1. The data showcases the details of a total of **1790** capital projects undertaken between 1998 and 2008. Each of the projects was assigned an amount of approved funding for construction which is given as “**Construction Registered Amount**” in the data and the total amount spent on projects as “**Total Budget**”. These two key variable/columns helped to understand the department’s accuracy cost estimation which is carried out using the [**ABS function**](https://www.exceldemy.com/excel-abs-function/) in excel to calculate the percentage of the error and subtract the error from **1**, the formula forAccuracy **Percentage = 1 – ABS (Construction Registered Amount / Total Budget – 1).** This analysis tells us that only **197 (approx.)** capital projects out of **1790** had an accurate estimation percentage (considering accuracy in cost estimation to be **greater than 99%**) of approved funding for construction which constitutes only **11.01% (approx.)** of the total capital projects under DPR. Moreover, the analysis estimated that **0.17% (approx.)** of the projects i.e., **3** out of **1790** projects had extreme outliers, the estimation shows an error that occurs in the accuracy percentage as the construction registered amount was much higher than the actual total spending on the project which results in negative or zero accuracy percentage. Considering the previous analysis, we found that the department had **88.82% (approx.)** inaccurate cost estimation i.e., **1593** of the total projects (considering accuracy in cost estimation to **be lesser than 99%**). The inaccurate billing/funds and the wrong estimation/predictions of funds before the official beginning of paperwork i.e. Title Date and Approved funding procedures could be one of the major reasons for the planning fallacy of the projects.
2. The data investigation reveals another major planning fallacy specifically highlighting the ability to meet set deadlines by the DPR. For this analysis, we can count the number of distinct projects which had matching date values in the two variables/columns of “**Scheduled Completion Date**” i.e., target completion date, and “**Final Inspection**” i.e., actual completion date in the excel. The analysis of these two columns tells us that only **689** capital projects out of **1790** met their set deadlines, which means **approximately** **38%** of projects were completed on the target completion date and the rest **62%** failed to achieve their goal on completion before the target. Moreover, it’s not viable to check the exact target date of completion because several reasons come into consideration for the delay/fallacy i.e. natural disaster, virus pandemic, or change in govt. policies etc., to nullify these considerations we check the actual completion date within the same year, and as a result, almost **76%** of the projects were able to complete the capital project within the targeted project year i.e. a total of **1368** projects out of **1790**. The failed monitoring/evaluation of new processes could be the major devastating reason for this planning fallacy, which caused wrongly predicted completion dates.
3. For any successful project-based service in this case New York City DPR which is responsible for maintaining more than 1,700 City Parks and Recreational Facilities, an agency needs to have a well-defined process. The DPR Agency must change and update the process by analyzing viable fallacies beforehand instead of cognitive biases to remain as efficient as possible. Our analysis withdraws two major recommendations for DPR as areas of improvement to project planning and control.

* **Assessing the Process:** DPR can analyze every step and identify the risk in the process, how approximate amount should be approved for the construction? Is there a gap in the previous process? Where can the delays occur? Etc., the actual cause has several layers to be filled before getting a conclusion. This can help the agency to register accurate construction amounts.
* **Create a new Process:** It is a part of the process improvement plan which should be followed by DPR and must be on regular basis, continuous monitoring and updating of the process ensure accurate and smooth predictions which can easily solve the fallacy of delayed project completions.