

## Evidence in Action – Case Study 004

### Creating the GSCI Industrial Intelligence Model

#### How One Data Model Connected Manufacturing, Trade and Industrial Strategy

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##### Better Decisions Start with Better Intelligence

Every major industrial decision begins with a simple question.

##### What do we actually know?

Governments collect business statistics.

Customs authorities collect international trade data.

Companies understand their own capabilities.

Researchers develop new technologies.

Each dataset provides valuable information.

Unfortunately, they rarely connect.

The result is fragmented intelligence.

Decisions are often based upon partial evidence rather than a complete understanding of industrial capability.

The GSCI Industrial Intelligence Model was developed to solve that problem.

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##### The Challenge

Industrial strategy depends upon understanding far more than individual companies or individual products.

It requires answers to questions such as:

- Which companies could support a new manufacturing programme?
- Which products are strategically important?
- Which countries dominate critical supply chains?
- Which industries are exposed to international risk?
- Where are the opportunities for reshoring or inward investment?
- Which suppliers possess transferable capability?

Traditional datasets rarely answer these questions.

Business data understands organisations.

Trade data understands products.

Neither understands industrial capability.

The missing link was intelligence.

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### **Recognising the Missing Connection**

Throughout more than thirty years working with manufacturers, one observation became increasingly clear.

Companies do not manufacture SIC codes.

Countries do not trade SIC codes.

The global economy trades products.

Governments classify businesses.

The two systems operate independently.

Without connecting them, it becomes extremely difficult to understand how industrial capability translates into international trade.

The challenge therefore became:

**How do you connect businesses with products in a meaningful way?**

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### **Building the Model**

The answer was not another database.

It was a governed intelligence model.

Over several years, GSCI developed a structured methodology that connects industrial capability with international trade.

The model links:

- UK Standard Industrial Classification (SIC) codes
- Harmonised System (HS) commodity codes
- Manufacturing capability
- Industrial processes
- Supply chain position

- Economic function
- Strategic importance
- Confidence scoring
- International trade statistics

Rather than storing information, the model creates relationships between information.

This transforms isolated datasets into connected industrial intelligence.

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### **Turning Data into Intelligence**

Every manufacturing sector was assessed individually.

Each relationship between industrial activity and traded products was evaluated and classified.

The methodology records not only what a business makes, but also:

- where it sits within the value chain;
- whether products are manufactured, assembled or processed;
- strategic importance;
- typical international trade behaviour;
- confidence in the relationship.

The result is a structured knowledge base capable of supporting complex industrial analysis.

Instead of asking:

*"Which companies manufacture fabricated metal products?"*

Decision makers can ask:

*"Which Welsh companies possess transferable capability for floating offshore wind foundations?"*

or

*"Which sectors could support advanced nuclear manufacturing?"*

The quality of the question changes because the intelligence has improved.

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### **Supporting Better Decisions**

The Industrial Intelligence Model now supports analysis across a wide range of strategic themes including:

- industrial strategy;
- inward investment;
- supply chain resilience;
- international trade;
- manufacturing capability;
- economic security;
- advanced manufacturing;
- clean energy;
- aerospace;
- rail;
- defence;
- additive manufacturing.

Because every relationship is governed, the model provides a consistent evidence base capable of supporting government, investors and industry.

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### **Better Intelligence. Better Decisions.**

The model is not intended to replace expert judgement.

It enhances it.

Artificial Intelligence can analyse enormous quantities of information.

However, AI remains dependent upon the quality of the data and relationships that underpin its reasoning.

The GSCI Industrial Intelligence Model provides that structured foundation.

It transforms disconnected datasets into meaningful industrial intelligence.

That enables better questions.

Better analysis.

Better evidence.

And ultimately...

Better decisions.

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## The Outcome

The Industrial Intelligence Model has become the foundation of GSCI's work.

It supports projects ranging from floating offshore wind and advanced nuclear to rail, international trade and manufacturing strategy.

It demonstrates that successful industrial policy is not simply about collecting more data.

It is about connecting the right data in the right way.

The result is a repeatable methodology capable of helping governments, investors and manufacturers make more informed strategic decisions.

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## Evidence at a Glance

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|-----------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Focus</b>          | <b>Industrial Intelligence</b>                                                                               |
| <b>Challenge</b>      | Connecting business data with international trade                                                            |
| <b>Innovation</b>     | Governed SIC–HS Industrial Intelligence Model                                                                |
| <b>Key Components</b> | Manufacturing capability, trade mapping, value chain analysis, strategic classification, confidence scoring  |
| <b>Applications</b>   | Industrial strategy, inward investment, supply chain resilience, international trade, advanced manufacturing |
| <b>Core Principle</b> | Better Decisions Start with Better Intelligence                                                              |

