THE UNIVERSITY OF SYDNEY

INFO5992 Introduction to IT innovation
Tutorial 4

WEB API Product Platform

Pre-reading:

'*State of API Integration*'. The 2021 report on the State of API Integration will help you understand the current (up to 2021) state of API integrations and the role and realised benefits of integrating API within an organisation. In the 2018 report (section 2, pages 14 – 18), different types of business models built with API services are presented with examples.

'2023 State of the API Report' https://www.postman.com/state-of-api/

- 2022 State of the API Report: This reports the organization's development priorities, the economy, and where the industry going with the API services. The report's key findings are: (1) the organization's development effort is spent on APIs; (2) the investments in APIs will remain strong, and (3) how well the API integrates with internal apps and systems is a key factor in consuming and producing API.
- API-enabled digital ecosystems: This report contains information about API-enabled digital ecosystems and how to execute and realise the benefit of the API programme, The report provides knowledge, including assessment and prioritisation of APIs, the API platform and infrastructure, and creating a good API design.

Web APIs around you

- Find out the three most used apps in your group.
- List the apps in the answer sheet.
- For each app, try to find out whether it uses web APIs. Note that the API services may be provided by the developers of the apps, or they may also use third-party APIs provided by other companies or organisations such as Alphabet (Google), which provides Map service-related APIs and the Bureau of the Meteorology of Australia, which provides the weather and climate information APIs.

Some Examples of APIs

1. Alpha Vantage: Alpha Vantage offers free stock APIs in JSON and CSV formats for real-time and historical equity, forex, cryptocurrency data and over 50 technical indicators. Its free API allows 5 API requests per minute and 500 API requests per day. The premium API keys allow users to pay for more frequent API requests per minute and unlimited daily API requests.
2. Strava: Strava is an internet service for tracking human exercise that incorporates social network features. It is mostly used for cycling and running using GPS data. Strava also provides API services for third-party developers. Strava athletes upload millions of activities every day. Its open API and this rich data set yield diverse opportunities for developers, from creating new hardware to augmenting the Strava experience.

3. [Australia Post](#): Australia Post offers APIs to third-party developers, allowing them to integrate tools for shipping and tracking, postage assessment calculator, delivery method selection and online payment gateway functions into their websites/apps.
4. [Introduction - OpenAI API](#): The OpenAI API can be applied to virtually any task. We offer a range of models with different capabilities and price points and the ability to fine-tune custom models.

For the three examples of API services, try to determine whether they belong to any of the following categories and explain why:
   a. API as a product
   b. API enhancing existing product.
   c. API promoting existing product.

Open Innovation

For each one of the examples above (Alpha Vantage, Strava, Australia Post and OpenAI), try to determine whether the usage of API services allowed these companies to adopt open innovation strategies. If your answer is yes for a company, try to determine whether it is outside-in, inside-out or couple process type of open innovation.