Neutral Citation: [2024] UKFTT 00617 (TC)

Case Number: TC09238

FIRST-TIER TRIBUNAL
TAX CHAMBER

By remote video hearing

Appeal reference: TC/2022/13281

CORPORATION TAX – research and development credits – claim for an R&D tax credit under section 1054 Corporation Tax Act 2009 - whether the tests for "research and development" in the BEIS Guidelines had been met – yes – appeal allowed

Heard on: 3 January 2024
Written submissions on dates to 5 April 2024
Judgment date: 9 July 2024

Before

TRIBUNAL JUDGE MARK BALDWIN
MR MOHAMMED FAROOQ

Between

GET ONBORD LIMITED (IN LIQUIDATION)

Appellant

and

THE COMMISSIONERS FOR HIS MAJESTY'S REVENUE AND CUSTOMS

Respondents

Representation:

For the Appellant: Mr Barrie Dowsett of Myriad Associates and Mr Edward Cahill, a former director of the Appellant

For the Respondents: Mr David Lewis, litigator of HM Revenue and Customs' Solicitor's Office

DECISION

INTRODUCTION

1. This appeal concerns a claim made by the Appellant ("GOL") for an "R&D tax credit" under section 1054 of the Corporation Tax Act 2009 ("CTA 2009"). HMRC rejected GOL's claim on the basis that its project did not advance overall knowledge or capability and therefore did not amount to research and development ("R&D"), which is a prerequisite for making a claim under section 1054 CTA 2009, and the question for us is whether this conclusion was right.

2. The project we are concerned with was described (by GOL's advisers, Myriad Associates ("Myriad")) like this:

> "The Company, Get Onbord Limited, sought to develop a novel, automated artificial intelligence (AI) analysis process for 'know your client' (KYC) verification and risk profiling. The main objective of this project was to develop AI-enabled holistic analysis of a new counterparty during a financial services customer onboarding process that could achieve a superior outcome to human analysis and meet all regulatory and legislative requirements."

PROCEDURAL ISSUE

3. Before dealing with the substantive questions in this appeal, we should set out an interesting procedural point which emerged and how we dealt with it. On 3 January 2024 the Tribunal heard this Appeal by video conference ("the Hearing") and subsequently made directions for the further conduct of these proceedings, principally allowing further written submissions to address issues which arose but were not resolved during the Hearing.

4. On 10 January 2024 HMRC drew the Tribunal's attention to the fact that GOL had been in liquidation since October 2023 and asked the Tribunal to make Directions consequential on that.

5. On 2 February 2024 GOL (acting through its Joint Liquidators) submitted that, whilst Mr Cahill (a former Director of GOL who represented the company at the Hearing) was not authorised to represent GOL after the company went into Liquidation, the Joint Liquidators wished to adopt the arguments put forward by him and allow the appeal to be continued by him on the Joint Liquidators' behalf.

6. On 9 February 2024 HMRC submitted that the appeal should be reheard as the Liquidators had confirmed that they first became aware of the appeal on 8 January 2024, five days after the Hearing. As such, Mr Cahill was acting at the Hearing with neither the knowledge nor the authority of the Joint Liquidators.

7. HMRC said that they recognised the pragmatic appeal of allowing such a retrospective authorisation, as it would allow the proceedings to conclude promptly with minimal additional costs, but they submitted that they were unable to identify any basis in law for that approach. They said that it would be an error of law for the Tribunal to rely on evidence given and submissions made by persons who had no standing. There would be nothing to prevent either party from seeking permission to appeal to the Upper Tribunal on that basis alone. HMRC submitted that this approach risked inadvertently prolonging the resolution of the matter and increasing the costs for all parties.

8. HMRC also submitted that allowing the Hearing to stand in the present case would be to legitimise and empower others, who in the future find themselves in the equivalent position to Mr Cahill, to pursue litigation where they do not have standing. Such individuals could claim that they intended to regularise their position retrospectively. HMRC submitted that it is a fundamental tenet of English law that litigation should only be conducted between

parties who have standing before the relevant court, and it would be inappropriate for the Tribunal to give credence to an approach that undermined that approach.

9. On 16 February 2025 GOL replied saying that there was no intention of "banking" a hearing. The confusion stemmed from the company's situation and was not a strategic ploy. The Joint Liquidators would present the same arguments at any new hearing, bringing all parties back to the same place they are in now. Initiating additional hearings would just risk prolonging the resolution of the appeal and imposing undue burdens on all involved.

10. We considered HMRC's submission that it is not open to the Tribunal to allow the Joint Liquidators to adopt Mr Cahill's submissions. Clearly, on the appointment of a liquidator all the powers of a director cease, and so we agree that Mr Cahill had no capacity to represent GOL at the Hearing.

11. We too were unable to find any authority which discusses whether a liquidator can retrospectively sanction a director's otherwise unauthorised acts. However, Schedule 4 ("Schedule 4") of the Insolvency Act 1986 sets out the powers of a liquidator in a winding up. Paragraph 4 of Schedule 4 gives a liquidator power to bring or defend any action or other legal proceeding in the name and on behalf of the company. Paragraph 13 gives the liquidator a wide power to "do all such other things as may be necessary for winding up the company's affairs and distributing its assets". Whilst we were unable to locate any authority to the effect that the Joint Liquidators can retrospectively validate any invalid act of a former director, such as Mr Cahill's acts here, the provisions we have just cited from Schedule 4 seem to us to give the Joint Liquidators power to continue the appeal and to decide how to do that, which would include endorsing the arguments run by Mr Cahill at the Hearing and allowing him to continue to run the appeal going forward.

12. Rule 2 of the Tribunal Procedure (First-tier Tribunal) (Tax) Chamber Rules 2009 ("the Rules") provides that the Tribunal is to seek to give effect to the overriding objective in exercising its power under the Rules. The overriding objective is to deal with cases fairly and justly. In turn this includes avoiding delay (so far as compatible with the proper consideration of the issues) and dealing with cases in a way which is proportionate to the complexity of the issues and the anticipated costs and resources of the parties.

13. Rule 5 of the Rules gives the Tribunal a wide power to regulate its own procedure.

14. We could not see any unfairness or injustice in allowing the Hearing to stand. There is no suggestion here that the Joint Liquidators had authorised Mr Cahill to represent the Appellant at the Hearing or that Mr Cahill was deliberately setting out to get into a position where he could (if he chose) have a "second bite of the cherry".

15. As to the argument that allowing the Hearing to stand would encourage people to behave as Mr Cahill has done, but deliberately and cynically rather than inadvertently, we considered that the likelihood of a situation like this arising at all must be very small; it requires a liquidator not to know of an appeal which is being conducted by a director (rather than a professional adviser, who would surely know of the appointment of the liquidator and its consequences), who does not realise the implications of a liquidator being appointed and who goes ahead and represents the company personally before the liquidators get to know about it. We would be very surprised if this had happened in any other case; if it has, it must surely be very rare.

16. To conclude, we decided that the Joint Liquidators had power to endorse the submissions made by Mr Cahill and to ask that the Hearing stand, that it would be fair and just and best give effect to the overriding objective to agree to that course of action and doing so would not run the risk of creating a precedent which could be cynically exploited in the

future. For these reasons, we dismissed HMRC's application and directed that the appeal should not be reheard.

17. We turn now to the substance of the appeal.

THE R&D TAX CREDIT REGIME

18. GOL is a Small or Medium-Sized Enterprise ("SME") for the purposes of the R&D legislation. As a result, if GOL made a "Chapter 2 surrenderable loss", it was entitled to claim an R&D tax credit, an amount of money payable to it by HMRC. This is the claim that GOL made and that HMRC rejected. HMRC rejected the claim because it considered that GOL's did not incur expenditure on "research and development". To understand where that requirement comes from and what it means entails a rather circuitous journey around legislation and guidance, on which we now embark.

19. The starting point is that, for GOL to make a "Chapter 2 surrenderable loss", it needed to have been entitled to an additional deduction under section 1044 CTA 2009; see section 1055(2)(a) CTA 2009.

20. To be entitled to an additional deduction under section 1044, GOL needed to have incurred "qualifying Chapter 2 expenditure".

21. Section 1051 CTA 2009 defined "qualifying Chapter 2 expenditure" as "qualifying expenditure on in-house direct research and development".

22. Section 1052 set out the conditions for expenditure to qualify as "qualifying expenditure on in-house direct research and development" and this included a requirement (Condition B in section 1052(3)) that the expenditure was "attributable to relevant research and development undertaken by the company".

23. Section 1041 provided that "research and development" has the meaning given by section 1138 of the Corporation Tax Act 2010 ("CTA 2010"). Section 1138 provided as follows:

> "(2) "Research and development" means activities that fall to be treated as research and development in accordance with generally accepted accounting practice. This is subject to subsections (3) and (4).
>
> (3) Activities that are "research and development" for the purposes of section 1006 of ITA 2007 as a result of regulations under that section are "research and development" for the purposes of this section.
>
> (4) Activities that are not "research and development" for the purposes of section 1006 of ITA 2007 as a result of regulations under that section are not "research and development" for the purposes of this section."

24. Section 1006 of the Income Tax Act 2007 ("ITA 2007") provided as follows:

> "(2) "Research and development" means activities that fall to be treated as research and development in accordance with generally accepted accounting practice. This is subject to subsection (3).
>
> (3) The Treasury may by regulations specify activities which–
>
> (a) are to be treated as being "research and development" for the purposes of this section, or
>
> (b) are to be treated as not being "research and development" for the purposes of this section. 1006
>
> (4) The regulations may–

(a) make provision by reference to guidelines issued by the Secretary of State, and

(b) contain incidental, supplemental, consequential and transitional provision and savings."

25. The Treasury has made regulations, the Research and Development (Prescribed Activities) Regulations 2004 (SI 2004/712) ("the Regulations"), under section 1006. So far as relevant, the Regulations provide in regulation 2:

"For the purposes of section 837A of the Income and Corporation Taxes Act 1988–

(a) activities that fall to be treated as research and development in accordance with the "Guidelines on the Meaning of Research and Development for Tax Purposes" issued by the Secretary of State for Trade and Industry on 5 March 2004, are research and development; and

(b) activities that do not fall to be treated as such in accordance with those guidelines are not research and development."

26. The 5 March 2004 guidelines (the "BEIS Guidelines") had been updated on 6 December 2010 and that is the version which was in force at the time we are concerned with. It contained the following passages relevant for us:

"3. R&D for tax purposes takes place when a **project** seeks to achieve an **advance in science or technology**.

…

Advance in science or technology

6. An advance in science or technology means an advance in **overall knowledge or capability** in a field of **science** or **technology** (not a company's own state of knowledge or capability alone). This includes the adaptation of knowledge or capability from another field of science or technology in order to make such an advance where this adaptation was not readily deducible.

7. An advance in science or technology may have tangible consequences (such as a new or more efficient cleaning product, or a process which generates less waste) or more intangible outcomes (new knowledge or cost improvements, for example).

8. A process, material, device, product, service or source of knowledge does not become an advance in science or technology simply because science or technology is used in its creation. Work which uses science or technology but which does not advance scientific or technological capability as a whole is not an advance in science or technology.

9. A project which seeks to, for example,

a) extend overall knowledge or capability in a field of science or technology; or
b) create a process, material, device, product or service which incorporates or represents an increase in overall knowledge or capability in a field of science or technology; or
c) make an **appreciable improvement** to an existing process, material, device, product or service through scientific or technological changes; or
d) use science or technology to duplicate the effect of an existing process, material, device, product or service in a new or appreciably improved way

(e.g. a product which has exactly the same performance characteristics as existing models, but is built in a fundamentally different manner)

will therefore be R&D.

10. Even if the advance in science or technology sought by a project is not achieved or not fully realised, R&D still takes place.

11. If a particular advance in science or technology has already been made or attempted but details are not readily available (for example, if it is a trade secret), work to achieve such an advance can still be an advance in science or technology.

12. However, the routine analysis, copying or adaptation of an existing product, process, service or material, will not be an advance in science or technology.

…

Scientific or technological uncertainty

13. Scientific or technological uncertainty exists when knowledge of whether something is scientifically possible or technologically feasible, or how to achieve it in practice, is not readily available or deducible by a competent professional working in the field. This includes system uncertainty. Scientific or technological uncertainty will often arise from turning something that has already been established as scientifically feasible into a cost-effective, reliable and reproducible process, material, device, product or service.

14. Uncertainties that can readily be resolved by a competent professional working in the field are not scientific or technological uncertainties. Similarly, improvements, optimisations and fine-tuning which do not materially affect the underlying science or technology do not constitute work to resolve scientific or technological uncertainty.

…

Overall knowledge or capability

20. Overall knowledge or capability in a field of science or technology means the knowledge or capability in the field which is publicly available or is readily deducible from the publicly available knowledge or capability by a competent professional working in the field. Work which seeks an advance relative to this overall knowledge or capability is R&D.

21. Overall knowledge or capability in a field of science or technology can still be advanced (and hence R&D can still be done) in situations where:

- several companies are working at the cutting edge in the same field, and are doing similar work independently; or

- work has already been done but this is not known in general because it is a trade secret, and another company repeats the work; or

- it is known that a particular advance in science or technology has been achieved, but the details of how are not readily available.

22. However, the routine analysis, copying or adaptation of an existing process, material, device, product or service will not advance overall knowledge or capability, even though it may be completely new to the company or the company's trade.

Appreciable improvement

23. Appreciable improvement means to change or adapt the scientific or technological characteristics of something to the point where it is 'better' than the original. The improvement should be more than a minor or routine upgrading, and should represent something that would generally be acknowledged by a competent professional working in the field as a genuine and non-trivial improvement. Improvements arising from the adaptation of knowledge or capability from another field of science or technology are appreciable improvements if they would generally be acknowledged by a competent professional working in the field as a genuine and non-trivial improvement.

24. Improvements which arise from taking existing science or technology and deploying it in a new context (e.g. a different trade) with only minor or routine changes are not appreciable improvements. A process, material, device, product or service will not be appreciably improved if it simply brings a company into line with overall knowledge or capability in science or technology, even though it may be completely new to the company or the company's trade.

25. The question of what scale of advance would constitute an appreciable improvement will differ between fields of science and technology and will depend on what a competent professional working in the field would regard as a genuine and non-trivial improvement.

…

System uncertainty

29. System uncertainty is scientific or technological uncertainty that results from the complexity of a system rather than uncertainty about how its individual components behave. For example, in electronic devices, the characteristics of individual components or chips are fixed, but there can still be uncertainty about the best way to combine those components to achieve an overall effect. However, assembling a number of components (or software sub-programs) to an established pattern, or following routine methods for doing so, involves little or no scientific or technological uncertainty.

30. Similarly, work on combining standard technologies, devices, and/or processes can involve scientific or technological uncertainty even if the principles for their integration are well known. There will be scientific or technological uncertainty if a competent professional working in the field cannot readily deduce how the separate components or sub-systems should be combined to have the intended function.

…

Content delivered through science or technology

43. Information or other content which is delivered through a scientific or technological medium is not of itself science or technology. However, improvements in scientific or technological means to create, manipulate and transfer information or other content can be scientific or technological advances, and resolving the scientific or technological uncertainty associated with such projects would therefore be R&D."

27. So far as the correct approach to the interpretation of the BEIS Guidelines is concerned, we are required to approach this on a strict basis, not seeking to adopt a purposive construction. The proper approach to take was discussed in *Gripple v HMRC,* [2010] EWHC 1609 (Ch), at [12], where Henderson J (as he then was) had described the earlier version of the Guidelines as follows:

> "... the provisions form a detailed and meticulously drafted code, with a series of defined terms and composite expressions, and a large number of carefully delineated conditions, all of which have to be satisfied if the relief is to be available…a detailed and prescriptive code of this nature leaves little room for a purposive construction…"

28. The same is true of the current version of the Guidelines; see the FTT decision in *Hadee v HMRC* [2020] UKFTT 0497 (TC), where the FTT held that "a narrow approach was required" and that "the Guidelines require a strict interpretation to achieve their purpose". This approach was also endorsed by the FTT in *Flame Tree Publishing* (discussed below).

THE EVIDENCE BEFORE THE TRIBUNAL

29. We heard from two witnesses, Mr Cahill (for GOL) and Mr Umar (for HMRC). We summarise their evidence below.

30. We also had a hearing bundle, which contained a number of reports, prepared by Myriad, explaining various aspects of GOL's project. As is to be expected, the documents prepared by Myriad contain argument and assertion (most obviously, repeated statements that one or more of the requirements of the BEIS Guidelines were met). We have not attached any weight to the passages in the documents which contain argument, submission or assertion; it is for the parties to make their submissions on these issues and for us to form a view on them. However, HMRC made no challenge to the admissibility, truth or relevance of the contents of any of these documents and we have considered the passages in the documents which contain factual narrative as evidence of the facts they describe. We set out below the information we have collected from these documents.

Documents in the hearing bundle

31. In a report dated 4 August 2021, Myriad summarised GOL's project (their summary is set out at [2] above) and went on to outline a number of difficulties GOL needed to grapple with. Some of these were of a non-technological nature. In terms of features which might indicate that what GOL was doing amounted to R&D, they mentioned the following:

> "The Company considered that the development of the ONBORD system constituted an appreciable improvement in the technology associated with AI for KYC analysis. The development of the ONBORD system contained significant technical uncertainties, involving knowledge that could not be readily deduced by the Company's competent professionals.
>
> Before starting this project, the company investigated the state of the art in the use of AI KYC for financial services organisations to determine whether there was an existing development in this discipline that could meet the objectives of the project. The company determined that there was no existing technology that was available in the public domain or readily deducible by the Company's competent professionals that would allow it to provide an automated, AI-enabled onboarding solution. As there was no existing development, the Company was not certain if it would be possible to develop

the algorithms[1] required to translate an existing risk policy into an automated onboarding process.

Therefore, to successfully complete the ONBORD project, the Company would have to go through an iterative experimental development cycle as well as extensive testing and analysis. The Company considered that overcoming these challenges would constitute an appreciable advance in technology, as the technological advance sought would be new in the area of automated, AI-enabled onboading (sic) processes for companies across Europe.

The Company was unsure if it could develop the algorithms required to perform data normalisation, to ensure that the identification of a person on a particular sanctions list, or a director or shareholder of a company, was consistent across various data sources. Unless these individuals were uniquely identified, it was impossible to leverage information from multiple data sources and create a master list of information. The alternative to this process was to create vast quantities of false positives – what traditional methods produce because they do not factor in context or attempt to determine unique persons.

The Company did not know if it could develop a method to optimise the data increase the speed of a client journey and ultimately reduce the time from start of client sign-up to completion of onboarding and KYC checks. The Company was also uncertain if it could integrate and normalise data from various data sources to achieve this goal, using AI to validate information and auto populate any inputs required.

As more and more data were added to confirm the identification of the counterparty and ensure all regulatory requirements were met, it was necessary to develop AI methods to call the data needed for each part of the process only when required. This was needed as an alternative to calling all the data upfront, as the processing necessary to do so would slow the KYC process to a standstill and/or make the client interface unusable.

The Company was uncertain if it could develop an API[2] so that data could be transferred into and out of any client system.

Development of the API required the Company's software developers to ensure that the processes could be adapted to transfer data into and out of any client system, regardless of client use case. Extensive work was required to ensure security of the data exchanged while maintaining the data structure previous developed."

32. On 15 September HMRC wrote to Myriad explaining that they did not feel that GOL's work amounted to R&D., and on 29 September Myriad replied and sought to address HMRC's concerns. In particular, Myriad set out what they said was detailed evidence of technological advancement, including the following:

> "Example area 1: Compliance flags on an individual: This algorithm was designed to replicate the manual checks that a person would need to perform to meet the requirements of customer due diligence in the Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017. The Company's objective in undertaking the

[1] In computing, an algorithm is a step-by-step procedure for calculations or other problem-solving operations. Algorithms are used for calculation, data processing, and automated reasoning.

[2] Application programming interface (API) is a set of routines, protocols, and tools for building software applications. An API is a set of clearly defined methods of communication between various software components and specifies how those components should interact.

development of this algorithm was to create a robotic process automation engine that could approve or decline an individual based on identity documents and information available through searches of primary data sources.

The first step in this work involved translating the process described in the legislation into engineering documents. The Company diagrammed the legislative requirements for customer due diligence in Lucid Charts. Potential sources and methodologies were then identified for each potential screening check that could be performed in order to meet these legislative requirements. The Company's software developers then used these diagrams to develop user stories, which are the smallest units of work in an agile framework. A user story details, in an informal way, the software features required from an end user's perspective. The user stories were then used by the development team to divide work into functional increments that were planned into agile iterations.

The Company developed new methods of creating compliance flags and warnings that had not previously existed by leveraging the big data sources available to ONBORD. These sources would not have been checked by a manual process and included IP location and website domain name information.

As part of this work, the Company had to ensure that the individual for whom the compliance check was being performed was established as a unique individual, and that there were no false positives or false negatives due to similarities in names or other information. 'Uniquing' people required a number of different filters and strategies - it is actually a process that is running behind the system rather than just a one-off process as the Company realised that additional data could produce better results, but the system had to be able to attempt to do it even with minimal data. If identity documents were available after an optical character recognition (OCR) scan of the document, the system would have the middle name and date of birth to use as additional uniquing strategies. E-mail addresses and phone number data, where available, were also leveraged. The edge cases were the real issue: salutations may need to be considered, and the system needed to be able to distinguish between a parent and a child with the same name in a shareholder register, for example. In addition, the same person with a married and maiden name required adjustment in the code. All of this refinement needed to be done to provide the foundations of a robust system.

The primary data sources used in the compliance checks are of the Office of Foreign Assets Control (OFAC) list, the United Nation's sanctions list, the Interpol red list, the EU sanctions list, the UK sanctions list, the Company's own PEP database developed from a number of other sources, and a Google News feed. The Company developed an automatic system process that ran on a routine basis to download and scrape the data from these primary data sources, to keep the information up to date.

In order for the compliance check processes to be scalable, the Company developed the ONBORD system as a multithreaded application in which some of the processes that were part of the larger customer due diligence procedures ran as background processes.

This work is still ongoing, as the format and nature of the primary data sources change over time, and new sources are added when available."

33. Another example was iteratively developing shareholder identification and address validation algorithms.

34. On 12 November 2021 HMRC replied, describing GOL's project in glowing terms ("a complex platform … the project took a lot of hard work and dedication … impressive"), but indicating that (despite all the information Myriad provided) they were "still unclear as to what advance has been achieved as per para 6 of the BIS guidelines". So far as the APIs and algorithms are concerned, HMRC said ":

> "AI, algorithms, the data manipulation and database design may have been novel and difficult to achieve, however we have had no evidence that there has been an advance to any technologies in the process. According to para 12 of the BIS guidelines, "the routine analysis or adaptation of an existing product, process, service will not be an advance in science or technology". We believe that this work was readily deducible for a competent professional skilled in software development and data science."

35. HMRC's overall conclusion was that:

> "Where I stand currently is that the product produced by Get Onbord Ltd is impressive, but it does not meet para 6 of the guidelines based on the information I have. I believe the product produced, has used existing processes and technologies that were readily deducible to produce a new innovative product."

36. Myriad responded on 23 November 2021, observing:

> "We can see from your letter, that your final decision is to refuse the claim. However, we feel that the R&D taking place is not being completely understood, which may be partly down to us trying to respond in a manner that is not too technical and in plain English.
>
> Machine learning software models relating to KYC is a highly innovative, rapidly changing and ground-breaking area. We are concerned that you consider new machine learning models/training that make an appreciable improvement in technology doesn't qualify. We are also concerned about the wider precedent this sets for all other software technology claims."

37. On 2 December 2021 Myriad sent a final response to HMRC. Myriad had told HMRC that this would include commentary from Lauren Olson, who had been a Senior Consultant/Program Manager at Experian for over 6 years and (in Myriad's view) had domain expertise in this area. We set out some relevant commentary from Myriad's final report below but note that we have been unable to find passages in that report which are attributed to Lauren Olson. Overall, they commented:

> "[GOL's project] is an ambitious goal which will require significant innovation in software development relating to multiple big data sources, robotic process automation and machine learning models.
>
> As a starting point, the Company leveraged existing technology where possible, to avoid developing software that did not need to be built. The Company then sought to make appreciable improvements to robotic software automation and machine learning models in order to meet the objectives of the project."

38. Myriad identified examples of weaknesses in existing technology and commented that "These are all technical problems which can be overcome given robust algorithms. However, the biggest issue with current technologies is beyond this: existing systems do not approach the KYC problem holistically. The compliance problem for politically exposed person (PEP) and AML screening is treated as a distinct process from credit checking and anti-fraud measures. This creates gaps in the decisioning and requires human controls and analysis to try and unite these different workstreams."

39. They gave two other examples of technological advancement. The first was creating a robotic process to automate the onboarding journey. Here they commented:

> "From the perspective of advancing the field of computer sciences, the Company initially developed tasks that could be automated based on their rule-based nature and incorporated structured digital data to support decisioning. These tasks were then assigned to a bot that performs them according to the overall master program (which the Company refers to internally as "the Metatron").
>
> This master program is a set of algorithms that decide which information is required and must be requested from the end client or from various data sources to build the full picture of the individual or business and produce a comprehensive client file. The Metatron itself is composed of hundreds of smaller rules-based decisions that would be almost imperceptible to a human digesting the final client file, integrating hard data such as passport number and issuing country with less obvious things like IP address location and phone number."

40. The second example was replicating, using artificial intelligence, the manual processes used for internal credit, fraud, and compliance checks. Here they commented:

> "The Company created a machine learning model where two multivariate decision trees were built for 1) fraud/compliance and 2) credit. They both start from the same data set but are run separately for each individual or business. These models are not static but must necessarily adapt as new data points are added to the system and changes are made in the environment and behaviour of bad actors. There were three main reasons for choosing decision trees over other machine learning models:
>
> ♣ A decision tree does not require normalisation of data
>
> ♣ Missing values in the data don't affect the process of building a decision tree to any significant extent
>
> ♣ A decision tree model is very intuitive and easy to explain to clients; auditability was essential
>
> Decision tree models fall within the category of "white-box" techniques, which trade some predictive power for transparency, which is useful for explaining to a regulator. Most machine learning models tend to be "black-box" systems, such as neural networks, random forests, and gradient boosting, which are well-suited for finding patterns but are impractical to decipher.
>
> The Company continues to explore and experiment with both "white box" and "black box" models, with the aim of making incremental gains in predictive power while maintaining transparency. A hybrid machine learning model is also being considered."

41. Myriad concluded by observing that the importance of GOL's project was demonstrated by a Financial Times report which indicated that, although businesses and individuals will go through onboarding processes several times a year, fraud losses and regulatory fines are increasing alongside credit losses, giving as an example the £5bn losses said to have been incurred by "UK taxpayers" as a result of fraudsters exploiting the Covid-19 bounceback loan schemes. Creating a universal, automated system that works across industry verticals – such as the GOL platform – was (they said) key to reducing losses by performing identity verification, customer due diligence, and enhanced due diligence processes in a scaled, sustainable manner.

42. HMRC replied on 7 January 2022. They said that "We have taken the time and have carefully gone through your response which we received from yourselves along with using our CDIO officers, who are HMRC's Chief Digital Information Officers." Their conclusion was that no R&D had taken place. No reasons were given for that view.

43. On 14 October 2022 HMRC issued their review conclusion letter, upholding the decision that GOL's project did not constitute R&D. The essence of the review conclusion was that there was no evidence of scientific or technological advance. For example, the reviewing officer commented that, "The use of the APIs, AI, algorithms, the data manipulation and database design may have been novel and difficult to achieve, however we have had no evidence that there has been an advance to any technologies in the process."

Mr Cahill's Evidence

44. As well as helping to present GOL's case, Mr Cahill gave evidence about the project the company was working on. Some of his evidence (in particular, most of his original witness statement) was directed at what he regarded as the unfair treatment of GOL by HMRC. He was also critical of Mr Umar (HMRC's witness), whom he described as having no technology experience.

45. We found Mr Cahill to be an impressive witness. He is clearly very experienced in his field and gave clear answers to Mr Lewis' questions.

46. Mr. Cahill has worked for more than 25 years building models for investment banks. He has written code himself and described himself as an expert in building models to analyse risk.

47. Mr Cahill said that GOL is an innovative technology start-up with a workforce focused on coding and a substantial codebase in GitHub[3]. In his witness statement he said that company has a competent professional, who can support and defend the claim. The company's existence is based on creating innovative technology that advances the current state of the field. They do not have any other business line - R&D is their essence as an innovative start-up and is core to their business.

48. He said that on many occasions financial institutions need to measure the level of risk in a transaction. That requires them to validate the identity of their counterpart and investigate them. Put simply, the thinking behind the GOL project is to take lots of pieces of data on a person and use them to decide whether that person is a "bad guy" or not.

49. There are products like those from Lexis Nexis and Dow Jones but they are little more than name checks and throw out lots of false positives. The Experian system is just an ID verification system, radically different from GOL's.

50. Since the project started there have been major advances in software, most obviously open artificial intelligence. GOL has sought to take advantage of these. One example of a recent development is the Chat GPT and other translation functions. It is now possible to take pieces of information in a foreign language and feed them into a translation tool. GOL did not build a translation tool but accesses existing tools. What GOL has done is to write new code to feed information into a translation tool and then take outputs (translated information) from it.

51. At the same time, whilst some developments (e.g. large language learning models (sub-sets of AI)) have developed, making some problems easier to solve, fraudsters and other

[3] GitHub is a web-based platform for version control and collaboration on software development projects. It allows developers to store, manage and share their code with others, and provides tools for tracking changes, collaborating on projects and managing different versions of code.

"bad actors" have evolved and they can leverage technology, giving another dimension to the problem which needs to be solved.

52. The team have written millions of lines of code to sit on top of various pieces of information.

53. Answering the question whether the company's product enables people to do something they couldn't do before, Mr Cahill said the answer to that is yes. The GOL system is all about creating an output. There are now more ways of gathering information, but their system is all about analysing it and using it to answer a question.

54. One way of describing what GOL does is firing processing power at a problem. It would take hours and lots of people to run the checks and make the decisions GOL's system ran.

55. They have also been working on creating intelligent online forms. You can ask an individual to fill in the form online and the GOL system will run its checks as the form is being filled in. Essentially, it validates what someone is writing as they fill the form in.

56. He described his project as creating knowledge and capability, using open-source material. The element of innovation is putting all the existing tools and information together and writing the code that links the component parts.

57. Mr Lewis asked Mr Cahill whether the model he was working on exists already in banks. Mr Cahill said that he had worked at a number of major banks but none of them have this system. Their typical solution is to employ lots of people to run these checks and make judgments on them. Mr Cahill said that he couldn't say that no bank had developed the systems he had, but he wasn't aware of any. Mr Cahill had spoken to the head of financial crime at a major bank, who employs a large team of people to carry out exactly the sorts of checks the company's programs are designed to carry out. The GOL system does all of this by pure technology.

58. Mr Lewis asked Mr Cahill whether he would use pieces of existing code and Mr. Cahill said that of course he would. Every piece of code is built on existing code; nobody writes code from scratch. Why would you when someone else has already done the work? GOL works by taking components and adding to them. It is rare for a software development to be completely novel.

59. GOL has not sought to protect its software. Mr Cahill said this is not common in the software industry except for some very large players. He said that people move jobs and take code with them. The company stores its code on GitHub, but it has not made it opensource. Mr Cahill explained that GitHub has several purposes. It is a place where tech firms can store code. Other developers can access opensource material stored there or license other material.

60. In answer to Mr Lewis' suggestion that all we have here is an internal advance for GOL, Mr Cahill said that all he could do was look around to see what did not exist before embarking on a project. He was sure that this was more than an internal advance for his company. He would not waste years of his life working on something that someone else had already done.

61. In answer to the question whether the project was an overall advance, Mr Cahill drew a distinction between existing data (e.g. the database of addresses held by Royal Mail) and software/AI "building blocks" (e.g. the Chat GPT translation tool) on the one hand and "doing something on top" (e.g. code to connect the Chat GPT translation tool with data sources), which is the new work done by GOL. Mr Lewis suggested that GOL could do the

same thing (using existing blocks and writing code around them). Mr Cahill said that he was not saying that no one else could do what GOL is doing if they knew what to do, but no one had done that.

62. Mr Lewis put it to Mr Cahill that the HMRC CDO/CDI team said that all that he is doing is data analysis or processing. Mr Cahill said that you could say that about all sorts of artificial intelligence. At the core of what they are doing is a lot of data, but they are using it to try to provide an intelligent answer to a question.

63. Mr. Lewis asked Mr Cahill whether he was a software developer. Mr. Cahill said that he would describe himself as a model and risk expert, but he needs to be able to write code to be able to do his job. His job has never been software development. Julian Guppy is responsible for software development at GOL. Mr Lewis suggested to Mr Cahill that, for the software project, the competent professional would usually be a software developer. Mr Cahill's answer to that is that most people with his competence do not write software, but unusually he does and he is, as he put it, "technocratic".

Mr Umar's Evidence

64. We then heard from Mr Umar, who is the HMRC officer responsible for this case. Mr Umar was in a difficult position, as he has no technology experience or expertise, nor (beyond the fact that they are members of HMRC's in-house software development team) was he aware of the credentials of those he sought advice from and who commented on his correspondence with GOL and its advisers. He does not know whether they had industry knowledge of KYC/ALM processes. This was the first software claim Mr Umar had dealt with.

65. We found Mr Umar to be an honest, straightforward witness, who was clearly trying to help as best he could, but his lack of scientific knowledge or experience meant that his evidence was of no real help to us in deciding the issues before us.

HMRC'S WRITTEN SUBMISSIONS

66. At the end of Mr Umar's evidence we were unsure about HMRC's position in relation to GOL's project. Mr Lewis asked for permission to make some written submissions. To frame this, we summarised GOL's submissions, as we understood them, and invited HMRC to respond. We summarised GOL's submissions like this:

> (1) Mr Cahill's evidence is that there is currently no product which has the functionality/capacity of the "holistic onboarding solution" the Appellant is seeking to develop. KYC (as opposed to ID verification) is still a largely manual process. The Appellant accepts that there are a number of products in the market which perform individual functions within its KYC solution (e.g. ID checking), but nothing which operates in a holistic and reliable way to validate the identity of a person and whether they are a good/appropriate counterparty.
>
> (2) The Appellant's submission is that, in the light of the BEIS Guidelines (in particular paragraphs 6, 9b, 9c and 43), its project constitutes R&D as it is seeking to create a technology-enabled process which manipulates/manages data to replace a slow, fallible, human process with one which is fast/real-time, reliable and robotic. The Appellant accepts that its project involves collecting data from readily available sources and utilises some existing technology (code which has already been written and applications such as the ChatGPT translation function). However, the Appellant's innovation is to write significant amounts of code which aggregate and utilise all these sources of information, creating a higher order functionality. The Appellant is (it submits) creating a process which will represent an overall increase in capability, a

new/improved, technology-enabled way of exploiting data to deliver a fast/real-time, reliable, holistic KYC solution that is not currently available.

67. The responses we asked from HMRC were as follows:

(1) Confirm whether it accepts Mr Cahill's evidence summarised at [66](1) above, and, if it does not, it should give reasons for its position.

(2) Confirm whether it accepts the factual description of the Appellant's project at [66](2) above and, if it does not, it should give reasons for its position.

(3) Confirm whether, in its submission, the Appellant's project (assuming it is correctly summarised at [66](2) above and that Mr Cahill's evidence summarised at [66](1) above is accepted) would count as R&D within the BEIS Guidelines. If HMRC consider that the project would not count as R&D, it should give reasons for its position by reference to the BEIS Guidelines.

68. It was shortly after this point that HMRC discovered that GOL was in liquidation and asked for the appeal to be re-heard in consequence. We have already explained how we dealt with that application. HMRC also sought permission to make submissions on section 1057 CTA 2009, which provides that a company can only make a claim (to an R&D tax credit) under section 1054 CTA 2009 if it is a going concern, but later withdrew that request as they discovered that the tax credit claim had been applied against the company's unpaid PAYE liabilities in June 2021 and so section 1057(3) applied. Once these matters had been dealt with, HMRC responded to the points we had raised.

69. Beyond a point on when Chat GPT became available, which Mr Lewis suggested indicated inconsistencies in Mr Cahill's evidence, but which Mr Cahill satisfactorily addressed, Mr Lewis did not take issue with the factual summary recorded at [66] above.

70. Mr Lewis did, however, make some very detailed submissions in responses to our third request. In summary, these are his submissions:

(1) The burden of proof is on GOL.

(2) To the extent the claim is based on there being no product on the market with the same functionality, that is not the test.

(3) Paragraph 3 of the BEIS guidelines require there to be "an advance in science or technology" and paragraph 6 defines this by reference to overall knowledge, not functionality.

(4) Paragraph 9 is part of the section of the BEIS Guidelines that establishes what constitutes an advance in science or technology. However, the definition is at paragraph 6 and it can only consistently be interpreted as saying that, where an appreciable improvement is brought about by some advancement to the underlying science or technology, it will be R&D.

(5) GOL places too much weight on the presence of an appreciable improvement, but the simple test is whether the process advanced overall knowledge in the field of technology. GOL has not explained what the "technology" fundamental is here. The "problem" that has been addressed is "Know your customer ("KYC") and anti money-laundering ("AML") compliance. Automating an existing manual process can either use existing technology or can require an advance in the underlying science or technology to be able to achieve it. GOL needs to show it is the latter.

(6) Paragraph 43 of the Guidelines says that improving how information is manipulated "can" be scientific/technological advance. It does not say that it "will" be.

GOL has not explained the technological uncertainty they were seeking to overcome in clear language that can be understood, having instead chosen to focus on the functionality and uniqueness of their product.

(7) GOL submits that its software has unique functionality and coding, and therefore its development amounts to R&D. Given that pretty much every computer programme written has unique coding and unique or bespoke functionality, this would therefore extend R&D relief to all coding activity, which is clearly not what was intended. The use of the APIs, AI, algorithms, the data manipulation and database design may have been novel and difficult to achieve, but there is no evidence to show that there has been an advance to any technologies in the process.

(8) GOL has not provided any project plans, milestones, correspondence etc to demonstrate the scientific process (hypothesis, testing, evaluating, concluding and re-hypothesising) that was required to overcome issues. It has not made it clear whether there is a project that is distinct from the whole process development.

(9) The person said to be the competent professional (Mr Cahill) has failed to explain the nature of the work and the nature/extent of any underlying uncertainties. It is regrettable that the key software developer Julian Guppy, who for software projects are normally the competent officer, did not provide evidence and was not available for cross examination.

THE APPELLANT'S REPLY

71. In a very detailed reply, Mr Cahill submitted:

(1) The document discussed at paragraph [35] demonstrates clearly that the project attempted to advance knowledge and capability. Mr Cahill referred to the fact that he had prepared the document with the assistance of Lauren Olson, a technical advisor at Myriad Associates. He describes HMRC's response as curt and generally complained that, despite asking, they were unable to speak to anyone at HMRC who had domain expertise.

(2) Mr Cahill agrees that routine work is not R&D, but says that the work undertaken by GOL was not routine in any sense of the word. The utilisation of existing technology does not preclude an activity from constituting R&D. Innovation often involves integrating existing technologies to achieve advancements in a particular field. it is wrong to dismiss activities as R&D simply because they use existing technology. In software development, in particular, it is nearly always the case that existing code or API will be used where they exist.

(3) A massive amount of new code was written and can be seen in GitHub. The writing of the new code was a critical component of the project.

(4) There are no similar products in the market. This corroborates the assertion that the technology developed by the company is innovative.

(5) The need for appreciable improvement is best evidenced in a software context by looking at functionality. Mr. Cahill says that it would be difficult to understand how to evidence appreciable improvement without looking at functionality. Functionality represents the combination of the innovative processes undertaken during development.

(6) The technology was innovative in trying to automate what would otherwise be a complex human process. A large proportion of R&D innovation in the software space has similar automation goals. As Mr Cahill put it, the fact that a human can drive a car

does not mean that developing a self-driving car is not a massive innovation and technological advance.

(7) Most software projects (and R&D claims) will not be for software for software's sake, but software to achieve a goal. The company has never claimed that it was an advancing compliance or KYC/AML mechanisms. The innovation lies in the development of an automated AI due diligence post. The use of AI technology represents a fundamental aspect of the project, enabling the creation of a system capable of achieving superior outcomes compared to traditional human analysis. The company has produced an advance, which is a technological advance resulting in the creation of innovative technology. The advance is not in the field of compliance.

(8) In focusing on paragraph 9c of the BEIS Guidelines, which refers to making an appreciable improvement to an existing process, the company was simply drawing attention to the fact that, by creating automatic technology to perform tasks that were previously impossible without manual intervention, the company has made an appreciable improvement to an existing process.

(9) If what the company was working on was a routine project that could be done with existing technology, every bank and most companies would have done it already, whereas Mr Cahill's clear evidence that this is not the case.

(10) Mr Cahill says HMRC have tried to downplay the technological innovations achieved by the project and this is unfounded and indicates a lack of understanding on their part of the complexities involved. There is confusion on HMRC's part around what is involved in almost all software development. If pushed to the limit their argument would mean that no software development could be R&D as all projects will use existing algorithms and data and APIs and coding languages.

(11) Mr Cahill, the competent professional who testified at the hearing, is an expert in his field and is fully aware of the state of the art in the space. GOL's project work was not to advance personal or team knowledge. The competent professional, Mr Cahill, was the directing mind of the R&D research activities at the company and was best placed to provide evidence on this matter.

(12) Finally, Mr Cahill attached an article from the Financial Times on 1 April 2024, entitled "HMRC undermining innovation by failing to award R&D tax credits say start-ups".

DISCUSSION

72. Before we embark on our discussion of the evidence and arguments presented to us, there is an important preliminary point we should make. As well as criticising HMRC for a lack of scientific knowledge and rigour, Mr Cahill and Mr Dowsett criticised HMRC's general approach to GOL's claim, which they say is out of line with the way HMRC have dealt with previous claims. Mr Cahill's original witness statement was largely given over to this topic and it was said that Myriad had never seen a claim like this rejected before. This theme is reflected in the Financial Times article Mr Cahill sent to us with his final submissions (see [71](12) above).

73. Whilst we read that article, we should stress that we have put the issues it raises to one side. Questions of whether the UK should have a regime for encouraging R&D spend and what that regime should be are for the government and Parliament to decide. Questions as to whether HMRC have applied the law fairly and consistently are, if anyone seeks to raise them, for the Administrative Court. We are concerned only with the more prosaic question, whether HMRC have applied the existing law correctly in this case.

The burden of proof

74. We agree with Mr Lewis that it is for GOL, as the company making the R&D claim, to substantiate its entitlement, not for HMRC to justify its decision to deny the credits claimed. However, although the burden of proof is on GOL, we need to keep in mind what is often referred to as the shifting of the evidential burden. In *Brady v Group Lotus plc* [1987] STC 635, Mustill LJ (in the majority in relation to the legal burden of proof) stated at 643f-h:

> "Although this term [the 'evidentiary burden of proof"] is widely used, it has often been pointed out that it simply expresses a notion of practical common sense and is not a principle of substantive or procedural law. It means no more than this, that during the trial of an issue of fact there will often arrive one or more occasions when, if the judge were to take stock of the evidence so far adduced, he would conclude that, if there were to be no more evidence, a particular party would win. It would follow that, if the other party wished to escape defeat, he would have to call sufficient evidence to turn the scale. The identity of the party to whom this applies may change and change again during the hearing, and it is often convenient to speak of one party or the other as having the evidentiary burden at a given time. This is, however, no more than shorthand, which should not be allowed to disguise the fact that the burden of proof in the strict sense will remain on the same party throughout – which will almost always mean that the party who relies on a particular fact in support of his case must prove it."

75. We can see this principle at work in a tax case in the decision of the Court of Appeal in *Wood v Holden*, [2006] EWCA Civ 26. In that case the taxpayers had entered into a scheme to mitigate the charge to capital gains tax on the disposal by the taxpayers of their company. The case turned on the residence of a company, Eulalia, incorporated in the Netherlands. HMRC had charged capital gains tax, finding that Eulalia was resident in the UK for tax purposes. The Special Commissioners had dismissed the taxpayers' appeal, holding that the taxpayers had not established that Eulalia was not resident in the UK for tax purposes. The taxpayers appealed to the High Court, which reversed that finding, upholding the taxpayers' appeal. HMRC appealed to the Court of Appeal, which found for the taxpayers.

76. The Special Commissioners in *Wood v Holden*, appear to have decided the case (at least in part) on the basis that the taxpayers had not satisfied them that Eulalia was not UK tax resident. Park J thought that they were wrong to have done so in the light of the state of the evidence before them. The Court of Appeal agreed, holding:

> "[30] The judge noted that the special commissioners had expressed their conclusion as to the central management and control of Eulalia (at paragraph 145 of their decision) in terms which suggested that they had based that conclusion on what they saw as the taxpayers' failure to discharge the onus which was placed upon them by section 50(6) TMA 1970. As the special commissioners had put it: "the Appellants have failed to satisfy us that the central control and management was not in London from 18 July 1996 when CIL became its shareholder". The judge accepted that the special commissioners had been correct, in principle, to approach the matter on the basis that it was for Mr and Mrs Wood to show that the amendments made to their self-assessments in October 2001 had been wrongly made. He said this, at paragraph [59] of his judgment:
>
> > "[59] I wish to say more about the way in which the Commissioners have based their decision on what they see as the failure of Mr and Mrs Wood to discharge the burden of proving a negative. I accept, despite a submission of Mr Goldberg to the contrary, that, when an Inspector of Taxes makes an adjustment to a taxpayer's self-assessment and the

taxpayer appeals against the adjustment, the statutory burden on appeal rests on the taxpayer to show that the adjustment is wrong. That is the effect of s.50(6) of the Taxes Management Act 1970:

'If, on an appeal, it appears to … the Commissioners … by evidence – (c) that the appellant is overcharged by an assessment … the assessment … shall be reduced accordingly, but otherwise the assessment … shall stand good."'

But he went on (*ibid*):

" . . . However, there plainly comes a point where the taxpayer has produced evidence which, as matters stand then, appears to show that the assessment is wrong. At that point the evidential basis must pass to the Revenue."

The judge's conclusion at paragraph [63] must be read with those observations in mind.

[31] At paragraph [63] of his judgment the judge said this:

"[63] . . . in so far as the Commissioners decided this appeal against Mr and Mrs Wood on grounds relating to the burden of proof (and the opening part of paragraph SC145 suggests that those were the critical grounds for the decision), I consider that they were in error."

He could not have been intending to suggest, in that paragraph, that the special commissioners had been wrong in principle to approach the matter on the basis that it was for Mr and Mrs Wood to show that the adjustments to their self-assessments had been wrongly made. Rather, I think, he was stating his conclusion that the special commissioners had been wrong in failing to appreciate that the evidential burden had passed to the revenue in the present case. He had set out his view of the position at paragraph [60]:

"[60] In this case, at the beginning of the appeal before the Special Commissioners the position was that the Revenue had made an adjustment on the basis that Mr and Mrs Wood were liable to CGT, and that Mr and Mrs Wood had to show to the civil standard of proof that the adjustment was wrong. I accept that the onus was on them to show that Eulalia was not resident in the United Kingdom, but rather was resident in the Netherlands. [Park J then set out what Mrs and Mrs Wood had shown and went on] Surely at that point they can say: 'We have done enough to raise a case that Eulalia was not resident in the United Kingdom. What more can the Special Commissioners expect from us? The burden must now pass to the Revenue to produce some material to show that, despite what appears from everything which we have produced, Eulalia was actually resident in the United Kingdom."

[32] As the judge pointed out, the revenue had produced no positive material to show where the central control and management of Eulalia was. It was not enough (as the judge thought) for the revenue to criticise the lack of evidence from some of those at Price Waterhouse and ABN AMRO who had been involved in the transaction in 1996. The special commissioners had said that they would not have been assisted, to any material extent, by oral evidence of events then some seven years in the past. Nor was it enough to demonstrate, as counsel for the revenue had done convincingly, "that the steps taken were part of a single tax scheme, that there were overall architects of the scheme in Price Waterhouse, and that those involved all shared the common expectation that the various stages of the scheme would in fact take place". As the judge observed, those matters were not denied.

> Taken together they did not, of themselves, lead to the conclusion that Eulalia was resident in the United Kingdom."

77. The relevance of the shifting of the evidential burden here is that there may come a point where GOL can say something along the lines of, "We have done enough to raise a case that our project comprised an overall advance in science and technology. What more can the Tribunal expect from us? The burden must now pass to the Revenue to produce some material to show that, despite what appears from everything we have produced, our project was a routine advance."

The importance of evidence

78. The importance of evidence (as opposed to assertion and argument) in the context of R&D claims can be seen in the decision of the First-tier Tribunal ("FTT") in *AHK Recruitment Limited v HMRC*, [2020] UKFTT 232 (TC), where the FTT commented:

> "[69] In the reports submitted to HMRC and in its case before us, the Appellant through Optimal Compliance made assertions as to the aim of the project and as to the technology it had sought to develop to achieve the project's aims (and why it said that constituted an advance in technology). The Appellant, through Optimal Compliance, also referred to a number of uncertainties that it said it faced and how it had sought to overcome them. However, to meet the burden on it, the Appellant needed provide evidence that proved: (1) the technology it sought to develop was not already readily available; (2) the technology it sought to develop to achieve the project's aims amounted to an advance in technology within the meaning of the Guidelines and, specifically that it amounted to more than "routine… copying or adaptation of an existing product [or] process…"; and (3) that there were technological uncertainties which a competent professional working in the field could not have readily resolved.
>
> …
>
> [73] We find it remarkable that the Appellant did not provide evidence from someone that was contemporaneously involved in the project (such as Mr Jones or Mr Philby) and/or from someone with relevant expertise who, having reviewed records of the project, might have been able to address the issues set out at paragraph 69 above preferably by reference to supporting materials."

79. The FTT came back to the need for evidence in a decision released just after we had received written submissions, *Flame Tree Publishing Limited v HMRC*, [2024] UKFTT 00349 (TC). As well as stressing again the need for evidence, the FTT discussed whether, in order to support an R&D claim, a taxpayer needs to produce evidence from a "competent professional" and whether two individuals in that case were competent professionals. The FTT recorded the submissions of Mr Lewis (for HMRC) as follows:

> [65] Mr Lewis submitted that the Guidelines required a claimant to provide evidence from a "competent professional". He referred to *AHK v HMRC* [2020] UKFTT 0232 (TC) ("*AHK*"), a decision of Judge Bedenham and Mr Adrain, where the Tribunal said at [29]:
>
> > "In order to satisfy the burden of proof, the Appellant would have needed to provide witnesses who could have testified to the facts necessary for me to conclude that the criteria set out in the Guidelines were satisfied and who could then have been subjected to cross-examination by the Respondents. In the absence of that, I am unable to conclude that, on the balance of probabilities, the expenditure in question satisfied the relevant criteria."

> [66] In his skeleton argument, he said that the term "competent professional" is not defined, but that:
>
> > "its natural meaning is self-explanatory, and that it goes beyond having an intelligent interest in the field…to be accepted as a competent professional, an individual would need to be able to demonstrate appropriate qualifications, experience and up-to-date knowledge of the relevant scientific and technological principles involved."
>
> [67] He submitted that neither Mr Wells nor Mr Herbert was a competent professional. FTP's claim related to the digitisation of FTP's archive and making that archive available to users; in that context a competent professional would have up-to-date software, programming and computing skills and knowledge. Instead, Mr Wells was a publisher with some familiarity with computing, but no IT qualifications; he was plainly not a professional in that field. Mr Herbert was familiar with using computers but not a professional in the fields of programming or software development. As a result, said Mr Lewis, FTP could not show that these key provisions in the Guidelines were met."

80. At [68] the FTT said that it had "no hesitation in agreeing with HMRC, for the reasons given by Mr Lewis" and (so far as the question whether the individuals were competent professionals) some additional reasons of its own, and concluded (at [69]) that:

> "[The Appellant] has failed to show that the Project had either (a) resolved uncertainties which could not have been resolved by a competent professional or (b) made an improvement which a competent professional would have acknowledged as being "non-trivial". As Mr Lewis said, its claim must therefore fail."

Is Mr Cahill a "competent professional"?

81. In a report prepared by Myriad for HMRC, Mr Cahill is described as an "Investment banking expert in modelling. Expert in granular credit risk and algorithms." He has a degree from University College Dublin in International Commerce & French. In contrast, Mr Guppy is described as having "20+ years' of relevant experience in Software development, creating new software products at various financial institutions and fintechs". His academic qualifications are an ordinary national certificate (ONC) in Computer Science awarded by BTEC. An ONC is a Level 3 qualification, equivalent to A Levels. Mr Cahill described himself to us as the directing mind of the R&D research activities at the company, an expert in his field and fully aware of the state of the art in the space. He accepted in cross-examination that he was not a software developer and that most people with his competences do not write code, but he said that he needs to be able to write code to be able to do his job. As he put it, it is often much faster if he gets on and writes code himself rather than asking other people to do that. He described himself as "technocratic".

82. Although Mr Cahill does not have any formal qualifications in this area (nor, we note in passing, does Sam Altman, who dropped out of his computer science course at Stanford), Mr Cahill was a very impressive witness, who spoke with complete fluency about the technical way in which GOL's project worked and answered Mr Lewis' questions with assurance. Although his original witness statement suggested that someone else (we assume, Mr Guppy) was the competent professional, we are completely satisfied that Mr Cahill has experience (including in coding) and up-to-date knowledge of software capabilities, albeit perhaps only in the area he works in, to be a "competent professional" for our purposes. He is far more than "a publisher with some familiarity with computing, [or someone who] was familiar with using computers but not a professional in the fields of programming or software

development" (to quote the FTT's description of the two individuals who were held not to be competent professionals in *Flame Tree Publishing*).

Would it have mattered if he was not?

83. Mr Lewis did not submit to us, as he (or someone else with the same name) had done in *Flame Tree Publishing,* that, to support an R&D claim, a taxpayer needs to produce evidence from a "competent professional".

84. Because we have concluded that Mr Cahill is a competent professional, we do not need to express a view as to whether we agree with that submission (as the FTT did in *Flame Tree Publishing*) or whether it is open to us, in the absence of evidence from an accepted competent professional, to reach a conclusion on all the evidence submitted to us on questions such as what could be deduced by a competent professional from information in the public domain or what view a competent professional would have taken of a particular advance. We are not sure that we would have agreed with Mr Lewis with the same degree of alacrity as the FTT did in *Flame Tree Publishing,* so it comes as a relief not to have to express a conclusion on this issue.

What does GOL need to prove?

85. At its simplest, Get OnBord needs to show that it has a project which seeks to make an advance in overall (not just its own) scientific knowledge or capability by resolving a scientific or technical uncertainty (which is a reference to a situation where knowledge as to whether something is scientifically possible or technologically feasible is not readily available or deducible by a competent professional and which can include system uncertainty).

86. To advance overall knowledge means going beyond what is publicly available or readily deducible by a competent professional; routine copying or adaptation is not enough.

87. An "R&D" project can be "applied" (in the sense that it can lead to a tangible, commercial result, such as a new or appreciably improved process or product) as long as it incorporates an overall scientific advance.

Has GOL proved what it needs to prove?

88. We do not agree with Mr Lewis that GOL did not have a "project". The BEIS Guidelines (at paragraph 30) describe a project as a number of activities conducted to a method or plan to achieve an advance in science or technology. It is clear from Myriad's description of the project that it was an overall process with a defined objective of developing an AI process for KYC verification and risk-profiling. That objective defined the boundaries of what GOL was doing. Clearly, the project would evolve over time, but this does not mean that there is no method or plan designed to achieve GOL's goal.

89. The next question is whether this project was seeking to resolve a scientific or technological uncertainty. The evidence is that GOL was trying to work out whether it was technologically feasible to build an AI system to deal with KYC verification and risk profiling. The uncertainty is nothing to do with KYC or risk profiling requirements themselves. Mr Cahill readily agreed that GOL was not looking at KYC/AML or risk profiling requirements themselves; it was looking to see if it could develop an AI system that could do this better than humans can. Mr Cahill's evidence, reflected in the Myriad reports, was that there was no system in the market that did this and in consequence it was uncertain whether it would be possible to build a system that could do all that was required.

90. As well as this overall, macro-level uncertainty, there was uncertainty over particular aspects of the project. The August 2021 Myriad report identifies uncertainties in areas such

as developing algorithms to perform data normalisation, and developing a method to integrate and normalise data to reduce the time taken in the process.

91. We can see detailed examples of particular pieces of development work undertaken in the September 2021 Myriad report and the December 2021 report. These examples show new features being created and experimented with and improved. None of these pieces of work appear to be routine or readily deducible developments.

92. Mr Cahill's evidence is that a massive amount of new code was written as part of the project, which goes far beyond "routine" adaptation of existing technologies. This code sits on top of the information, gathered using existing sources and software/AI tools, and establishes a capability that was not there before.

93. Whilst the test in the BEIS Guidelines is not whether a new function has been developed, we accept Mr Cahill's submission that creating a new function, solving a real-world problem in a new and creative way using technology, is at least an indication that there has been an appreciable technological advance. In addition, we have Mr Cahill's evidence that he could not see technology being used this way anywhere, no bank had developed a system like this that he knew of (the market solution being to throw bodies at the task) and (as he put it) he would not waste years of his life trying to do something someone already could.

94. We also accept that using existing code (including from a code library) or other technologies already in existence (for example, using existing programming languages, frameworks and tools) is common in the software development world. We can see that for ourselves in the way the non-profit OpenAI organisation works, and we had evidence from Mr Cahill about one of the uses of GitHub. We do not consider that, of itself, the use of open source, or other existing, materials is an indication that a particular development is routine or readily discernible from publicly available materials. The question whether a development is an overall advance is a question to be answered in individual cases (by asking whether the development is a routine advance or otherwise readily discernible), but it is not necessary for that to be the case that each component part of the solution must itself be novel or bespoke to the project in question. As Mr Cahill observed, given the amount of open-source software/AI material available, if complete novelty were the test, no software project would ever amount to R&D. That is quite clearly not the case as the BEIS Guidelines themselves contemplate that an appreciable improvement to an existing process can amount to R&D.

95. In the light of all this, we are satisfied, on the balance of probabilities, that:

(1) GOL had a project with a defined aim;

(2) the technology GOL sought to develop and incorporate in the project was not already publicly available or readily deducible;

(3) the technology it sought to develop to achieve the project's aims amounted to more than "routine" copying or adaptation of an existing product or process; and

(4) the project required the resolution of technological uncertainties which a competent professional working in the field could not have readily resolved.

96. We discussed earlier the shifting of the evidential burden and the possibility, given the lack of evidence (as opposed to assertion and argument) put forward by HMRC, that we might come to a point where GOL could say something along the lines of, "We have done enough to raise a case that our project comprised an overall advance in science and technology. Over to HMRC to produce some material to show that, despite what appears from everything we have produced, our project was a routine advance." We certainly

consider that we have reached that point. However, that observation notwithstanding, we have reached our decision simply by asking ourselves whether, on the basis of the evidence we have read and heard, we think it more likely than not that the statements in [95] are correct. As we have already indicated, our answer to that question is "Yes". To the extent that the shifting of the evidential burden might suggest a lower state of satisfaction (and we are not sure that it does), that forms no part of our analysis.

97. Our answer to the question we asked ourselves at the head of this section of our decision (Has GOL proved what it needs to prove?) is "Yes".

DISPOSITION

98. For the reasons set out above, we have concluded that GOL's project did constitute research and development within the meaning in the BEIS Guidelines. The argument that it did not was HMRC's only objection to the claim made by GOL for an R&D tax credit under section 1054 CTA 2009. It follows that GOL was entitled to make the claim and that its appeal is allowed.

99. Before concluding we would like to add a few words about process. It will be readily apparent that this case has turned on the question of the scientific/technological quality of GOL's project, putting the point very (possibly too) simply "Was it a routine development or a real, meaningful scientific/technological advance?" We consider that these proceedings would have been much more straightforward (and possibly could have been avoided) if, at an early stage, both parties had "put their scientific cards face up on the table". Ideally, GOL would have produced a single document in which it marshalled all its scientific/technological evidence, including evidence from a competent professional (which is clearly highly desirable, whether or not it is strictly necessary), and HMRC would then have replied to that document with details of its own scientific analysis and evidence. It is not for us to tell other people how to run their cases, but our experience in this case would lead us to suggest this as an approach which might usefully be considered where similar issues arise.

RIGHT TO APPLY FOR PERMISSION TO APPEAL

100. This document contains full findings of fact and reasons for the decision. Any party dissatisfied with this decision has a right to apply for permission to appeal against it pursuant to Rule 39 of the Tribunal Procedure (First-tier Tribunal) (Tax Chamber) Rules 2009. The application must be received by this Tribunal not later than 56 days after this decision is sent to that party. The parties are referred to "Guidance to accompany a Decision from the First-tier Tribunal (Tax Chamber)" which accompanies and forms part of this decision notice.

MARK BALDWIN
TRIBUNAL JUDGE

Release date: 09th JULY 2024