# Exercises
# Software Project Management

**Student Name**: Snehil Sharma
**Course**: SOEN-6841 (Software Project Management)
**Exercise URL**: https://github.com/SnehilSharma0308/SOEN-6841-SPM
**Week1**: Jan 18 – Jan 24

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?

## Factors responsible for increase of IT spending by Government:

1. **Infrastructure requirements:** As the data of citizens of the country is increasing day by day which might include the data of their passports, financial documents, banking statements, Social Insurance Numbers; government needs to purchase more hardware to store, process and retrieve the data as and when required. So, to store this data they need to buy physical machines, or they need to move their systems to cloud so that they can demand the required resources as and when required but, in such cases, government needs to spend more on data security and privacy.

2. **Software Upgrades:** To manage this huge amount of data government needs to upgrade and create new software systems which can handle this large amount of data and process it efficiently. To achieve this, they need to hire a greater number of developers who can develop such software systems and make sure that such huge amount data can be handled. Moreover, manpower is also required to maintain the systems that have been developed which also requires significant efforts so that these systems can serve the government in the longer run.

3. **Cyber Security requirements:** With the increase in the attempts of different nations to target a nation by attacking their data and to decrease cyber-crimes happening in the country government spend a significant amount to make a cyber security cell which can track and prevent the citizens and the country from the cyber-attacks. Government also spends a significant amount in training their employees about cyber security and how to prevent themselves from the frauds. At times government organize nation-wide events and hackathons for the awareness of citizens.

4. **Improve Customer Service:** To promote the digitalization concepts and to stop the issues like black money, government promotes to pay using online banking or e-transfers and they spend money to make sure that such systems are always available, reliable, and scalable for the larger audience. So financial institutions are spending more budget to improve the interface and user experience of their websites and mobile applications to make it more convenient which will increase the interest of citizens to adapt to digital modes of payment.

5. **Data Analysis and predictions:** Government spend ample amount in creating the software systems which can help them with the analysis of data and make predictions. For instance, the **GDP (Gross Domestic Product)** of the country in the last financial years was a given amount and it increased by what percentage every quarter in the year. What government can expect in the upcoming year, is the country going into recession or are there any other threats which might appear during the upcoming time like the **decrease of birth rate** in the country. So, data analysis and predictions are one the key aspects of IT spending by the government.

## IT projects undertaken by Government in recent times:

1. **National Cyber Security Strategy:** Federal government is working on the project national cyber security strategy which will aim to increase the security of the citizens in terms of cyber-attacks for the well being of country's economy. The department of public safety and emergency preparedness will conduct cyber security assessments and prepare plans for the risk management which will ensure the security of the systems. Moreover, government will establish national cybercrime coordination units for the citizens to coordinate with the police in case of any cyber threat.

2. **Passport Programme Modernization Initiative:** Federal government is working on various enhancements under PPMI (Passport Programme Modernization Initiative) to increase the domestic accessibility to the services offered by IRCC (Immigration, Refugees and Citizenship Canada). It is focused on making a transition to an electronic system for issuing the passports to the citizens of the country and makes decisions using the new rules-based system in which the overall time required for the issuance of passport will be reduced with less overhead for the countrymen.

3. **e-Procurement Solution (EPS):** Federal government has launched the electronic-procurement solution to reduce the administrative overhead, to have seamless interaction with the suppliers of the goods and provide better value for money for the citizens. It also reduces the burden on the suppliers in participating in the bidding process and helps to improve their productivity and efficiency. Moreover,

it is linked with government financial systems which increase effectiveness of the entire system. It helps the sellers to get onboarded easily and train them for the transition to the system.

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

## Charters of open-source projects:

1. **CHAOSS (Community Health Analytics Open-Source Software)**: CHAOSS is an open-source project which is working on the health analysis of the community and their charter comprises of following goals and missions:

   a. *"Produce integrated, open-source software for analyzing software development, and definition of standards and models used in that software in specific use cases;"*
   b. *"Establish implementation-agnostic metrics for measuring community activity, contributions, and health; and"*
   c. *"Optionally produce standardized metric exchange formats, detailed use cases, models, or recommendations to analyze specific issues in the industry/OSS world."*

   **Reasons of the charter**: Their focus is to produce various open-source software for the analysis of software development by following a structured and well-defined way of development by making sure the importance of community health and the different metrics involved in this process helps the stakeholders to make better business decisions.

2. **Cboard**: Cboard is an open-source project which helps people with disabilities by providing them voice and their project charter is:

   *"Be a global one-stop solution for technological solutions for people with disabilities. With innovation, affordability and empathy as key motivators and guideline."*

   **Reasons of the charter:** Their focus is to improve the lifestyle of people with disabilities by returning the voice to all those who have lost it by using the technology as a medium of help.

3. **Talk2U**: It is an open-source project which is focused to improve the social, emotional, and mental well-being of the youngsters to be held back. Their project charter is:

   *"We strive for safer, healthier and happier communities led by emotional intelligent young change makers."*

   **Reasons of the charter:** Their focus is to empower young people to build their socio-economic skills so they can challenge their belief-system, face obstacles with ease and make change happen for their mental wellbeing, so they start living the lives they want and deserve.

4. **Fedora Project**: It is an open-source project which helps the community to develop different solutions for the customers and their project charter is:

   *"The Fedora Project envisions a world where everyone benefits from free and open-source software built by inclusive, welcoming, and open-minded communities."*

   **Reasons of the charter:** Their focus is to create an innovative platform for hardware, clouds and containers that enables the software developers and community members to build tailored solutions for their users which goes along with their project charter where everyone benefits from free and open-source software.

5. **OTTAA Project:** It is an open-source project which is also helping people with disabilities and making the affordability as a priority. Their project charter is:

   *"Be a global one-stop solution for technological solutions for people with disabilities. With innovation, affordability and empathy as key motivators and guidelines."*

   **Reasons of the charter:** Their focus is to make affordable products for the people suffering from hearing disabilities and make them feel motivated that their disabilities can be taken care of using innovation and affection.

References:

1. https://www.splunk.com/en_us/blog/learn/it-tech-spending.html
2. https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/ntnl-cbr-scrt-strtg-2019/index-en.aspx
3. https://canadagazette.gc.ca/rp-pr/p2/2019/2019-05-29/html/si-tr27-eng.html
4. https://pdweek.ca/wp-content/uploads/sites/2/2018/09/THU_Chopin_830_-Turbide_e-Procurement-Solution_EN.pdf
5. https://large-government-of-canada-it-projects.github.io/2022/#uid=
6. https://chaoss.community/charter/
7. https://www.cboard.io/about/
8. https://talk2u.co/
9. https://docs.fedoraproject.org/en-US/project/#_our_vision
10. https://ottaa-project.github.io/
11. https://unicef.github.io/inventory/dpg-indicators/3/charters/