

# Not all patents are equal; using metrics to tell the full story

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# Agenda

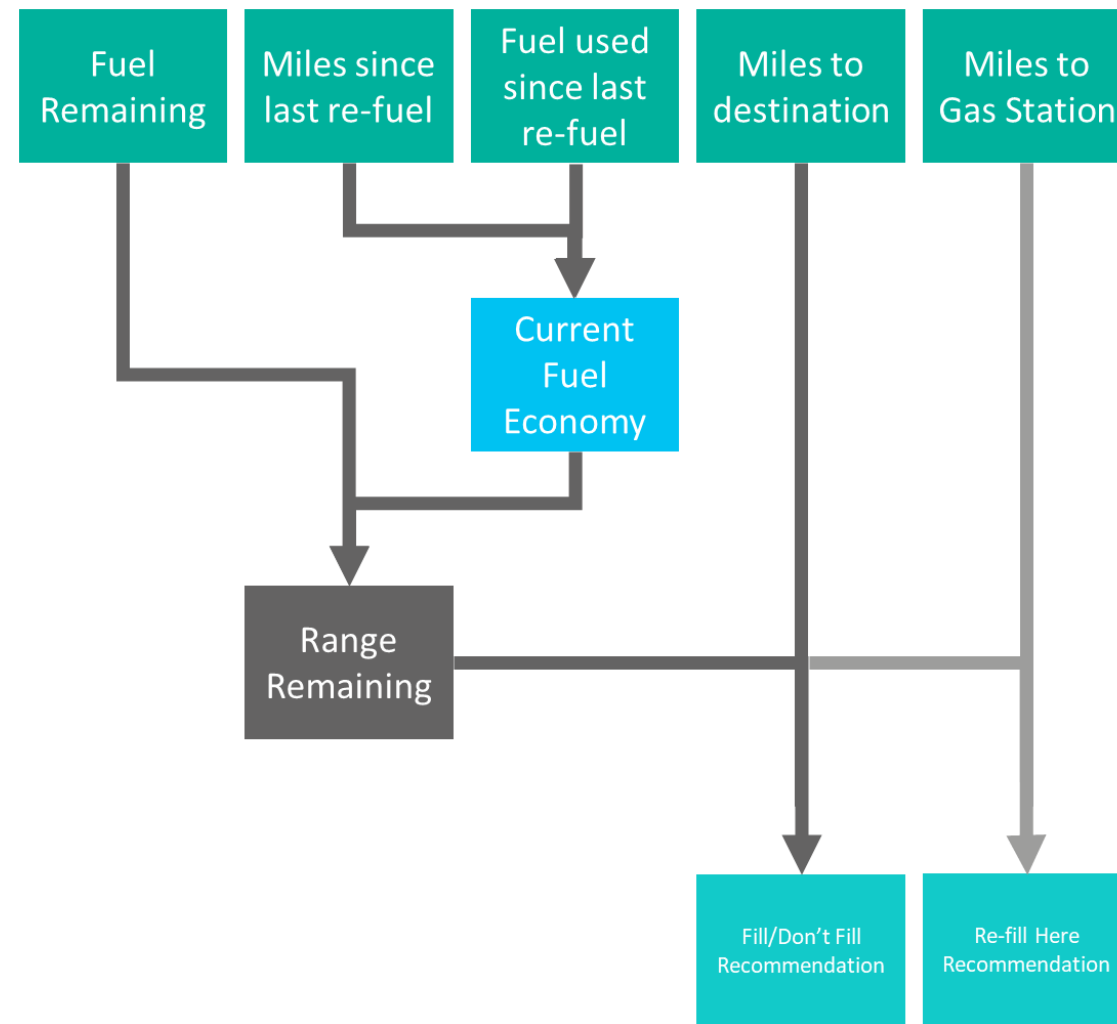
- **Why metrics help: frameworks, types and approaches**
- **The Derwent Strength Index**
  - **How we approach ranking, modelling and scoring of inventions and patented ideas**
- **The modelling metrics make possible**
  - **Directed prosecution**
  - **The strength in your portfolio**
  - **Innovation strategy and technical direction**

# Metrics, Metadata & Insight

The link between better measurement and action outcomes



Economy 41.4 MPG  
Range 243 miles



# Metrics & Measures

Our approaches to patent data scoring

## Predictive

Machine learning algorithmically produced metrics predicting future citation impact, likelihood of grant, likelihood of renewal etc.

Based on 100s of attributes

At individual patent/application level

In Derwent Innovation

## Evaluative

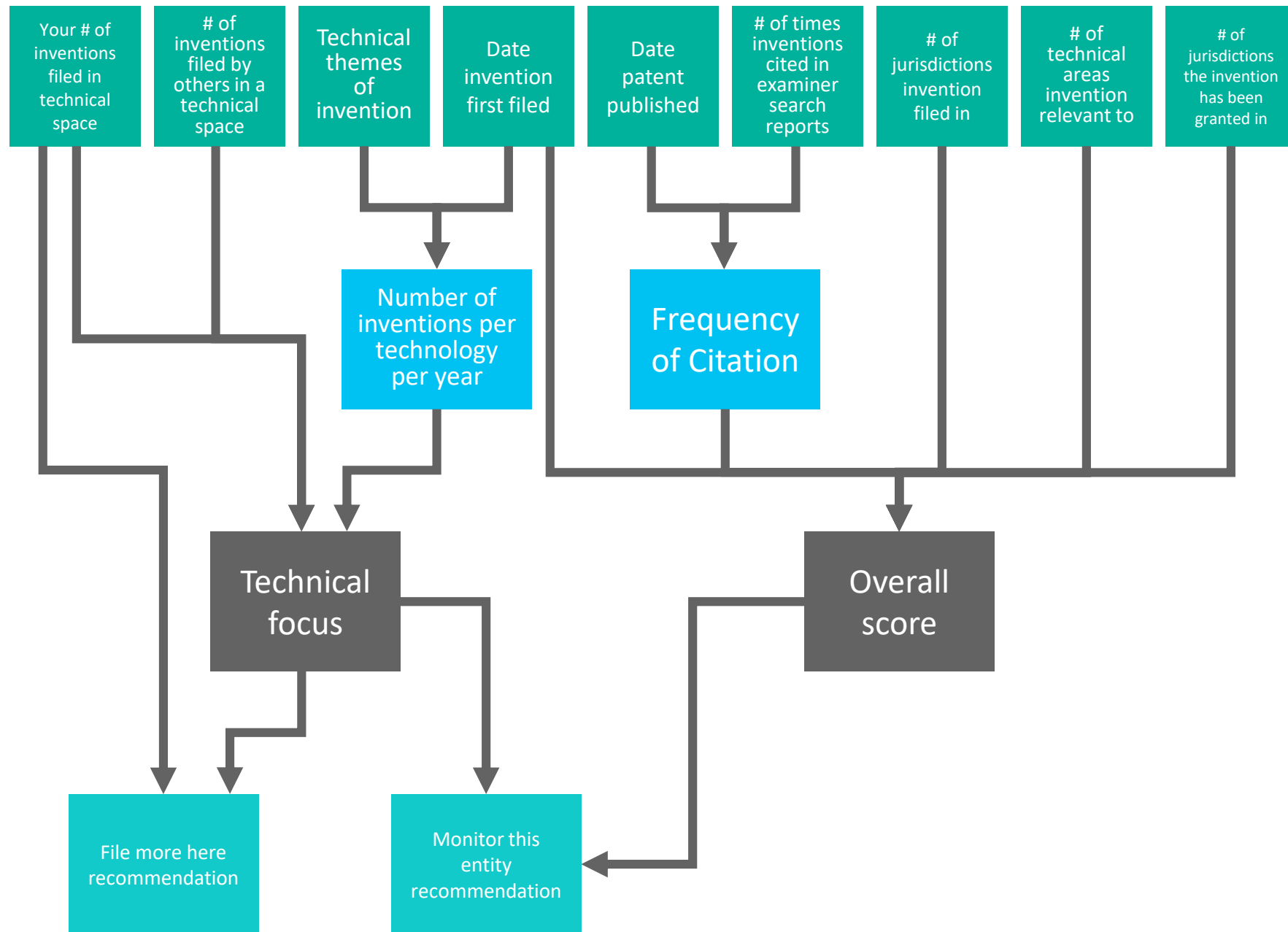
Scores existing, limited set datapoints that proxy for real world effect

Based on characteristics of individual patents/applications such as citation level, geographic filing, grant status and technical applicability

At the Invention level

As a custom data feed / within research projects

# Applying to Patent Data



# How best to assess importance, externally?

- Patents differ
- Data sets are large
- Traditional ranking methods (citation) vary a lot by field, geography and language
- Being able to answer “why” is useful
- Neutral view is useful

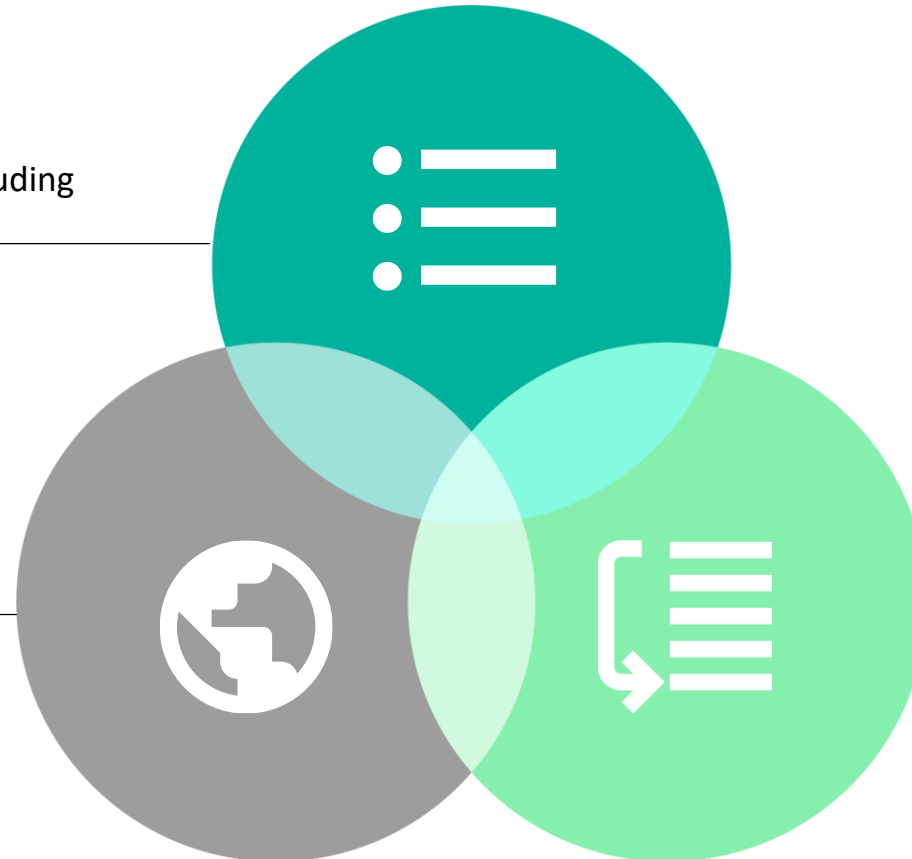
# Derwent Strength Index

Idea evaluation and  
tracking

DWPI-family based (including  
citation tracking)

Real-world impactful  
metrics

Always relative to a  
specific dataset



# Derwent Strength Index

Keeping things simple,  
but effective



Impact



Investment



Validity/  
Commitment



Technical Footprint



# Derwent Strength Index

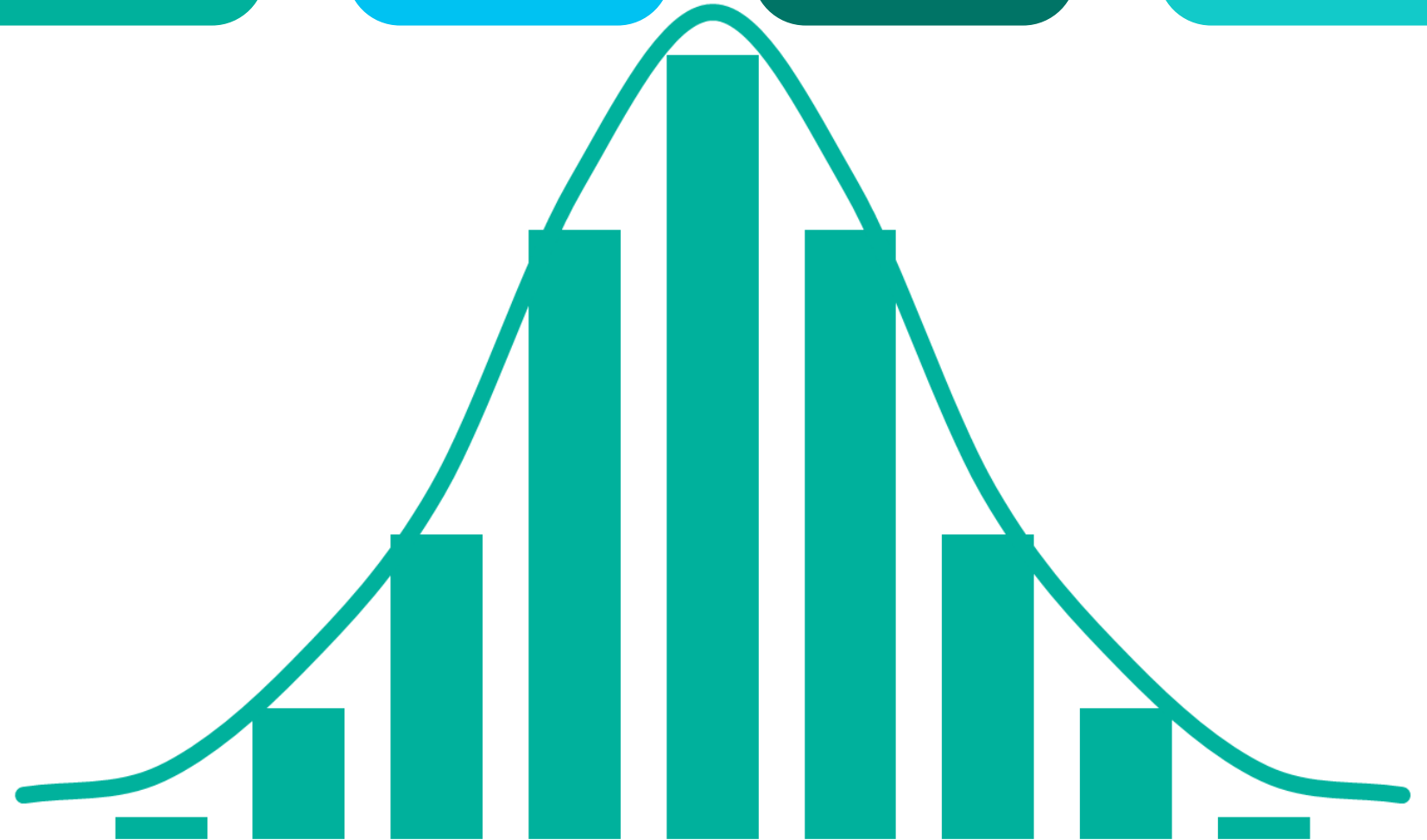
Going from raw number to a score

Each factor is assessed for distribution profile in the dataset

Score boundaries set based on variation and distance from norm

Contribution of factors weighted to flatten over-representation

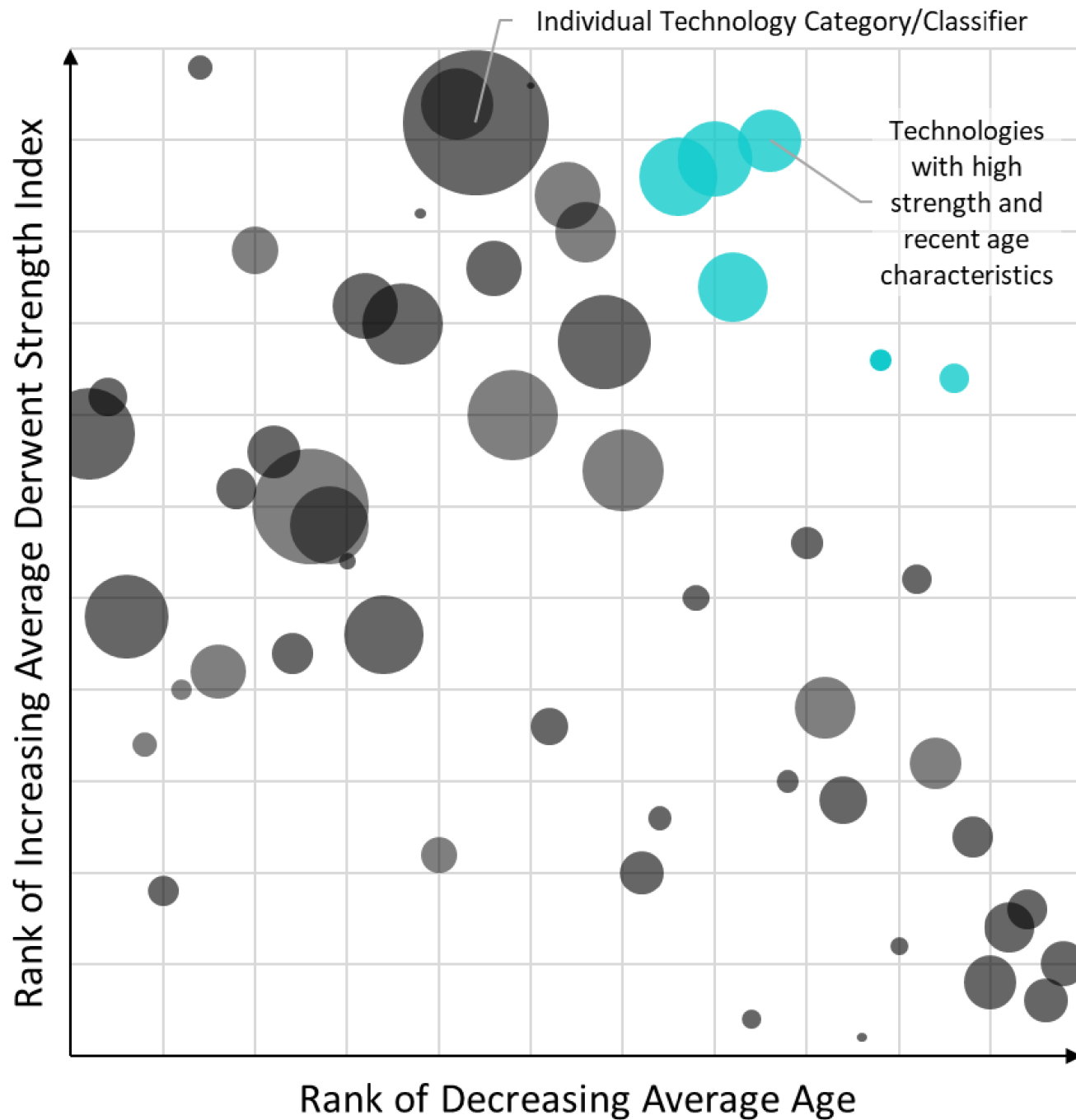
Time biases removed via further modelling



# What does that mean?

- Inventions are scored on a level playing field
- An invention removed from dataset and placed in another will have a different score
- Scores are volatile: citation events, new family members, grant events etc. all change the score
- Scores are also time volatile: more age/less youth changes the score
- Fewest measures possible for accurate modelling and decision support

# Modelling markets, technologies, portfolios & competitors



# Derwent Strength Index

What is it for?

- In combination with internal metrics of applicability, usefulness, licensing revenue, importance etc. = portfolio management
- As common to all actors, without the need for internal metrics – a benchmark, and method of assessing strength and weakness by technical field
- Modelling the future – and thereby informing innovation strategy by learning from the actions and outcomes of all other innovators

# Your questions

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# How we can supply data

- Individual datasets (portfolios, groups of portfolios, technical areas, groups of technical fields) – updated monthly in full
- Large scale datasets, metrics calculated across complete dataset or with reference to specific portions (technical area etc.) – updated monthly in full
- Datasets can be heavily customised:
  - Reduced field list for easy portability, focus, e.g. record ID, entity, technical tag(s), scores