**Capital Budgeting & Investment Appraisal**

**Excel / Google Sheets**

You are a financial analyst at Eco Sky Builders, a fast-growing modular construction company.

The leadership team is considering investing in one of two major projects:

* Project A: Energy-Positive Modular School Buildings
* Project B: Recycled Steel Prefab Commercial Units

You have been asked to prepare a full capital budgeting analysis, to be presented to the board as Excel/Google Sheets outputs including tables and graphs.

**Project Data (for Excel input table)**

| **Item** | **Project A** | **Project B** |
| --- | --- | --- |
| Initial Investment | £900,000 | £850,000 |
| Discount Rate | 10% | 10% |
| Year 1 Cash Flow | £220,000 | £200,000 |
| Year 2 Cash Flow | £240,000 | £280,000 |
| Year 3 Cash Flow | £210,000 | £250,000 |
| Year 4 Cash Flow | £300,000 | £220,000 |
| Year 5 Cash Flow | £330,000 | £270,000 |

**Tasks (Excel Spreadsheet Outputs Required)**

**Table: Cash Flows & Present Value Calculation**

| **Year** | **Cash Flow** | **Discount Factor (10%)** | **Present Value (PV)** |
| --- | --- | --- | --- |
| **1** |  |  |  |
| **2** |  |  |  |
| **3** |  |  |  |
| **4** |  |  |  |
| **5** |  |  |  |
| **Total** |  |  |  |

**(Do this table for both Project A and Project B)**

**NPV Calculation**

* Use built-in NPV function in Excel or Sheets
* Or manually sum the PV column and subtract Initial Investment

**IRR Calculation**

* Use built-in IRR function in Excel or Sheets

**Payback Period Table**

| **Year** | **Cumulative Cash Flow** | **Recovered? (Yes/No)** |
| --- | --- | --- |
| **1** |  |  |
| **2** |  |  |
| **3** |  |  |
| **4** |  |  |
| **5** |  |  |

**Determine the year and partial year in which the project pays back its initial investment.**

**NRV Calculation**

**Graphs (Excel or Google Sheets Chart Suggestions)**

Cumulative Cash Flow vs Time (Line Graph) — shows payback visually

**NPV Profile** (Optional advanced — NPV vs Discount Rate Line Chart)

**Bar Chart of Total PV by Year** — compare Project A vs Project B visually

**Strategic Discussion (Text Output / Discussion Slide)**

* Which project offers better NPV and IRR?
* Which project pays back sooner?
* How does risk of cash flow variability compare between projects?
* If environmental marketing value is considered, does this affect your recommendation?
* Final recommendation — Project A, Project B, or neither? Why?

**Deliverables**

**Excel / Google Sheets file with:**

* Cash Flow & PV tables
* NPV & IRR calculations
* Payback period analysis
* NRV calculation
* At least one graph