CORPORATION TAX – research and development relief – whether statutory conditions met no - appeal dismissed

FIRST-TIER TRIBUNAL
TAX CHAMBER

Appeal number: TC/2018/06751

BETWEEN

AHK RECRUITMENT LIMITED **Appellant**

-and-

THE COMMISSIONERS FOR HER MAJESTY'S REVENUE AND CUSTOMS **Respondents**

TRIBUNAL: JUDGE DAVID BEDENHAM
JOHN ADRAIN

Sitting in public at Central City Tower, Birmingham on 29 November 2019

David Hart and Philip Redford-Jones of Optimal Compliance for the Appellant

Muhammed Khan and Martin Priestley, litigators of HM Revenue and Customs' Solicitor's Office, for the Respondents

DECISION

INTRODUCTION

1. On 1 October 2018, HMRC issued to the Appellant a closure notice pursuant to paragraph 32 of Schedule 18 to the Finance Act 1998 ("FA 1998"). By that closure notice, HMRC refused the Appellant's claim to Research and Development ("R&D") relief made pursuant to Part 13 of the Corporation Tax Act 2009 ("CTA 2009") in relation to accounting periods ending 31 December 2014 and 31 December 2015.

2. In this appeal, it falls to us to determine whether the Appellant met the statutory criteria for R&D relief so as to mean that HMRC were wrong to refuse the Appellant's claim.

THE HEARING OF THIS APPEAL

3. HMRC were represented by Mr Khan and Mr Priestley. HMRC's sole witness was HMRC Officer Peter Arrowsmith who had opened, conducted and closed the enquiry into the Appellant's tax returns. In his evidence before us, Mr Arrowsmith confirmed the evidence set out in his witness statement and answered questions put to him. We found Mr Arrowsmith to be a straightforward witness and we accept his evidence. HMRC also relied upon documents within the hearing bundle.

4. The Appellant was represented by Mr Hart and Mr Redford-Jones of Optimal Compliance. Mr Redford-Jones explained to us that Optimal Compliance provides consultancy services to businesses including in relation to R&D claims. The Appellant is one of Optimal Compliance's clients. Indeed, it was Optimal Compliance that suggested to the Appellant that it should make a claim for R&D relief, and who put the claim together. The only witness statement filed in support of the Appellant's case was from Mr Hart. During opening submissions, Mr Redford-Jones made a number of assertions of fact that went beyond what was set out in Mr Hart's witness statement. Mr Redford-Jones said that "if needed" he was able to give evidence of these further factual matters. Despite Mr Redford-Jones not having provided a witness statement by the deadline directed by the Tribunal (or, indeed, at all), we decided to permit Mr Redford-Jones to give evidence. As set out in more detail below, the evidence provided by Mr Hart and Mr Redford-Jones was less than satisfactory. That is not to say that we in any way doubt their honesty; we do not. But neither was contemporaneously involved in the project and activities underpinning the claim for R&D relief and neither has any direct knowledge of the detail of those activities. Rather, the evidence that each gave was based on what they had pieced together from documents and/or what they had been told by others. We acknowledge that the strict rules of evidence do not apply in this tribunal, but in this appeal we would have found it helpful to have evidence from someone who was contemporaneously involved in the project and activities underpinning the claim for R&D relief and/or had direct knowledge of the detail of those activities or, at the very least, from someone who (even if not contemporaneously involved in the project) was a competent professional in the field or otherwise had expertise such that he/she could state with authority what technology was readily available during the relevant period and how the technology that the Appellant sought to develop was materially different to or appreciably improved from that which was readily available.

BACKGROUND

5. The Appellant's business was the provision to third parties of human resource services and systems, including relating to the recruitment of new employees.

6. In its Corporation Tax Returns for the periods ending 31 December 2014 and 31 December 2015, the Appellant claimed R&D relief pursuant to s 1044 of the Corporation Tax

Act 2009 ("CTA 2009") and, on the basis of that relief, R&D tax credits pursuant to s 1055 CTA 2009.

7. The Appellant provided HMRC with a document (on Optimal Compliance headed paper) titled "R&D Activity Summary". In this document, the name of the "activity/project" was said to be "Individual Behaviour Assessment". The document continued as follows:

> "**1. Summary of R&D activity/project**
>
> Our project is based on a combination of quantitative and qualitative research into behaviour assessment, prediction and change. Typically, an individual's behaviour and predicted ability to perform a given task or set of tasks in business, has been assessed either through:
>
> informal methods - gut feel, informal assessments using question and answer techniques, structured questionnaires or informed third party opinion e.g. an individual's line manager.
>
> Formal methods - using competency based interview frameworks and or psychometric, numerical, verbal, diagrammatic questionnaires.
>
> We have specialised in using the latter for the core of our business transformation work. We have built our own assessments - previously provided by third party organisations - around our own IP.
>
> We felt that the traditional assessments, in particular the science behind psychometric and intellect measures, lack relevance to the job at hand of assessing real potential in a human being. Further, these assessments and their approach, are more than 30 years old and there has been little revision of assessment methods or technology during this time.
>
> As a result, we have spent the last 18 months investing in the research and development of values, motivation and intellect as concepts developing our own criteria and methods for assessing these attributes and developing state of the art technology to assess them accurately and effectively on a volume scale.
>
> **2. The scientific/technological aims of the project**
>
> Our objectives within the research and development are:
>
> To develop insight and fully understand the methods and science used in individual behavioural assessment and psychometric testing to date
>
> To create newer, up to date and more relevant criteria and methods for assessing the concepts of values, motivation and intellect.
>
> To build our own assessments and revise traditional methods to reflect our findings.
>
> To develop new technology to assess and measure the criteria on a large scale.
>
> …"

The document then proceeded to assert that various uncertainties had been encountered and to summarise attempts made to overcome those uncertainties. The document then set out why it was said the project constituted an advance that went beyond current knowledge and/or capability.

8. On 4 March 2016, Mr Arrowsmith notified the Appellant that HMRC was, pursuant to paragraph 24(1) of Schedule 18 to the FA 1998, conducting a check into the Appellant's tax return for the accounting period ending 31 December 2014. Mr Arrowsmith specifically stated

that he would be looking at the Appellant's claim for R&D relief and asked how the "Individual Behaviour Assessment" project was said to be qualifying R&D activity given that Guidelines issued by the Secretary of State for Trade and Industry exclude from the definition of "science" "work in the arts, humanities and social sciences".

9. On 12 April 2016, the Appellant's agent, Azure Financial Services, wrote to Mr Arrowsmith as follows:

> "We do of course appreciate that certain aspects of our client's research activity, namely that which comprises research into human behaviour, does not qualify for R&D Tax Credit relief. We provided details in the claim of such background activity in order to contextualise the technology development and we apologise if that was not made clear. In fact, most of the 'non-qualifying' research was carried out in earlier years and the focus is now (since 2013) on building the technology which forms the basis for the claim.
>
> We confirm that the costs we have included in the claim relate purely to the development of application technology designed to create re-usable and scalable online products that deliver the benefits envisaged by the behavioural research. This is particularly challenging; there are no other products available addressing these objectives and it has been by no means clear that it would be possible to create a technological solution to what has historically been a manual or consultancy process.
>
> Our client is now beginning to see positive results with a number of client pilot test sites. The products are still in prototype. But ultimately, if successful, these products will provide low cost tools for large and small businesses alike to vastly improve their human resource functions with much higher retention rate and matching of capabilities to job roles and hence productivity.
>
> …"

10. On 13 April 2016, Mr Arrowsmith wrote to Azure as follows:

> "Thank you for clarifying that tour client's claim was in relation to the development of the technology for an online product. That is not what the R&D Activity Summary from Optimal Compliance focuses on.
>
> Please can you advise me who within the company decided that they had carried out a qualifying project for R&D Tax relief in the first place? I would then like to know who the competent professional in the project was, as well as their background and qualifications.
>
> Please…provide details of the advance that your clients sought from the competent professional, and advise in which particular field of science of technology it took place. I would also like to hear about the uncertainties that they encountered during the course of the project from the competent professional involved.
>
> Finally, please provide a detailed breakdown of the costs involved in the claim under the appropriate headings of Staff, Externally Provided Workers, Subcontractors, Software and consumable items.
>
> Please will you provide me with these details by 20 May 2016."

11. On 19 May 2016, Azure emailed Mr Arrowsmith asking for further time in which to provide the requested information. Mr Arrowsmith agreed to this request.

12. On 21 June 2016, Azure emailed Mr Arrowsmith again asking for further time in which to provide the requested information on the basis that "my client had become extremely busy

and I am struggling to get them focused on providing the detail we need for this." Mr Arrowsmith replied asking that the further information be provided no later than 8 July 2016. Mr Arrowsmith summarised the information he was waiting on as follows:

> "1. Who within the company decided that they had carried out a qualifying project for R&D Tax relief, and how they came to make an application for the relief in the first place. I would then like to know who the competent professional in the project was, as well as their background and qualifications.
>
> 2. A 'project description' from the competent professional, and advise in which particular field of science or technology it took place. I would also like to hear about the uncertainties that they encountered during the course of the project from the competent professional involved.
>
> 3. A detailed breakdown of the costs involved in the claim under the appropriate headings of Staff, Externally Provided Workers, Subcontractors, Software and consumable items.
>
> …"

13. On 22 July 2016, Mr Arrowsmith emailed Azure asking when the requested information would be received. On 1 August 2016, Azure replied stating that it was expecting "the final bit of information I need from a third party this week."

14. On 17 August 2016, Azure emailed Mr Arrowsmith attaching a letter from Optimal Compliance signed by Mr Hart. The Optimal Compliance letter stated as follows:

> "1. The R&D claim was suggested by Optimal Compliance Services LLP (OCSLLP) who have worked as consultants with AHK Recruitment Ltd (AHKRL) for a number of years. The application was completed by OCSLLP with information supplied by AHKRL.
>
> Gareth Jones is the competent professional at AHKRL. He is currently in his fifth year there as Head of Innovation and Technology. Before that he spent two years as a Technical advisor to Technology Start-Ups and five years in another company as Operations Director overseeing the Technology and Marketing Divisions.
>
> 2. See attachment
>
> 3. We set out below a breakdown of the Consumable Costs included in the Claim…
>
> …
>
> 4. We set out below a breakdown of the Subcontractor Costs included in the claim....
>
> …
>
> See appendix 1 for a breakdown of Staff Costs.
>
> …"

15. On 2 September 2016, Mr Arrowsmith wrote to Azure thanking them for forwarding Optimal Compliance's letter but pointing out that no project description had been provided. No response having been provided by Azure, Mr Arrowsmith sent Azure a further email on 11 October 2016 asking that the project description be provided by no later than 25 October 2016.

16. On 25 October 2016, Optimal Compliance emailed Mr Arrowsmith asking for further time in which to provide the project description as "some internal changes have meant that the information is still in the process of being put together". No alternative date was suggested by Optimal Compliance.

17. On 28 October 2016, Azure emailed Mr Arrowsmith asking that he agree to allow until 11 November 2016 for the provision of the project description. Mr Arrowsmith agreed to this request.

18. On 11 November 2016, Optimal Compliance emailed Mr Arrowsmith stating "we are still in the process of putting the information together and anticipate getting this across to you next week". Azure was copied into this email.

19. On 20 December 2016, Mr Arrowsmith emailed Azure pointing out that he had still not received the project summary.

20. On 7 February 2017, Mr Arrowsmith wrote to the Appellant noting that HMRC's system indicated that Azure was no longer acting as the Appellant's agent. Mr Arrowsmith's letter went on to summarise the correspondence to date and ended with a request that the following be provided by 7 March 2017:

> "1. Details of how the claim was compiled and confirmation of how it came about.
>
> 2. The qualifications that Gareth Jones has that makes him a competent professional in the field of science or technology in which the advance was made.
>
> 3. A copy of the project description that was not provided when expected in November. What is required is set out in the document enclosed.
>
> 4. Details of who the sub-contractors were and what activities they carried out towards the R&D project."

21. On 17 February 2017, the Appellant emailed Mr Arrowsmith authorising him to liaise directly with Optimal Compliance.

22. On 7 March 2017, Optimal Compliance (Mr Hart) emailed Mr Arrowsmith stating that he had been trying to contact Mr Arrowsmith by telephone. On 10 March 2017, Mr Arrowsmith replied that due to existing work commitments and annual leave, he could not speak on the telephone until early April. Mr Arrowsmith went on "I would request that the project description be submitted while I'm away, so that the case can be progressed."

23. On 12 March 2017, Optimal Compliance (Mr Hart) emailed Mr Arrowsmith stating:

> "…Clearly this claim has gone a bit awry and I have got involved to try to bring it back on track. From what I could see a project description had been provided and there were some queries which we had attempted to resolve, but now we seem to be back at square one. [My colleague] tells me that he and one of our technical consultants had a conference with the person at the client who we understood was the key person there, but that this did not result in us reaching a conclusive position which everyone felt comfortable with, hence the delay. I do apologise for this, but we probably need a bit of guidance from you before we do further work or send over further clarifying information. That is why I would very much appreciate the opportunity to talk through on the phone…"

24. On 15 March 2017, Mr Arrowsmith emailed Optimal Compliance (Mr Hart) summarising the correspondence to date and asking that the information previously requested be provided by the middle of April. Mr Arrowsmith also asked for:

(1) details of the field of science or technology in which Gareth Jones was said to be have expertise and for details of his qualifications in that field; and

(2) copies of the contracts and invoices showing the role played by the sub-contractors in the R&D activity.

25. Following a telephone call on 7 April 2017, Mr Arrowsmith accompanied by another HMRC officer) met with the Appellant and Optimal Compliance on 5 May 2017. HMRC's notes of that meeting record that attendees from the Appellant included Gareth Jones and Mr Hart. The note goes on to record:

> "Company owns a piece of intellectual property which allows for the prediction of human performance in the workplace…this is done through algorithms and the application of the IP…The R&D claim is all in relation to software development…The R&D involves complexity of code and algorithms. They have not produced any new coding."

Under the heading "outcome", the notes record:

> "It was agreed that the competent professional would submit his report outlining the R&D activity that has taken place by 9 June 2017, along with the contract with the sub-contractors."

26. On 4 September 2017, Optimal Compliance (Mr Hart) emailed Mr Arrowsmith apologising for "the four moth delay in coming back to you following the meeting". Mr Hart went on to say "the company has been going through some re-structuring and rationalisation not least because the costs of the product R&D have proved challenging and some team members have left the business. These factors significantly delayed progress on the work". Mr Hart's email continued:

> "Following the meeting we have re-worked the 2014 R&D claim in light of your advice and also done the 2015 claim. The 2015 claim and revised CT return and computation have been submitted electronically…we are not able to do likewise for the 2014 claim so please can you accept the attached as the revised submission…
>
> We have enclosed a single narrative report on the project which we have prepared in consultation with the company which covers both years."

27. Attached to Mr Hart's 4 September 2017 email was a document titled "R&D Activity Summary". In this document, the name of the "activity/project" was said to be "Individual Behaviour Assessment Automation", and the "project manager and competent professional" was recorded as Gareth Jones. The document continued as follows:

> "**Background**
>
> Historically, the 'human judgment' element in the recruitment process which assesses soft skills such as personality, motivations and social interaction has been observed manually (face to face) by its very nature. This is the aspect we are automating and building into the software. Through our research into human behaviour, we have huge banks of data that we are looking to program into unique 'DNA code' for each individual. Getting the technology to make a good judgment call is where the challenge lies and is where the algorithms become even more powerful and intelligent.
>
> Digitising and coding the data has proved challenging and human interaction can never be completely replaced in the recruitment process. However, results so far have been encouraging and we expect that the work will continue over a number of years with iterative development, testing and refinement.
>
> The ultimate objective is to provide a highly effective low cost solution to the universal problem of matching people with jobs. In the past we have done this

using our own unique methods based on the concept of 'what great looks like', which can be very different for different job roles and different cultures/organisations. However, our clients for this service have been large organisations that can afford a bespoke consultancy project, typically costing several £100ks. The ultimate success of our project will be determined by whether we can deliver the same benefits to the SME market at a fraction of the cost through automated tools.

Our work is not only with UK based clients but also internationally, and this represents a further extension to the automation challenge because different cultures throw up nuances of interpretation which require different approaches to the development and refinement of the coded algorithms.

This is a long term project. The first early activities on the project can be traced back to 2011, but the serious work got underway in 2013. We partnered with our major clients as beta-test sites…The early working versions of test products proved unusable, with great divergence between the results produced by the software as compared with the human judgments - which was the primary testing strategy. Over time we have achieved an encouraging level of convergence to the point where the software is, as of 2017, proving to be at least a useful supporting tool. But there is a long way to go before we find out whether our ultimate aspirations can be achieved.

The Project Specifics

The project aim is to revolutionise the current recruitment and assessment of individuals for job roles by developing innovative software that uses data driven thinking, coupled with intelligent algorithms, to establish individual 'DNA' profiles for candidates AND 'DNA' profiles for each unique role within an organisation, and be able to automate the match between the two. This is designed to find the best people for a given job role based on criteria (values, motivations, behaviours) determined by the client. This subjectivity is something that has been identified as missing from the technology and online tools that are currently available.

Traditional methods and recruitment software have always used a number of generic methods to determine candidate suitability for an organisation or role. The two core ones are:

Tests or questions which have a yes/no answer. Typically, these include competency based interview questions, psychometric, numerical and verbal tests. Our view is that these tests are very generic and classify people into pre-determined categories.

Skills or experience based matching systems. These focus purely on practical or professional skills and what the individual has done before. The limitation of this approach is that skills and experience are the least reliable predictor of potential in a given role.

Ultimately, we hope to get to a point whereby we embed data mining, scraping, and machine learning into the process. Taking unstructured data, such as profiles from Facebook and Twitter, could allow the framework to be even more intelligent. The diagram below illustrates these aspirations.

Early Attempts

The core challenges facing [the Appellant and its parent company] and the technical team can be summarised as:

Step one. Being able to code our values, motivations and behaviour frameworks in a way that would drive a unique and automated What Great Looks Like profile (WGLL) for the individual

Step 2. Code the values, motivations and behaviour frameworks in order to produce an automated and unique WGLL profile for the role in question specifically contextual to that role in that organisation i.e. spoke

Step 3. Code a system that can accurately match the two, and can sift out those are not suitable to an acceptable level of accuracy.

Step 4. To be able to do the same matching and assessment capability for existing employees and create a machine learning loop that will 'learn' what high performance looks like and will be able to feed that back into the recruitment module, allowing 'real time' and automated adjustments to be made dynamically to the applicant screening assessments.

This blend, combining bespoke, unique profiles for individuals and roles, and 'joining' this assessment journey up to create a data driven machine learning loop that can adjust the profiles in real time has never been done before.

Our initial attempts to blend these together have had mixed results. We have managed to achieve steps 1 and 3. As yet, we've been unable to address Step 2 to create an automated process using an effective algorithm that will automatically drive out the WGLL profile for the role. This is currently still largely created and entered into the platform manually.

In our effort to try and create a machine learning loop between the employee and applicant profiling we created an initial step which is to automate the WGLL matching process for existing employees. We deployed the first version of this in 2013 but after significant use and testing we have had to withdraw this from field testing. This refers to the core challenge referred to above as Step 4.

At this stage, we do not know when or if we will be able to complete this machine learning loop and deploy the technology across the employee lifecycle.

Continuing Research and Development

Increasingly we will be exploring how we can move away from collecting data on individuals through a 'user interface' towards analysis of the individual 'digital footprints'.

We have been researching and testing this approach over the last two years with a distinct goal to eliminate the need for an individual job applicant or employee to complete any form of psychometric or cognitive questionnaire. Early results are encouraging but we are still in the testing stages.

This work is supplemental to the main project and whilst the digital footprint work will undoubtedly add a significant level of complexity to the technology work, the requirement still exists to complete steps 1 – 4 above.

…"

At the end of the document, the Appellant set out the methodology used to calculate the amount of claim for R&D Relief. A significant proportion of the expenditure said to have been incurred related to sub-contractor costs.

28. On 1 October 2018, Mr Arrowsmith wrote to the Appellant as follows:

> "I have now completed my check of the company's return. This letter is a closure notice issued under Paragraph 32, Schedule 18 of Finance Act 1998.
>
> **My decision**
>
> Having carried out a review and having an officer not previously involved in this case carry out a further review, we accept that the claim was made in good faith. However, as I have explained, I have not received an adequate project description of R&D activity, and therefore I deem the project to fall outside the scope of a qualifying project for R&D tax credit purposes according to our guidelines. In the circumstances, I shall now give effect to the removal of the claim and note my records accordingly.
>
> …"

29. On 3 October 2017, Mr Arrowsmith notified the Appellant that HMRC was, pursuant to paragraph 24(1) of Schedule 18 to the FA 1998, conducting a check into the Appellant's tax return for the accounting period ending 31 December 2015

30. On 6 October 2017, Mr Arrowsmith replied to Optimal Compliance's correspondence of 4 September 2017 as follows:

> "…
>
> I was awaiting a report from the competent professional outlining the R&D activity that had taken place, along with a copy of the contract with the subcontractors.
>
> Thank you for the report, however this once again appears to be all about the framework and the difficulties of defining the important factors for a job applicant, or job holder rather than pushing the boundaries of known technology. Little is mentioned regarding the advances that were required in IT to achieve the digitisation of the framework. The digitisation and coding of data in and of itself is not considered by the guidelines relating to software, CIRD81960, to be likely to involve R&D activity. Therefore what I require from the competent professional is an explanation of the advances he sought in IT and the uncertainties he encountered in attempting to make those advances and how he sought to overcome them."

31. On 23 October 2017, Optimal Compliance provided Mr Arrowsmith with information relating to the sub-contractor costs including that all costs related to a single sub-contractor (Evensys Technologies Ltd) and "arrangements with [Evensys] for the subcontracted services were dealt with on an informal basis". Optimal Compliance attached to the letter "a draft Supply of Services Agreement with [Evensys]". Optimal Compliance then went to provide further information said to "clarify and extend the revised R&D report supplied on 4 September". The further information included the following:

> "The project is an attempt to use technology to appreciably improve the HR function and recruitment processes…work to date has gone beyond routine analysis and methods in recruitment and had required the resolution of technical uncertainties relating to both overall feasibility and practical implementation of a software based automated systems, approach.
>
> …
>
> The project attempts to use machine learning ("ML") technology to go far beyond what is currently available. The aim is to achieve massive cost and efficiency gains by automating the most judgment-heavy aspects and so reduce necessary human intervention.

> There are no commercial solutions or combinations of existing technologies which address this problem in any comparable way.
>
> …
>
> We would like to clarify the use of the term 'coding' in the report. In order to build the attempted technology, it has been necessary to perform investigatory system analysis…as currently conceived, the attempted advance will require the automatic, unsupervised measurement of individuals and roles by their attributes. As such the codification of the framework into a machine-understandable format is foundational.
>
> …"

32. On 1 December 2017, Mr Arrowsmith wrote to Optimal Compliance in response to its 23 October 2017 letter. Mr Arrowsmith concluded "Having reviewed the latest submission, I remain unable to see any advance in science or technology that has been attempted…"

33. On 18 January 2019, Mr Arrowsmith had a telephone call with and then emailed Optimal Compliance stating:

> "I require the advance in the overall knowledge or capability in a field of science or technology to be made clear, along with the state of knowledge at the outset, the technical uncertainties encountered by the competent professionals, and what the result was at the end of the period."

34. On 8 February 2018, Optimal Compliance wrote to Mr Arrowsmith stating that the R&D claim was a valid one and that the advanced in technology sought had already been outlined in previous correspondence and querying Mr Arrowsmith's request for further information.

35. On 10 April 2018, Mr Arrowsmith wrote to Optimal Compliance summarising previous correspondence and underscoring "I have been trying to establish whether your clients have made any attempt to advance and develop software as advised…"

36. On 22 June 2018, following a further call with Mr Arrowsmith, Optimal Compliance wrote to Mr Arrowsmith stating:

> "…the overarching aim of the project was to build a computer system capable of making human-level judgments about a candidate's suitability for a role and other recruitment matters. At the time the project was undertaken the competent professionals did not believe this had been achieved elsewhere and thus it would represent an increase in the overall capability in automation technology and other related fields.
>
> …
>
> Given the level of expenditure on the project, competence of the professionals involved and the fact that it was ongoing without the core aims having been met, it seems reasonable to conclude that more than minor or routine changes to technology were involved, and thus an appreciable improvement on the status quo was attempted. This was the opinion of the competent professionals at the time.
>
> These key technology staff with an understanding of the system are no longer with the business. We are making efforts to reach them for further details of the technological uncertainties, which we believe have been provide in summary already…"

37. There was some further correspondence in August and September but nothing therein materially altered the positions adopted by the parties as set out in the previous correspondence.

38. On 1 October 2018, Mr Arrowsmith issued closure notices in respect of both of the accounting periods (to 31 December 2014 and to 31 December 2015). Mr Arrowsmith summarised his position as follows "The claim for R&D tax relief is being rejected on the grounds that there has not been any evidence provided by the company to suggest that they have advanced the technological field of IT."

39. On 30 October 2018, the Appellant filed its Notice of Appeal.

THE LAW

40. Part 13 of CTA 2009 provides for additional corporation tax relief for expenditure on R&D.

41. Section 1041 CTA 2009 provides that in Part 13, "research and development" has the meaning given by s1138 of the Corporation Tax Act 2010 ("CTA 2010").

42. Section 1138 CTA 2010 provides "*'Research and development'* means activities that fall to be treated as research and development in accordance with generally accepted accounting practice." Section 1006 of the Income Tax Act 2007 provides that the Treasury may by regulations specify what activities are or are not to be treated as "research and development" including by reference to guidelines issued by the Secretary of State.

43. Section 1042 CTA 2009 provides:

> "(1) In this Part *"relevant research and development"* , in relation to a company, means research and development—
>
> (a) related to a trade carried on by the company, or
>
> (b) from which it is intended that a trade to be carried on by the company will be derived.
>
> (2) Research and development related to a trade carried on by a company includes—
>
> (a) research and development which may lead to or facilitate an extension of the trade, and
>
> (b) research and development of a medical nature which has a special relation to the welfare of workers employed in the trade."

44. Section 1044 CTA 2009 sets out the conditions that a company needs to meet before it is entitled to R&D relief. One of the conditions is that the company has "qualifying Chapter 2 expenditure which is allowable as a deduction in calculating for corporation tax purposes the profits of the trade for the period".

45. Section 1051 CTA 2009 provides that for the purposes of Part 13, "qualifying Chapter 2 expenditure" means:

> "a) its qualifying expenditure on in-house direct research and development (see section 1052), and
>
> (b) its qualifying expenditure on contracted out research and development (see section 1053)."

46. Section 1052 CTA 2009 provides:

> "(1) A company's *"qualifying expenditure on in-house direct research and development"* means expenditure incurred by it in relation to which each of conditions A, B, D and E is met .
>
> (2) Condition A is that the expenditure is—
>
> (a) incurred on staffing costs (see section 1123),
>
> (b) incurred on software or consumable items (see section 1125),
>
> (c) qualifying expenditure on externally provided workers (see section 1127), or
>
> (d) incurred on relevant payments to the subjects of a clinical trial (see section 1140).
>
> (3) Condition B is that the expenditure is attributable to relevant research and development undertaken by the company itself.
>
> …
>
> (5) Condition D is that the expenditure is not incurred by the company in carrying on activities which are contracted out to the company by any person.
>
> (6) Condition E is that the expenditure is not subsidised (see section 1138).
>
> …"

47. Section 1053 CTA 2009 provides:

> "(1) A company's "qualifying expenditure on contracted out research and development" means expenditure—
>
> (a) which is incurred by it in making the qualifying element of a subcontractor payment (see sections 1134 to 1136), and
>
> (b) in relation to which each of conditions A, C and D is met.
>
> (2) Condition A is that the expenditure is attributable to relevant research and development undertaken on behalf of the company.
>
> …
>
> (4) Condition C is that the expenditure is not incurred by the company in carrying on activities which are contracted out to the company by any person.
>
> (5) Condition D is that the expenditure is not subsidised (see section 1138)."

48. Section 1054 CTA 2009 provides that a company is entitled to an R&D tax credit for an accounting period if it has a Chapter 2 surrenderable loss (as defined in s 1055) in the period. The amount of the credit is determined in accordance with s 1058 CTA 2009.

49. On 5 March 2004, the Secretary of State for Trade and Industry issued *Guidelines on the Meaning of Research and Development for Tax Purposes.* These Guidelines were updated on 6 December 2010. The Guidelines refer to having been initially issued for the purposes of section 837A of the Income and Corporation Taxes Act 1988 (repealed by CTA 2010). The parties were agreed that the Guidelines must be applied when considering the definition "research and development" for the purposes of Part 13 CTA 2009.

50. Paragraph 1 of the Guidelines provides:

> "..the definition of R&D for tax purposes follows generally accepted accounting practice…the accountancy definition is then modified for tax purposes by these Guidelines, which are given legal force by Parliamentary

> Regulations. These Guidelines explain what is meant by R&D for a variety of tax purposes, but the rules of particular tax schemes may restrict the qualifying expenditure."

51. The Guidelines then provide the following definitions:

> "R&D for tax purposes takes place when a project seeks to achieve an advance in science or technology.
>
> The activities which directly contribute to achieving this advance in science or technology through the resolution of scientific or technological uncertainty are R&D.
>
> Certain qualifying indirect activities related to the project are also R&D…"

52. The Guidelines go on to provide further definitions, explanations and commentary including as follows:

> "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.
>
> …
>
> Even if the advance in science or technology sought by a project is not achieved or not fully realised, R&D still takes place.
>
> 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.
>
> 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 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's already been established as scientifically feasible into a cost effective, reliable and reproducible process, material, device, product or service.
>
> Uncertainties that can be readily 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.
>
> …"

53. As the Appellant pointed out, the Guidelines recognise that not every project succeeds but that does not mean R&D did not place:

> "What counts is whether there is an intention to achieve an advance in science or technology, not whether ultimately the associated scientific or technological uncertainty is completely resolved, or resolved to the degree intended. Scientific or technological planning activities associated with projects which are not taken forward (e.g. because of insurmountable technical or commercial challenges) are still R&D."

54. We make clear that despite not setting out all of Guidelines above, we have considered and applied then in full.

55. HMRC referred us to two cases: *Gripple Limited v HMRC* [2010] EWHC 1609 (Ch) and *BE Studio Ltd v Smith and Williamson* [2005] EWHC 1506 (Ch). We considered of these cases carefully but did not find that either provided any material assistance in determining the cores issues that are before us on this appeal.

THE APPELLANT'S CASE

56. In its Notice of Appeal, the Appellant stated its grounds of appeal to be "The company has undertaken qualifying Research and Development ("R&D") activities in the year to 31 December 2014 and 31 December 2015."

57. In its skeleton argument, the Appellant submitted:

(1) "The R&D project claimed for by [the Appellant] …was an attempt to develop a technological system capable of predicting applicant suitability for a job. This technology would take a set number of inputs and automatically produce an output that correlated to a prediction as to the candidate's suitability for the job. This aim is a genuine attempt to create/improve a technological system, using the application of computer science principles. This type of computing is often referred to as Artificial Intelligence (AI)…"

(2) "The type of AI [the Appellant] aimed to create was a Binary Classifier…[which] aimed to take the inputs and predict a value for them…"

(3) "[the Appellant] chose to attempt to create an AI with a Convolutional Neural Network (CNN) architecture. This CNN is a type of Artificial Neural Network (ANN) that uses Deep Learning and mathematical convolutions to predict categories, and uses a method of ML called backpropagation to update the prediction algorithm to make an improved prediction…"

(4) "A key issue faced…is that it requires upwards of 100,000 examples to learn for most types of predictions, often millions of data points for high accuracy. [The Appellant] did not have access to this kind of data, and each job role would require the algorithm to learn for that job. This meant that system architecture was far more important…"

(5) "a core system uncertainty in the process is how to actually build the network in practice. The system architecture is very important to performance and is not obvious at the outset of the work. This can be seen clearly when we consider how new this technology is, the first practical application was shown to work in 2011 (see AlexNet), and this application was in the field of computer vision."

(6) "[There are] problems that are specific to recruitment when we use AI to inform or make decisions. Specifically, we have legal protection for categories of people…AI may struggle to recognise how it is discriminating on these bases…"

(7) "we believe this to be a serious and committed attempt to create a new piece of technology in the field of computer science and AI. The advancement was for the development of a new AI system capable of categorising people as either good or bad for a particular job…the technological uncertainties were numerous and have been outlined in detail at various points above, but the overarching uncertainty was how to achieve an AI with a high prediction accuracy in this field, at a cost-effective price, in practice. If successful, this would have represented a genuine and non-trivial advancement in the field of AI technology."

(8) "Much of the work performed in the period qualified as directly contributing to the attempt to resolve technological uncertainties where it was created solely for R&D purposes (BIS 27a), project planning activities (BIS 27b), and the testing and analysis of the created system, (BIS 27c). We have provided evidence of the code created, and payroll for the staff time."

(9) "the total qualifying costs may be summarised as [follows]:

(a) In-house staff costs: £25,191 (for the year to December 2014) and £27,004 (for the year to December 2015); and

(b) External workers – software developers: £141,201 (for the year to December 2014) and £84,332 (for the year to December 2015)."

58. The Appellant's did not make detailed submission on the applicable legislative provisions bud did refer to the Guidelines issued by the Secretary of State.

59. In its opening submissions, the Appellant (through Mr Redford Jones and Mr Hart) repeated the submissions made in its skeleton argument and made further factual assertions. When Mr Redford-Jones gave evidence, he adopted as part of his evidence the factual statements that made during the Appellant's opening.

60. Mr Redford Jones gave the following evidence:

(1) he graduated with a BSc in Physics and Chemistry in 2017.

(2) he has worked for Optimal Compliance since September 2018.

(3) his role at Optimal Compliance is to create reports that accompany claims for R&D relief and to "put together the claims".

(4) all of his factual knowledge in relation to the Appellant's activities and the R&D claim comes from reviewing documents and speaking with people who have previously worked for the Appellant.

(5) when asked which of the Appellant's employees/former employees he had spoken with, he named Ajai Sehgal but then went on to say that Mr Sehgal had only started working on the project in 2016. He assumed, however, that Mr Seghal would have spoken with Gareth Jones about project activity prior to 2016.

(6) AI is not general purpose. Given AI may be good for one task but incapable of wider use.

(7) there have been functioning ANNs since the mid 2000s and functioning CNNs from about 2012. By 2014, CNNs were being used for certain computer vision decision making.

(8) in 2014, the core principles had been developed and were being applied in other contexts but the Appellant needed to work out how a CNN could be made to work in practice for the specific task of assessing candidates for jobs with a view to the CNN making recruitment decisions that were qualitative comparable to those made by human assessors.

(9) contrary to what was recorded in the notes of the meeting on 5 May 2017, he believes, based on a conversation with Mr Seghal, that new coding was written for this project.

(10) when asked why the "project summary" reports provided to HMRC had not referred to CNNs, he said this was "probably because my predecessors did not understand the project properly".

(11) when asked who the competent professional on the project was, he said it was Gareth Jones who was "competent through experience".

61. Mr Hart gave the following evidence:

(1) he has had a professional relationship with the Appellant since 2010.

(2) he was aware of the project as it was being conceived but was not contemporaneously involved in or told about the detail of the project or the activities being conducted.

(3) his factual evidence is based on what he was subsequently told by Gareth Jones and Roger Philby, who founded the Appellant.

(4) Gareth Jones was the competent professional. Mr Jones was the project lead under the direction of Roger Philby.

(5) the activities undertaken by the Appellant in the accounting periods to 21 December 2014 and 31 December 2015 were "an attempt to create a Convolutional Neural Network with Sematic Classifiers capable of making Human Level Decisions that could be used for classifying candidates for job roles. This, in layman's terms, can be referred to a Supervised Machine Learning methodology for recruitment using multiclassification…"

(6) "the background knowledge and understanding in this filed was limited to almost nil given the first major proof of concept had only been achieved less than 2 years before commencement of the project."

(7) "given the novelty of the field in question we believe it only possible to be a 'competent professional' through individual and institutional research into the topic. Hence, we believe the professionals at AHK are competent by nature of their research. No accredited institution offered a qualification in the application of Convolutional Neural Networks prior to 2014."

(8) he does not recollect it being said at the 5 May 2017 that the project did not involve new coding. His understanding is that the entire project related to software development which required new coding.

(9) the Appellant had an "overarching contract" with Evensys. Even though that contract provided for a "statement of work" to be completed, and that statement of work had not been completed, he had been told by Gareth Jones and Roger Philby that Evensys had undertaken work on the project and this is what the Evensys invoices related to. It was his understanding that the only work that Evensys had undertaken for the Appellant related to the project.

(10) Gareth Jones no longer works for the Appellant so it was not practicable to obtain witness evidence from him.

(11) Roger Philby is "time poor" hence why no witness was given by him.

(12) it was not practicable to obtain evidence from the individuals that worked on the project as most of these were employed by the sub-contractor, Evensys.

62. The documents relied on by the Appellant included invoices issued by Evensys date throughout 2014 and 2015. These invoices described the work undertaken as "Development", "support", "web development" or, in a single instance, "TDT Multi-lingual project".

63. In closing submissions, Mr Hart said that the activities undertaken by the Appellant did not relate simply to the adaptation or fine tuning of existing technology. Instead the Appellant had sought to build new technology from the ground up. In seeking to do this, the Appellant has faced many uncertainties including if and how AI could be used to replicate human judgment in making selection decisions for job roles. He also referred us to the Guidelines issued by the Secretary of State.

HMRC'S CASE

64. HMRC submitted:

(1) the Appellant has failed to prove that its project sought to achieve an advance in science or technology.

(2) the Appellant has failed to identify and prove that there was a scientific or technological uncertainty that it was seeking to resolve.

(3) the Appellant has failed to prove that any improvements constituted an "appreciable improvement…through scientific or technological changes" (referring to paragraph 9 of the Guidelines issued by the Secretary of State). Instead the Appellant appears to have been doing no more than seeking to apply existing technology to their psychometric model.

(4) the person said to be the competent professional (Gareth Jones) has failed to explain the nature of the work and the nature/extent of any underlying uncertainties.

(5) the Appellant has not proved that Gareth Jones (or anyone else involved with the project) ought to be considered a "competent professional".

(6) if any R&D activity was conducted, the Appellant has not proved the quantum of the claim. In particular, the evidence relating to the sub-contractor costs was inadequate as it did not prove that the work undertaken by the sub-contractor related to the project.

65. Mr Arrowsmith gave evidence before us during which he:

(1) confirmed the accuracy of his witness statement, which set out the history of HMRC's interaction with the Appellant in relation to the R&D claim (as summarised above).

(2) accepted that the Appellant had sought to build an AI system that could make recruitment related decisions to a human standard.

(3) said that in at the 7 May 2017 meeting he has asked Gareth Jones whether the Appellant was using new methods of coding or developing new code to which Mr Jones said "no".

(4) said he had not seen evidence of any new code being created for the project.

DISCUSSION AND DECISION

66. To succeed on this appeal, the Appellant needed to prove that in the relevant accounting periods it had undertaken R&D within the meaning of the legislation and the Guidelines. The Appellant also needed to prove what activities had been undertaken as part of the R&D and what costs included in its R&D claim related to R&D activities.

67. In our view, for the reasons set out below, the Appellant has failed to prove that it undertook qualifying R&D. Even if R&D was undertaken by the Appellant (which we have found the Appellant has not proved), the Appellant has failed to prove that the costs included in its R&D claim related to R&D activities.

68. The Appellant needed to, but did not, provide evidence that proved it had undertaken a project which sought to achieve an advance in science or technology and, as part of that project, undertook activities which sought to resolve a scientific or technological uncertainty as defined by the Guidelines.

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.

70. As to whether the technology was already readily available: Optimal Compliance (in the reports it prepared and sent to HMRC and in the evidence provided to us by Mr Hart and Mr Redford-Jones), stated that it was not. However, as set out above, neither Mr Hart nor Mr Redford-Jones were contemporaneously involved in the project during the relevant period and neither claimed to be an expert in the field. Accordingly, we do not attach weight to their assertions (for which they provided no supporting evidence – such as relevant extracts from, industry publications) as to what technology was and was not readily available during the relevant periods. To the extent (which was far from clear) that Mr Philby or Mr Jones (or any other person associated with the Appellant) fed into the reports prepared by Optimal Compliance, that does not assist the Appellant given that the Appellant has failed to prove that any such individual was a competent professional or otherwise had expertise in the field such as to mean that they were appropriately placed to say what technology or was not readily available during the relevant periods. Simply asserting that Mr Jones was "competent through experience" and providing a resume as brief as that contained in the 17 August 2016 letter was not sufficient. In these circumstances, in the absence of documentary evidence (such as extracts from technological journals or industry publications) or evidence from a competent professional operating in this field or a person with other relevant industry expertise who could speak with authority as to what technology was and was to available during the relevant periods, we are not willing to accept the assertions made by Optimal Compliance on behalf of the Appellant

71. As to whether the technology that the Appellant sought to develop to achieve the project's aims amounted to an advance and amounted to more than "routine…copying or adaptation of an existing product [or] process…": Optimal Compliance (in the reports it prepared and sent to HMRC and in the evidence provided to us by Mr Hart and Mr Redford-Jones) said it did. However, the case put forward by the Appellant in relation to this issue suffers from the same deficiencies as we have identified at paragraph 70 above. In the absence of a competent professional operating in this field or a person with relevant other expertise explaining what

existing technology was available during the relevant period, why this technology was not suitable to achieve the project's aims and what steps needed to be taken to develop the technology needed for the project (in particular the extent to which this was, as asserted by Optimal Compliance, a "build from the ground up" situation or whether there was existing technology that could be adapted and altered – and the extent of any necessary adaptations/alterations), we are not willing to accept the assertions made by Optimal Compliance on behalf of the Appellant.

72. As to whether there were technological uncertainties which a competent professional in the field could not readily resolve: Optimal Compliance (in the reports it prepared and sent to HMRC and in the evidence provided to us by Mr Hart and Mr Redford-Jones) said there were such uncertainties. However, the case advanced by the Appellant in relation to this issue again suffers from the same deficiencies as we have identified at paragraph 70 above. Further, in circumstances where the Appellant has not proved there was a competent professional involved with the project, it does not assist the Appellant to say (as Mr Hart did on its behalf) that the fact that the uncertainties were not resolved must mean that there were not readily resolvable by a competent professional in the field.

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.

74. As summarised above, even if R&D was undertaken by the Appellant (which we have found the Appellant has not proved), the Appellant has failed to prove that the costs included in its R&D claim related to the R&D. There was no adequate evidence given as to whether the costs claimed in relation to the sub-contractor (and indeed in relation to the Appellant's own staff) did in fact relate to the activities undertaken as part of the project. Mr Hart and Mr Redford-Jones were not contemporaneously involved in the project and so we gave very limited weight to their assertions that the claimed costs all related to R&D activities (and to Mr Hart's asserted "understanding" that the only work undertaken by Evensys for the Appellant related to the project). Nor were the documents provided sufficiently clear to on this issue; the Evensys invoices simply described the work undertaken as "Development", "support", "web development" or, in a single instance, "TDT Multi-lingual project" and the (unsigned) contract with Evensys did not have a completed statement of the work that was to be undertaken.

75. Again, we find it remarkable that the Appellant did not provide evidence from someone contemporaneously involved in the project (or who had subsequently conducted a review of the Appellant's records) who could speak with authority as to the nature of the work undertaken by Evensys and the Appellant's own staff, to the descriptions of work provided on the Evensys invoices, and to whether Evensys provided other (non-project related) services to the Appellant during the relevant accounting periods.

76. The Appellant's appeal is dismissed.

RIGHT TO APPLY FOR PERMISSION TO APPEAL

77. 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.

DAVID BEDENHAM

TRIBUNAL JUDGE

RELEASE DATE: 20 MAY 2020