

Chapter 1 and 2 exercise

Exercise 1.1. It is said that government spending on IT is increasing as government departments take initiatives to improve customer service or have a wider reach of services. Find out what factors are responsible for the increase of IT spending by government agencies. Also list and explain the three biggest IT projects undertaken by the federal government in recent times?

Answer.

Governments across the world are indeed spending on IT more and more. The reasons behind them are as follows:

1. **Modernizing legacy systems:** No citizen wants to deal with old websites when they file their taxes, or apply for a government scheme. To make the user experience more satisfying, it makes sense to update the existing software services with modern alternatives.
2. **Enhanced Security:** As more and more data is being digitized, there comes a legitimate risk of losing that data, or worse yet, getting that data hacked or stolen. This would result in a bureaucratic nightmare that no government wants to face. Cybersecurity thus becomes one of the primary factors for governments to spend resources in keeping the infrastructure robust and secure.
3. **Artificial Intelligence:** With the advent of AI, every modern corporate company wants to build an LLM wrapper to create a bot to provide basic customer service. In the future as well, government expenditure to develop AIs will keep on increasing.

Some big examples of these are as follows:

1. **Universal Broadband Fund:** “High-speed Internet is no longer considered just a luxury. That’s why our government made a historic commitment to connect 98% of Canadians to high-speed Internet by 2026, and 100% by 2030. All communities, large and small, need a reliable connection to grow their potential in this digital world.” – The Honorable Gudie Hutchings, Minister of Rural Economic Development and Minister responsible for the Atlantic Canada Opportunities Agency [1].
The Canadian government has pledged to connect all Canadians with high-speed internet by 2030. To achieve this goal, a total investment of \$3.225 billion has been made to create the Universal Broadband Fund.
2. **Benefits Renewal System:** The benefits system renewal project was initiated to address aging infrastructure issues with the benefits system and improve the CRA's capacity in the areas of program growth and service delivery. The renewed system, which was implemented in February 2021 has strengthened the CRA's (Canada Revenue Agency) benefits delivery by modernizing processes and incorporating more efficient technologies to ensure the uninterrupted delivery of benefit payments and services. [2]
3. **Sovereign AI Compute Strategy:** In December 2024, Canada announced the Sovereign AI Compute Strategy, committing up to \$700 million to enhance domestic AI computing capacity. This initiative aims to leverage Canada's advantages in energy, land, and climate to support the AI ecosystem.

Exercise 2.2. Go to some open-source projects and find out about their project charters. Find out why they have those project charters.

Answer.

Project charters contain the mission and/or objective of the project along with the approval of senior management to begin the project. I looked at several open source projects to understand why project charters are important. These are some of the few reasons I found:

1. **Clarity of Purpose:** The charter for Kubernetes helps to clearly define the goals, objectives, and responsibilities of the various groups within the Kubernetes community, such as Special Interest Groups (SIGs), Working Groups (WGs), and Committees. Without it, there could be confusion or overlap about what each group is responsible for, leading to inefficiencies. [4]
2. **Specifying Decision-Making Authority:** The charter for Ubuntu clearly defines the processes that facilitate participation in decision-making regarding the Ubuntu community and distribution, clarifying who is responsible for specific decisions and how others can contribute. [5]
3. **Project Governance:** Every Apache Software foundation project is overseen by a Project Management Committee, which is responsible for making high-level decisions regarding the project's direction, governance, and strategy. The charter defines the roles of the PMC chair, members, and committers within each project, outlining how they contribute to the project's success and how they're selected. This ensures that project oversight is distributed among key roles and that each contributor knows where they fit in the governance structure. [6]

References:

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4. Kubernetes governance file
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