitants**

Maximum Value: 0.04
Minimum Value: 0.04

Average: 0.04
Trend: Increasing by 0.80%
Standard Deviation: 0.00

Indicator 1 selected:

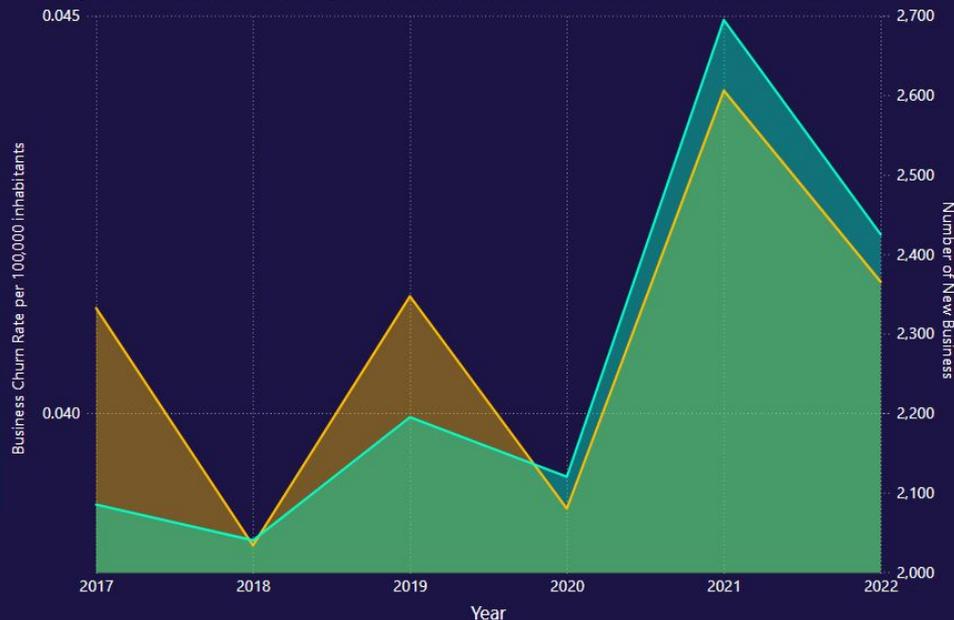
Business Churn Rate per 100,000 inhabitants

The Business Churn Rate per 100,000 Inhabitants measures the rate of business turnover within a given area, adjusted for population size. It is calculated by dividing the total number of business births and deaths by the number of active businesses and then adjusting for every 100,000 inhabitants. This indicator is derived from the ONS Business Demography data and computed by the Yorkshire & Humber Office for Data Analytics (YHODA). It provides insights into the dynamism and competitiveness of local economies, helping to track business growth patterns and economic vitality across Local Authorities.

Indicator 1: Business Churn Rate per 100,000 inhabitants

Indicator 2: Number of New Business

Comparison of Business Churn Rate per 100,000 inhabitants and Number of New Business for Sheffield



The Indicator 1 selected is Business Churn Rate per 100,000 inhabitants, and the Indicator 2 selected is Number of New Business. **Across all Local Authorities in Yorkshire and Humber combined**, the correlation between these 2 indicators is **-0.87**. This means that **regionally, there is a very strong and statistically significant negative relationship, as one indicator increases, the other tends to decrease**. Specifically, the p-value is **0**.

Select the Indicator 2

Indicator 2

- Business and Economy
 - Business Churn Rate per 100,000 inhabitants
 - Deaths of Business
 - Gross Value Added in Millions of Pounds
 - Labour Productivity (Pounds per hour worked)
 - Number of Business Counts per 10000 inhabi...
 - Number of New Business
- Civic Participation
 - Percentage of adults who volunteered in the ...
- Community Safety
 - Public order offences per 1,000 people
 - Theft offences per 1,000 people
 - Violent incidents per 1,000 people

Indicator 2 selected: **Number of New Business**

Maximum Value: 2,695.00
Minimum Value: 2,040.00

Average: 2,260.00
Increasing trend by 16.31%
Standard Deviation: 230.69

Indicator 2 selected: **Number of New Business**

The Number of New Businesses represents the total count of new business registrations within a given period. This indicator, sourced from the ONS Business Demography dataset, highlights business creation trends across industries and regions. It provides valuable insights into entrepreneurial activity, economic growth, and market opportunities, serving as a key measure of local economic vitality and business development.

Pick as many Indicators as you like for both Rows and Columns

Rows	Columns
<input type="checkbox"/> Business and Economy <input type="checkbox"/> Business Churn Rate per 100,000... <input type="checkbox"/> Deaths of Business <input type="checkbox"/> Gross Value Added in Millions of... <input type="checkbox"/> Labour Productivity (Pounds per ... <input type="checkbox"/> Number of Business Counts per ... <input type="checkbox"/> Number of New Business	<input type="checkbox"/> Business and Economy <input type="checkbox"/> Business Churn Rate per 100,00... <input type="checkbox"/> Deaths of Business <input type="checkbox"/> Gross Value Added in Millions of... <input type="checkbox"/> Labour Productivity (Pounds per... <input type="checkbox"/> Number of Business Counts per ... <input type="checkbox"/> Number of New Business
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<input type="checkbox"/> Connectivity <input type="checkbox"/> Average download speed (Mbit/s) <input type="checkbox"/> Percentage of premises without ...	<input type="checkbox"/> Connectivity <input type="checkbox"/> Average download speed (Mbit/s) <input type="checkbox"/> Percentage of premises without ...
<input type="checkbox"/> Demographics <input type="checkbox"/> Percentage of Individuals aged 6... <input type="checkbox"/> Percentage of Individuals under ... <input type="checkbox"/> Population (Total number of inh...	<input type="checkbox"/> Demographics <input type="checkbox"/> Percentage of Individuals aged 6... <input type="checkbox"/> Percentage of Individuals under ... <input type="checkbox"/> Population (Total number of inh...
<input type="checkbox"/> Earnings and Income <input type="checkbox"/> Average Weekly Earnings (Poun... <input type="checkbox"/> Gross weekly pay (Pounds) for th... <input type="checkbox"/> Gross weekly pay (Pounds) for th... <input type="checkbox"/> Inequality: Ratio of 80th Percent... <input type="checkbox"/> Number of children in relative lo...	<input type="checkbox"/> Earnings and Income <input type="checkbox"/> Average Weekly Earnings (Poun... <input type="checkbox"/> Gross weekly pay (Pounds) for t... <input type="checkbox"/> Gross weekly pay (Pounds) for t... <input type="checkbox"/> Inequality: Ratio of 80th Percent... <input type="checkbox"/> Number of children in relative lo...
<input type="checkbox"/> Education and Skills <input type="checkbox"/> Percentage of 19 year olds achie... <input type="checkbox"/> Percentage of pupils achieving g... <input type="checkbox"/> Percentage of pupils eligible for ...	<input type="checkbox"/> Education and Skills <input type="checkbox"/> Percentage of 19 year olds achie... <input type="checkbox"/> Percentage of pupils achieving g... <input type="checkbox"/> Percentage of pupils eligible for ...
<input type="checkbox"/> Employment and Jobs <input type="checkbox"/> Employment rate <input type="checkbox"/> Number of Jobs per Working-Ag... <input type="checkbox"/> Number of People with Disabilit...	<input type="checkbox"/> Employment and Jobs <input type="checkbox"/> Employment rate <input type="checkbox"/> Number of Jobs per Working-A... <input type="checkbox"/> Number of People with Disabilit...

Matrix of Correlations	Average download speed (Mbit/s)	Average Weekly Earnings (Pounds)	Business Churn Rate per 100,000 inhabitants	Collected household waste per person (kg)	Deaths of Business	Deaths under 75 from preventable causes (per 100,000)	Employment rate	Female healthy life expectancy (years)	Female life expectancy (years)	Gross Value Added in Millions of Pounds	Gross weekly pay (Pounds) for the Highest Paid 80 Percent	Gross weekly pay (Pounds) for the Lowest Paid 10 Percent	Inequality: Ratio of 80th Percentile to
Average download speed (Mbit/s)	1.00	0.69	0.22	-0.07	-0.16	0.26	-0.06	-0.34	-0.20	-0.02	0.64	0.60	
Average Weekly Earnings (Pounds)	0.69	1.00	-0.03	-0.24	0.16	0.40	-0.14	-0.04	0.37	0.95	0.90		
Business Churn Rate per 100,000 inhabitants	0.22	-0.03	1.00	0.35	-0.85	0.27	-0.19	-0.47	-0.34	-0.87	-0.02	0.05	
Collected household waste per person (kg)	-0.07	-0.24	0.35	1.00	-0.32	-0.23	0.26	0.11	0.16	-0.32	-0.17	-0.19	
Deaths of Business	-0.16	0.16	-0.85	-0.32	1.00	-0.18	0.12	0.39	0.29	0.84	0.08	0.04	
Deaths under 75 from preventable causes (per 100,000)	0.26	0.21	0.27	-0.23	-0.18	1.00	-0.42	-0.71	-0.82	-0.22	0.15	0.34	
Employment rate	-0.06	0.40	-0.19	0.26	0.12	-0.42	1.00	0.54	0.53	0.25	0.46	0.23	
Female healthy life expectancy (years)	-0.34	-0.14	-0.47	0.11	0.39	-0.71	0.54	1.00	0.82	0.40	-0.06	-0.37	
Female life expectancy (years)	-0.20	-0.04	-0.34	0.16	0.29	-0.82	0.53	0.82	1.00	0.35	0.02	-0.22	
Gross Value Added in Millions of Pounds	-0.02	0.37	-0.87	-0.32	0.84	-0.22	0.25	0.40	0.35	1.00	0.28	0.25	
Gross weekly pay (Pounds) for the Highest Paid 80 Percent	0.64	0.95	-0.02	-0.17	0.08	0.15	0.46	-0.06	0.02	0.28	1.00	0.86	
Gross weekly pay (Pounds) for the Lowest Paid 10 Percent	0.60	0.90	0.05	-0.19	0.04	0.34	0.23	-0.37	-0.22	0.25	0.86	1.00	
Inequality: Ratio of 80th Percentile to	-0.29	-0.66	-0.13	0.13	0.06	-0.42	0.01	0.52	0.38	-0.13	-0.56	-0.89	1.00

Pick as many Indicators as you like for both Rows and Columns



- | Rows | Columns |
|---|--|
| <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Business and Economy <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Business Churn Rate per 100,00... <input type="checkbox"/> Deaths of Business <input type="checkbox"/> Gross Value Added in Millions ... <input type="checkbox"/> Labour Productivity (Pounds pe... <input type="checkbox"/> Number of Business Counts per... <input type="checkbox"/> Number of New Business <input checked="" type="checkbox"/> Civic Participation <ul style="list-style-type: none"> <input type="checkbox"/> Percentage of adults who volun... <input checked="" type="checkbox"/> Community Safety <ul style="list-style-type: none"> <input type="checkbox"/> Public order offences per 1,000 ... <input type="checkbox"/> Theft offences per 1,000 people <input type="checkbox"/> Violent incidents per 1,000 peo... <input checked="" type="checkbox"/> Connectivity <ul style="list-style-type: none"> <input type="checkbox"/> Average download speed (Mbit... <input type="checkbox"/> Percentage of premises without... <input checked="" type="checkbox"/> Demographics <ul style="list-style-type: none"> <input type="checkbox"/> Percentage of Individuals aged ... <input type="checkbox"/> Percentage of Individuals unde... <input type="checkbox"/> Population (Total number of inh... <input checked="" type="checkbox"/> Earnings and Income <ul style="list-style-type: none"> <input type="checkbox"/> Average Weekly Earnings (Poun... <input type="checkbox"/> Gross weekly pay (Pounds) for t... <input type="checkbox"/> Gross weekly pay (Pounds) for t... <input type="checkbox"/> Inequality: Ratio of 80th Percen... <input type="checkbox"/> Number of children in relative l... <input checked="" type="checkbox"/> Education and Skills <ul style="list-style-type: none"> <input type="checkbox"/> Percentage of 19 year olds achi... <input type="checkbox"/> Percentage of pupils achieving ... <input type="checkbox"/> Percentage of pupils eligible fo... <input checked="" type="checkbox"/> Employment and Jobs <ul style="list-style-type: none"> <input type="checkbox"/> Employment rate <input type="checkbox"/> Number of Jobs per Working-A... <input type="checkbox"/> Number of People with Disabili... | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Business and Economy <ul style="list-style-type: none"> <input type="checkbox"/> Business Churn Rate per 100,00... <input type="checkbox"/> Deaths of Business <input type="checkbox"/> Gross Value Added in Millions ... <input type="checkbox"/> Labour Productivity (Pounds pe... <input type="checkbox"/> Number of Business Counts pe... <input checked="" type="checkbox"/> Number of New Business <input checked="" type="checkbox"/> Civic Participation <ul style="list-style-type: none"> <input type="checkbox"/> Percentage of adults who volun... <input checked="" type="checkbox"/> Community Safety <ul style="list-style-type: none"> <input type="checkbox"/> Public order offences per 1,000... <input type="checkbox"/> Theft offences per 1,000 people <input type="checkbox"/> Violent incidents per 1,000 peo... <input checked="" type="checkbox"/> Connectivity <ul style="list-style-type: none"> <input type="checkbox"/> Average download speed (Mbit... <input type="checkbox"/> Percentage of premises without... <input checked="" type="checkbox"/> Demographics <ul style="list-style-type: none"> <input type="checkbox"/> Percentage of Individuals aged ... <input type="checkbox"/> Percentage of Individuals unde... <input type="checkbox"/> Population (Total number of in... <input checked="" type="checkbox"/> Earnings and Income <ul style="list-style-type: none"> <input type="checkbox"/> Average Weekly Earnings (Poun... <input type="checkbox"/> Gross weekly pay (Pounds) for t... <input type="checkbox"/> Gross weekly pay (Pounds) for t... <input type="checkbox"/> Inequality: Ratio of 80th Percen... <input type="checkbox"/> Number of children in relative l... <input checked="" type="checkbox"/> Education and Skills <ul style="list-style-type: none"> <input type="checkbox"/> Percentage of 19 year olds achi... <input type="checkbox"/> Percentage of pupils achieving ... <input type="checkbox"/> Percentage of pupils eligible fo... <input checked="" type="checkbox"/> Employment and Jobs <ul style="list-style-type: none"> <input type="checkbox"/> Employment rate <input type="checkbox"/> Number of Jobs per Working-A... <input type="checkbox"/> Number of People with Disabili... |

Matrix of Correlations

	Number of New Businesses
Business Churn Rate per 100,000 inhabitants	-0.87

Business Churn Rate per 100,000 inhabitants

-0.87

Pick as many Indicators as you like for both Rows and Columns

- Rows** — + ≡

 - Business and Economy ①
 - Business Churn Rate per 100,00... ①
 - Deaths of Business ①
 - Gross Value Added in Millions ... ①
 - Labour Productivity (Pounds pe... ①
 - Number of Business Counts per... ①
 - Number of New Business ①
 - Civic Participation ①
 - Percentage of adults who volun... ①
 - Community Safety ①
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 - Theft offences per 1,000 people ①
 - Violent incidents per 1,000 peo... ①
 - Connectivity ①
 - Average download speed (Mbit... ①
 - Percentage of premises without... ①
 - Demographics ①
 - Percentage of Individuals aged ... ①
 - Percentage of Individuals under... ①
 - Population (Total number of inh... ①
 - Earnings and Income ①
 - Average Weekly Earnings (Poun... ①
 - Gross weekly pay (Pounds) for t... ①
 - Gross weekly pay (Pounds) for t... ①
 - Inequality: Ratio of 80th Percen... ①
 - Number of children in relative l... ①
 - Education and Skills ①
 - Percentage of 19 year olds achi... ①
 - Percentage of pupils achieving ... ①
 - Percentage of pupils eligible fo... ①
 - Employment and Jobs ①
 - Employment rate ①
 - Number of Jobs per Working-A... ①
 - Number of People with Disabili... ①

Columns — + ≡

 - Business and Economy ①
 - Business Churn Rate per 100,00... ①
 - Deaths of Business ①
 - Gross Value Added in Millions ... ①
 - Labour Productivity (Pounds pe... ①
 - Number of Business Counts pe... ①
 - Number of New Business ①
 - Civic Participation ①
 - Percentage of adults who volun... ①
 - Community Safety ①
 - Public order offences per 1,000... ①
 - Theft offences per 1,000 people ①
 - Violent incidents per 1,000 peo... ①
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 - Percentage of pupils eligible fo... ①
 - Employment and Jobs ①
 - Employment rate ①
 - Number of Jobs per Working-A... ①
 - Number of People with Disabili... ①

Matrix of Correlations	Gross Value Added in Million s of Pounds	Labour Productivity (Pounds per hour worked)	Number of Business Counts per 10000 inhabitants	Number of New Business s
Business Churn Rate per 100,000 inhabitants	-0.87	0.02	-0.23	-0.87
Deaths of Business	0.84	-0.03	0.36	0.97

Yorkshire Vitality

Jobs



Yorkshire Vitality

Jobs v.1.0

Welcome to the Yorkshire Vitality Jobs (YVJ)

The Yorkshire Vitality Jobs (YVJ) is an interactive dashboard that enables users to explore, compare, and gather insights for Jobs across the **15 Local Authorities** in the **Yorkshire and the Humber** region.

- Front Page
- Overview
- Jobs by Local Authority
- Jobs by Industry
- Jobs by Neighbourhood
- Jobs Advanced Tool



Economic
and Social
Research Council



YHODA
Yorkshire & Humber
Office for Data Analytics



Local Authority Selected: **Sheffield**

Step 1: Select Your Local Authority

Before exploring the dashboard, please **select a Local Authority** from the **slicer on this page**.

This selection will be applied across all pages, ensuring a consistent and tailored view throughout your analysis.



Jobs by Local Authority

This page offers a comprehensive overview of **total employee numbers across the Local Authority**, presented in an easy-to-understand graph. Alongside, a **density map of Neighbourhoods (LSOA)** visually highlights where those jobs are concentrated, providing insight into the geographic distribution of employment within the area.

Select a Local Authorities

- Barnsley
- Bradford
- Calderdale
- Doncaster
- East Riding of Yorkshire
- Kingston upon Hull
- Kirklees
- Leeds
- North East Lincolnshire
- North Lincolnshire
- North Yorkshire
- Rotherham
- Sheffield
- Wakefield
- York

Jobs by Industry

This dynamic page allows you to explore employment patterns by **Industry (SIC codes)**, offering filters by **Section, Division, and Group** for granular analysis. You can pinpoint where specific industries, such as 'Manufacturing' or even 'Manufacturing of bakery or farinaceous products', have the most employees using the **density map of Neighbourhoods (LSOA)**. Furthermore, visualize the **eight-year employment trend (2015-2023)** for your chosen industry, providing valuable historical context and trends.

Jobs by Neighbourhood

Dive into specific local employment patterns on this page, allowing you to select an **Area (MSOA)** and then drill down into individual **Neighbourhoods (LSOA)** within it. Explore **job trends** (total number of employees) for your chosen area, visualize the precise geographic distribution of jobs on the **interactive map**, and understand the **industry sector breakdown** within that specific neighbourhood or area through a pie chart.

Jobs Advanced Tool

This advanced tool offers highly granular insights into employment data, allowing you to perform intricate analysis by simultaneously applying two powerful slicers: **Industry type** (filterable by Section, Division, and Group) and **Geographic Area** (hierarchically selectable by MSOA and individual Neighbourhoods/LSOA). Track precise **employment trends** – for instance, observing the 'Manufacturing' sector's performance within the 'Burngrave' area of Sheffield, or even down to a specific neighbourhood within Burngrave. Two supplementary **pie charts** provide immediate insights into the detailed industry composition and geographic distribution of jobs within your selected parameters.

Source

All job and employment data within the Yorkshire Vitality Jobs (YVJ) dashboard is derived from the **Business Register and Employment Survey (BRES)**. This annual survey, conducted by the Office for National Statistics (ONS), is the official source for detailed employee and employment estimates, collecting data from UK businesses registered for VAT (Value Added Tax) and/or PAYE (Pay As You Earn), which are key UK business tax and payroll schemes. Please note that the dashboard presents the total number of employees and does not distinguish between full-time and part-time roles.

Limitations

Please note that employee counts of **fewer than 10**



Job Trends for Sheffield

266520

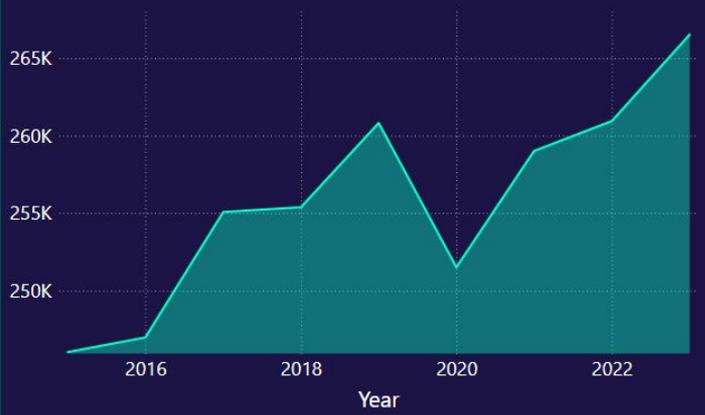
Number of employees in 2023

In Sheffield, for 2023, there are 266,520 employees. This represents a positive trend (5.97%) over the last 3 years, and a positive trend (8.32%) over the last 8 years.

▲ 5.97%
Employee Trend % (3 Years Ago)

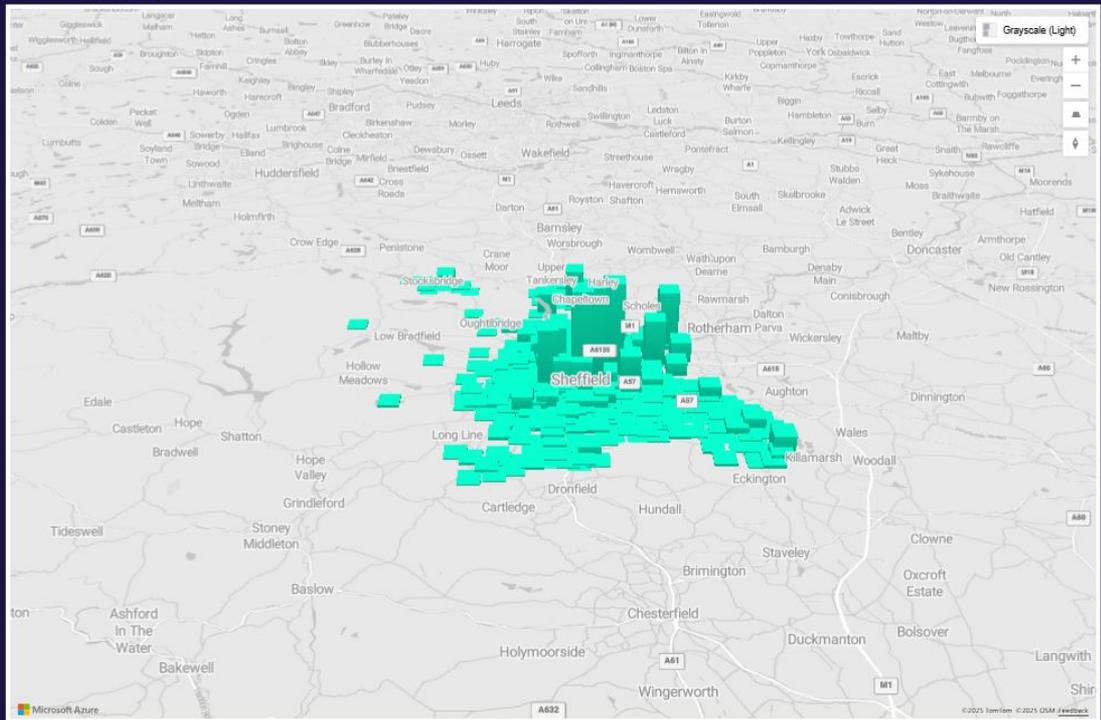
▲ 8.32%
Employee Trend % (8 Years Ago)

Evolution of Total Number of Employees in Sheffield



Job Geography for Sheffield

Number of Employees



Job Trends for Sheffield

266520

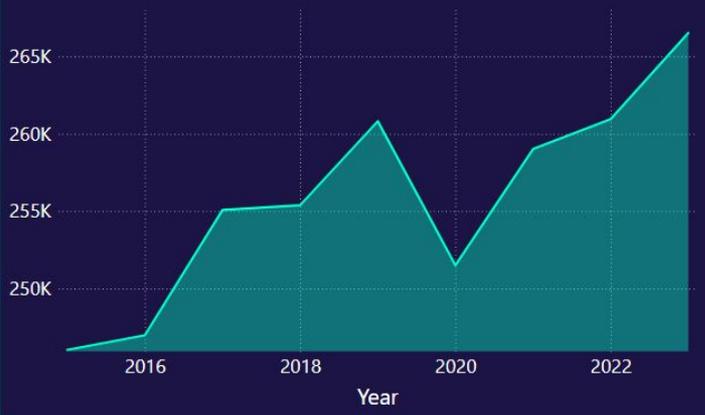
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▲ **8.32%**
Employee Trend % (8 Years Ago)

Evolution of Total Number of Employees in Sheffield



Job Geography for Sheffield

Number of Employees



Year





Select one or multiple Indu...

- Select all
- Accommodation and food serv...
- Administrative and support ser...
- Agriculture, forestry and fishing
- Arts, entertainment and recrea...
- Construction
- Education
- Electricity, gas, steam and air c...
- Financial and insurance activities
- Human health and social work ...
- Information and communication
- Manufacturing
- Mining and quarrying
- Other service activities
- Professional, scientific and tec...
- Public administration and defe...
- Real estate activities
- Transportation and storage
- Water supply; sewerage, waste...
- Wholesale and retail trade; rep...

Evolution and Geography Analysis of
Education Section selected.

35215 : Number of Employees in 2023

4.93% ▲
Employee Trend % (3 Years Ago) Industry

7.10% ▲
Employee Trend % (8 Years Ago) Industry



Year								
2015	2016	2017	2018	2019	2020	2021	2022	2023



Select one or multiple Area...

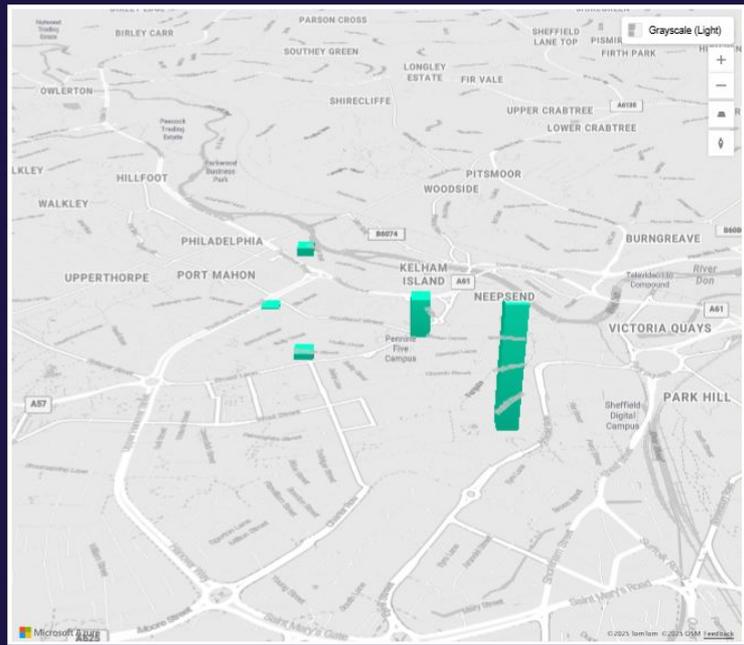
- Select all
- Arbourthorne
- Batemoor & Jordanthorpe
- Beauchief
- Beighton
- Bents Green & Millhouses
- Birley
- Brightside & Wincobank
- Brincliffe & Sharrow Vale
- Broomhall
- Broomhill & Lower Crookesmo...
- Burngreave & Grimesthorpe
- Cathedral & Kelham
- Chapeltown
- Charnock & Basegreen
- Crabtree & Fir Vale
- Crookes
- Darnall
- Deepcar & Bolsterstone
- Devonshire Quarter

Evolution and Geography Analysis of Jobs for Sheffield in *Cathedral & Kelham Area* selected.

25260 : Number of Employees in 2023

12.22% ▲
Employee Trend % (3 Years Ago) Geography

-10.19% ▼
Employee Trend % (8 Years Ago) Geography





Show filters

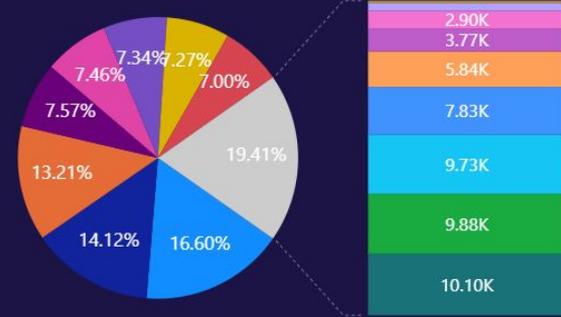
Sheffield

Industry selected: All Industries selected.

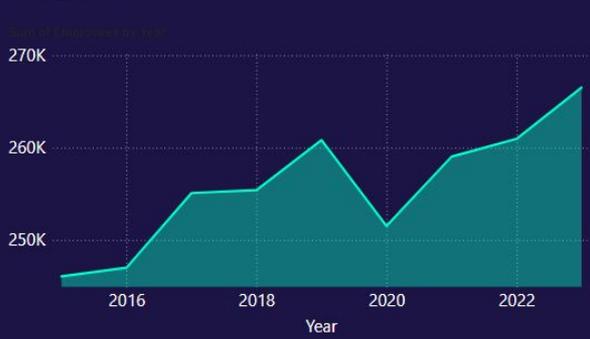
Geography selected: All Areas selected.

Evolution and Geography Analysis of number of employees for *All Industries selected.* and *All Areas selected.*

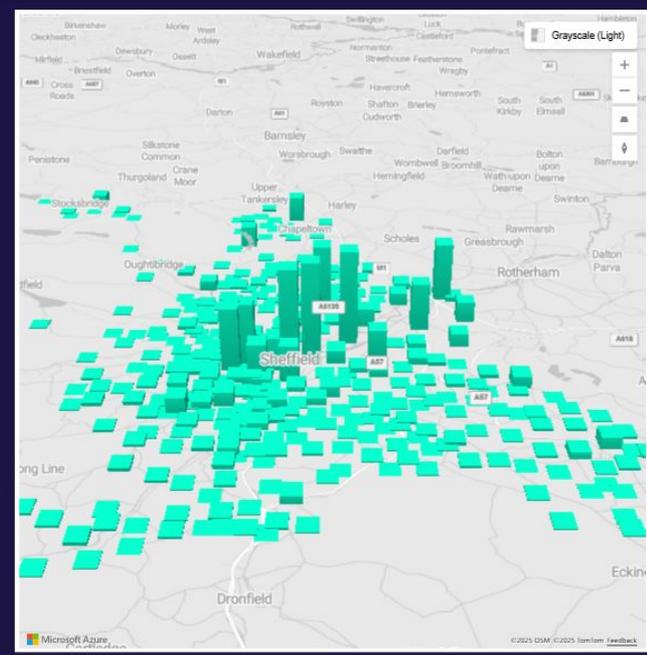
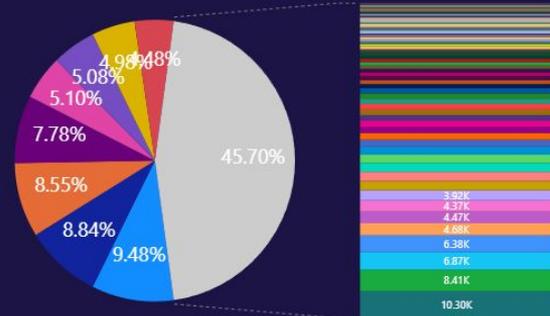
Percentage (%) of Employees by Industry



266520 Number of Employees in 2023



Percentage (%) of Employees by Area



Select an Industry

- Select all
- Accommodation and food service activities
- Administrative and support service activities
- Agriculture, forestry and fishing
- Arts, entertainment and recreation
- Construction
- Education
- Electricity, gas, steam and air conditioning su...

Select a Geography

- Select all
- Arbourthorne
- Batemoor & Jordanthorpe
- Beauchief
- Beighton
- Bents Green & Millhouses
- Birley
- Brightside & Wincobank
- Brincliffe & Sharrow Vale
- Broomhall

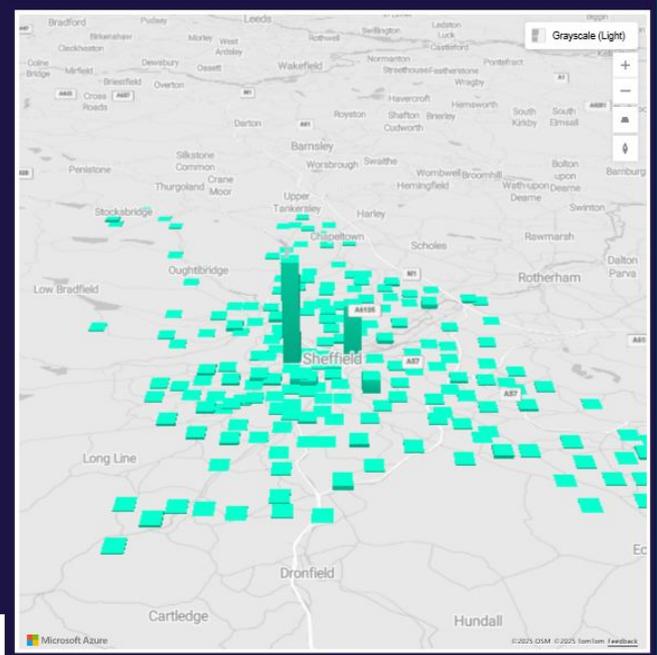
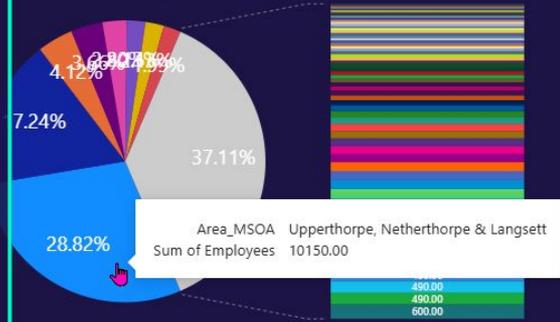
← Industry selected: Education Section selected.

← Geography selected: All Areas selected.

Percentage (%) of Employees by Industry



Percentage (%) of Employees by Area



Year						
2015	2016	2017	2018	2019	2020	2021
2022	2023					

Yorkshire Vitality

Industry



Yorkshire Vitality Industry

v.1.0

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[Overview](#)

[Businesses by Local Authority](#)

[Businesses by Industry](#)

[Businesses by Area](#)

Welcome to the Yorkshire Vitality Industry (YVI)

These dashboards provide insights into business activity across the 15 local authorities in Yorkshire and the Humber. They present the **number of businesses by industry and area (MSOA)** from 2016 to 2024, with additional breakdowns by **business turnover**. Use this tool to explore local economic trends and growth patterns.



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Front Page

Overview

Businesses by Local Authority

Businesses by Industry

Businesses by Area



Select a Local Authority

Barnsley	Bradford	Calderdale	Doncaster	East Riding of Yorkshire
Kingston upon Hull	Kirklees	Leeds	North East Lincolnshire	North Lincolnshire
North Yorkshire	Rotherham	Sheffield	Wakefield	York

Businesses by Local Authority

This page provides an in-depth look at **business activity within each Local Authority** across Yorkshire and Humber. You can explore the **total number of businesses over the past nine years** through a trend graph. We also break down business counts into three distinct **turnover bands: Micro** (under £1M), **Small** (under £10M), and **Medium & Large** (over £10M), each with its own dedicated graph. For quick insights, Key Performance Indicators (KPIs) summarize business changes for both the last three and nine years. Finally, a detailed **density map** visualizes the concentration of businesses at the MSOA level.

Businesses by Industry

Dive into an in-depth view of business activity segmented by Industry Sector across Yorkshire and Humber. By using the **Industry filter**, you can explore the total number of businesses within your chosen sector over the past nine years, alongside detailed breakdowns of business counts by turnover band. KPIs summarize changes for both the last three and nine years within the selected industry, while a comprehensive density map visualizes the concentration of businesses from your chosen industry at the MSOA level, highlighting their geographic distribution.

Businesses by Area

This page offers granular insights into **business activity by Area (MSOA)** across Yorkshire and Humber. Select an Area (MSOA) filter to view the total number of businesses over nine years, detailed breakdowns by turnover band (Micro, Small, Medium & Large), and KPIs for recent changes within your chosen MSOA. A map further visualizes the business density of the selected area. This enables a clear understanding of localized economic trends and concentrations.

Businesses Advanced Tool

This advanced page offers more granular insights into business data, allowing you to perform intricate analysis by simultaneously applying two slicers: **Industry** (by Sector) and **Geographic Area** (by MSOA). You can track precise business trends; for instance, observing the 'Manufacturing' sector's performance within a specific MSOA. Two supplementary pie charts provide immediate insights into the detailed industry composition and geographic distribution of businesses within your selected parameters.

Source

This report's data comes from the **Inter-Departmental Business Register (IDBR)**, a comprehensive ONS list of UK businesses registered for VAT/PAYE. It captures active enterprises (entire businesses, including all sites) each March. Turnover figures, based primarily on VAT returns, represent total UK turnover. Please note these are mainly from administrative sources and should be used with caution as independent validation isn't always possible. For full details on data quality and methods, you can refer to the ONS's "UK Business: Activity, Size and Location" publication and its Quality and Methodology Information (QMI) report.

Limitations

From a YHODA perspective, several key limitations should be considered regarding this dataset. Firstly, business counts



Total Businesses Trends

14750

Total Number of Businesses in 2024 in Sheffield

3.84% ▲

Businesses Trend % (3 Years Ago)

12.90% ▲

Businesses Trend % (8 Years Ago)

Number of Businesses from 2016 to 2024



Sheffield

Number of Businesses in 2024 by Turnover band

Micro (under 1M)
13400

Small (1M to under 10M)
1225

Medium and Large (10M+)
125

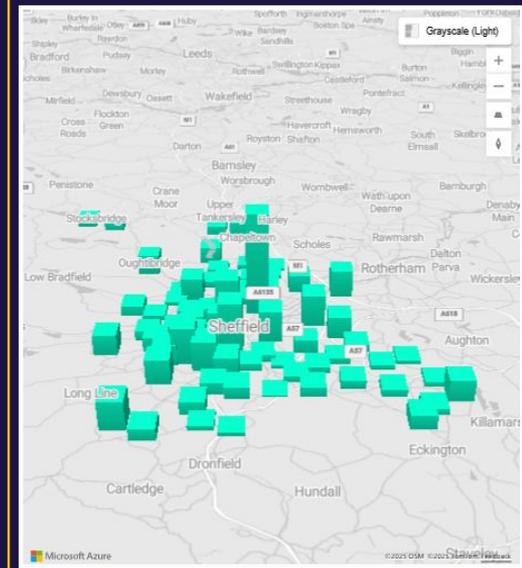
Number of Businesses, Trends by Turnover band



KPI	Micro (under 1M)	Small (1M to under 10M)	Medium and Large (10M+)
8-Year % Change in Businesses	11.07% ▲	33.88% ▲	47.06% ▲
3-Year % change in Businesses	2.52% ▲	19.51% ▲	13.64% ▲

Business Geography - Sheffield

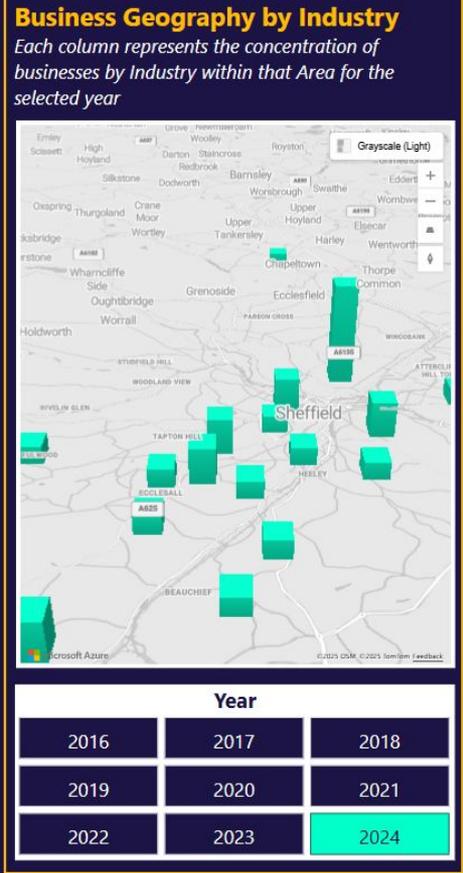
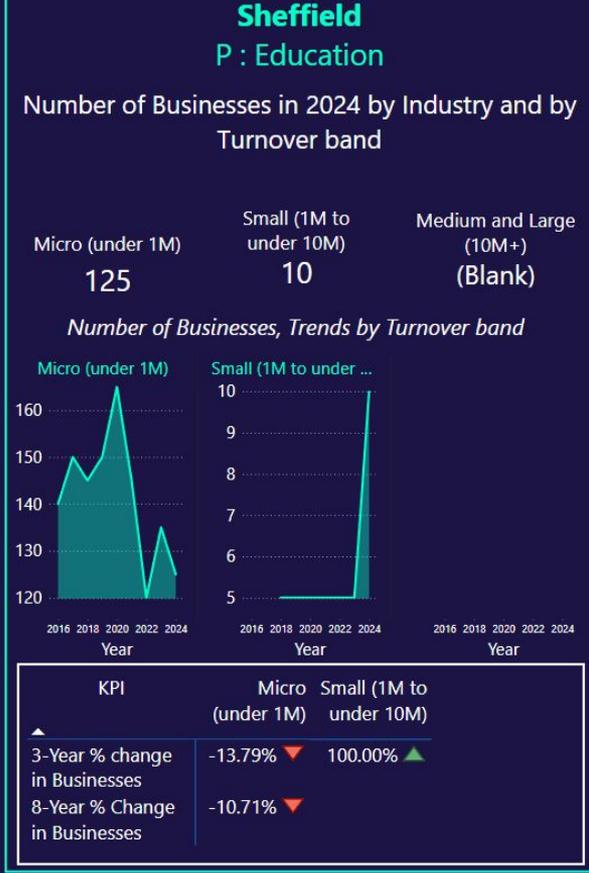
Each column represents the concentration of businesses within that Area for the selected year



Year		
2016	2017	2018
2019	2020	2021
2022	2023	2024



- Industry**
- A : Agriculture, forestry a...
 - B : Mining and quarrying
 - C : Manufacturing
 - D : Electricity, gas, steam ...
 - E : Water supply; sewerag...
 - F : Construction
 - G : Wholesale and retail t...
 - H : Transportation and st...
 - I : Accommodation and f...
 - J : Information and com...
 - K : Financial and insuranc...
 - L : Real estate activities
 - M : Professional, scientifi...
 - N : Administrative and su...
 - O : Public administration ...
 - P : Education
 - Q : Human health and so...
 - R : Arts, entertainment an...
 - S : Other service activities





Pick an Area (MSOA)

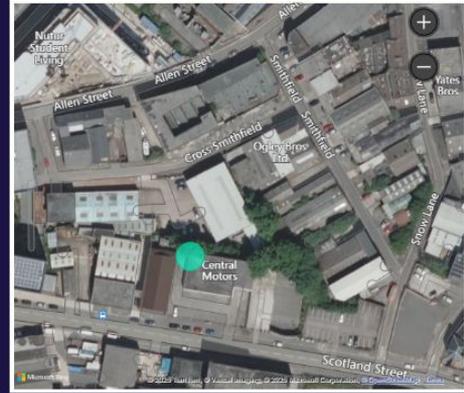
- Arbourthorne
- Batemoor & Jordanthorpe
- Beauchief
- Beighton
- Bents Green & Millhouses
- Birley
- Brightside & Wincobank
- Brincliffe & Sharrow Vale
- Broomhall
- Broomhill & Lower Crookesm...
- Burngreave & Grimesthorpe
- Cathedral & Kelham
- Chapeltown
- Charnock & Basegreen
- Crabtree & Fir Vale
- Crookes
- Darnall
- Deepcar & Bolsterstone
- Devonshire Quarter
- Dore & Whirlow
- Ecclesall & Greystones
- Ecclesfield South
- Endcliffe & Ranmoor
- Firth Park

Sheffield

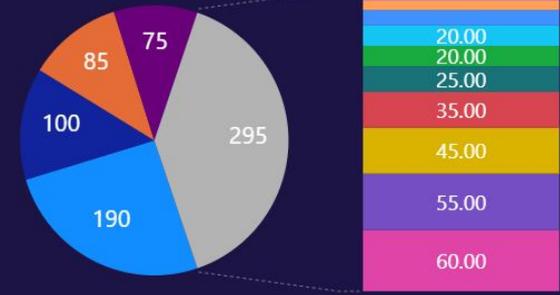
Cathedral & Kelham

Total Number of Businesses in
Cathedral & Kelham
(2024):

745



Industries in the Area (MSOA) selected (2024)
Number of Businesses by Industry (2024)



Evolution of Total Number of Businesses
in Cathedral & Kelham:



4.93% **Businesses Trend % (3 Years Ago) by MSOA**

4.93% **Businesses Trend % (8 Years Ago) by MSOA**

Evolution of Number of Businesses by **Turnover Band** in
Cathedral & Kelham



Yorkshire Vitality

Neighbourhoods



Yorkshire Vitality

Neighbourhoods

v.1.0

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[Overview](#)

[Neighbourhoods](#)



Welcome to the Yorkshire Vitality Neighbourhoods (YVN)

The Yorkshire Vitality Neighbourhoods (YVN) is an interactive dashboard designed to help you explore and understand the vitality of neighbourhoods across the Yorkshire and the Humber region. It brings together **9 key indicators** across **Demographics, Society, Energy, and Environmental Transport** for every **Neighbourhood (LSOA)**.



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Office for Data Analytics



Type a Postcode



Postcode:

LS1 1AA

Local Authority:

Leeds

Area (MSOA):

Leeds City Centre

Neighbourhood:

E01033008

Introduction

The **Yorkshire Vitality Neighbourhoods (YVN)** dashboard offers detailed insights into **nine key indicators** across **Neighbourhoods (Lower Layer Super Output Areas – LSOAs)** in **all Local Authorities within the Yorkshire and Humber region**.

Data coverage varies by indicator, spanning from **2011 to 2025**. To make navigation easier, the dashboard uses **Postcode-based filters**. However, results reflect conditions across the **entire Neighbourhood (LSOA)** associated with that postcode—not the postcode address itself. It's also crucial to note that **some**

Claimant Count (Age 16–64) (People)

The **Claimant Count (Age 16–64)** indicator tracks the number of people claiming unemployment-related benefits—primarily **Universal Credit** and **Jobseeker's Allowance** within each Neighbourhood (LSOA). It reflects those actively seeking work and is updated **monthly**, with data available from **June 2013**. This measure is based on administrative benefit records and includes individuals aged **16 to 64**.

Number of Licensed Ultra Low Emission Vehicles (ULEVs)

The **Number of Licensed Ultra Low Emission Vehicles (ULEVs)** indicator shows the **quarterly** number of ultra low emission vehicles, plug-in hybrids and electric cars, registered to addresses in each LSOA, based on **DVLA** data from **December 2011** onward. Counts reflect the **registered keeper's** address,

Demographic Indicators

We enclose 3 demographic Indicators: **Total Population (People)**, **Number of Individuals Aged 16 to 64 (People)**, and **Working-Age Population (%)**. The Total Population indicator provides an estimate of the number of usually resident people in each Neighbourhood (LSOA), based on official mid-year population estimates from the **Office for National Statistics (ONS)**. These estimates follow the UN definition of usual residence and exclude short-term visitors. Figures are produced annually and reflect the population as of 30 June each year, using data from the most recent Census combined with administrative sources, such as health registers. As of mid-2022, all estimates are aligned to the 2021 LSOA geography. The Number of Individuals Aged 16 to 64 indicator is derived from the same ONS mid-year population estimates used in the Total Population measure. It specifically captures the count of working-age residents, those aged 16 to 64. Working-Age

Energy Indicators

The four indicators are drawn from **official domestic electricity consumption statistics** at the Neighbourhood level (**LSOA**) in Great Britain, produced annually by the **Department for Energy Security and Net Zero**. These are based on **meter-level data** from electricity suppliers and, from 2015 onwards, are mapped to the updated **LSOA 2021 geography**. The data reflect usage from **non-half-hourly domestic meters**, which account for nearly all residential consumption. The indicators include the **number of meters** in each LSOA, the **total electricity consumption** in kilowatt hours (kWh), and both the **mean** and **median consumption per meter**. While the mean gives an average across all meters, the median offers a central value that is less affected by

Type a Postcode

Neighbourhood:

E01033008

Population (2022)

2114

Local Authority:

Leeds

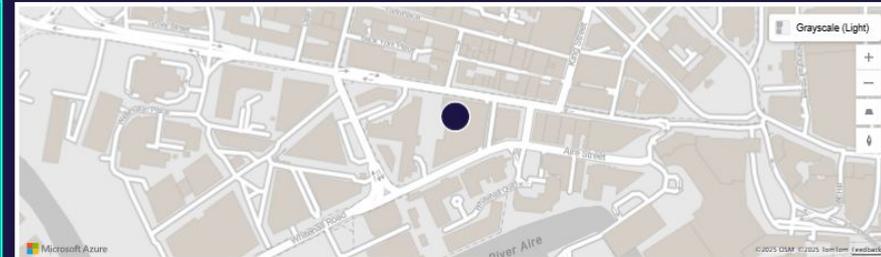
Area (MSOA):

Leeds City Centre

For each indicator, you'll find a graph illustrating its trend, alongside two key performance indicators (KPIs): a year-on-year change and a 5-year change.

Please note that for approximately 1.6% of LSOAs, the geographical boundaries for Claimant Count and ULEV data may differ from the rest of Indicators, and in such cases, a message showing both relevant LSOA codes will be displayed here: E01033008

Number of licenced ultra low emission vehicles (ULEVs)



Total Neighbourhood Population (People)



Working age Population 16-64 years (People)



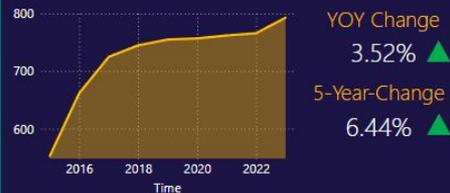
Working age Population Percentage (%)



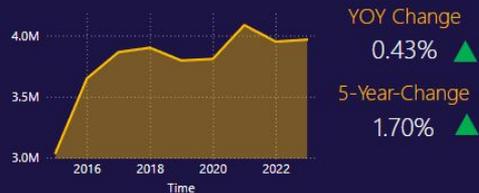
Claimant Count 16-64 years (People)



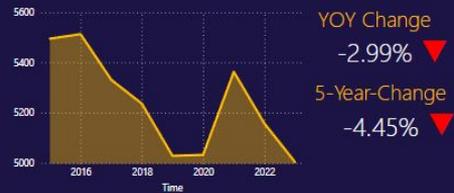
Energy: Number of Meters



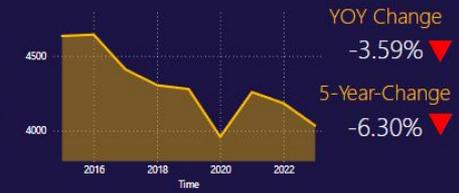
Total consumption (kWh)



Mean consumption (kWh per meter)



Median consumption (kWh per meter)



Yorkshire Vitality

Forecasting



Yorkshire Vitality Forecasting

v.1.0

Front Page

Overview

Forecasting



Welcome to the Yorkshire Vitality Forecasting (YVF)

The Yorkshire Vitality Forecasting (YVF) is an interactive dashboard enabling users to explore forecasts for **Population**, **Claimant Count**, and **Gas Emissions** across the 15 Local Authorities in the Yorkshire and the Humber region. The duration of data forecasts varies by variable.



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Select a Local Authority

Barnsley	Bradford	Calderdale	Doncaster	East Riding of Yorkshire
Hull	Kirklees	Leeds	North East Lincolnshire	North Lincolnshire
North Yorkshire	Rotherham	Sheffield	Wakefield	York

Forecast Methodology

Our approach to forecasting key variables by Local Authority involved a comprehensive evaluation of ten distinct models during the initial scoping phase. These models included traditional econometric models, exponential smoothing techniques, and three machine learning models. Following rigorous testing and validation, the Holt-Winters model was selected for forecasting Population and Gas Emissions due to its superior robustness and consistency. For Claimant Count forecasting, a Multilayer Perceptron (MLP) machine learning model was chosen. This selection was based on its overall best performance across various metrics, including Mean Absolute Error (MAE), Root Mean Squared Error (RMSE), Mean Absolute Percentage Error (MAPE), Mean Absolute Scaled Error (MASE), and Symmetric Mean Absolute Percentage Error (sMAPE).

Bottom-Up Forecasting

A critical aspect of our methodology was to forecast each variable at a highly granular level. To achieve this, we generated individual forecasts for each Lower Super Output Area (LSOA) for each Local Authority in the Yorkshire and the Humber region. **These disaggregated LSOA forecasts were then aggregated** to produce the final projections for each respective Local Authority, ensuring a bottom-up approach that captures local nuances for each variable.

Limitations: Univariate Modelling and External Factors

It is important to acknowledge that the current forecasts for these variables are based on univariate time series models. This means that **each model relies solely on its respective historical data** and does not account for external factors or covariates that could influence the trends of these variables, such as economic shifts, policy changes, or significant demographic or environmental events. Consequently, unforeseen major events impacting the dynamics of these variables could potentially alter their direction for the upcoming years, diverging from our current projections. At this stage, univariate models were chosen due to their demonstrated ability to produce lower forecast errors in our initial testing and their utility as a foundational starting point. This approach lays the groundwork for future iterations of the dashboard, where more sophisticated multivariate models incorporating external factors could be developed to enhance predictive accuracy and provide a richer understanding of the drivers behind each variable.



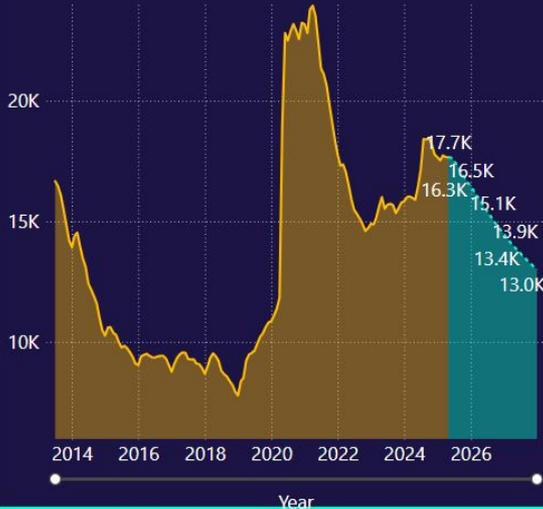
Population forecasting for Sheffield *(People)*

The Holt-Winters model's average Mean Absolute Percentage Error (MAPE) for each population projection year is 2.06 % in 2023, rising to 3.35 % in 2024, 4.67 % in 2025, 6.13 % in 2026 and 7.30 % in 2027, illustrating growing uncertainty over longer horizons. Remember that a 3 % error equates to 3,000 inhabitants per 100,000, so even small percentage errors can represent substantial absolute differences.



Claimant count (age 16-64) forecasting for Sheffield *(People)*

The MLP model's accuracy in forecasting the 16-64 claimant count starts strong but deteriorates sharply as the projection window lengthens. In 2025 the model achieves an average MAPE of just 3.27 percent, but error more than quadruples to 13.22 percent in 2026 and nearly doubles again to 25.30 percent by 2027. This steep rise highlights that, while short-term predictions remain reasonably reliable, medium- and long-term forecasts become highly uncertain.



Gas emissions forecasting for Sheffield *(Tonnes of carbon dioxide (CO2) emissions per capita)*

The Holt-Winters model's average error (MAPE) for gas-emissions forecasts starts at a modest 2.64 percent in 2023 but then climbs sharply to 7.92 percent in 2024 before easing back to 6.17 percent in 2025. Error then spikes to a peak of 13.70 percent in 2026, with a slight improvement to 13.34 percent in 2027. This volatility highlights the model's solid short-term accuracy but growing uncertainty—and even small percentage errors can equate to thousands of metric tons of CO₂-equivalent.

