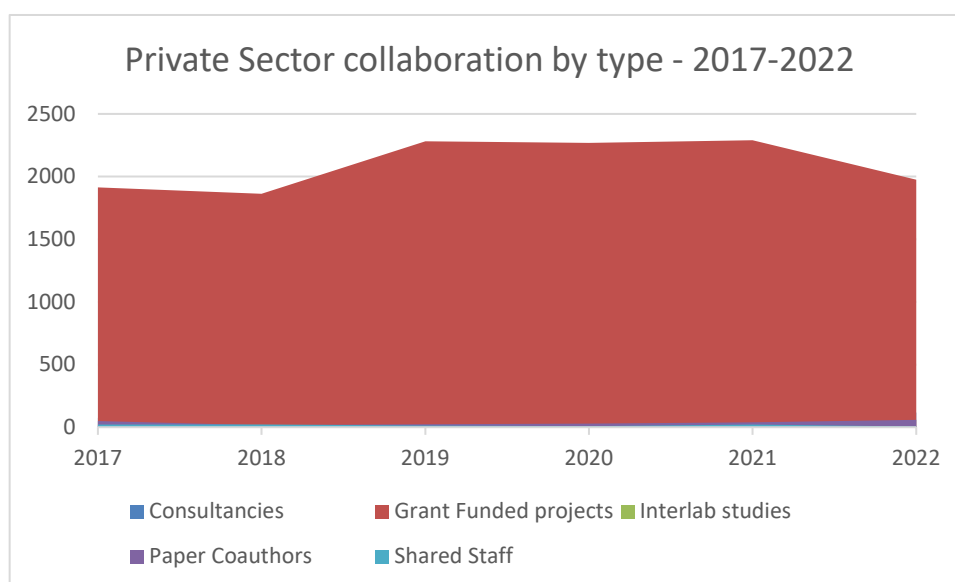


Updating the Collaborators Data

As detailed in section 4.4 of the main report, there have been significant changes to the RSFs since the publication of *Dias & King (2022)*. Notably, the underlying collaborations data has seen some issues. When initially developed, collaborators are defined as having done one of the following in given year:

- Co-authors of scientific publications. (Paper Coauthors).
- **Participation in grant funded projects that were active in year. (Grant Funded Projects)**
- Participation in commercial research contracts. (Consultancies)
- Organisations partnering with NMS projects that involve the flow of staff (joint students, guest workers, incoming and outgoing secondments). (Shared Staff)
- Organisations partnering in NMS-run inter-laboratory studies that were active in year. (Interlab Studies)

For private sector collaborations, the emboldened type is the dominant type of collaborations. As seen in the graph below:



This data originated in Dimensions, which NPL started to utilise from 2018. This meant that the data was collected from 2018 but wasn't backdated for the previous years. This was a simple fix that was amended quickly. However, another issue had to be dealt with, but this requires an aside to understand the fix.

1 AN ASIDE – GRID IDS

A very important indicator that is used by NPL to identify innovative organisations is if they've been tagged by the Global Research Identifier Database (GRID)¹. It should be noted that GRID has been superseded publicly by the Research Organization Registry (ROR), but GRID is used by Dimensions. As detailed by ROR – which is derivative of GRID which provides public information– it tags firms that are involved in research in a range of different ways². GRID and ROR are described as the best identifier for the *Distributed System of Scientific Collections* project³, which is looking to “[unify] all European natural science assets under common access, curation, policies and practices”, ensuring data meets *FAIR principles*⁴. The indicator has the potential to be used in It has the potential to be used in future market analyses to help identifier potential collaborators, along with other characteristics data.

2 ACCOUNTING FOR THE NEW COLLABORATIONS

As we used GRID IDs previously to identify collaborators, it was found that firms that **didn't have GRID IDs but did conduct collaborations** weren't identified across the entire time-period (2007-2022). This helped to truly represent the collaborators, but another issue arose. When the new numbers were computed, they were unfeasibly larger than expected. This was due to the nature of firms that engage with projects in the grant-funded collaborators tag. Among these firms were a group known as *Project Partners* – Organisations who have an active interest in the outcomes of a piece of R&D, but don't involve themselves with the R&D activities themselves.

This type of firms can't be classed as collaborators as they aren't truly involved in the full extent of the project. So, to account for these firms in a systematic way, the GRID id was adopted as a filter for collaborators, whereby firms without GRID ids weren't deemed as collaborators. This deals with most private sector Research Council project partners but there is an important caveat. Where collaborations should be accepted for firms that may not have a GRID id is in the case of Innovate UK (I-UK) projects.

I-UK work generally involves a lead participant, normally a private sector firm, working with other private and public partners to help promote product or process innovation. As I-UK projects directly lead to innovation, the GRID id stipulation doesn't feel relevant for this type of projects, unlike the Research Council projects which are more research-focused. Projects that don't require the GRID id stipulation also include Analysis for Innovators⁵/Measurement for Business⁶ projects which operate in the same manner.

¹ <https://www.grid.ac/>

² <https://ror.org/about/faqs/#what-is-the-definition-of-a-research-organization>

³ <https://workflowhub.eu/programmes/15>

⁴ FAIR = Findable, Accessible, Interoperable and Reusable

⁵ <https://www.npl.co.uk/analysis-for-innovators>

⁶ <https://www.npl.co.uk/measurement-for-business>

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