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Business case

Financial Analysis and Funding

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Objective of the financial analysis

- To provide the proof of the financial viability and profitability of a project



Content of a financial analysis

- **The financial analysis section of a business case shows the expected cash flow implications of the project proposal, in terms of both revenues and expenditures**
- **It includes assumptions, methods and rationale for the estimation of revenues and expenditure**



Expenditures ...

- **Lifecycle costs are to be considered**



Expenditures ...

- **Capital costs:**
 - **Land**
 - **Facilities**
 - **Equipment**
 - **Software**

- **Other non-recurring costs:**
 - **Project staff, consultants and contractors including studies, procurement, travel, documentation, etc.**
 - **Training costs**



Expenditures

- **Recurring costs:**
 - **Operation**
 - **Maintenance**
 - **Lease and rental costs**



Revenues

- For air navigation service providers, revenues correspond to the user charges collected from airspace users
- For airspace users, the cost savings resulting from flight efficiency are considered as a cash inflow (revenue)



Methods & techniques

- **Net Present Value (NPV)**
- **Benefit-to-cost ratio (profitability index)**
- **Pay-back period**
- **Accounting rate of return (ARR)**
- **Internal rate of return (IRR)**



Net Present Value (NPV)

Net Present Value = Difference in the present value of the cash inflows and outflows associated with a project



Benefit-to-cost ratio (profitability index)

Benefit-to-cost ratio = Ratio of the present value of the cash inflows to the present value of the cash outflows associated with a project



Pay-back period

The time required to recover the original investment

Pay-back period = Original investment / Annual cash inflow



Accounting rate of return (ARR)

The accounting rate of return measures the return of a project in terms of income, as opposed to using a project cash flow

Accounting rate of return =
Average income / Investment



Internal rate of return (IRR)

- The discount rate which equates the present value of cash inflows to the present value of cash outflows



Analysis process ...

- **Main assumptions and parameters**
 - **Project time horizon**
 - **Analysis base year**
 - **Traffic forecasts**
 - **Cost of capital**
 - **Efficiency rates**
 - **Average a/c operating cost**
 - **Cost-recovery period**



Analysis process ...

- **Air navigation service provider**
 - **Cash flow streams of expenditures**
 - **Cash flow streams of revenues based on the expected user charges**
 - **Net present value**
 - **Benefit to cost ratio**
 - **Pay-back period**



Analysis process

➤ Airspace users

- Cash flow streams of expenditures
- Cash flow of streams of benefits based on the expected flight efficiency
- Net present value
- Benefit to cost ratio
- Pay-back period



Sensitivity analysis

- To examine how variations in the parameters of the analysis affect results
- Uses the extreme values (maximum and minimum) of the range of each parameter separately



Funding



Funding requirements

- **The cash flow analysis provides an excellent forecast of when funding is needed**
- **Typically, cash disbursements are high at the beginning of the project life cycle and diminish gradually**



Sources of funds

- **Government funds**
- **Accumulated profits**
- **Bonds**
- **Loans**
 - **Public (World Bank, UNDP, etc.)**
 - **Private (private banks & financial institutions)**
- **Equity capital (institutions, individuals, etc.)**



Outcome of the analysis

- **Statement of financing needed**
 - **Amount of funds**
 - **Timing**
- **Sources and application of funds**

