Mapping the UK Games Industry

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Nesta

Context

Exam question: To measure and map a fast moving, innovative, entrepreneurial sector.

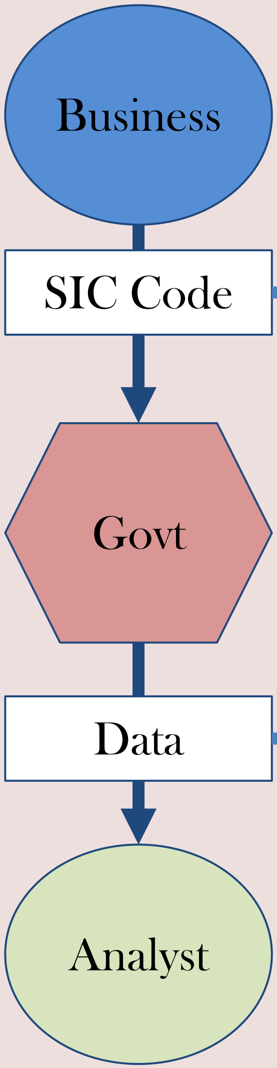
Opportunity: The ‘big data’ revolution

Audiences:

- Policymakers
- Industry
- Other innovation agents
- Researchers

Tasks: **Finding** and **mapping**.

How do we FIND UK games companies?
The traditional way



Do these SIC codes capture games companies?

Some issues:

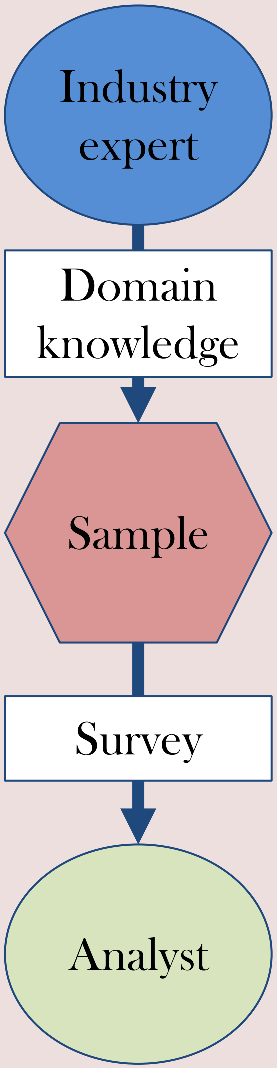
1. **Inadequate SIC codes:** Games SIC codes only appeared in 2007.
2. **Misclassification:**
   - Companies have no incentives to select the right SIC code.
   - Companies straddle sectors (educational games, games app developers etc.)

Is this data relevant?

Some issues:

1. Suspicion it misses smaller companies
2. Lags in the publication of the data (~1/2 years)
3. Data only available in an aggregate way. Can’t identify companies (due to disclosure issues)
4. Data doesn’t include industry-relevant questions

Surveys



Excellent source of data, tried and tested methodology

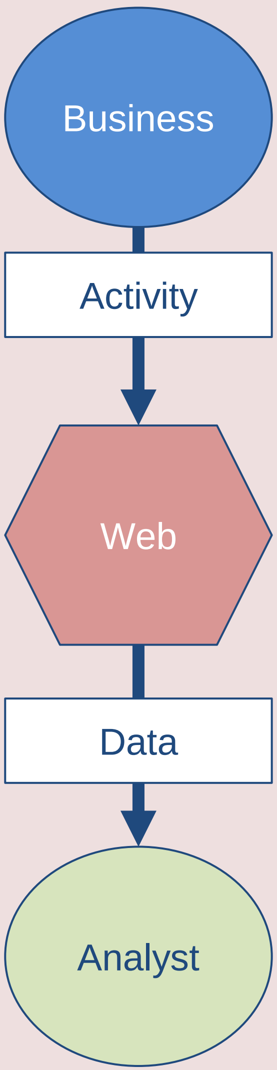
- Used in TIGA games industry census, Next Gen and other reports.
- Allows targeting existing companies, and obtaining very relevant information.

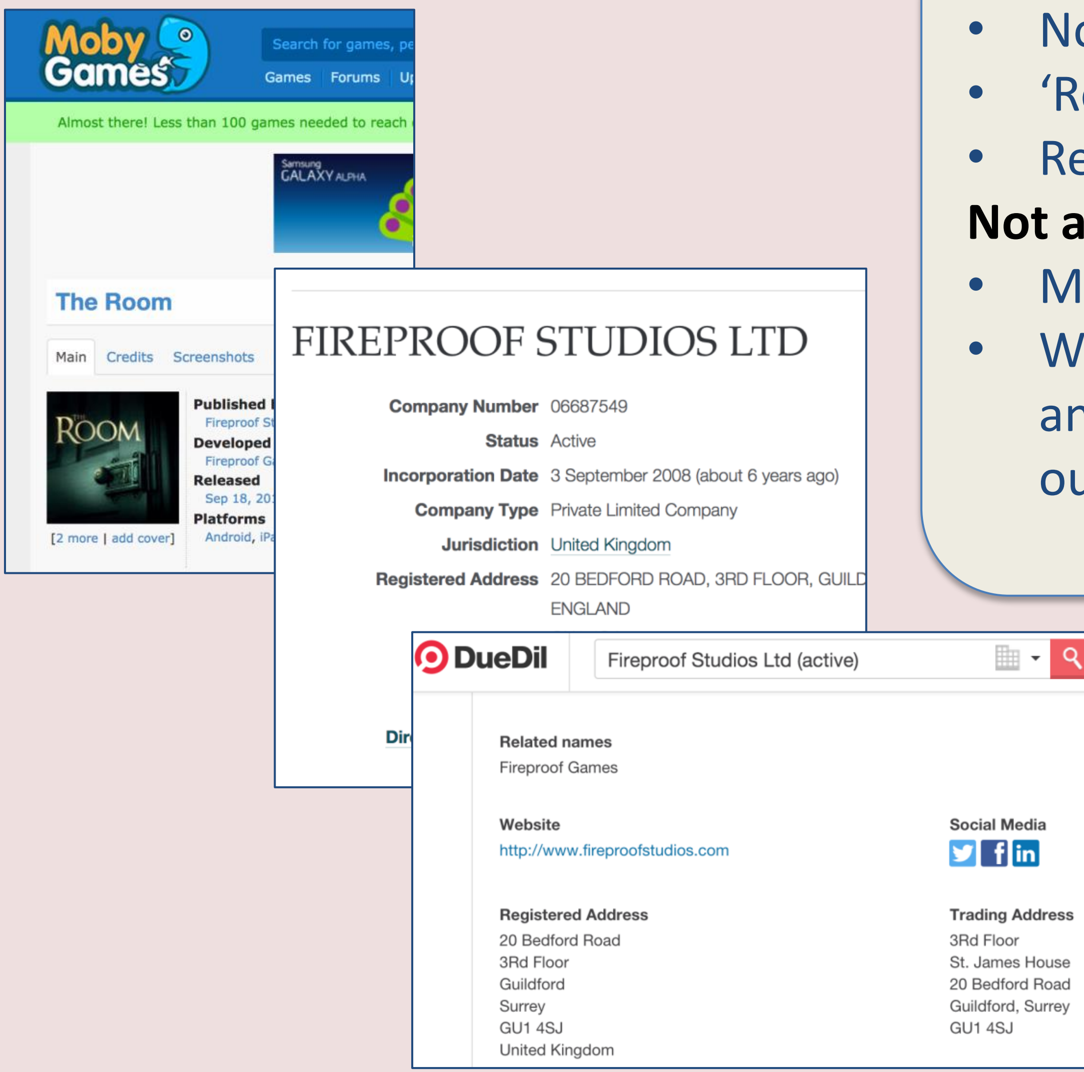
Some issues here:

- Very expensive (especially if you want to repeat it)
- Very low response rates
- **Conventional approach -> We wanted to try something new.**

WHAT WE DID

The big/found data way





Advantages

- No SIC codes
- 'Real-time' data
- Relevant data

Not a silver bullet

- Messy data
- What goes in and what goes out?

Data collection process

Data collection and processing	Company numbers
We select and scrape online data sources. We identify 226,302 unique games titles, their developers and publishers. We identify UK companies in Games SIC codes.	73148
We identify which of the companies in the company list are UK-based using Open Corporates (a web portal to query the business registries of different countries). We quality-assure the matching process using SIC codes and word similarity.	8880
We validate company identities through a web search, and use decision tree methods to identify non-validated companies that have a high probability of being games companies.	2225
We undertake final quality assurance and sense-checking of the data, removing inactive companies and extracting additional information from DueDil, a platform that provides comprehensive access to Companies House records.	1902

Master company dataset including... Location, incorporation date and platform specialisation, financials (for larger companies)

\+

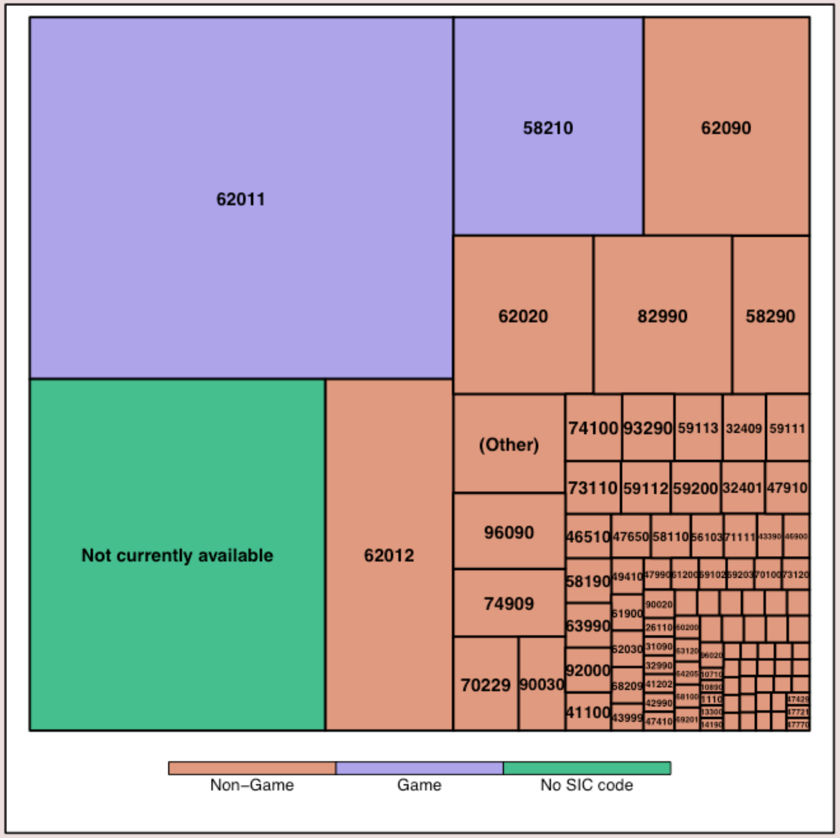
Additional scraped data (UCAS)

Secondary data (ONS, Ofcom)

Geographical metadata (ONS, Ordnance Survey)

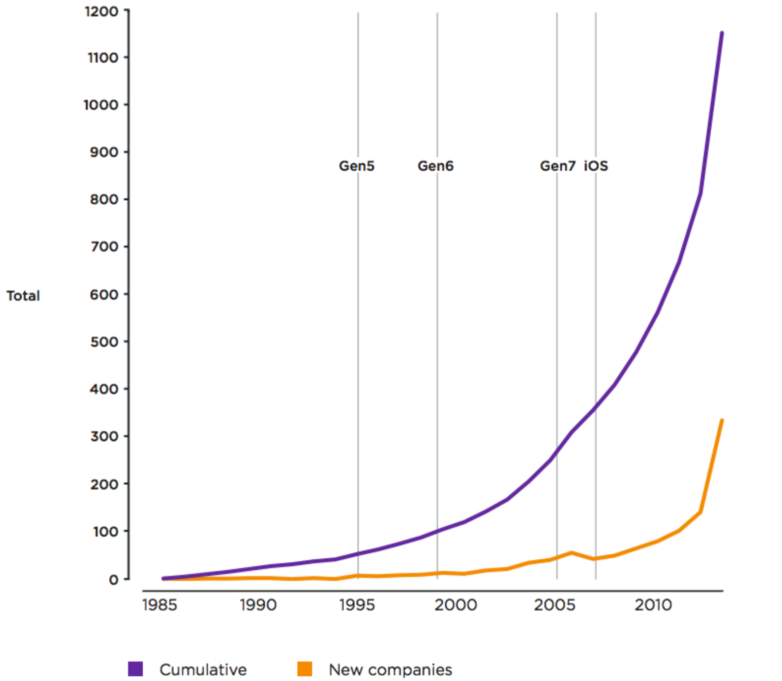
Our findings: coverage

- Our approach identifies 1902 companies: ~ 40% more companies than official surveys
- Only around 1/3rd of our dataset is covered by official games SIC codes.



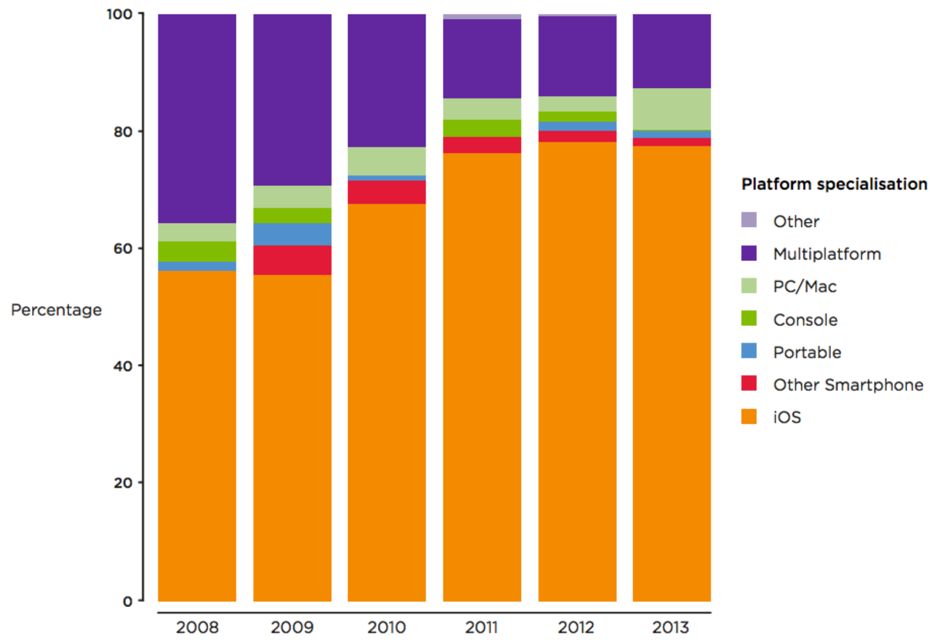
Our findings: expansion, innovation

Figure 2.4: **Video games company incorporations (1985–2011)**



Source: **Nesta (2014)**

Figure 2.5: **Company incorporations by platform specialisation and year (per cent of total, 2008–2013)**



Source: **Nesta (2014)**

2011-2013 sector grew 22% in company numbers (15x rest of the economy)

2/3 companies started in 2000s (and 8/10 in the 2010s) are iOS developers.

How do we MAP UK games companies?

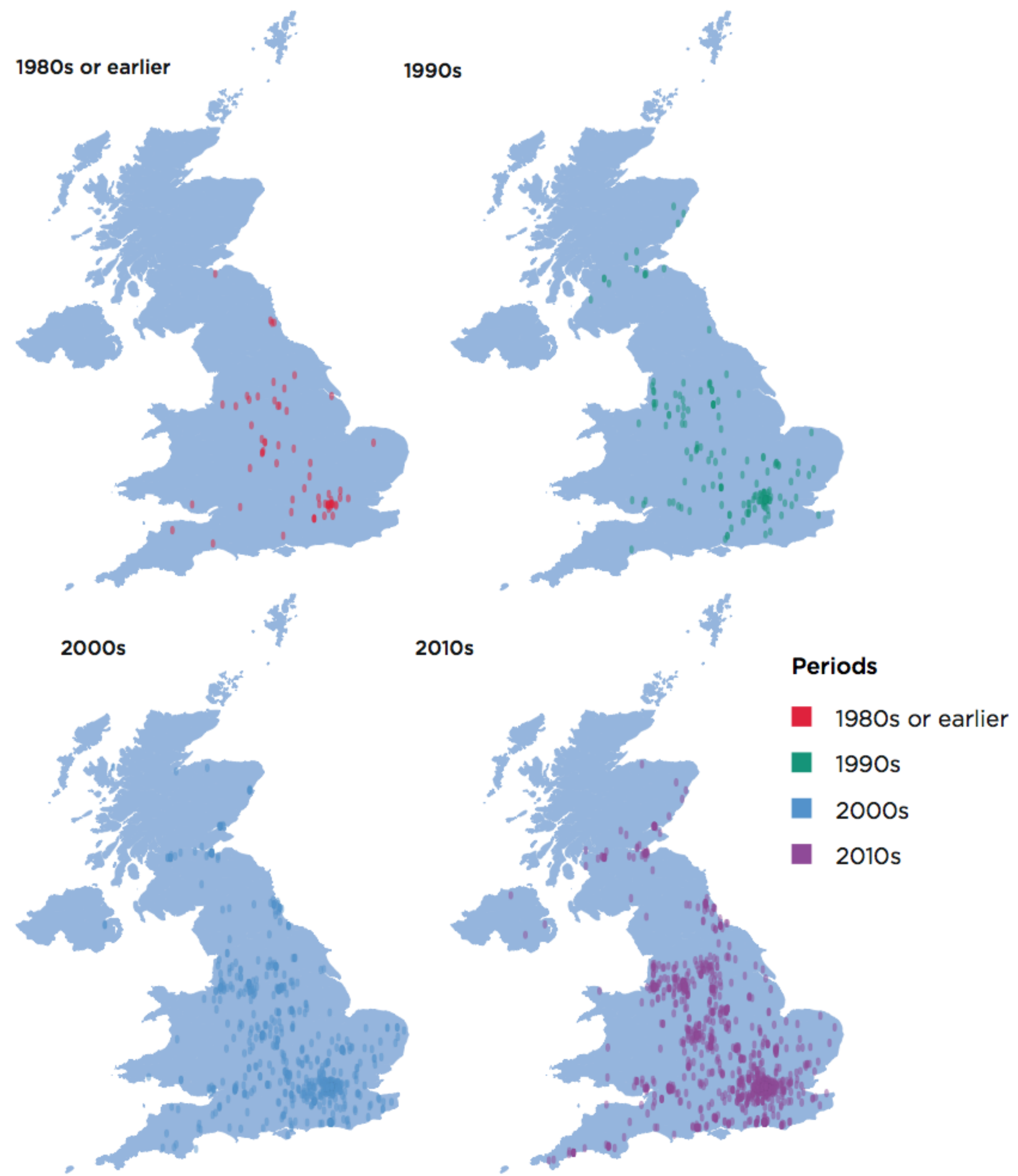
In a data-driven way: We use data about games production activity (including company numbers and employment) to identify hubs of activity.

Using standardised geographies: Travel To Work Areas

Focusing on specialisation, instead of simply mass: We normalise by the size of the local economy.

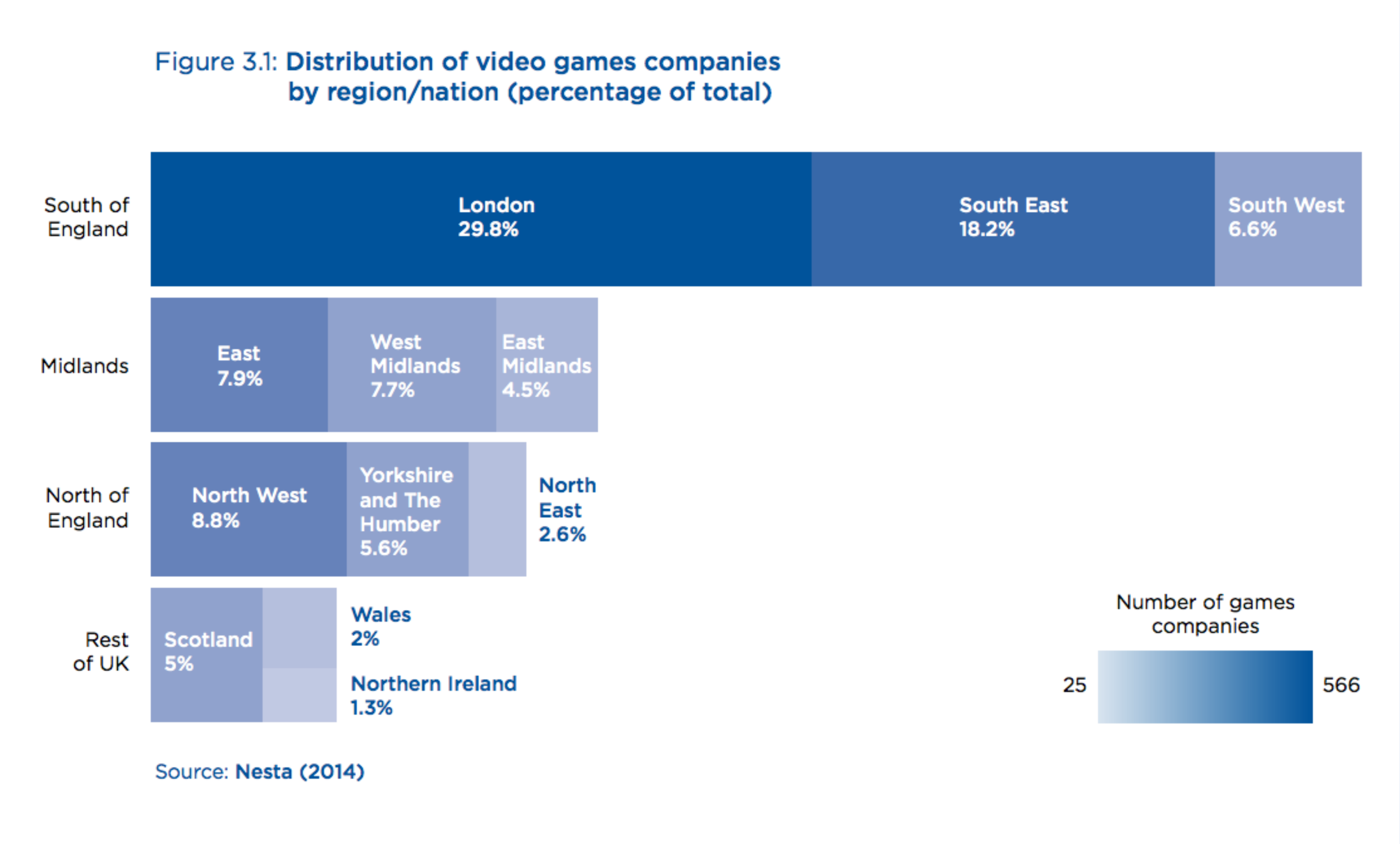
This is an efficient approach but it isn't perfect -> Maybe some clusters don't respect TTWA boundaries?

Map 3.1: **Video game incorporation across the UK by decade**



Source: **Nesta (2014)**

Distribution of regional activity

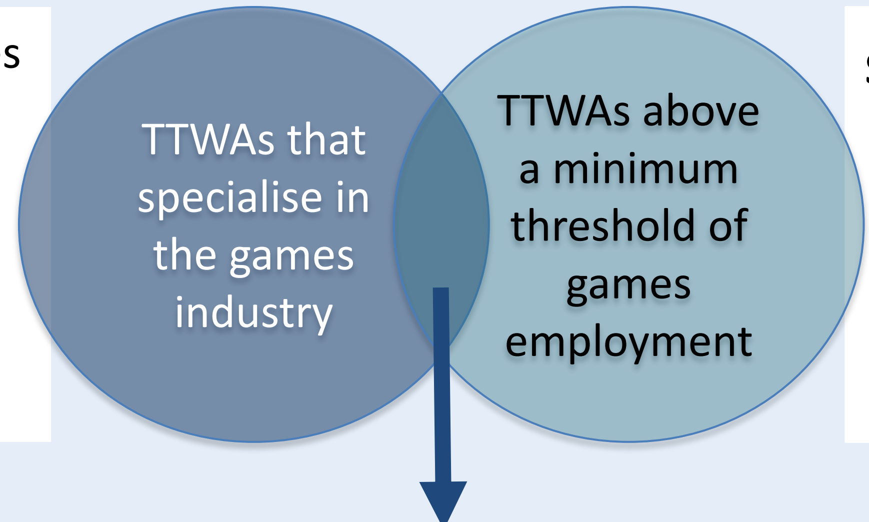


Concentrated in London and the South East…although to a lesser degree than the creative industries overall.

What/where are the game-making hubs?

We define game-making hubs as locations with a critical mass of games jobs and companies. ***This is an economic definition based on the data, not a policy definition based on the existence of initiatives to develop hubs.***

Source: Nesta games industry data
Purpose: Not just capture big economies with many companies in all sectors



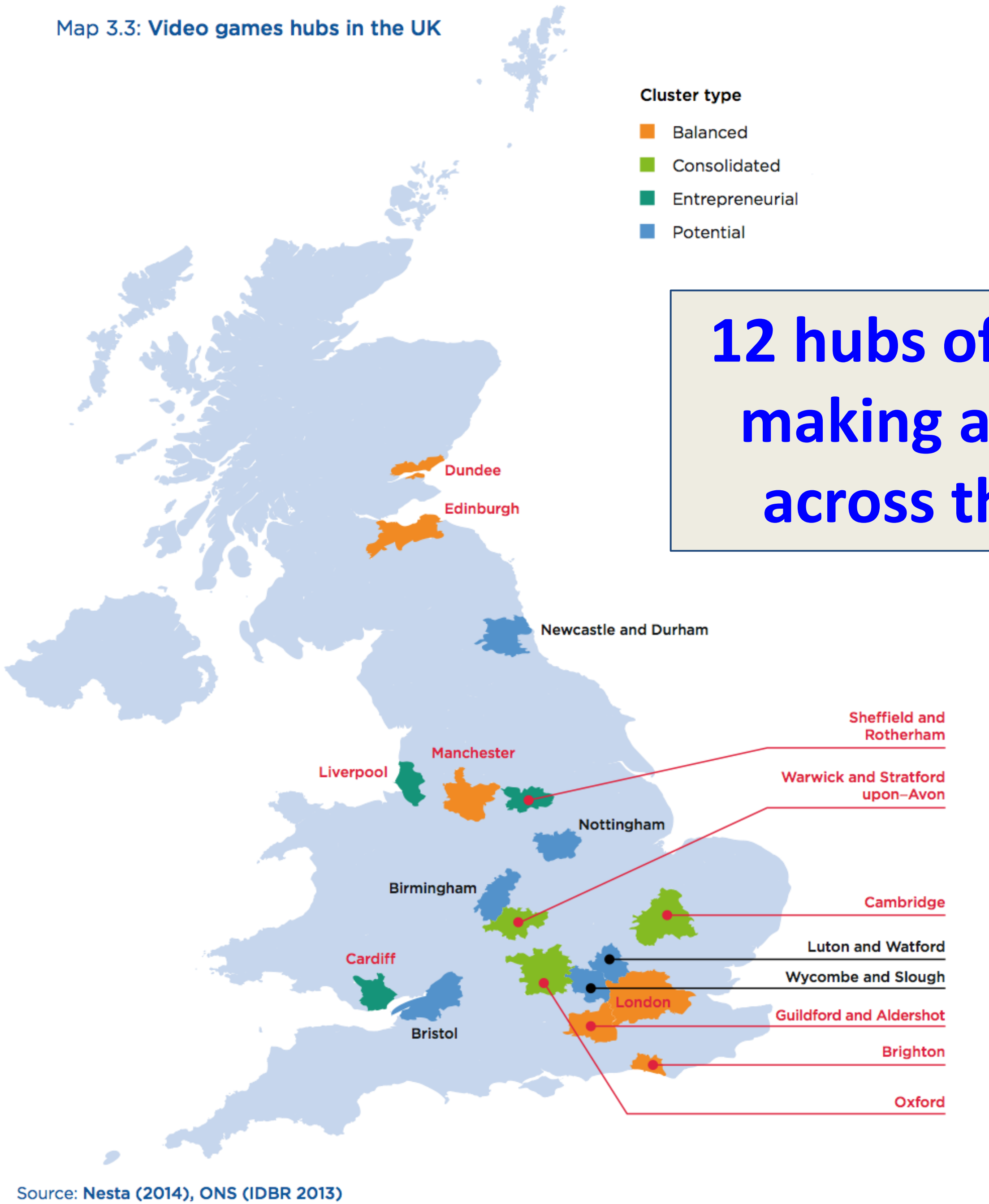
Source: Official BRES data
Purpose: Capture places with a critical mass of activity. We use government data because it beats the data we can take from Companies House

18 locations

We compare their levels of games activity (in company numbers and employment) and classify them in 4 groups

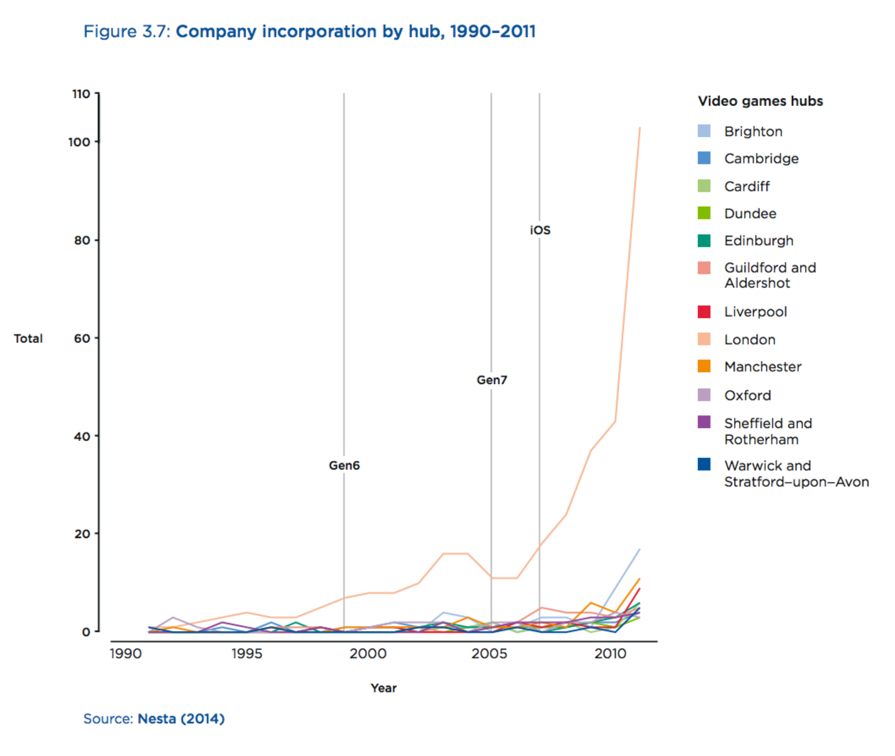
Employment levels

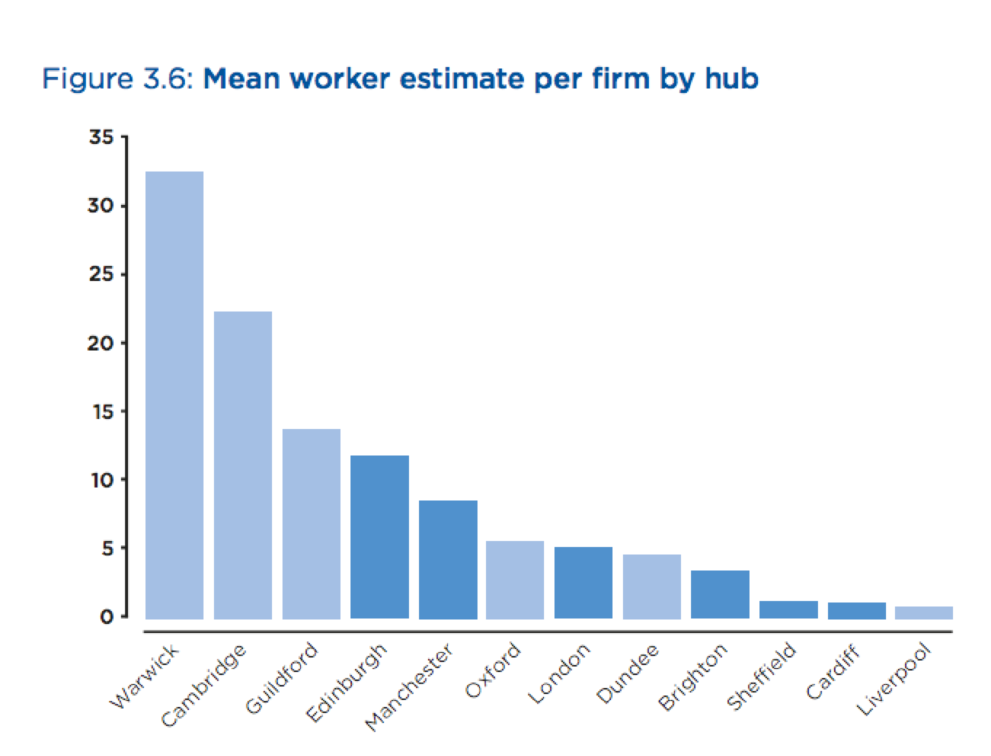
Company numbers	**Low**	**High**
Low	Potential	**Consolidated**
High	**Entrepreneurial**	**Balanced**



12 hubs of games making activity across the UK

Evolution and structure of these games hubs…





iOS specialist, creatively diverse hubs have "exploded" in the late 2000s

They tend to be dominated by smaller, in many cases micro, businesses -> scaling those up and making them sustainable might be a challenge going ahead

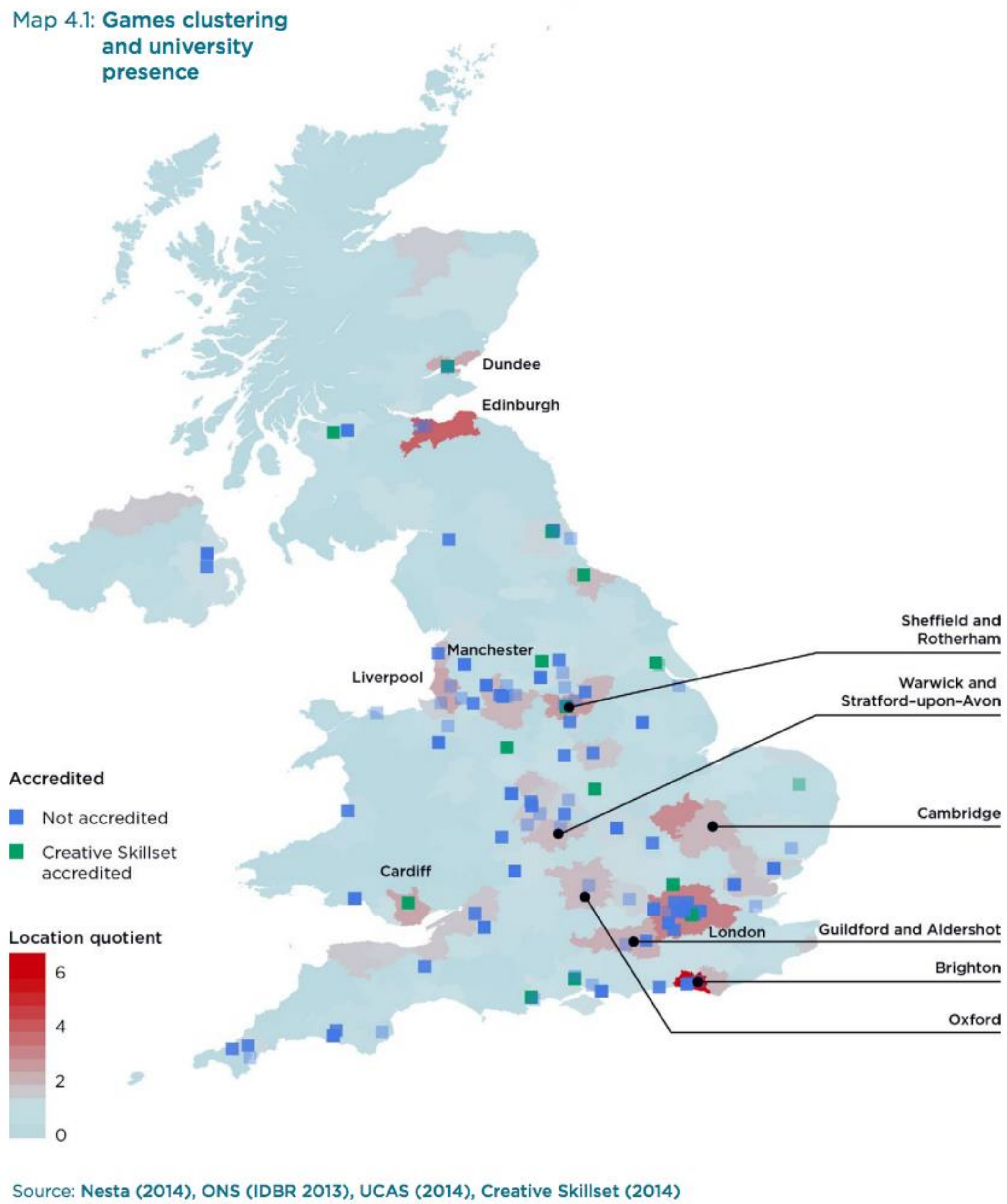
From where to why: what drives games clustering?

We have started exploring this by combining our data with open government data (ONS, Ofcom, UCAS)

Co-location: Games companies co-locate with other creative industries like Design, Advertising, Software, Music or Film, Video and TV: **Games industry is an integral part of UK's creative economy**

Broadband: We find a link between household broadband speeds and games clustering.

Education: Stronger games clustering in areas with a supply of specialist talent.



Conclusion

Method

- Accessing and using web data to map an innovative sector like games has challenges, but also shows potential.

State of the industry

- Our data reveals an industry in the midst of an entrepreneurial boom -> disruption, creative crossover, also fragmentation.

Geography

- Although London + South dominate we see thriving hubs elsewhere, from Wales to Scotland and the North. Their contexts and structures are different, and so should be the policies to support them.

Policy

- Local infrastructures matter – creative spillovers + talent + broadband

Next steps

- We are scratching the surface of our dataset. We want to use it as the foundation for a ‘live’, crowd-sourced, “self-service” data platform for the UK games industry and other industry stakeholders.

THANKS: QUESTIONS?

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