OpenAI – Artificial intelligence digital platform

Date: 11.07.2023
Version: 1.5
Author: Dominik Bork
Management summary:

This document describes the case study of the US-based company OpenAI, which conducts artificial intelligence (AI) research and markets the out of the research created digital products and services. This case study focuses on OpenAI's business regarding its digital services building on its generative pre-training transformers (GPT) such as GPT-4 and ChatGPT. OpenAI provides AI functionalities as a service and makes them available for a variety of applications to its users and partners through its digital platform. OpenAI allows for expandability and adaptability of their service by offering developers the possibility to develop plugins or integrate the services seamlessly with their applications through the OpenAI API.

OpenAI website: https://openai.com/

Table of Contents

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

1. Business view of the case

The Business view describes the business side of the case, including the enterprise, the platform and the business model on which they are based, business goals, requirements, basic products and services on which the business is based, stakeholders in the value chain and their roles and objectives, business and legal context and limitations and the like.

1.1. Background

In today's ever-evolving digital landscape, the rise of artificial intelligence (AI) has become a critical driver of innovation across industries. Among the most impactful AI solutions is currently OpenAI's ChatGPT, powerful, cutting-edge language models, transforming the way users and businesses interact with technology.
A large language model (LLM) is an advanced AI system that uses deep learning to understand and generate human-like text. It is trained on vast amounts of data and can answer questions, provide explanations, and assist with language-related tasks. LLMs have a broad range of applications, including virtual assistants, chatbots, content generation, and translation.
This makes them very interesting for businesses to integrate them into their business practices to innovate or automate processes.

1.2. The company

1.2.1. Basic facts

OpenAI is a leading AI research laboratory and company that focuses on developing and promoting advanced AI technologies. It was founded in December 2015 by Elon Musk, Sam Altman, Greg Brockman, Ilya Sutskever, John Schulman, and Wojciech Zaremba and has its headquarters in San Francisco, California, U.S. As of 2023, OpenAI employs 375 people.
With the launch of the free preview of its ChatGPT service, OpenAI achieved global widespread media attention and public interest. This brought on significant funding and attention from big tech companies such as Microsoft, which aim to utilize the language models for their own AI solutions.

1.2.2. Mission

As stated by OpenAI[1]:
OpenAI's mission is to ensure that artificial general intelligence (AGI)—by which we mean highly autonomous systems that outperform humans at most economically valuable work—benefits all of humanity. We will attempt to directly build safe and beneficial AGI, but will also consider our mission fulfilled if our work aids others to achieve this outcome. To that end, we commit to the following principles:

- *Broadly distributed benefits*
- *Long-term safety*
- *Technical leadership*
- *Cooperative orientation*

[1] https://openai.com/charter

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

1.2.3. Vision

OpenAI envisions a future where AGI is developed and deployed in a manner that is safe, beneficial, and aligned with human values. It aims to provide an ecosystem of powerful AI functionalities to be used by users but also allows developers and entrepreneurs to build on its technology.

1.2.4. Start-up and organization of the company

OpenAI was founded in 2015 as a startup by a group of prominent individuals including Elon Musk and Sam Altman. They started with significant funding from the founders and quickly gained recognition for their AI research and development. Over time, OpenAI attracted external investments and expanded its team of AI experts.
In 2019, they transitioned to a capped-profit company structure while remaining committed to their mission of advancing AI for the benefit of humanity. OpenAI has emerged as a leading organization in the AI field, focusing on cutting-edge research and responsible AI deployment.

1.3. Business model

1.3.1. Description of the business model

OpenAI's business model involves a combination of research, commercialization, and partnerships. They conduct advanced AI research and publish their findings. They also collaborate with companies to develop AI solutions for real-world applications. OpenAI generates revenue by providing access to their language models through an API and exploring licensing agreements for their technology.

Initially, OpenAI operated as a research-focused organization, conducting cutting-edge AI research and publishing its findings to contribute to the broader scientific community. The company gained recognition for its advancements in natural language processing, reinforcement learning, and other AI domains.

In recent years, OpenAI has also pursued commercialization and collaboration as part of its business model. This has included partnerships with companies and organizations to develop and deploy AI technologies in real-world applications. By collaborating with external entities, OpenAI aims to leverage its expertise to address industry-specific challenges and create practical AI solutions.

OpenAI selectively offers licensing agreements for its technology, allowing companies to use their AI systems in specific domains or applications. This approach enables OpenAI to establish partnerships with organizations that can leverage their technology while generating revenue through licensing arrangements.

OpenAI offers access to its advanced language models, such as GPT-3, through an API (Application Programming Interface), allowing developers and businesses to integrate the models into their own applications and services. This API-based approach provides a revenue stream for OpenAI, where users pay for access to the AI capabilities provided by the models. For the commercialization of the API calls they implemented a token system in which tokens bought by the customer are exchanged for API query calls to access and use their LLMs.

In addition to the services mentioned above which focus on companies as clients, OpenAI also offers a more accessible interaction method with their LLMs through ChatGPT and GPT-4 service over a

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

dedicated website or app. Users can directly ask questions and interact with the LLM. This expanded OpenA'Is business from only B2B to also offering a B2C service. The service makes use of the freemium business model, offering a restrictive functionality of the tool to free users which is expanded by entering a subscription model. With the free users OpenAI collects a large set of interactions and possibly feedback to improve their product, while also attracting significant interest from the public and media.

1.3.2. Business model canvas

Questions and Tasks:

- On the basis of the above-mentioned business model, model a business model canvas.
- For any information not provided, do further research on the company and do informed decisions yourself on what these could be to complete the canvas

<table>
<tr>
<td rowspan="2">Key Partners:
• Research institutions for collaborative research and development
• Technology partners for infrastructure and API support
• Enterprise clients for customized solutions
• Open-source community for feedback and contributions</td>
<td>Key Activities:
• AI research and development
• Model training and improvement
• API development and maintenance
• Collaboration with partners and researchers
• Monitoring and addressing ethical considerations</td>
<td rowspan="2">Value Propositions:
• Conversational AI capabilities
• Natural language understanding and generation
• Assistance in information retrieval and tasks automation
• Integration flexibility through API access
• Customization options for enterprise clients</td>
<td>Customer Relationships:
• Self-service model through API access
• Developer documentation and support forums
• Dedicated support for enterprise clients
• Collaboration and co-creation with research partners</td>
<td rowspan="2">Customer Segments:
• Developers and programmers
• Businesses and enterprises
• Research institutions and academia</td>
</tr>
<tr>
<td>Key Resources:
• AI researchers and engineers
• High-performance computing infrastructure
• Data for training and fine-tuning the models
• API infrastructure and documentation
• Intellectual property and patents</td>
<td>Channels:
• API platform for self-service access
• Developer communities and forums
• Partnership collaborations
• Direct sales and marketing for enterprise clients</td>
</tr>
<tr>
<td colspan="3">Cost Structure:
• Research and development costs
• Data acquisition and processing
• Model training and computing infrastructure
• API maintenance and support
• Marketing and sales expenses</td>
<td colspan="2">Revenue Streams:
• Subscription or usage-based fees for API access
• Licensing agreements with enterprise clients
• Customization and consulting fees
• Potentially revenue-sharing through research collaborations</td>
</tr>
</table>

Table 1 OpenAI Business Model Canvas

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

2. Process view of the case

The Process view describes requirements for business processes and business processes to the level that is relevant for a particular case. If it is a case that is process- or workflow-oriented, then the business process model is created in several levels and with more details. If it is a transaction platform that is event-driven and does not have a clear process structure, the process view is more compact.

2.1. Business process requirements

OpenAI's business process requirements encompass various aspects necessary for the successful operation of their AI-focused organization. These requirements include:

1. **AI Research and Development:** OpenAI's business processes heavily rely on ongoing research and development in the field of AI. They require a strong team of AI researchers, engineers, and scientists who continually explore new techniques, algorithms, and models to advance the state of the art.
2. **Data Acquisition and Management:** To develop and train AI models, OpenAI requires access to large volumes of high-quality data. This entails establishing data acquisition strategies, partnerships, and data management processes to ensure the availability, privacy, and security of data used in their research and development activities.
3. **Model Training and Improvement:** OpenAI's business processes involve extensive model training and fine-tuning. They require infrastructure, computing resources, and workflows to train AI models on large datasets, optimize their performance, and iteratively improve their capabilities.
4. **Ethics and Safety Considerations:** OpenAI places significant emphasis on ethics and safety in AI development. Their business processes require establishing robust frameworks and guidelines for responsible AI research, addressing potential biases, considering the impact of AI on society, and implementing safety measures to mitigate risks associated with AGI.
5. **Collaboration and Partnerships:** OpenAI actively collaborates with research institutions, industry partners, and the broader AI community. Their business processes involve establishing collaboration frameworks, knowledge sharing mechanisms, and partnership agreements to foster a cooperative environment and leverage collective expertise for advancing AI research and applications.
6. **Documentation and Communication:** OpenAI's business processes include effective documentation and communication practices. They need to document their research findings, methodologies, and best practices. Additionally, they must communicate their advancements, innovations, and updates to stakeholders, the AI community, and the public through publications, presentations, and other channels.
7. **Intellectual Property Management:** OpenAI's business processes involve managing intellectual property related to their AI technologies, research outputs, and proprietary models. This includes legal considerations, patent filings, licensing agreements, and protection of their innovations and inventions.
8. **API Development and Support:** OpenAI provides access to their AI capabilities through APIs. As part of their business processes, they need to design, develop, and maintain API infrastructure, ensuring smooth integration, scalability, and support for developers and clients utilizing their services.

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

These requirements collectively contribute to OpenAI's ability to conduct cutting-edge AI research, develop advanced AI technologies, foster responsible practices, collaborate with partners, and deliver valuable AI services to their stakeholders and customers.

2.2. Business process model

Questions and Tasks:

- Use the ArchiMate modelling tool to model the business layer. Model the most significant business function including their stakeholders, possible resources, required processes, triggers and any other necessary elements.
- Example function could be the process describing the user interactions with the ChatGPT web service.

There is a selection of business processes involving OpenAI. For this case study, two processes are described and modeled:
The first process involves an individual user interacting with the ChatGPT service. The user wants to obtain an answer to a question with support from ChatGPT, which triggers the business function. The function involves wording the question as a prompt and sending it to the ChatGPT application service, which returns the appropriate answer. Depending on the satisfaction of the answer and whether the user requires additional information, this process is repeated; alternatively, the user concludes the process.
The second business function creates a new application artifact required by an external/third-party company. This function is assigned to an external developer which performs it. The process includes integrating the library provided by OpenAI and adding an API key necessary for the OpenAI API to track customer transactions. Deployment creates a software artifact that can be deployed on the external company's infrastructure to serve their business services.

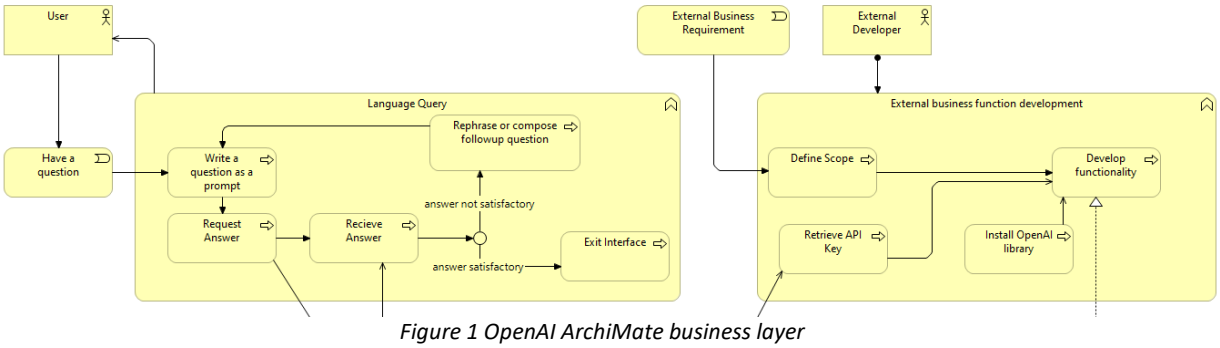

Figure 1 OpenAI ArchiMate business layer

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

3. Service view of the case

The Service view describes user requirements for services provided by the platform and its applications, the design of the services provided with the help of the platform, whose outlines are defined in the business view. Models and other specifications describe the structure of services, their users, the way they use services, user and system interaction scenarios, user experience (UX), service delivery system, etc.

3.1. User requirements for the platform

User requirements for the OpenAI platform revolve around accessing and utilizing the AI capabilities and services provided. Key user requirements are:

- **Access to AI Models:** Users expect straightforward access to OpenAI's AI models, such as ChatGPT, through the platform. This includes providing APIs or other interfaces for developers and businesses to integrate the models into their applications or systems.
- **Seamless Integration:** Users require smooth integration of the AI models into their existing software or platforms. This involves well-documented APIs, clear instructions, and developer resources that facilitate the integration process.
- **Customization Options:** Users may have specific requirements for tailoring the AI models to their specific use cases. OpenAI's platform should provide flexibility and options for customization, allowing users to fine-tune or adapt the models to suit their specific needs.
- **Reliability and Scalability:** Users expect the OpenAI platform to deliver reliable and scalable AI services. The platform should handle user requests efficiently, ensuring quick response times and minimal downtime to support their applications or services.
- **Documentation and Support:** Clear and comprehensive documentation is crucial for users to understand the capabilities, limitations, and usage guidelines of the AI models. OpenAI should provide user-friendly documentation, tutorials, examples, and a knowledge base to assist users in effectively utilizing the platform. Timely and responsive support channels, such as developer forums or dedicated support teams, are also valuable to address user inquiries and technical issues.
- **Privacy and Data Security:** Users require assurance that their data and interactions with the AI models are handled with privacy and security measures in place. OpenAI should implement appropriate data protection practices, including encryption, secure data handling, and compliance with privacy regulations, to ensure user trust and confidence.
- **Continuous Improvement:** Users expect ongoing updates and improvements to the AI models and services provided by OpenAI. This includes regular model updates, bug fixes, and enhancements to address user feedback, improve performance, and introduce new features or capabilities.

By addressing these user requirements, OpenAI can provide a user-friendly and reliable platform that empowers developers and businesses to leverage their AI models effectively and unlock the full potential of AI in their applications and services.

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

3.2. Design of services

Customer personas demonstrate how different individuals can leverage service functionalities based on their specific needs and goals. The following describes three exemplary personas using the services based on their own value propositions:

- ***The Efficient Professional:*** The Efficient Professional persona values productivity and time optimization. They leverage GPT to streamline their workflows, automate tasks, and access relevant information quickly. This persona relies on GPT's ability to provide accurate and timely responses, allowing them to accomplish more in less time.
- ***The Creative Content Producer:*** The Creative Content Producer persona includes writers, bloggers, and content creators who rely on GPT's language generation capabilities to enhance their creative output. They use GPT to generate ideas, brainstorm concepts, and refine their content, saving time and unlocking new possibilities for creativity.
- ***The Tech Innovator:*** The Tech Innovator persona leverages GPT's advanced capabilities to explore new applications, develop innovative solutions, and create novel user experiences. They actively experiment with GPT's APIs and integrate it into their tech projects to unlock new possibilities in areas such as chatbots, virtual assistants, or intelligent automation.

In addition to customer personas, it is important to reflect on their journey from getting to know a product or service, utilizing it, and ultimately contributing to it. Exemplary Customer Journey Map for GPT-4:

1. **Awareness:** Customers become aware of the existence of GPT-4 through various channels such as news articles, social media, or official announcements. They learn that GPT-4 is an advanced language model that offers even more powerful capabilities compared to previous versions.
2. **Anticipation and Research:** Customers eagerly anticipate the release of GPT-4 and actively seek more information about its features, improvements, and potential applications. They read articles, watch videos, and engage in discussions to understand how GPT-4 can benefit them personally or professionally.
3. **Release and Availability:** GPT-4 is officially released, and customers can access the model through different platforms or APIs. They are excited to experience the enhanced capabilities of GPT-4 and explore its potential for various use cases.
4. **Adoption and Integration:** Customers who see value in GPT-4 start adopting the model into their workflows or applications. They integrate GPT-4's capabilities into their existing systems, leveraging its advanced language understanding and generation to enhance their products or services.
5. **Training and Familiarization:** Customers invest time and effort in training GPT-4 to improve its performance in their specific domain or industry. They provide specific training data or fine-tune the model to make it more accurate, relevant, and aligned with their unique requirements.
6. **Integration and Implementation:** Customers integrate GPT-4 seamlessly into their products, services, or platforms. They leverage GPT-4's language capabilities to enhance user experiences, automate tasks, or provide personalized recommendations, resulting in improved customer satisfaction and efficiency.
7. **Continuous Feedback and Iteration:** Customers actively provide feedback on GPT-4's performance, sharing insights, and suggesting improvements. They engage in ongoing communication with the model's developers and community to ensure that GPT-4 continues to meet their evolving needs.

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

8. **Value Realization:** Customers witness the value and impact of GPT-4 in their specific use cases. They observe improvements in productivity, user engagement, or customer satisfaction, attributing some of their success to the capabilities of GPT-4.
9. **Expansion and Scaling:** As customers witness the benefits of GPT-4, they consider expanding its usage to other areas of their business or exploring new applications. They explore opportunities to scale the integration of GPT-4 across departments or use it as a foundation for new innovative products and services.
10. **Ecosystem and Collaboration:** Customers actively engage in the broader GPT-4 ecosystem, collaborating with other organizations, developers, and researchers. They share knowledge, exchange best practices, and contribute to the advancement and development of the AI community.

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

4. Application view of the case

The Application view describes the relevant application aspects of the digital platform, such as the data model on which it is based, the design elements of the application, the deployment of application components, the services that the application provides and uses, etc. In this view, the interoperability of the platform on the organizational and semantic level is also defined. level.

4.1. Use Case Specification

4.1.1. Narrative description of use cases

OpenAI's GPT (Generative Pre-trained Transformer) models, such as ChatGPT or GPT-4, can be applied to a wide range of use cases across various domains. Here are common use cases for OpenAI's GPT:

- **Natural Language Understanding:** GPT models excel in understanding and interpreting human language. They can be utilized for tasks such as text classification, sentiment analysis, and entity recognition. This makes them valuable in applications involving content analysis, social media monitoring, and customer sentiment analysis.
- **Language Generation:** GPT models have impressive text generation capabilities, enabling them to generate human-like responses, complete sentences, and even entire paragraphs. Use cases include chatbots, virtual assistants, content generation for written articles, automatic summarization, and creative writing assistance.
- **Customer Support and Interaction:** GPT models can be leveraged to enhance customer support services. They can provide automated responses and handle customer queries, offering instant assistance and reducing the need for manual intervention. GPT models enable personalized and conversational interactions, leading to improved customer experiences.
- **Content Recommendations:** GPT models can analyze user preferences, browsing behavior, and historical data to provide personalized content recommendations. This can be applied in areas such as news aggregation, content streaming platforms, e-commerce product recommendations, and personalized marketing campaigns.
- **Language Translation:** GPT models can aid in language translation tasks by generating accurate translations from one language to another. This functionality is particularly useful in multilingual applications, global communication platforms, and language learning tools.
- **Creative Writing and Storytelling:** GPT models can assist writers, content creators, and storytellers by offering suggestions, generating plotlines, or providing inspiration. They can also simulate characters or engage in collaborative writing exercises.
- **Research and Knowledge Discovery:** GPT models can help researchers in information retrieval, summarization, and data analysis tasks. They can assist in gathering relevant research papers, summarizing scientific articles, or answering complex research questions.

These are just a few examples of the use cases where OpenAI's GPT models can be applied. The versatility and capabilities of GPT models make them valuable in numerous domains, where natural language processing and generation are essential for effective communication and automation.

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

4.1.2. Use case Diagrams

Questions and Tasks:

- On the basis of the provided narrative description of use cases model a use case diagram.
- Feel free to further expand the provided description.

Additional guidance: UML Use Case Diagram Tutorial https://youtu.be/zid-MVo7M-E

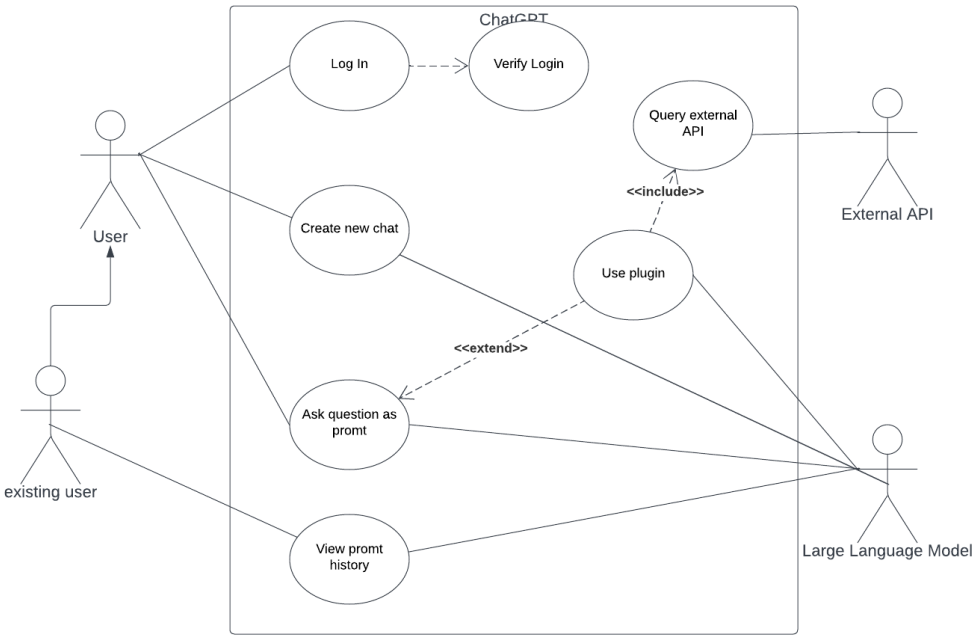

Figure 2 ChatGPT use case diagram

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

5. Technical view of the case

The Technical View considers technical details of the realization of the platform, including the technology on which it is based, or which will be applied in its construction, commercial or other ready-made components to be used as building elements, interoperability at the technical level, etc.

5.1. Platform structure

Following Ghazawneh and Henfridsson[2] definition and categorization for digital platforms, OpenAI's business model can be identified as a platform strategy and can be categorized as an innovation platform. Therefore, it should include the respective elements: platform, boundary resources, third-party applications, platform owner and Third-Party Developers.

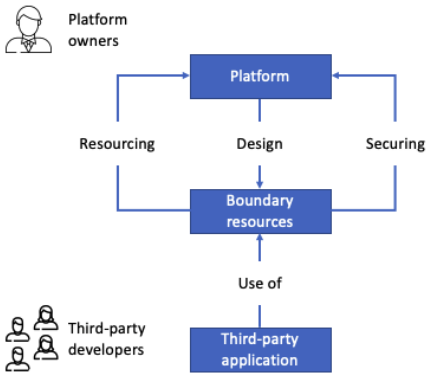

Figure 3 Innovation platform structure

Questions and Tasks:

- Instantiate the above diagram for OpenAI by identifying its structural components.
- Provide a description on each structural element of the diagram including references to them, their functionalities and examples where applicable.

- **Platform/Core:** OpenAI provides its large language model (LLM) through its ChatGPT or API as the core of its platform and as its key value proposition based on which it is expanding to become possibly one of the most impactful digital platforms.
- **Boundary Resources:** OpenAI provides a wide selection of resources to promote and support the expansion of the ChatGPT and API ecosystem. These consist of community forum, documentation, development resources, legal terms, and safety guidelines.
- **Third-party application:** Are created as plugins and expand ChatGPT's functionality by enabling the retrieval of real time information, retrieval of knowledge-base information, or assist application users.
- **Platform Owner:** OpenAI, focus on improving the core LLM, while also expanding its possible integrations with third-party plugins.
- **Third-Party Developers:** Could be developers from other applications and companies, who want to integrate the functionalities of ChatGPT into their product.

[2] A. Ghazawneh and O. Henfridsson, "Balancing platform control and external contribution in third-party development: the boundary resources model," Information Systems Journal, vol. 23, no. 2, pp. 173–192, 2013, doi: 10.1111/j.1365-2575.2012.00406.x.

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

5.2. Technical Services and Components

To realize a service like OpenAI it requires the integration of multiple different digital systems. The core value proposition and foundation of OpenAIs services is their large language model (LLM), the required data to train it. LLMs are trained using deep learning frameworks like TensorFlow or PyTorch. These frameworks provide the necessary tools and libraries for building and running language models. Training and running LLM's has significant computational costs and are resource intensive. This requires adequate server infrastructure to with sufficient CPU and memory capacity to handle the computational demands. GPUs or TPUs can significantly accelerate the training and inference processes.

In addition to the LLM, a selection of applications and infrastructure are necessary to serve the companies services.

To enable the ChatGPT service, a webserver is necessary to serve the users with a platform/website to interact with. This handles user registration, login, and provides the users with the chat interface to interact with the LLM based chatbot. This interaction should be possible through a dedicate mobile device application.

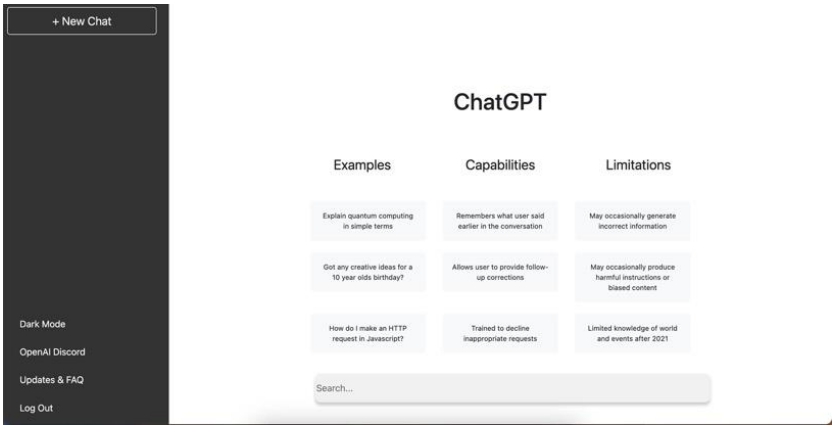

Figure 4. ChatGPT User Interface, Source: https://openai.com/

These services require user data such as registration and chat history to be saved persistently and therefore are integrated with dedicated databases.

An alternative way to make use of OpenAIs services such as ChatGPT or GPT-4 besides the above-mentioned user interface is through their dedicated API. The API opens the potential of ChatGPT to be easily integrated in applications and use cases of other companies. This makes the solution very interesting for companies to take advantage of this new technology.

The API accepts queries with a defined structure, which then are forwarded and evaluated by the respective LLM. The API allows the users to interact with the LLM in a more defined way, allowing also to pick the precise model depending on their needs and budget.

In addition to the functionalities provided to users through ChatGPT and the OpenAI API, OpenAI also provides the possibility for developers to expand the functionality of ChatGPT and further adapt it to the individual company's need. With the before mentioned services, users are able to obtain information from the existing knowledge of ChatGPT. The implementation of plugins allows to expand this knowledge, for example specific documentation of the company. Plugins are externally hosted

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

and provide an API which can be queried by ChatGPT for external companies' documentation[3], information or other functionalities.

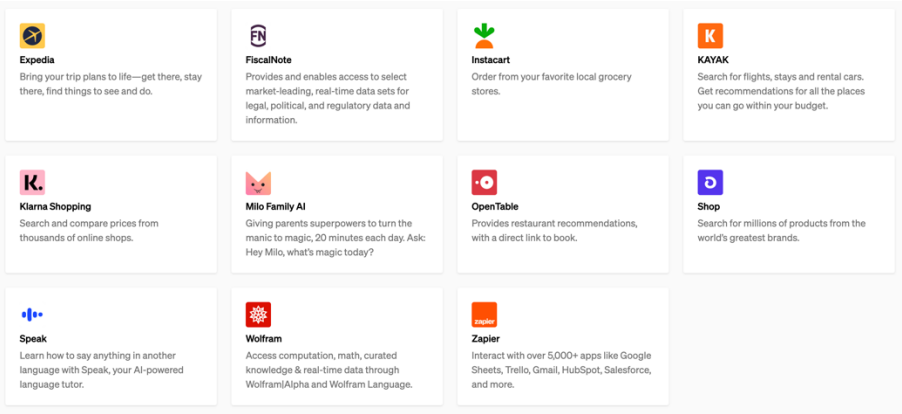

Figure 5. List of ChatGPT plugins, Source: https://openai.com/blog/chatgpt-plugins

5.3. Enterprise Architecture

Questions and Tasks:

- Build on the already modelled business layer.
- Use the ArchiMate modelling tool to model the application and technology layer. Model the most relevant applications, data object, interfaces, nodes, devices, … and their relations to each other
- The model should represent the mentioned services and functionalities OpenAI offers.

Based on the case-studies recollection of view, an ArchiMate model can be reconstructed to visualize the enterprise architecture.

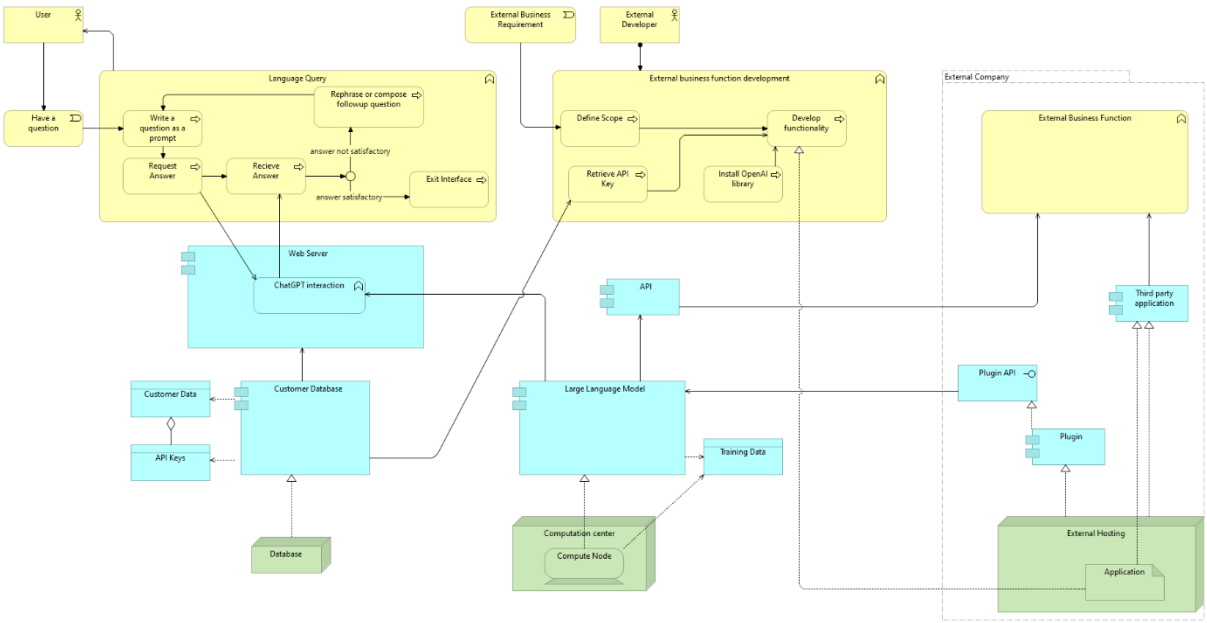

Figure 6 OpenAI - ArchiMate model

[3] Exemplary plugin for information retrieval: https://github.com/openai/chatgpt-retrieval-plugin#about

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

List of figures

Funded by the European Union
The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union

List of tables

Funded by the European Union

The action Erasmus+ Digital Platform Enterprise (project ID 2021-1-RO01-KA220-HED-000027576) is Co-funded by the Erasmus+ programme of the European Union