

Software Development and the R&D Tax Incentive

Basis for presentation

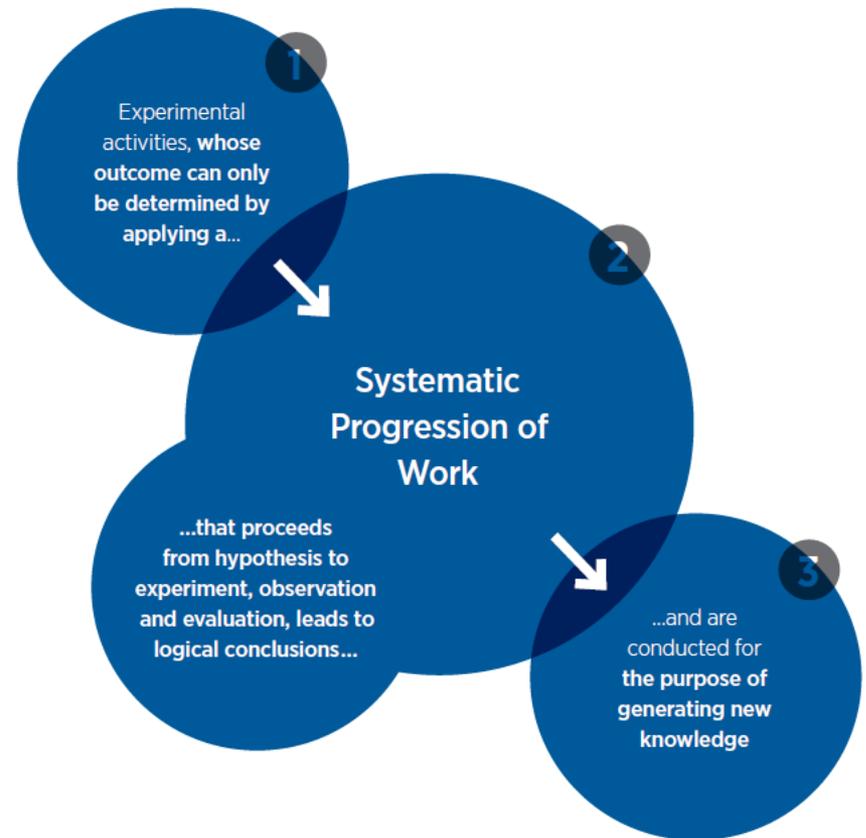
- This presentation has been based on an AusIndustry guidance publication titled “*Software activities and the R&D Tax Incentive*” released in February 2019.
- business.gov.au/assistance/research-and-development-tax-incentive/guidance-and-information/sector-guidance/software-development

Software development and R&D eligibility

- Software development currently a target of AusIndustry compliance activity;
- ATO and AusIndustry alert from 2017 includes concerns about:
 - Whole-of-project claims;
 - Activities that do not:
 - Generate new technical knowledge;
 - Have unknown technical outcomes;
 - Applying existing knowledge or processes.

What is R&D?

- Types of activities:
 - Core;
 - Supporting;
 - Non-R&D.
- Core criteria:
 - Conducted for purpose of generating new knowledge;
 - Outcome unable to be determined in advance;
 - Experimental, applying a systematic progression.
- Supporting criteria:
 - Directly related to Core;
 - For the dominant purpose of supporting Core.



Core software R&D activities

- Experimental activities;
 - Systematic progression of work;
 - Records kept of:
 - Hypothesis being tested;
 - What the experiment, or set of related experiments, was, and how it was conducted;
 - Results of the experiment;
 - Conclusions drawn from results.
 - Purpose of generating new knowledge:
 - Cannot just be new to the company or their application;
 - Refers to knowledge that can only be generated by undertaking an experiment as part of a systematic progression of work;
 - Onus is on claimant to conduct a thorough search to ensure the knowledge does not already exist AND to keep records of the search.
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Hypothesis

- An explanatory statement that can be proven or disproven by conducting an experiment:
 - Specific, technical or scientific uncertainty, or a set of related knowledge gaps, that is being tested by an experiment, not the objective of a project as a whole;
 - Generally directs the design and conduct of the experiment, observation and evaluation.
 - Acceptable hypotheses from the guidance:
 - *Compression Algorithm v1 will compress a 12-megapixel image without exceeding the limits of the low-power processor;*
 - *Test Algorithm v1 will enhance speed of the ‘alpha’ data extraction tool to interrogate the dataset and accurately return relevant error-free data within 20 milliseconds;*
 - Unacceptable hypothesis from the guidance:
 - *Whether particular computer software can be developed to include the latest research from the planning community.*
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Experiments

- Experiments:
 - A series of planned and systematic tasks to evaluate a hypothesis;
 - Recorded such that they can be repeated by a competent professional in the field;
 - Able to be understood and replicated by AusIndustry;
 - From which key observations should be noted and conclusion/s made;
 - Where experiments do not yield required results, inputs may be varied and further experiments undertaken until the outcome is known or can be determined.
 - Failed or abandoned experiments may still be eligible and may assist to show that there was an unknown outcome unable to be determined in advance.
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New knowledge

- Core R&D activities must generate new technical knowledge;
 - Knowledge generated must be new to the world (or not reasonably available to a competent professional in the relevant field);
 - It is not sufficient that the knowledge is new just to the company conducting the activity;
 - Existing knowledge not known publicly due to confidentiality will still be new;
 - To generate new knowledge, core R&D activities in a software development project are expected to be dependent on a scientific and/or technological advance.
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Supporting R&D activities

- Could be an activity that does not meet eligibility criteria to be a core R&D activity;
- Must “have a direct, close and relatively immediate relationship with one or more components of the relevant systematic progression of work” (DIIS, 2016, p. 19);
- Some activities may only be eligible as supporting R&D activities if they are undertaken for the **dominant purpose** of supporting a core R&D activity, e.g. activities that:
 - Are purposely excluded from being a core R&D activity;
 - Produce, or are directly-related to producing, goods or services.

Example supporting activities

- May be conducted before, during or after a core R&D activity is conducted;
- Cannot just be ‘everything else’ within the project.

i **ACTIVITIES WHICH COULD BE DIRECTLY RELATED TO A CORE R&D ACTIVITY**

- ✓ Literature searches or reviews that help design the experiment
- ✓ Planning the experiment
- ✓ Designing and producing test subjects to be used in the experiment
- ✓ Designing and producing equipment to be used in the experiment
- ✓ Disassembling the experiment
- ✓ Disposing of waste products

Ineligible core software activities

- Legislative exclusion:
 - Software for internal administration;
 - Internal databases, accounting packages, CRM systems.
 - Generally ineligible core activities (but may be supporting):
 - Beta testing;
 - Bug testing (identifying and fixing errors);
 - UAT and system testing;
 - Data mapping, data migration testing;
 - Testing efficiency of different algorithms already known to work;
 - Measuring number of hits;
 - Routine maintenance — among other activities.
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Eligible R&D activities – the OECD’s Frascati Manual

- Activities that may involve R&D:
 - New operating systems or languages;
 - New search engine technologies;
 - Ways to resolve conflicts within hardware/software by re-engineering a system;
 - New algorithms based on new techniques;
 - New encryption techniques.
 - Activities that will not involve R&D:
 - Activities of a routine nature;
 - Solutions to problems overcome in previous projects;
 - Developments using existing knowledge/known tools;
 - Routine customisation;
 - Debugging.
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Records

- Outcome could not have been known or determined in advance:
 - Literature reviews, emails with experts, screenshots of questions posted on blogs, details of failed iterations;
 - Purpose of generating new knowledge:
 - Minutes of meetings where the need to conduct experiments was discussed;
 - Systematic progression of experimental work:
 - Records of each step of experimental activity;
 - Code repositories, software versions with comments (incl. weaknesses identified and rectified);
 - Supporting activities directly related to eligible core activity/ies:
 - Technical records showing how and why the supporting R&D activity is directly related to one or more core R&D activities.
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Practical examples

- In AusIndustry’s publication “*ICT and the R&D Tax Incentive*”:
 - DataCoAnalytics (p 10): Definition of eligible core and supporting R&D activities in a practical business situation; example of distinguishing between core and supporting R&D activities; information on software activities likely to be ineligible;
 - ColdTec (p 18): Definitions of eligible core and supporting R&D activities in the context of developing a new cloud-based product; supporting documentation;
 - eWatchMakers (p 24): Highlights core and supporting R&D activities; shows how the company offset some of the cost of its technical failures through the programme;
 - Push Through Technologies (p 30): Shows a company applying for an Advance/Overseas Finding to register overseas activities; examples of core and supporting R&D activities.
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References

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Organisation for Economic Co-operation and Development. (2015). Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development.

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