



**Administrative  
Appeals Tribunal**

**DECISION AND  
REASONS FOR DECISION**

**Camalic Pty Ltd and Innovation and Science Australia (Taxation) [2020]  
AATA 1590 (3 June 2020)**

Division: **TAXATION AND COMMERCIAL DIVISION**

File Number: **2017/1709**

Re: **Camalic Pty Ltd**

APPLICANT

And **Innovation and Science Australia**

RESPONDENT

**DECISION**

Tribunal: **Senior Member Theodore Tavoularis**

Date of Decision: **3 June 2020**

Date of Corrigendum(s): **5 June 2020, 18 June 2020**

Place: **Brisbane**

The Tribunal affirms the objection decision under review.

.....[SGD].....

Senior Member Theodore Tavoularis

Catchwords

*TAXATION – research and development tax incentive – whether the Applicant conducted a core R&D activity in the relevant financial years – whether development of an algorithm to predict shareholder value increases is a core R&D activity – whether claimed activities were undertaken in the year in which they were claimed – whether claimed activities were undertaken at all – whether development of algorithm is caught by exclusion in s. 355-25(1) Income Tax Assessment Act 1997 (Cth) – whether activities claimed as supporting R&D activities are core R&D activities – decision under review affirmed.*

*PRACTICE AND PROCEDURE – procedural fairness – where claim by applicant that applications not assessed by people with sufficient knowledge of machine learning and software development – no evidence to support claim – no unfairness.*

Legislation

*Income Tax Assessment Act 1997 (Cth)*

*Industry Research and Development Act 1986 (Cth)*

Secondary Materials

*Industry Research and Development Decision-making Principles 2011*

**REASONS FOR DECISION**

**Senior Member Theodore Tavoularis**

**3 June 2020**

**THE APPLICATION**

1. This matter concerns applications for registration in relation to “R&D Activities” (research and development activities) under the R&D tax incentive scheme for the 2013/14 and 2014/15 financial years. Central to the determination of this application is whether the Applicant conducted (or had planned) a “core R&D activity” in either of the relevant financial years.

## THE R&D TAX INCENTIVE SCHEME

2. The R&D tax incentive scheme is jointly administered by Ausindustry under the *Industry Research and Development Act 1986* (Cth) (**IR&D Act**), and the Commissioner of Taxation under Division 355 of the *Income Taxation Assessment Act 1997* (Cth) (**ITAA**).
3. Division 355 of the ITAA provides a statutory scheme whereby an entity may be entitled to a tax offset for expenditure that was incurred in relation to research and development activities (**R&D activities**) in certain circumstances. The scheme provides that an “R&D entity” is entitled to a deduction in an income year for expenditure it incurred during that year if, among other things, the expenditure was incurred on one or more R&D activities for which the R&D entity was registered under s. 27A of the IR&D Act in that year.<sup>1</sup> Registration for an R&D activity is therefore crucial to qualifying for the tax offset.
4. Part III of the IR&D Act provides a mechanism whereby R&D entities may become registered and deregistered for R&D activities. An R&D activity is either an “R&D core activity” or an “R&D supporting activity”<sup>2</sup>. Of particular importance in this matter is the definition of “core R&D activities”.
5. Section 355-25 of the ITAA relevantly defines core R&D activities as follows:
  - (1) **Core R&D activities** are experimental activities:
    - (a) whose outcome cannot be known or determined in advance on the basis of current knowledge, information or experience, but can only be determined by applying a systematic progression of work that:
      - (i) is based on principles of established science; and
      - (ii) proceeds from hypothesis to experiment, observation and evaluation, and leads to logical conclusions; and
    - (b) that are conducted for the purpose of generating new knowledge (including new knowledge in the form of new or improved materials, products, devices, processes or services).

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<sup>1</sup> Section 355-205 ITAA.

<sup>2</sup> Section 355-20 ITAA.

(2) However, none of the following activities are **core R&D activities**:

...

(c) management studies or efficiency surveys;

(d) research in social sciences, arts or humanities;

...

6. Supporting R&D activities must have a direct relationship to a core R&D activity.

## BACKGROUND

7. For the purposes of the scheme, an “R&D entity” includes a body corporate incorporated under an Australian law<sup>3</sup>. There is undisputed evidence before me<sup>4</sup> that the Applicant was, at all relevant times, such an entity, and I am satisfied that it was.

8. On 30 April 2015, the Applicant applied for registration in relation to the 2013/14 financial year for a core R&D activity, being “*Development of an algorithm to predict [shareholder] value increases*” and three supporting activities, being:

- Acquisition of a supporting framework and database for the predictive tool;
- Literature and Technology Review; and
- Project Planning with AusIndustry.<sup>5</sup>

9. The application stated that the project spanned 1 August 2013 to 31 December 2016,<sup>6</sup> and it described the overall objective of the project as:

*...to develop a software predictive tool that utili[s]es a significantly large number of multiple variables to predict an increase in value based upon the optimal combination of variables. The initial practical application of this project is to assist boards of companies to predict increases in shareholder value that will result from improvements in board governance practices.<sup>7</sup>*

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<sup>3</sup> Section 4 Industry Research and Development Act 1986 (**IR&D Act**) and s355-35 ITAA.

<sup>4</sup> Exhibit R3, Annexure B.

<sup>5</sup> Exhibit R4, T6, pp86 – 88.

<sup>6</sup> Exhibit R4, T6, page 83.

<sup>7</sup> Exhibit R4, T6, p84.

10. The application identified that:<sup>8</sup>

*Technical unknowns to be resolved through the conduct of experimental activities include:*

- *Which [board governance] variables and to what extent they impact upon [shareholder] value?*
- *Is there a correlation between increase in variables [improvements to board governance practices] and increases in [shareholder] value?*
- *Can an algorithm be developed to accurately predict these increases, if such a correlation exists?*

11. The application further identified that the new knowledge being sought related to “determining the relationships between variables that help to predict increases in [shareholder] value”.<sup>9</sup>

12. Sub-section 27A(1) of the IR&D Act provides that, upon application by an R&D entity, the Board<sup>10</sup> (the Respondent in this matter) must decide whether to register, or refuse to register, the entity for an income year for:

- one or more specified “core R&D activities” conducted during that income year; and/or
- one or more specified “supporting R&D activities” conducted during that income year.<sup>11</sup>

13. Section 27A(2)(a) provides that a decision to register an R&D entity must be made consistently with any findings already in force under subsection 27B(1) in relation to the application. The Board’s findings bind the Commissioner of Taxation for the purposes of any entitlement an R&D entity may have to an R&D tax offset.<sup>12</sup>

14. Sub-section 27B(1) of the IR&D Act provides that when considering an R&D entity's application, the Board may find that all or part of an activity was a core R&D activity, or was not a core R&D activity or that all or part of an activity was a supporting R&D activity, or was not a supporting R&D activity, during the income year.

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<sup>8</sup> Exhibit R4, T6, p84.

<sup>9</sup> Exhibit R4, T6 p85.

<sup>10</sup> Also known as Innovation and Science Australia (see ss. 4 and 6 IR&D Act), the Respondent in this matter.

<sup>11</sup> Section 27A and 27J IR&D Act.

<sup>12</sup> Section 27 IR&D Act.

15. The application for registration was approved on 11 May 2015<sup>13</sup> (and subsequently revoked - see below at paragraph [18]).
16. On 2 May 2016, the Applicant applied for registration in relation to the 2014/15 financial year for the same core activity and one supporting activity, being “*project planning*”.<sup>14</sup>
17. On 30 August 2016 the Respondent notified the Applicant that, pursuant to s. 27B of the IR&D Act, it had decided that the activities for the 2014/15 financial year were not R&D activities.<sup>15</sup> Further, pursuant to s. 27J, it had decided that the registered R&D activities in relation to the 2013/14 financial year were not R&D activities.<sup>16</sup>
18. The effect of these findings was that the Applicant could not obtain registration for the claimed R&D activities with respect to the 2014/15 financial year<sup>17</sup> and it was taken never to have been registered for the claimed R&D activities for the 2013/14 financial year<sup>18</sup>.
19. The Respondent summarised its reasons with respect to the claimed core activity:

*The company has not demonstrated that the activity (the machine learning algorithm for the predictive tool) is an experimental activity:*

- *The activities were not concerned with determining whether a relevant, contemporaneous hypothesis, tested in an experiment, was true or false, and;*
- *The activities did not involve testing a relevant hypothesis via a systematic progression of work, and;*
- *The activities were not undertaken for the significant purpose of generating new knowledge, and;*
- *The contemporaneous records provided do not evidence experimentation to test the hypothesis.*<sup>19</sup>

20. The claimed supporting activities were not accepted as supporting R&D activities because they did not have a close and relatively immediate relationship to a core R&D activity.

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<sup>13</sup> Exhibit R4, T7, p93.

<sup>14</sup> T10, pp106 – 120.

<sup>15</sup> Exhibit R4, T41, p461.

<sup>16</sup> The Board is empowered to do this by ss. 27F(1) and ss. 27J(1) IR&D Act.

<sup>17</sup> Subsection 27A(2)(a) IR&D Act.

<sup>18</sup> Subsection 27L(1)(b) IR&D Act.

<sup>19</sup> Exhibit R4, T41, p461 – 462.

21. The Applicant sought internal review of each decision<sup>20</sup>. After conducting an internal review, the Respondent confirmed both decisions.<sup>21</sup>
22. The Applicant now asks the Tribunal to review the decisions<sup>22</sup>. The Applicant asks the Tribunal to substitute the reviewable decisions with decisions that the activities claimed as R&D activities were indeed R&D activities<sup>23</sup>.
23. In the conduct of this review, the Tribunal stands in the shoes of the original decision maker, being the Respondent, as subsection 43(1) of the *Administrative Appeals Tribunal Act 1975* (Cth) (**AAT Act**) provides. That subsection states:

*(1) For the purpose of reviewing a decision, the Tribunal may exercise all the powers and discretions that are conferred by any relevant enactment on the person who made the decision and shall make a decision in writing:*

- (a) affirming the decision under review;*
- (b) varying the decision under review; or*
- (c) setting aside the decision under review and:
  - (i) making a decision in substitution for the decision so set aside; or*
  - (ii) remitting the matter for reconsideration in accordance with any directions or recommendations of the Tribunal.**

24. Part 2 of the *Industry Research and Development Decision-making Principles 2011* apply to the Respondent's decision making process in relation to certain matters. Those matters include whether refusing to make a finding that an activity is an R&D activity is justified.<sup>24</sup>  
The relevant principles are:

#### *2.2 Proper decision-making process*

- (1) The Board must give an interested person an opportunity to present the person's case in a manner approved by the Board.*
- (2) The Board must give proper consideration to the case before it by:
  - (a) considering the evidence and any explanation given by or for the interested person about the case; and*
  - (b) taking all relevant considerations into account, including the interested person's past or present behaviour; and**

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<sup>20</sup> Under s30A IR&D Act.

<sup>21</sup> In accordance with s30D(1) and (2) IR&D Act. Decision is at T58.

<sup>22</sup> Under s30E IR&D Act.

<sup>23</sup> Exhibit R4, T1.

<sup>24</sup> See s. 32A(b) of the IR&D Act.

- (c) *not taking an irrelevant consideration into account; and*
- (d) *considering relevant precedents from similar cases.*

(3) *The Board must consider the case in good faith and in an unbiased manner.*

### 2.3 Making the decision

*Decisions of the Board must be based on the following:*

- (a) *the merits of the particular case;*
- (b) *the tested evidence;*
- (c) *all relevant considerations.*

25. In accordance with subsection 43(1) of the AAT Act, these principles, along with the relevant legislation, bind the Tribunal in its review of this matter.

## THE APPLICATIONS

26. There are several issues that affect the Applicant's entitlement to registration in relation to the claimed R&D activities, including whether the claimed activities were undertaken in the year in which they were claimed or at all, and if they were not, whether there was an intention to engage in a *core* R&D activity when the claimed *supporting* R&D activities were undertaken. However, the threshold issue is whether there was a core R&D activity undertaken or in mind in either of the relevant financial years, that is to say, were any of the claimed activities in the 2015 or 2016 applications core R&D activities? If there was a core R&D activity undertaken or planned, it will become necessary to determine those other matters. If not, there is no entitlement to registration for any of the claimed R&D activities in either financial year.

27. Critical to determining this threshold issue is identifying exactly what the claimed core R&D activity is. As will become apparent, the information provided by the Applicant is imprecise and somewhat confusing. It is therefore necessary to examine the various iterations of the application and project description in order to determine what, in substance, the project is and what the core activity is.

28. Before the Applicant submitted the applications, a related entity, Effective Governance International Pty Ltd (**EGI**), had submitted applications in relation to the same project.



### *The EGI Applications*

29. On 30 October 2012, EGI applied for registration in relation to activities for the 2011/12 financial year. The application was submitted by Mr James Beck, described in the application as the managing director of EGI.<sup>25</sup>
30. Mr Beck was the secretary and one of two directors of EGI. The two issued shares in EGI were owned by Bedarra Nominees Pty Ltd (**Bedarra**),<sup>26</sup> of which Mr Beck was the secretary, one of two directors, and owner of nine of the ten issued company shares.<sup>27</sup> I find that Mr Beck exercised effective control of EGI.
31. The project was initially described as a “*Board Maturity Model*”. The objectives of the project were described thus:

*Good Governance requires all Company Boards to review their performance, as per ASX principle 2.6. Current approaches are subjective and emotive, providing minimal insight for improvement. The Board Maturity Model will provide a systematic approach for company boards to identify their current performance level and agree the level that they wish to perform against [sic] a High Performance Board Model. The out put of this process will be a Governance Road Map for the board to improve their overall performance and in turn the performance of the company.*

32. The new knowledge was described as:

*Hypothesis is that, like Change Management and Information Technology, boards of companies have 5 levels of Maturity, we will define these levels, and document the attributes of each level, against each key function/role of the board, and then utilise on [sic] on-line survey to validate the level of Maturity of the board being assessed, as well as provide a roadmap for improvement. Having conducted an initial global search, nobody has undertaken this research, nor developed such an offering to assist boards of companies [sic] add value to the organisation it governs.*

33. The application listed the first core R&D activity as “*Project research and design*” and claimed five more core activities relating to developing prototypes, including the development of a technical platform for data analysis and a technical platform for “*Governance Roadmap Output*”, and the testing of prototypes.

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<sup>25</sup> Exhibit R5, ST2, pp54-55.

<sup>26</sup> Exhibit R3, Annexure C.

<sup>27</sup> Ibid, Annexure D.

34. The development of an algorithm was not explicitly mentioned in the application. Nor is it readily implied.

35. The project was initially approved. It was subsequently identified for a desk audit on 31 January 2013.<sup>28</sup> In correspondence with AusIndustry much later, in May 2016, Mr Beck expressed the view that:

*[[I]t became apparent that eGi had not documented the project correctly, and had focused the documentation on the short term deliverables, rather than the longerterm development of The Predictive Tool. The short term deliverables were determined not to be Core Activities, but rather Supporting Activities ...<sup>29</sup>*

36. On 18 March 2013, EGI submitted an amended application that re-cast the project.<sup>30</sup> The project title was “*Development of an algorithm to predict increases in shareholder value*”. The objectives of the project included:

*[T]o develop a predictive tool to assist boards of companies to predict increases in shareholder value that will result from improvements in board governance practices.*

...

*Technical unknowns to be resolved through the conduct of experimental activities include:*

- *Which board governance variables (and to what extent) impact upon shareholder value?*
- *Is there a correlation between improvements to board governance practices and increases in shareholder value?*
- *Can an algorithm be developed to accurately predict these increases (if such a correlation exists)?*

37. The new knowledge that the project sought to generate, according to the application, related to board governance, including board maturity, and the relationships between variables that help to predict increases in shareholder value.

38. The core activity claimed was “*Development of an algorithm to predict shareholder value increases*”. The supporting activities were broadly described as “*Development of a supporting framework and database for the predictive tool*”.

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<sup>28</sup> Exhibit R4, T20, p200.

<sup>29</sup> Exhibit R5, ST2, p125.

<sup>30</sup> Ibid, p79.

39. In 2016, Mr Beck explained the change in the description of the project – to focus on the development of the predictive tool, rather than the context in which it could be implemented as having resulted from “*lessons learnt*”. He added that the tool could be applied to a farming context to predict mathematically how the input parameters (seed type, soil type, rain amount over time, fertiliser quality and timing etc) could be manipulated to achieve the mathematically optimum crop.<sup>31</sup>

40. In October 2013, EGI’s service provider for the project, Power Stats Pty Limited (**Power Stats**) provided a report to EGI that provided responses to questions asked of EGI by AusIndustry<sup>32</sup>. It was written by *Applicant Witness 2*, who stated that:

*Effective Governance International Pty Ltd (eGi) is aiming to develop software that predicts the impact of changes in up to 100 different facets of company’s governance on that company’s shareholder value. This will require the development of an algorithm that undertakes that calculation.*

41. The report went on to state that the algorithm would employ a “*Bayesian statistical analysis*”, the algorithm should have general applicability (e.g. could be used to predict the effects of changes in different variables on crop growth), and that Power Stats recommended using a basic suite of machine learning algorithms. The report described the machine learning process as:

- *A pattern exists (as indicated by a preliminary governance model)*
- *We cannot pin it down mathematically*
- *We can collect data (governance data) and allow a machine learning algorithm to learn a model*

*...The system will begin to train itself, and successive data plus feedback by the user will rapidly improve performance.*<sup>33</sup>

42. *Applicant Witness 2* explained that EGI’s project was akin to a clinical trial in relation to a molecule developed in a scientific lab, in the sense that Power Stats could perform the clinical trial but developing the molecule was an academic research activity undertaken by universities rather than businesses.

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<sup>31</sup> In a May 2016 response to a request for information from the Respondent, at Exhibit R4, T20, p204.

<sup>32</sup> Exhibit R4, T4, p70.

<sup>33</sup> *Ibid*, p72.

43. He identified novelty in the project in the following way:

*...the deployment of predictive analytics in the form of Machine Learning algorithms into Australian industry from academic theory has yet to be done in the way expressed by eGi.<sup>34</sup>*

44. On 21 February 2014, AusIndustry provided a Statement of Understanding (**SOU**) to EGI, giving further notice that it was not satisfied that the claimed core R&D activity met the statutory definition. The SOU stated:

*Development of an algorithm may be eligible as a stand-alone Core R&D Activity provided that it involves experimental activity whose outcome cannot be known or determined in advance on the basis of current knowledge, information or experience. However, only the development of the functionality of the algorithm would be eligible as Core R&D Activity (ie does the algorithm accurately measure in some new way the change in one variable that results from changes in other variables, regardless of what those variables are), not the gathering or analysis of governance (or other) data being put through the algorithm to identify a correlation between improvements in governance and shareholder value. This means that a much narrower set of activities are potentially eligible as Core R&D Activity than those claimed by eGi.<sup>35</sup> [My underlining]*

45. On 30 April 2014, EGI applied for registration for the 2012/13 financial year in relation to the same project, described in the same way<sup>36</sup>.

46. After 18 months of review and discussion<sup>37</sup> between EGI and AusIndustry, AusIndustry was not satisfied that the predictive tool was an eligible core activity. It concluded that there was not sufficient evidence on which to assess whether the development and testing of the predictive tool (algorithm) by EGI was an eligible Core Activity. It noted that EGI had focused on the uncertainty and knowledge gaps in the data being analysed (which was considered ineligible as a Core R&D Activity) rather than the uncertainty, knowledge gaps and experimentation to be undertaken in developing the functionality of the algorithms that would analyse the data.<sup>38</sup>

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<sup>34</sup> Ibid, p73.

<sup>35</sup> See extract in Exhibit R4, T29, p320.

<sup>36</sup> Exhibit R5, ST2, p90.

<sup>37</sup> According to Mr Beck, Exhibit R4, T20, p201.

<sup>38</sup> See Exhibit R4, T29, p314.

47. On 17 October 2014, EGI withdrew the registrations for the activities for the 2011/12 and 2012/13 financial years. On 20 October 2014 EGI was placed into voluntary administration and on 1 November 2015 it was de-registered.<sup>39</sup>

*The Applicant's Applications*

48. The project was then taken over by the Applicant<sup>40</sup>. The Applicant was formerly known as Effective Governance (Australia) Pty Ltd (**EGA**) and is now known as Camalic Pty Ltd. Mr Beck is, and was at all relevant times, the secretary and one of two directors of the Applicant. The two issued shares in the Applicant are owned by Bedarra. The applications that are the subject of these proceedings were submitted by Mr Beck as managing director of the Applicant. In the hearing, Mr Beck gave evidence that, through Bedarra, he effectively owned and controlled the Applicant<sup>41</sup>. Mr Beck represented the Applicant in its dealings with the Respondent and in the proceedings before the Tribunal.
49. On 30 April 2015 the Applicant lodged an application to register R&D activities for the 2013/14 financial year<sup>42</sup> (**the 2015 application**). The project title was "*Development of a multi-variable algorithm to predict increases in value*". The rest of the application was largely the same as the amended EGI application. However it included the additional claim that:

*The method allows for ongoing data collection that provides the ability to refine the relationships between variables of interest in a way that has not been investigated before... This is critical to real-world use of any tool that would not be possible with existing approaches. Through undertaking this approach, [EGA] believes the relationships can be accurately identified by the algorithm to accurately predict increases in shareholder value resulting from improvements to board governance practices.*<sup>43</sup>

50. However, the application did not explain how the proposed method "*provides the ability to refine the relationships between variables of interest in a way that has not been investigated before*" [my underlining] and how this was "*critical to real-world use*" and

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<sup>39</sup> Exhibit R4, T41, p472.

<sup>40</sup> Exhibit R4, T20, p202.

<sup>41</sup> Transcript p28, lines 24 and 25.

<sup>42</sup> Exhibit R4, T6, p79.

<sup>43</sup> Ibid, p85.

"would not be possible with existing approaches"<sup>44</sup>. Nor are those things apparent from the materials before me.

51. On 11 May 2015 the application was accepted.<sup>45</sup>
52. On 19 April 2016 AusIndustry notified the Applicant of a compliance review and requested further information.<sup>46</sup>
53. On 2 May 2016 the Applicant applied for registration for substantially the same activities for the 2014/15 financial year<sup>47</sup> (**the 2016 application**). However, the application contained more detailed information about the collection and use of data, and the development of the predictive algorithm. It relevantly stated:

*The overall object of this project is to develop a software predictive tool that utilises a significantly large number of multi-dimension variables to predict an increase in value based upon the optimal combination of variables. Whilst the algorithm can be utilised for numerous multi-dimensional situations, the initial practical application of this project is to assist boards of companies to predict increases in shareholder value and that will result from improvements in board governance practices... eG(Aus) is seeking to test the following hypothesis:*

*that through utilising a Bayesian statistical approach, a predictive tool (algorithm) can be developed to accurately predict the increase in [shareholder] value that will result from improvements to various multi-dimension variables [aspects of board governance].<sup>48</sup>*

54. The application described how data would be collected and used to establish relationships between variables and outcomes and to develop an initial hypothesis that would be tested against a more robust database. A number of analytic techniques would be used to build alternative predictive models, and data would be used to evaluate those models. It appears that, in the application, "model", "algorithm" and "predictive tool" all referred to the same thing.
55. In relation to the new knowledge intended to be produced by the core activity, the application claimed the following<sup>49</sup>:

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<sup>44</sup> Ibid.

<sup>45</sup> Exhibit R4, T7, p93.

<sup>46</sup> Exhibit R4, T9, pp101-105.

<sup>47</sup> Exhibit R4, T10, p107.

<sup>48</sup> Exhibit R4, T10, p113.

<sup>49</sup> Exhibit R4, T10, p 114.

*In Machine Learning, there are a number of algorithms already available. However, in order to solve a problem, the analyst usually starts with an algorithm and eventually moves into extensions of that algorithm. As such, it quickly becomes very difficult to determine what constitutes a canonical algorithm and what can be considered a novel approach.*

*The type of algorithms that we propose to consider for this problem (at least initially) fit into the category of Supervised Learning.*

*In supervised learning, input data is called training data and has a known label or result such as spam/not-spam or a stock price at a time. A model is prepared through a training process where it is required to make predictions and is corrected when those predictions are wrong. The training process continues until the model achieves the desired level of accuracy on the training data...Example algorithms are Regression-based techniques and Ensemble Methods...The ultimate choice of algorithm(s) to be tested within these categories will be decided once phase 2 data becomes available.*

56. I take this to mean that the Applicant intended to put a machine learning algorithm through a training process whereby it would be fed selected data and corrected when it made known errors so that it would learn the relationships between variables and outcomes so that it could perform the desired task.
57. Where the application form asked how the outcome of the core activities could not have been known or determined in advance on the basis of current knowledge, information or experience, the Applicant stated:

*Given the volume of variables and parameters impacting upon the relationship between improvements to [board governance practices] variables and increases in [shareholder] value, conventional statistical approaches would be unsuccessful... applying a Bayesian statistical approach, this problem can be overcome.<sup>50</sup>*

58. I note that this explanation focusses on the relationship between board governance and shareholder value, not the functionality of the algorithm.
59. On 26 May 2016, the Applicant provided a response to the Respondent's request for information. On 7 June 2016 there was a meeting between AusIndustry and the Applicant, and the Applicant subsequently provided a response to the issues raised in that meeting on 28 June 2016<sup>51</sup>.

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<sup>50</sup> Exhibit R4, T10, p115.

<sup>51</sup> Exhibit R5, ST1.

60. In July 2016 AusIndustry provided the Applicant with an SOU asking it to address specific issues<sup>52</sup>. In relation to the claimed core R&D activity it noted that the Applicant had not provided compelling evidence demonstrating that the algorithm itself would be novel, and that the rest of the claimed core activity (developing a software tool that company boards could use to predict increases in shareholder value resulting from improvements to board governance practices) arguably fell within the “*management studies or efficiency surveys*” or “*research into social sciences, arts or humanities*” exclusions to the definition of core R&D activities.<sup>53</sup>
61. On 8 August 2016 the Applicant responded to the SOU.<sup>54</sup> In relation to whether the development of the predictive algorithm was a core R&D activity, the Applicant referred to previously submitted material.
62. Ultimately, the Respondent decided that the claimed core R&D activity did not satisfy the legislation. In particular it observed that it did not appear that the Applicant knew if there was an existing algorithm that would meet its requirements, or whether it would need to develop a bespoke algorithm, which suggested that a program of experimentation – sufficiently defined to meet the definition of core R&D activities – had not yet been conceived.<sup>55</sup> The Respondent further found that there was insufficient evidence that the purpose of the development of the algorithm was to generate new knowledge. In reaching that conclusion it observed that *Applicant Witness 2* (of Power Stats) was not a software expert and thus it gave no weight to his opinion that the application of predictive analytics in the form of machine learning from academia into industry was novel.<sup>56</sup>
63. The decision was followed by further communications between the Applicant and AusIndustry, and by an internal review. The Applicant provided the Respondent with a report, dated December 2016,<sup>57</sup> from Power Stats in which *Applicant Witness 2* again described the process of developing a predictive algorithm with reference to using a machine learning algorithm that is fed data and trained until it achieves a desired level of

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<sup>52</sup> Exhibit R4, T29, pp307 – 324.

<sup>53</sup> Ibid, p321.

<sup>54</sup> Exhibit R4, T37, pp421 – 445.

<sup>55</sup> Exhibit R4, T41, p483.

<sup>56</sup> Ibid, p485.

<sup>57</sup> Exhibit R4, T52, p567.



accuracy. He added that “*Specific choice of algorithm can vary depending on new techniques becoming available within the next 12 months*”.<sup>58</sup>

## EXPERT ANALYSIS OF THE PROJECT

*Associate Professor Fabio Ramos*

64. On 19 December 2017, at the Respondent’s request, Associate Professor Fabio Ramos provided a statement in which he answered questions directed to ascertaining whether the claimed activities met the statutory definition of core R&D activities.<sup>59</sup> Taking into account Dr Ramos’s curriculum vitae, I am satisfied that he has relevant expertise in machine learning and Bayesian techniques. Dr Ramos was provided with a brief summary of the issues, the evidence that was before the Tribunal (T documents and Supplementary T documents), the Applicant’s Statement of Facts, Issues and Contentions, and the Explanatory Memorandum to the R&D Tax Incentive legislation.
65. Dr Ramos’s statement includes the following salient evidence, which I accept:<sup>60</sup>
- a) There are two technical uncertainties that the project seeks to resolve. The first, is which algorithm will perform best in predicting shareholder value. The second, is which subsets of variables will be the most important for prediction, which the Applicant calls “*data reduction*”;
  - b) There is a discernible hypothesis in the project, which is whether any existing machine learning algorithm would accurately predict increases in shareholder value using governance variables;
  - c) There is very little detail on how testing would be conducted, in particular which measures of accuracy would be considered in comparing the different algorithms. A precise definition on how different algorithms would be compared is central to the scientific procedure, directly affecting the results of the experiments and therefore the conclusions, because different algorithms may be ranked differently depending on the measure of accuracy adopted. A definition of the measure of

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<sup>58</sup> Exhibit R4, T52, p575.

<sup>59</sup> Exhibit R3.

<sup>60</sup> *Ibid*, pp2-7.

accuracy adopted should be part of the hypothesis since it can affect how experiments will be performed, and how methods will be compared;

- d) There is no evidence that a new machine learning algorithm would be designed or that the project contemplated the development of a Bayesian technique. The statement in the Power Stats report that *“The ultimate choice of algorithm(s) to be tested within these categories will be decided once phase 2 data becomes available”* suggests that the project aims to apply existing techniques to a new problem;
- e) If the outcome of the activity is to determine whether increases in shareholder value could be predicted from board governance variables, it would not be possible to precisely know the outcome before conducting the analysis of the data;
  - i. however there is significant evidence in the literature suggesting that machine learning techniques would perform well provided that the dataset to be used was large enough, and patterns were present in the data;
  - ii. there are machine learning techniques that have been available in open source libraries since before 1 July 2013 that could readily be applied to the problem;
  - iii. the algorithms considered by the Applicant have a long history in machine learning and are widely available in open source and commercial libraries;
  - iv. there is a significant amount of work on the application of machine learning to businesses in general and several books published on the topic. One such book discusses shareholder value prediction from macroeconomic and firm-specific economic factors, comparing a number of machine learning techniques;
  - v. a problem with a few hundred input variables to predict another variable, with a few hundred observations, cannot be considered a large problem given machine learning state-of-the-art in 2013. This could easily be solved with hardware and methods from at least two decades ago. In 2013,

researchers in the field had shown that Bayesian analysis could be performed on problems with millions of observations and millions of input variables;

- vi. supervised learning is well studied and there are comprehensive literature reviews on the topic. After the dataset is collected and the data prepared to a particular format suitable for a machine learning algorithm, preliminary analysis could be carried out within hours using open source libraries; and
- vii. in the course Dr Ramos teaches (Introduction to Machine Learning and Data Mining) final year undergraduate students and Masters students in computer science, engineering and data science are required to develop data analytics tools and Bayesian analysis on problems with 3000 variables and datasets with 40,000 observations. They have three weeks to complete the assignment.

66. It is significant that, according to Dr Ramos, the project is not intended to develop a new machine learning algorithm, but to apply existing technology. Moreover, he does not consider the task to be out of the ordinary or difficult, given the right data-set and the technology that has been publicly available since 2013 (at the latest).

*Applicant Witness 1*

67. At the Applicant's request, *Applicant Witness 1* made a statement, dated 23 September 2018<sup>61</sup>. *Applicant Witness 1*'s curriculum vitae indicates that he has significant experience in information technology, including in software development and data analysis.<sup>62</sup> He claims to be skilled in machine learning, and neither his statement, nor his expertise, was challenged. I accept that he has relevant expert knowledge in machine learning, software development and data analysis. I accept, as claimed, that he has been involved in several research and develop projects with respect to the R&D tax incentive scheme and its predecessor.

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<sup>61</sup> Exhibit A6, p3.

<sup>62</sup> *Ibid*, p7.

68. *Applicant Witness 1* provided information in response to questions asked by the Applicant. His statement includes the following relevant observations and explanations:<sup>63</sup>

- a) *“Machine based learning”* is a very broad term that has changed meaning over time. Now it is frequently used as a catchall for any number of data analysis techniques. In the strictest traditional definition, and in the more modern interpretation, machine based leaning has been used in other R&D projects;
- b) In a machine learning project R&D is conducted long before any data is available to use. A researcher must first understand the problem they wish to create a model for and undertake a process of discovery to figure out which data to collect. Once they have collected data, they must then step through a series of phases described in some fashion by Power Stats and Dr Ramos. These are - collecting the data, selecting variables from the data and expanding the model and evaluating using a machine learning algorithm. If the researcher finds that assumptions or beliefs used to decide which data to collect end up being invalid, they must start the process again with learnings from the previous iteration;
- c) In machine learning, *“algorithm”* can mean both *“algorithm”* and *“algorithm and data”*. The data in a machine learning model forms a critical part of it. Academic research is focused purely on the algorithm, less so on the data. In industry, data is often the proprietary intellectual property of the company doing the research. This means that existing datasets frequently lack the nuance required to tackle a specific problem the company is working on;
- d) The process - briefly described in the Power Stats document and expounded upon by Dr Ramos - describes a subset of the work involved in successfully applying machine learning statistics to real-world problems. In industry the success of R&D using machine learning depends on a lot more than simply pushing data into a particular pre-set algorithm and seeing whether it performs better than some other provided algorithm;

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<sup>63</sup> Ibid, pp3 - 6.

- e) There is a process of experimentation that has been required in all machine learning applications he has worked on and which starts a long time before collection of data begins. This is, in passing, covered by Dr Ramos as “*data reduction*” and “*variable selection*”. This can be a long-running and involved process; and
- f) Dr Ramos has zeroed in on the terms “*algorithm*” and “*Bayesian*” and interpreted them much more technically than the Applicant. “*Bayesian*” has been used incorrectly (by the Applicant) to describe the manifestation of a predictive model rather than a very particular type of process or probability distribution. This reflects more of a naïveté in the R&D application than an oversight in Dr Ramos’s interpretation.

69. I take *Applicant Witness 1*’s evidence to be, essentially, that the activities involved experimentation, and significant work, with respect to deciding upon the right variables, that is to say, data reduction. *Applicant Witness 1* does not appear to assert that experimentation is required with respect to developing a suitable algorithm. I accept his evidence.

#### *Applicant Witness 2*

70. At the Applicant’s request, *Applicant Witness 2* provided a statement, dated 7 November 2018<sup>64</sup>. *Applicant Witness 2* is from Power Stats, a market research and statistical consultancy firm. I am satisfied that, as claimed, *Applicant Witness 2* has expertise in statistics and research techniques including statistical modelling. In response to questions asked by the Applicant, *Applicant Witness 2* gave the following relevant evidence about the modelling process:

- a) Statistical packages (with or without machine learning algorithms incorporated in them) are tools used to solve problems;
- b) In real life (when human behaviour plays a role) it is impossible to predict an outcome with one hundred percent certainty. One of the advantages of using real

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<sup>64</sup> Exhibit A9.

data (as opposed to simulated data) in a machine learning process is that real data is more likely to incorporate a realistic measure of the variability of the data and of the error of the model; and

- c) Every predictive algorithm needs a development component and a testing component which could potentially use the same data set. In addition there needs to be a quarantined part of the data (not used for development or testing) that will eventually be used for validation of the algorithm. A test plan can be iterative, and based upon results of the initial phase, subsequently adjusting the testing regime in the subsequent phases.

#### *The Application of the Machine Learning Process from Academia to Industry*

71. The fact that *Applicant Witness 1* is able to give evidence about the application of “*machine learning R&D*” in industry indicates that it is not a novel phenomenon as claimed in the Power Stats report. Dr Ramos’s evidence tends to support *Applicant Witness 1*’s evidence. On this point, I respectfully prefer the evidence of these expert witnesses to the Power Stats report.

#### **IDENTIFYING THE CORE ACTIVITY**

72. In its first iteration, the project was solely concerned with board behaviour and performance. It fell squarely within the “*management studies*” exclusion from the definition of “*Core R&D Activities*”.
73. The subsequent EGI application, and the 2015 and 2016 applications, expressly identified the development of a predictive tool/algorithm as the key objective of the project and downplayed the importance of the context in which it was intended to be used. For example, the 2015 application gave the project title as “*Development of multi-variable algorithm to predict increases in value*” without mentioning board governance or shareholder value.<sup>65</sup> However two of the three technical unknowns that were put forward related to the (possible) relationship between board governance behaviour and increases in shareholder value. The May 2016 application stated “*The initial practical application of*

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<sup>65</sup> T6, pp84 – 86.

*this project is to assist boards of companies to predict increases in shareholder value ...*  
[my underlining].

74. In 2016, Mr Beck told AusIndustry that the change in the description of the project arose from “*lessons learnt*” and asserted that the predictive tool could “*be applied to a farming context...to achieve the mathematically optimum crop harvest.*” Mr Beck told the Tribunal that “*We are just using the data to develop the algorithm.*”<sup>66</sup>

*Activities Excluded by ss. 355-25(2) ITAA*

75. Placing emphasis on the tool itself, rather than its application, is a neat way of avoiding s. 355-25(2) ITAA, being the subject matter exclusions in the definition of “*Core R&D Activities*”. Given EGI’s initial description of the project, with its focus on studying board behaviour, and Mr Beck’s admission that the project was described differently because of “*lessons learnt*”, I consider that the subsequent applications were fashioned to fit the project within the meaning of R&D activities, and that some liberties were taken in this regard.
76. I am not satisfied that the project was intended to develop an algorithm of general application and that predicting increases in shareholder value from board governance variables was merely to be an *initial* application. First, the EGI project, as described in the application for the 2011/12 financial years, was solely about board governance. Second, according to the materials put forward by the Applicant, the effectiveness of the predictive tool would be heavily dependent on the data used to train it. Indeed *Applicant Witness 1* opined that the data in a machine learning model forms a critical part of it and it is not simply a case of pushing data into a pre-set algorithm. I find it implausible that an algorithm that is developed in the way envisioned by the Applicant could be applied to other subject matter without undergoing a similar training process using data relevant to that subject matter. Third, I respectfully agree with AusIndustry’s assessment that the Applicant’s material focussed on the uncertainty and knowledge gaps in the data being analysed rather than the uncertainty, knowledge gaps and experimentation to be undertaken in developing the functionality of the algorithms that would analyse the data.

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<sup>66</sup> Transcript p77, line 24.

77. The collection and analysis of board governance data for the purpose of determining relationships between board governance variables and increases in shareholder value, to my mind, comes within “*management studies*” and is therefore excluded under s. 355-25(2) ITAA<sup>67</sup> from being a Core R&D Activity. In submissions before the Tribunal, Mr Beck purported to quote a passage from the Frascati Manual, February 2007 edition, to the effect that governance activities differ from business management.<sup>68</sup> The Frascati Manual is a publication by the Organisation for Economic Co-Operation and Development that provides methodology for collecting statistics about research and development. Mr Beck did not provide a copy of the manual either in its 2007 or current form, or the quoted passage, nor did he provide the context of the quoted passage. Accordingly, it has very limited probative value. I am not persuaded that board governance materially differs from management for the purpose of s. 355-25(2) ITAA. Further, I am satisfied that the task of determining the relationships between board governance variables and increases in shareholder value constitutes research into one of the social sciences, being economics, which is also excluded by s. 355-25(2) ITAA.

78. However, the development of the algorithm itself is not necessarily caught by the exclusions in s. 355-25(2) ITAA and could potentially satisfy the core R&D activities criteria in s. 355-25(1) ITAA.

*Was the Purpose to Generate a New Algorithm?*

79. The Applicant has repeatedly claimed the development of an algorithm was the project’s core R&D activity. Both Power Stats and the Applicant referred to using machine learning to achieve this, with Power Stats recommending using a suite of machine learning algorithms.

80. The definition of core R&D activities in ss. 355-25(1) ITAA includes several elements. One element is that the activities are:

*(b)...conducted for the purpose of generating new knowledge (including new knowledge in the form of new or improved materials, products, devices, processes or services).*

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<sup>67</sup> Subsection 355-25(2)(b) ITAA.

<sup>68</sup> Transcript p77, lines 16-22.



81. The 2015 and 2016 applications claimed novelty in the predictive tool. For example, the 2016 application stated:

*[T]he analyst usually starts with an algorithm and eventually moves into extensions of that algorithm. As such, it quickly becomes very difficult to determine what constitutes a canonical algorithm and what can be considered a novel approach.*

82. As the Applicant does not claim to have intended to create a new machine learning algorithm (discussed below), it appears that the crux of the Applicant's claim of novelty is the notion that an algorithm that is *the result of machine learning* could have some novelty.

83. In the hearing Senior Counsel for the Respondent questioned Mr Beck extensively about how the algorithm would be developed. The following extracts of Mr Beck's cross-examination are illustrative of his apparent understanding of the process and the expected outcome:

*Q: Is the development of a predictive tool equivalent to the development of an algorithm?*

*A: Yes.*<sup>69</sup>

*Q: And I take it from "machine learning platform", we are still talking about a predictive tool?*

*A: That is correct.*<sup>70</sup>

*Q: My understanding, and you will tell me if your understanding differs from this...but my understanding of an algorithm is that it's a mathematical formula?*

*A: Yes.*<sup>71</sup>

*Q: Don't we have to identify how we are going to define the functionality that is between each one of [the] variables?*

*A: That's the outcome that you achieve. The process to get there requires experimentation.*<sup>72</sup>

...

*Q: But when the problems get very complex, you might need to teach the machine, mightn't you?*

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<sup>69</sup> Transcript p31, lines 45-46.

<sup>70</sup> Transcript p33 lines 39-40.

<sup>71</sup> Transcript p32 lines 3-7.

<sup>72</sup> Transcript p32 lines 22-24.

A: Yes.<sup>73</sup>

...

Q: *The actual model can be built by machine learning from abundant data. So you just need lots and lots of data to feed into this machine learning algorithm?*

A: *Simplistically that is correct*<sup>74</sup>

Q: *Mr Beck... You say you never purported to be seeking to develop a new algorithm.... Just read out what the project title is? "Development of a multi-variable algorithm to predict increases in shareholder value"... But you accept it was not part of your project to be developing an algorithm?*

A: *No I didn't say that. I said we are not developing a statistical algorithm. We are developing an algorithm to solve the predictive tool.*<sup>75</sup>

Q: *It's a form of experimentation to work out which algorithm is going to work best?*

A: *And there could be multiple algorithms... Which is the definition of machine-based learning.*

Q: *It could be multiple, and you're going to work out which one is best?*

A: *Not which one, in which combination will actually come up with the formula.... This is not... about running data through existing statistical packages to come up with, this is the answer. This is coming up with the formula or the algorithm that is the predictive tool.*<sup>76</sup>

84. After giving his evidence, Mr Beck made the following relevant submissions about the process:

*[W]e've used standard algorithms to develop a new algorithm, that's the area of contention.*<sup>77</sup>

*Again I reiterate, we are using standard algorithms to develop a new algorithm or, what I prefer to call it, a predictive tool, and we keep on getting bogged down in the nomenclature of what's a model, what's an algorithm and what's standard, off-the-shelf products.*<sup>78</sup>

*[W]e are trying to use a number of known algorithms which is commonly termed machine learning to develop an algorithm that will be the predictive tool. So it is kind of like if I simplify it down. We are building a car using robots who know how to build cars but we're using smart robots that depending on the input parameters will change how they build that car. So we're still building the car. That is the*

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<sup>73</sup> Ibid, lines 46-47.

<sup>74</sup> Transcript p33, lines 3-7.

<sup>75</sup> Transcript p35, lines 5-5.

<sup>76</sup> Transcript p54, lines 39-44.

<sup>77</sup> Transcript p59, lines 39-40.

<sup>78</sup> Transcript p60, lines 14-18.

*project. The predictive tool and at no point in time are we saying we are building a machine learning algorithm. We are building a tool. A predictive tool.*<sup>79</sup>

*Dr Ramos's statement was based on building a machine learning algorithm. What we are saying is we are building an algorithm using machine learning techniques. There is a significant difference between that*<sup>80</sup>.

85. I am satisfied on the evidence before me, notably Dr Ramos's evidence, and the concessions made by Mr Beck, that the Applicant never intended to build a bespoke machine learning algorithm. Rather, the weight of the evidence points to the objective of the project being to train an existing machine learning algorithm, using the functionality inherent in the algorithm, to adapt itself to predict increases in shareholder value from board governance variables.
86. As the entity seeking registration, there is an obvious obligation on the Applicant to clearly describe the activities that it asserts are R&D activities so the decision maker can apply the legislation. The Applicant has not done so satisfactorily. The Respondent has made it abundantly clear that it is looking for a new development in terms of the functionality of a "new" algorithm such that it measures the relationship between variables in a new way regardless of what the variables are. The Applicant has not established that this is the case. Rather, the Applicant has used the terms "algorithm", "model", "predictive tool", "formula" and "software package" interchangeably, although he gave evidence that "interchanged use of words between a model and algorithm and formula that can lend [sic] to confusion"<sup>81</sup>. The Applicant has put forward material that indicates no more than that machine learning algorithms will be tasked to do what they are designed to do, yet it claims novelty in this without explaining how the resulting algorithm would constitute new knowledge or a new process.
87. The Applicant's claim of novelty is further undermined by Dr Ramos's evidence that there have been machine learning techniques available in open source libraries since before 1 July 2013 that could readily be applied to the task, and machine learning techniques would perform well given a large enough dataset and the presence of patterns in the data. Further, Dr Ramos considers that a problem with a few hundred input variables to predict

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<sup>79</sup> Transcript p71, lines 4-2.

<sup>80</sup> Transcript p75, lines 42-45.

<sup>81</sup> Transcript p55, lines 20-30.

another variable, with a few hundred observations, could easily be solved with hardware and methods from at least two decades ago.

88. I am not satisfied that the claimed activities were intended to generate a bespoke algorithm or new, previously unknowable, functionality in an existing algorithm.
89. I am not satisfied that the core activity constitutes a core R&D activity.

*The Claimed Supporting Activities*

90. I have considered whether the activities that were claimed as supporting R&D activities in the 2015 and 2016 applications could meet the definition of core R&D activities, that is to say, whether they were incorrectly classified as supporting rather than core activities in the applications. The supporting activities are the collection and storage of data, reviewing literature and technology, and project planning. None of these are experimental activities. They are not core R&D activities.

*Do Any Activities Qualify as Supporting R&D Activities?*

91. Section 355-30 ITAA provides that:
- (1) *Supporting R&D activities are activities directly related to core R&D activities.*
  - (2) *However, if an activity:*
    - (a) *is an activity referred to in subsection 355-25(2); or*
    - (b) *produces goods or services; or*
    - (c) *is directly related to producing goods or services;**the activity is a supporting R&D activity only if it is undertaken for the dominant purpose of supporting core R&D activities.*<sup>82</sup>
92. Each of the claimed R&D supporting activities in the 2015 and 2016 applications relies on a direct relationship to a core R&D activity. I have found that there were not any core R&D activities undertaken or planned by the Applicant in the 2013/14 or 2014/15 financial years. Accordingly, none of the claimed supporting R&D activities in the 2015 and 2016 applications are supporting R&D activities for the purposes of the R&D tax incentive scheme.

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<sup>82</sup> s. 355-30 ITAA.

## FINDINGS

93. I make the following findings:
- a. None of the activities claimed in the 2015 application are core R&D activities or supporting R&D activities for the purposes of the R&D tax incentive scheme; and
  - b. None of the activities claimed in the 2016 application are core R&D activities or supporting R&D activities for the purposes of the R&D tax incentive scheme.

## PROCEDURAL FAIRNESS

94. The Applicant claims that it has not been afforded procedural fairness by the Respondent. It claims the applications were not assessed by people with sufficient knowledge of machine learning and software development, and the Internal Review team did not “seek clarification on what they were looking for”.<sup>83</sup>
95. The Applicant did not provide sufficiently precise information with respect to the core activity. In relation to both the EGI applications and the Applicant’s applications, AusIndustry notified Mr Beck of compliance reviews, sought further information, provided Statements of Understanding and sought responses to those. Further, with respect to the applications that are the subject of this review, AusIndustry held a meeting with Mr Beck in June 2016 and Mr Beck made representations during and after that meeting. The Respondent gave detailed reasons for finding that the claimed activities were not R&D activities, and conducted an internal review and gave reasons for the review decision.
96. At the hearing Mr Beck was asked if, when he responded to the Respondent’s request for further information in May 2016, he felt constrained, to which he replied “No”<sup>84</sup>. He was asked if he was able to convey his concerns in the meeting in June 2016 and he answered in the affirmative<sup>85</sup>.
97. I am satisfied that the Applicant was given ample opportunity to address AusIndustry’s reasons for its initial concern that the activities were not R&D activities and for ultimately

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<sup>83</sup> The application for review, Exhibit R4, T1, p7.

<sup>84</sup> Transcript p46, lines 16-21.

<sup>85</sup> Transcript p52, lines 27-32.

making that finding. Further, there is no evidence to support Mr Beck's complaint that the persons who assessed the applications lacked the requisite knowledge to do so competently.

98. During the hearing the Applicant informed the Tribunal that he was suffering from a condition he referred to as "*chemo brain*" that he said results from chemotherapy and affects short term memory and the ability to communicate clearly. He had an assistant or support person present during the hearing. The support person described his role thus: "*It's just usually to help or something, that's all. It's not to give evidence on his behalf. It's just-he'll get stuck and I'll just pop in a word*"<sup>86</sup>. The Respondent did not object to such assistance potentially being provided to Mr Beck. Mr Beck gave an opening address, sworn evidence, an extensive closing address that seemed well planned, and a reply to the Respondent's closing address. Mr Beck sometimes gave an apparent impression of being confused in relation to some questions put to him by Senior Counsel for the Respondent. However, my observation is that his apparent confusion was more likely due to a manifestation of an inability or unwillingness to provide precise information about the process of developing the algorithm rather than the result of any asserted disorientation. I am satisfied that Mr Beck was given a fair opportunity to present the Applicant's case, and that he did so.

99. The Applicant complains that guidance material produced by AusIndustry included an example of an R&D project that he says is essentially the same as the Applicant's project. That example was the SkyWonder project in *The R&D Tax Incentive ITC Guidance*, November 2014<sup>87</sup>. The publication states:

*The following hypothetical case studies are a guide only. They are not intended to be a definitive, exhaustive precedent that cover every possible component of a claim for companies to follow. The intent of this guidance is to empower companies with an overview and understanding of the key legislative requirements and concepts that they need to self-assess their own claims.*

100. This disclaimer was brought to the Applicant's attention in an email from AusIndustry to Mr Beck on 19 May 2016.<sup>88</sup> In any event, in the SkyWonder example the R&D entity had established that there were no existing algorithms in the market that could perform the

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<sup>86</sup> Transcript p28, lines 7-10.

<sup>87</sup> Annexure A to Exhibit R1.

<sup>88</sup> Exhibit R4, T19, p143.

required task and that it was necessary to develop a new algorithm. The Applicant has not established that there are no available algorithms that can perform the required task: it had not tested the machine learning algorithms that it considered potentially suitable. I am not satisfied that any unfairness arose from the SkyWonder example in AusIndustry's guidance material.

101. Finally, I am satisfied that the Parts 2.2 and 2.3 of the Industry Research and Development Decision-making Principles 2011 have been complied with.

### **DECISION**

102. I affirm the objection decision under review.

*I certify that the preceding  
102 (one hundred and two)  
paragraphs are a true copy of  
the reasons for the decision  
herein of Senior Member  
Theodore Tavoularis*

.....[SGD].....

Associate

Dated: 3 June 2020

Dates of hearing: **30 April 2019, 1 May 2019**

Date final submissions received: **7 May 2019**

Advocate for the Applicant: **J Beck**

Counsel for the Respondent: **M Brennan QC**

Solicitors for the Respondent: **HWL Ebsworth Lawyers**

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