Australian Government
Department of Industry, Science and Resources

AusIndustry
R&D Tax Incentive

# R&D tax incentive application

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| **Tracking ID:** | P0YPKQBFM |
| **Submitted:** | 25 Oct 2024 02:36 PM AEDT |
| **Company name:** | COIN HARBOUR PTY LTD |
| **Australian Business Number (ABN):** | 12624879223 |
| **Australian Company Number (ACN):** | 624879223 |
| **Registration Date:** | 08/03/2018 |
| **Income period:** | 01 Jul 2023 - 30 Jun 2024 |
| **Financial year:** | 2023-24 |

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## Registration type

**Is the company registered with the Australian Securities and Investments Commission?**

- [x] Yes, under an Australian law
- [ ] Yes, under foreign law that is an Australian resident for tax purposes
- [ ] Yes, under a foreign law AND
  is a resident of a country with which Australia has a double tax agreement, including a definition of 'permanent establishment' AND
  is carrying on business in Australia through a permanent establishment as defined in the double tax agreement
- [ ] No, this company is not registered with Australian Securities and Investments Commission

# Company details

**What date was the company registered with the Australian Securities and Investments Commission?**

You can find this information in the Australian Securities and Investments Commission register at ASIC Connect. Please notify the Australian Securities and Investments Commission if your details need to be updated.

08/03/2018

**Is the company the head of a consolidated or multiple entry consolidated group?**

Only the head company of a consolidated or multiple entry consolidated group can apply to register R&D activities. The head company must register R&D activities performed by any member of the group. For further information on claiming the R&D Tax Incentive if you are a member of a consolidated or multiple entry consolidated group please visit the Australian Tax Office website.

- ○ Yes
- ⊘ No, the company is not part of a consolidated or multiple entry consolidated group
- ○ No, the company is a subsidiary of a consolidated or multiple entry consolidated group

**Is the company controlled by one or more tax exempt entities?**

To work out if your company is controlled by one or more exempt entities, you will need to consider if one or more exempt entities, their affiliates or both have either:

- shares and other equity interests in your company that give them and/or their affiliates at least 50% of the voting power in your company
- the right to receive at least 50% of any income or capital your company distributes.

- ○ Yes
- ⊘ No

**Does the company have an Ultimate Holding Company?**

A company is an Ultimate Holding Company if it has majority ownership of or controlling interests in the other companies in the consolidated or multiple entry consolidated group. The ultimate holding company may be incorporated in a country other than Australia. More information can be found on the ASIC website and the Corporations Act 2001 where the term ‘ultimate holding company’ is defined.

- ⊘ Yes
- ○ No

**What country was the Ultimate Holding Company incorporated in?**

AUSTRALIA

## What is the Ultimate Holding Company’s ABN or ACN?

**Company name**

TAHOE BLUE INVESTMENTS PTY. LTD.

**Australian Company Number (ACN)**

159855035

**Registration Date**

09/08/2012

**Is the company Indigenous owned (where at least 51% of the organisation's members or proprietors are Indigenous)?**

- ○ Yes
- ⊘ No
- ○ Prefer not to answer

**Is the company Indigenous controlled (where at least 51% of the organisation's board or management committee are Indigenous)?**

- ○ Yes
- ⊘ No
- ○ Prefer not to answer

**Which industry does the company mostly operate in?**

**ANZSIC Division**

Select the Australian and New Zealand Standard Industrial Classification (ANZSIC) division that best describes the main business activity of the company.

M - PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES

**ANZSIC Class**

7000 Computer System Design and Related Services

# Contact details

**Please note that all contacts listed will receive correspondence about the application. Any contact listed may be contacted by the R&DTI Program to provide further information.**

## Primary company contact details

At least one company contact must be provided.

**Title (optional)**

Mr

**First name**

Peter

**Last name**

Cooney

**Position or role**

Compliance Manager

**Phone number**

For phone numbers outside of Australia, please include the international code (e.g. +64 X XXXX XXXX).

+61419337875

**Email**

To ensure the integrity of your information, please provide a personal email address. Do not use a generic email address. Using a generic email address may result in correspondence not being received.

peter@coinharbour.com.au

**Main business address**

This is the main address where the company does business in Australia.

L 2  696 Bourke St, MELBOURNE VIC 3000

**Website (optional)**

https://www.coinharbour.com.au/

**Would you like to include an alternate company contact?**

- ○ Yes
- ⊘ No

**Did you rely on advice from a tax agent?**

- ⊘ Yes
- ○ No

## Primary tax agent contact details

**Title (optional)**

Mr

**First name**

Ian

**Last name**

Young

**Position or role**

CPA & Tax Agent

**Tax agent registration number**

To find your tax agent registration number visit the Tax Practitioners Board website and search the TPB Register.

68457001

**Phone number**

For phone numbers outside of Australia, please include the international code (e.g. +64 X XXXX XXXX).

+61407910529

**Email**

To ensure the integrity of your information, please provide a personal email address. Do not use a generic email address. Using a generic email address may result in correspondence not being received.

ian@rjryanpartners.com.au

## Tax agent ABN

To find your tax agency ABN visit the ABN Lookup website to search by name or ABN. The ABN is part of the result if the business is registered.

**Company name**

The Trustee for Stirling Advisory Unit Trust

**Australian Business Number (ABN)**

13241738913

**Would you like to include an alternate tax agent contact?**

- ○ Yes
- ⊘ No

**Did you receive advice from an R&D consultant?**

Please include details of the primary consultant who provided advice on your application. Please note, primary consultant details are collected for internal reporting only. The primary consultant will not receive correspondence about the application and will not be contacted by the R&D Tax Incentive Program to provide further information.

- ○ Yes
- ⊘ No

# Application inclusions

**This application will include:**

Select one or more of the options below.

- ☐ Activities with an advance or overseas finding
- ☐ Expenditure paid via a levy to a Research Service Provider
- ☐ Activities conducted by a Research Service Provider
- ☐ Activities conducted by a Cooperative Research Centre
- ☐ Activities conducted by another research organisation
- ☐ Activities conducted under another collaborative agreement
- ☑ None of the above

**Will the company be including activities that are excluded from being a core activity in this application?**

- ○ Yes, as supporting activities
- ⊘ No

# Employees

**How many employees did the company have across all companies at the end of 30 Jun 2024?**

This is the total number of employees on the company's payroll at the end of the income period covered by this application (including working directors, partners, proprietors, full time, part time, and casual staff). For consolidated groups, this will be the total employee numbers for the

entire group.

5

**How many employees across all companies were engaged in the R&D activities included in this application?**

This is the full time equivalent (FTE) number of staff (including working directors, partners, proprietors, full time, part time, and casual staff) employed by the company on research and development in the income year covered by this application.

1

# Finance

**For your selected income period, what was the company's taxable income or loss across all companies?**

This is the company's taxable income or loss for the selected income year. Losses should be shown as negative figures.

AUD -410,560.00

**For your selected income period, what was the company's aggregated turnover?**

AUD 551,236.00

**For your selected income period, how much revenue did the company earn across all companies from export sales?**

This is the company's total revenue from export sales for the income year covered by this application as reported in the company's business activity statement provided to the Australian Taxation Office. The total revenue for the entire income year should be included, and this may require a company to add up the individual export sale amounts provided in their periodic business activity statements for the income year.

AUD 0.00

# Projects and activities

## Project - Experimental development of deep reinforcement learning model for technical analysis market trading (PJPS47F0B)

**Name for this project**

If you have registered this project before please use the same name.

Experimental development of deep reinforcement learning model for technical analysis market trading

**Project reference description (optional)**

This is an optional field to insert your internal reference.

**What is the expected duration of this project?**

Jul 2022 to May 2025

**How much is expected to be spent over the life of this project?**

Include both R&D and non-R&D expenses.

AUD 800,000.00

**What are the objectives of this project?**

Enter a maximum of 1000 characters.

At the project level the objectives may be described fairly broadly and can include both research and development and commercial aims. Please ensure your response allows the Department to understand the purposes for conducting the project.

In FY23, Coin Harbour Pty Ltd ("Coin") identified a significant deficiency in current market offerings: a lack of a specialised deep reinforcement learning model meticulously engineered to incorporate key parameters essential for the operational and profitable success of trading models.

The technical objective of this project is to meticulously engineer and systematically evaluate whether a reinforcement learning-based trading model can effectively execute intelligent trading decisions and achieve profitability, utilizing both real-time and historical data. The model aims to leverage an extensive integration with Azure Services, employ serverless computing for real-time data processing, and implement robust performance metrics and risk management strategies. Additionally, the model aims to facilitate effective stakeholder

communication through systematic feedback integration to further enhance model refinement and deployment.

**For the selected income period, how much was spent on feedstock inputs?**

Enter 0 if there is no spend related to feedstock inputs.

AUD 0.00

**For the selected income period, where in Australia did the company conduct most of the R&D activities in this project?**

Select the Australian postcode where most of the R&D activities in this project were conducted.

3000

**Which field of research best describes the majority of R&D activities in this project?**

**ANZSRC Division**

46 Information and Computing Sciences

**ANZSRC Group**

4612 Software engineering

## Core R&D activity - 1.1 Experimental Investigation of a Novel Deep Reinforcement Learning Model Utilizing Historical and Real-Time Data Sets to Optimize Market Returns (P5YNHCMF6)

You must conduct or plan to conduct, at least one eligible core R&D activity to register for the R&D Tax Incentive.

Section 355-25(1) of the Income Tax Assessment Act 1997, the law that applies to the program, states:

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 the 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)

For further information about core activities read the R&D Tax Incentive Guide to Interpretation.

**Name for this core activity**

If you have registered this core activity before please use the same name.

1.1 Experimental Investigation of a Novel Deep Reinforcement Learning Model Utilizing Historical and Real-Time Data Sets to Optimize Market Returns

**Which project is this core activity related to?**

Select the project that this core activity relates to.

Experimental development of deep reinforcement learning model for technical analysis market trading

**Does this core activity commence after the end of your income period for this application?**

Where a core activity is planned to occur in a future income year, you will need to provide the title of the core R&D activity, its start and end date, a brief description of the activity, and the new knowledge the activity is intended to create.

○ Yes

⊘ No

**Enter the start and end dates for this core activity**

The start and end dates for the core activity must fall within the dates specified for the related project.

Jul 2022 to May 2025

**For your selected income period, what was the estimated expenditure for this core activity?**

Enter a reasonable estimate of the expenditure on this core R&D activity for the income year of registration. This should include expenditure on the activity conducted by the company, and contracted expenditure to Research Service Providers or Cooperative Research Centres (if any).

AUD 395,400.00

**What was the hypothesis?**

Enter a maximum of 4000 characters.

Context

In the analysis of financial markets, practitioners typically employ fundamental and technical analysis methodologies to forecast asset price directions. These methodologies, traditionally conducted manually, involve a systematic examination of past market data, including price and volume, to assess both the short-term and long-term intrinsic value of investment opportunities.

The prices of financial assets are characterized by non-linear, dynamic, and chaotic behaviours, rendering these financial time series notably difficult to forecast. Among the cutting-edge methodologies for predicting market movements, machine learning models stand out due to their profound ability to identify complex patterns across diverse applications. However, despite their potential, these models are often met with scepticism regarding their reliability and consistency in financial contexts.

Hence, the primary objective of the core activity aims to develop a novel specialised deep reinforcement learning (DRL) model to enhance the precision and efficacy of market analysis and decision-making processes. The model aims to automate the traditionally manual methodologies of fundamental and technical analysis, systematically processing extensive datasets of historical and real-time market data. By integrating sophisticated algorithms capable of learning and adapting from complex data patterns, the model meticulously assesses performance metrics and facilitates more informed trading decisions.

Technical Unknowns

We have discerned that, while current algorithms are engineered to optimise trading strategies, many extant trading models exhibit significant limitations, notably their inability to autonomously learn from continuously incoming data or effectively adapt to abrupt shifts in market conditions without extensive human intervention. This observation aligns with scholar critiques (Fletcher, T.S.B.; (2012) that have found that the on the market models are typically unsuccessful at predicting daily and minutely prices of assets and the failure of models to maintain robustness during market anomalies and crises.

The model must manage real-time, high-throughput data efficiently, requiring robust computational infrastructure and optimized data workflows.

Additionally, the unpredictable nature of financial markets, compounded by numerous external influences, complicates the model’s training and adaptation. Maintaining rigorous security and risk management profiles in a cloud environment like Azure further complicates
deployment. Moreover, the model must prevent overfitting and generalize effectively to new market conditions, necessitating advanced continuous learning mechanisms. Hence, rigorous and systematic experimentation is essential to refine and validate the model’s capabilities under these complex conditions.

Hypothesis

Coin Harbour hypothesises that by integrating robust computational infrastructure, optimizing data processing workflows, and implementing continuous learning mechanisms, Coin will be able to develop a Deep Reinforcement Learning (DRL) model capable of efficiently processing real-time financial data, adapting to dynamic market conditions,
and maintaining high performance at scale. The model is expected to navigate the complexities of financial markets with enhanced predictive accuracy and improved risk management, ultimately achieving profitable trading outcomes under a variety of market scenarios.

**Did you conduct this core activity for a substantial purpose of generating new knowledge?**

- [x] Yes
- [ ] No

**What new knowledge was this core activity intended to produce?**

Enter a maximum of 1000 characters.

Your description should include sufficient and relevant detail so that the Department can understand the new knowledge the core activity was intended to generate.

New knowledge is sought through the novel application of advanced deep reinforcement learning (DRL) algorithms, such as Deep Q-Networks (DQN), Proximal Policy Optimization (PPO), and Actor-Critic methods, specifically tailored for the financial trading sector. The model architecture generates new knowledge by proficiently managing high-dimensional input data, encompassing historical price data, market indicators, and sentiment analysis, while maintaining resilience in the face of market anomalies and crises.

Consequently, this core activity was undertaken by Coin to generate novel insights into deep reinforcement learning, offering nuanced perspectives on how these algorithms can potentially enhance trading of financial assets, but also seeks to advance the underlying technological frameworks.

**How did the company determine that the outcome could not be known in advance?**

Select all options that apply.

- [x] There was no applicable information in scientific, technical, or professional literature or patents
- [x] Experts in the field provided advice that there wasn't a solution that could be applied
- [x] There wasn’t a way to adapt solutions from other companies in, and out of, Australia
- [ ] Other
- [ ] The company did not look into existing knowledge

**Please explain what sources were investigated, what information was found, and why a competent professional could not have known or determined the outcome in advance.**

Enter a maximum of 1000 characters.

Coin Harbour conducted comprehensive reviews of existing literature and patents to elucidate the capabilities and limitations of existing machine learning models in financial trading, aiming to pinpoint technological gaps. Their preliminary investigations uncovered distinct challenges endemic to the financial sector, including pronounced data noise, prevalent model overfitting, and the critical need for adaptive learning mechanisms capable of responding to market volatility.

Scholarly work insufficiently addresses the complexities associated with implementing deep reinforcement learning algorithms that require substantial computing resources to analyse high-dimensional data and incorporate sophisticated risk management strategies effectively. The intricate interplay of numerous parameters inherent the model precludes even the most competent professionals from foreseeing outcomes without empirical validation, therefore systematic experimentation becomes imperative.

**What was the experiment and how did it test the hypothesis?**

Enter a maximum of 4000 characters.

To test the veracity of the hypothesis, Coin Harbour undertook the following experimental procedure during the FY24 (1 July 2023 – 30 June 2024) period:

Success will be measured in the form of several key metrics include Return on Investment (ROI), which will assess the profitability of the model's trading decisions; the Sharpe Ratio, to evaluate risk-adjusted returns and ensure that the model's performance is consistent and not excessively volatile; and Maximum Drawdown, to measure the potential risk of loss in the model's trading strategy. These quantitative benchmarks will provide a clear and objective assessment of the model’s effectiveness and reliability in live market conditions, allowing Coin Harbour to determine the success of the experiment based on empirical data and performance outcomes.

Phase 1: Planning and Design began with defining the scope and specific objectives of the DRL model and the Azure infrastructure required to support it. During this phase, the team focused on designing the model to incorporate advanced DRL algorithms such as Deep Q-Networks, Proximal Policy Optimization, or Actor-Critic methods. The architecture was planned to handle high-dimensional input data, including historical price data, market indicators, and sentiment analysis, establishing a foundation for robust data processing capabilities.

Phase 2: Development involved the implementation of the chosen DRL algorithms within the Azure Machine Learning environment. The infrastructure was developed and set up to support the model, including Azure Data Lake for data storage and Azure Kubernetes Service for scalable deployment. This phase was crucial for integrating the model with real-time and historical market data feeds, utilizing Azure Event Hubs or Azure Stream Analytics to ensure the model could respond to market conditions dynamically.

Phase 3: Performance Evaluation was a critical step where the team established key performance metrics such as ROI, Sharpe ratio, and maximum drawdown to measure the model's effectiveness. The model was run in a controlled environment to simulate trading scenarios, allowing the team to capture comprehensive data on its performance against these metrics. This data was then used to compare the model's effectiveness with benchmark trading strategies, providing a clear assessment of its relative performance. A key experiment to test the accuracy and efficacy of the AI model has been to perform parallel manual (human) and AI (software generated) decisions and operations. A limiting factor has been the amount of input data to train the AI model.

Phase 4: Deployment involved deploying the optimized model on the Azure platform using Azure Kubernetes Service to ensure the model's high availability and scalability.

Phase 5: Back-testing of specific assets using historical time-series market data was undertaken using a modified Cashflow At Risk model.

**How did you evaluate or plan to evaluate results from your experiment?**

Enter a maximum of 4000 characters.

Experimental results are recorded in the form of statistical and observational data derived from each of the discrete tests (for each intended use case) forming the overall experiment. Further, evaluations will be drawn by comparing the recorded data and test results to predefined minimum performance benchmarks and hypothesised outcomes, with each test deemed to pass or fail before progression to the next phase of experimentation. To validate the hypothesis, the performance of the deep reinforcement learning (DRL) model for market-making will be evaluated through a systematic approach using several key metrics.

The primary indicators will include:

Return on Investment (ROI) to measure profitability, the Sharpe Ratio for assessing risk-adjusted returns, and Maximum Drawdown to evaluate the potential financial risk from peak to trough performance. These metrics will provide a quantitative foundation for assessing the model's effectiveness and reliability.

While significant progress has been made in the development and deployment of the deep reinforcement learning (DRL) model for financial trading, Coin Harbour Pty Ltd has not yet been able to validate the hypothesis that the model can autonomously make profitable trading decisions based on real-time and historical market data. Gathering more extensive input data to train the AI model is seen as a key factor for further improvements.

The project has successfully implemented advanced DRL algorithms and integrated these with the necessary Azure services, setting a solid foundation for ongoing analysis and optimization. Despite these advancements, conclusive results that validate the hypothesis are still being reviewed.

Consequently, Coin Harbour plans to continue its core R&D activities into future financial years, focusing on refining the model's capabilities, enhancing its adaptability to market conditions, and rigorously testing its performance to eventually confirm its effectiveness and reliability in live trading scenarios.

**If you reached conclusions from your experiments in the selected income period, describe those conclusions.**

Enter a maximum of 4000 characters.

We have undertaken a comprehensive and systematic approach to developing a deep reinforcement learning (DRL) model for financial trading, leveraging novel technologies and the ability to process high-dimensional input data to be able to adapt to dynamic market conditions autonomously.

Despite the theoretical readiness and technological sophistication of the model, the experimental phase has yet to conclusively validate the initial hypothesis—that the model can autonomously generate profitable trading strategies based on real-time and historical data. The absence of definitive results at this stage is not indicative of the inability to validate the hypothesis but rather a reflection of the complexities involved in modelling unpredictable financial markets and the challenges inherent in advanced AI technologies.

Future refinements to the hypothesis and subsequent experimental investigations are anticipated in upcoming financial years to enhance the accuracy and reliability of the deep reinforcement learning (DRL) model. This iterative approach will not only aim to validate the initial hypothesis but also adapt and evolve the model to meet

emerging market challenges and technological advancements.

Although this project has taken longer and cost more than expected, we are ethusiastic about the future potential of this DRL AI system.

**What evidence did the company keep about this core activity?**

Select all that apply.

- [x] Evidence of searches or enquiries you made to find current knowledge
- [x] Evidence to show that you could only determine the outcome of the core activity by conducting experiments as part of a systematic progression of work
- [x] Evidence of your hypothesis and design of your experiments
- [x] Documented results and evaluation of your experiments
- [ ] Other
- [ ] The company did not keep records

## Supporting R&D activity - 1.1.1 Experiment resourcing, management and design (PMNSXBWK4)

**Name for this supporting activity**

If you have registered this supporting activity before please use the same name.

1.1.1 Experiment resourcing, management and design

**Briefly describe this supporting activity**

Enter a maximum of 1000 characters.

We expect you to explain what you did within the supporting activity, including the main actions or steps you took within the activity so the scope and timing of the activity is clear.

Planning and correspondence in relation to core activity timeframes, logistics, and resource requirements.

- Supervision and management of experiments, including instructing researchers and technicians and tracking progress against timelines.
- Acquisition of personnel and resources required to conduct core R&D activities.
- Correspondence and consultation with relevant experts in subject matters relevant to the R&D activities.
- Liaising with core R&D activity stakeholders to enable the activity to proceed.
- Background research to inform hypothesis formation.
- Design and documentation of development goals.
- Documentation and analysis of experimental procedure and results.

**Which core activities are supported by this supporting activity?**

Select one or more core activities that this activity supported.

**Core activity**

1.1 Experimental Investigation of a Novel Deep Reinforcement Learning Model Utilizing Historical and Real-Time Data Sets to Optimize Market Returns

**How did this activity directly support the core activities?**

Enter a maximum of 1000 characters.

You need to identify the core R&D activity to which your supporting R&D activity directly relates. We also expect you to identify the relationship of the activity with the elements in your systematic progression of work. That is, we expect you to describe how the activity supported any or all of the following:

- the development or refinement of a hypothesis;
- the conduct of an experiment;
- the observation and evaluation of the results of an experiment, and/or
- the drawing of subsequent logical conclusions.

The following activities described in the section below have formed the basis for the development, formulation, and refinement of the hypothesis.

Specifically, these activities were conducted to directly inform the planning of the experimental steps, logistics and variables required to conduct the experiments, and provides guidance on how to evaluate and draw conclusions from experimental results.

**When was this supporting activity conducted?**

The start and end dates for the supporting activity must fall within the dates specified for the related project and the income period for this application.

Jul 2023 to Jun 2024

**For the selected income period, what was the estimated expenditure for this supporting activity?**

Enter a reasonable estimate of the expenditure on this supporting R&D activity for the income year of registration. This should include expenditure on the activity conducted by the company, and contracted expenditure to Research Service Providers or Cooperative Research Centres (if any).

AUD 24,217.00

**Did this activity produce a good or a service, or is it directly related to producing a good or a service?**

○ Yes

⊘ No

## Supporting R&D activity - 1.1.2 Development of operational infrastructure and data management support (P53Q4Z9BB)

**Name for this supporting activity**

If you have registered this supporting activity before please use the same name.

1.1.2 Development of operational infrastructure and data management support

**Briefly describe this supporting activity**

Enter a maximum of 1000 characters.

We expect you to explain what you did within the supporting activity, including the main actions or steps you took within the activity so the scope and timing of the activity is clear.

Data Management, utilize Azure Data Lake storage to securely store and manage historical market data and pre-processed datasets, ingest real-time data to ensure the model receives current market conditions

-Model development and training, develop and continuously train the DRL model, ensuring it adapts to new data sets and evolving market dynamics.
- Use (AKS) for deploying the trained model, ensuring scalability and data processing.
- Implement real-time data processing to perform serverless computing tasks, feature extraction, and model inference.
- Monitoring of system performance and health, gathering telemetry data.
- Secure sensitive information and credentials.
- Configure auto-scaling policies to manage fluctuations in workload and optimize resource allocation.
- Utilize deployment slots for safe staging and testing environments.
- Resource optimization and routine maintenance for model components

**Which core activities are supported by this supporting activity?**

Select one or more core activities that this activity supported.

**Core activity**

1.1 Experimental Investigation of a Novel Deep Reinforcement Learning Model Utilizing Historical and Real-Time Data Sets to Optimize Market Returns

**How did this activity directly support the core activities?**

Enter a maximum of 1000 characters.

You need to identify the core R&D activity to which your supporting R&D activity directly relates. We also expect you to identify the relationship of the activity with the elements in your systematic progression of work. That is, we expect you to describe how the activity supported any or all of the following:

- the development or refinement of a hypothesis;
- the conduct of an experiment;

- the observation and evaluation of the results of an experiment, and/or
- the drawing of subsequent logical conclusions.

The following activities mentioned are essential for the development and functionality of Coin’s deep reinforcement learning model.

Secure data management and real-time data ingestion ensure continuous access to both historical and current market data, crucial for the model’s learning and adaptability.

Robust infrastructure supports scalable model deployment and consistent performance under varying data loads.

Real-time data processing enables the model to make immediate trading decisions, while integrations with financial data APIs and continuous system monitoring ensure efficient and reliable operations in dynamic market conditions.

**When was this supporting activity conducted?**

The start and end dates for the supporting activity must fall within the dates specified for the related project and the income period for this application.

Jul 2023 to Jun 2024

**For the selected income period, what was the estimated expenditure for this supporting activity?**

Enter a reasonable estimate of the expenditure on this supporting R&D activity for the income year of registration. This should include expenditure on the activity conducted by the company, and contracted expenditure to Research Service Providers or Cooperative Research Centres (if any).

AUD 82,148.00

**Did this activity produce a good or a service, or is it directly related to producing a good or a service?**

○ Yes

⊘ No

# Declare and submit

## Privacy collection statement

*The Department of Industry, Science and Resources (Department) is bound by the Australian Privacy Principles (APPs) outlined in Schedule 1 of the Privacy Act 1988 (Cth) (Privacy Act) which regulates how entities may collect, use, disclose and store personal information.*

*The Department will collect from all application forms, personal information including the name, address, email address and telephone numbers of companies applying for the R&D Tax Incentive programme and also the named contact people for these companies, for the purposes of carrying out its functions including registering, identifying and contacting the applicants. This information may also be disclosed to and accessed by Departmental staff within the Department for the purposes of administering the R&D Tax Incentive, evaluating and improving the efficient administration of the programme, informing policy development and decision-making, as well as to contact R&D Tax Incentive programme participants to notify the company or business of other similar programmes or services.*

Personal information obtained will be stored and held in accordance with the Department’s obligations under the Archives Act 1983 (Cth) and will only be used and disclosed for the purposes outlined and will not be disclosed without your consent, except where authorised or required by law. For further information, please refer to the Department’s Privacy Policy which can be found at: http://www.industry.gov.au/Pages/PrivacyPolicy.aspx

## Declaration and submit application

**I declare that:**

- I have the authorisation to lodge this application for the R&D entity;
- to the best of my knowledge and belief the information in this application is true and correct and accurate in all material details, and that the activities and corresponding expenditure described in this application meet all prescribed eligibility requirements for the R&D Tax Incentive. I understand that giving false or misleading information is a serious offence;
- the R&D entity, while undertaking the activities described in this application, has maintained records, while the activities were conducted, that substantiate the conducting of the activities to be registered for the R&D Tax Incentive; and
- the R&D entity will provide further information as requested by the Department or Innovation Science Australia to support my registration in the future, and the R&D entity will do so in a reasonable amount of time after receiving a request.

**I acknowledge that:**

- Australian Government entities will securely share data to improve efficiencies and inform policy development and decision-making. In doing so, Australian Government entities will uphold the highest standards of security and privacy for the individual, national security and commercial confidentiality. For more information on the Australian Government's Public Data Policy and the commitment to use Public Data to help grow the economy, stimulate innovation and improve service delivery across Government, please visit: https://www.finance.gov.au/government/public-data;
- the application will be treated as a confidential Commonwealth record and information in the application will not be disclosed to any other person (unless required or permitted by law to do so);
- it is an offence (subject to a civil penalty) for a person to provide a service that is a 'tax agent service', where that person is not a registered tax agent (refer section 50-5 of Tax Agent Services Act 2009), other than where the service is a legal service in some circumstances.

## Declarant details

The declarant details need to be completed and saved before you can submit your application.

**Title (optional)**
Mr

**First name**
Peter

**Last name**
Cooney

**Position or role**
Director

**Phone number**
For phone numbers outside of Australia, please include the international code (e.g. +64 X XXXX XXXX).
0419337875

**Email**
To ensure the integrity of your information, please provide a personal email address. Do not use a generic email address. Using a generic email address may result in correspondence not being received.
peter@coinharbour.com.au

## Company ABN

To find your company ABN visit the ABN Lookup website to search by name or ABN. The ABN is part of the result if the business is registered.

**Company name**
COIN HARBOUR PTY LTD

**Australian Business Number (ABN)**
12624879223

**Australian Company Number (ACN)**
624879223

**Registration Date**
08/03/2018

## Potential risks

The following issues have been identified for your application. Please review the following guidance and address any issues as required. You can submit your application by acknowledging that you have considered the guidance to ensure you have correctly assessed your claim as eligible.

## I acknowledge I am aware of the potential risks

**There are Tax Payer alerts and / or specific guidance relevant to your company's primary industry of operation. Please confirm that you have considered the following guidance to ensure you have correctly assessed your claim as eligible.**

**ANZSIC Division**
M - PROFESSIONAL, SCIENTIFIC AND TECHNICAL SERVICES

**ANZSIC Class**
7000 Computer System Design and Related Services

Before continuing, please consider the software development sector guide for the R&D Tax Incentive relevant to the ANZSIC Division/Class selected for the industry the company mostly operates in.
Before continuing, please consider the tax payer alert for claiming the R&D Tax Incentive for software development activities relevant to the ANZSIC Division/Class selected for the industry the company mostly operates in.
Before continuing, please consider the tax payer alert for claiming the R&D Tax Incentive for software development activities - Addendum relevant to the ANZSIC Division/Class selected for the industry the company mostly operates in.

☑ I acknowledge that I have reviewed and understood the Tax Payer alerts and / or BGA guidance that are relevant to my company's primary industry of operation.

## Acknowledged by:

Peter michael Cooney

**Employer ABN**
12624879223