Research and Development Tax Measures
Understanding Application Software R&D Projects
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Research and Development (R&D) is one of the main pillars of Singapore's push for productivity and innovation growth. However, despite the generous tax benefits available, take-up for R&D tax incentive has remained slow due to taxpayers' apparent lack of understanding in the R&D tax incentive. In conjunction with the recent release of Annex G to Inland Revenue Authority of Singapore's (IRAS) e-Tax Guide on R&D Tax Measures, the Singapore Institute of Accredited Tax Professionals (SIATP) and IRAS jointly organised a technical briefing to help businesses better understand R&D tax incentive for application software R&D projects.

Ms Lydia Phua (Principal Tax Officer, IRAS) began the well-received session with an overview of R&D for Singapore income tax purposes and explained how the R&D tax incentive applies for application software R&D projects. This was followed by a Q&A session where Accredited Tax Advisor (Income Tax) Mrs Wong-Tan Puay Luang (Principal Tax Specialist, IRAS) and Ms Chew Tiew San (Senior Project Director, IRAS) shared their insights and clarified doubts on the topic.

Application software R&D projects: an introduction

Application software, often called 'productivity programme', enables users to carry out specific tasks more efficiently and effectively. Common application software includes accounting software, word processing software and customer relationship management software.

In assessing taxpayer's R&D tax claim on its application software R&D project, IRAS requires information on the following:

- Scientific or technological objective
- Novelty
- Technical risk
- Systematic, Investigative and Experimental (SIE) study

Where businesses outsource their application software R&D to software firms, it is important for them to obtain the above information from their vendors in order to justify their R&D tax claims.

Scientific or technological objective

Prior to the commencement of their application software R&D projects, businesses need to set out their desired scientific or technological outcomes, identify what are the current scientific or technological challenges and explain why existing technologies are unable to resolve them.

A common mistake made by taxpayers is that they tend to confuse scientific or technological objectives with commercial objectives. It is important to understand the difference between them. For example, the commercial objective of a software project may be to increase revenue, but the scientific or technological objective of the same project may be to close the technological gap between the current state of knowledge and the desired outcome (i.e. creating a product with new features).

Novelty

Novelty exists when there is something new in relation to the creation or improvement of products, processes or knowledge. "New" refers to the first of its kind in Singapore. On the other hand, a R&D project is not likely to meet the novelty requirement if the application software performs similar functions as those which already exist in the Singapore market, involves only minor or routine changes, or simply brings the business in line with current knowledge or capability.

Where the application software developed has many functionalities[1], IRAS is likely to treat the entire project as having met the novelty requirement if new functionalities form the core[2] of the application software.

Technical risk

To demonstrate technical risks, businesses need to describe specific scientific or technological uncertainties and why competent professionals in the field of Information Technology (IT) cannot readily resolve them. If the project is successful, businesses should explain the solution developed. Conversely, if the project is unsuccessful, businesses are required to record why the activities undertaken could not overcome the technological or scientific uncertainties identified, and the new knowledge gained from the unsuccessful R&D attempt.

Where scientific or technological uncertainties only affect parts of the functionalities in a large scale application software R&D project, only those parts of the project may be considered for R&D tax measures. However, IRAS is prepared to treat the entire project as having met the technical risk criteria if the taxpayer is able to demonstrate that such scientific or technological uncertainties relate to the core functionalities of the application software.

SIE study

Software application development typically involves "systematic" study in the field of science or technology. "Investigative" and "experimental" activities are carried out to test or find out something that is not known or readily deductible in the field of science or technology.

While some taxpayers may be of the view that software testing activities are SIE activities, IRAS generally does not consider software testing activities carried out to validate that the software is programmed according to design or that the programme's coding is accurate as SIE activities. This includes unit testing, system testing, user acceptance testing and load testing.

Besides gaining a better understanding of the finer points in the e-Tax Guide, participants also had their doubts clarified.

R&D work carried out at the inception of R&D project

For certain application software R&D projects, a business may have to conduct significant R&D work at the inception of the project, before it is able to set out specific scientific or technological objectives. As the business conceptualises the idea and sets out the objectives, it may then carry out IT development to develop the actual product.

In such circumstances, IRAS clarified that the initial work may qualify as R&D project if it satisfies the three requirements mentioned earlier [i.e. scientific or technological objective, novelty or technical risk and SIE]. Feasibility study (e.g. cost and benefit study) carried out before the decision that the R&D project shall be undertaken is generally not considered as part of the R&D project. However, once the objective has been identified and if in the course of the R&D project, additional feasibility studies are undertaken to explore alternative solutions, such studies may be considered as an integral part of the R&D project.

IRAS also clarified that the IT development will be considered as part of the R&D project if the activities carried out were SIE in nature and involved novelty or technical risk to develop the working prototype (and not carried out to commercialise the existing working prototype).

Load test

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[1] Sub-functions, components and interfaces
[2] Significantly substantial and key component of the entire application software

IT developers often conduct load testing to identify the problems with the software, and use the test results as the basis for redesign and redevelopment. While load testing is not considered a SIE activity, IRAS clarified that if the load test is carried out as part of a qualifying application software R&D project, it is prepared to accept that the load test is part of SIE works.

Conclusion

One thing is clear. Communication is key to successful R&D tax claims. It will be helpful for businesses to assist IRAS in understanding their R&D projects by providing sufficient supporting documents to justify their projects qualify for R&D tax incentive.

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Useful link:
IRAS' Guidance on R&D Tax Measures (including Annex G 'Application Software R&D Projects):
https://www.iras.gov.sg/irashome/uploadedFiles/IRASHome/e-Tax_Guides/etaxguide_IIT_RnDTaxMeasures_25%20Feb%202015.pdf

About the Technical Briefings
With priority given to accredited tax professionals, these technical briefings aim to provide a deeper understanding of the stipulated guidelines. Such briefings also provide the perfect platform to address any queries and doubts. Coupled with this technical summary, accredited tax professionals are equipped to provide advice with greater confidence to their clients and senior management. Over time, these briefings contribute in boosting the overall tax standards in Singapore.

This technical event commentary is written by SIATP's Tax Manager, Felix Wong. Felix has over seven years of experience in corporate and international tax. Previously from PwC, he now leads various tax initiatives in Singapore's first dedicated professional body for tax specialists to enhance Singapore's position as a centre of excellence.