



# Capital Budgeting Decisions

How Companies Evaluate Major Investment Projects

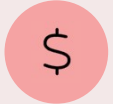
# Major Insight

A smart approach to capital budgeting helps companies invest billions with confidence. It focuses on solid financial checks, aligning with long term goals, managing risks and using tools like AI and sustainability to stay ahead.



# Definition and Strategic Importance

Capital budgeting is the systematic process of planning and evaluating a company's long term investments. It underpins strategic decision making by ensuring investments:



Create Shareholder Value

(NPV>0)



Meet Hurdle Rates

(IRR>WACC)



Fit Corporate Strategy

Balancing growth, risk and sustainability.

# Core Evaluation Techniques

Net Present Value (NPV)	Direct dollar measure of value creation; accounts for time value of money	Highly sensitive to discount rate; scale bias (favors larger projects)	Large, multi year projects with uneven cash flows	Large, multi year projects with uneven cash flows
Internal Rate of Return (IRR)	Rate such that NPV=0	Intuitive "rate of return"; comparable to cost of capital	Multiple IRRs possible; misleading for non-conventional cash flows; scale issues	Evaluating projects of similar size
Payback Period	Years to recoup via undiscounted	Simple; highlights liquidity and early risk	Ignores time value of money; disregards cash flows after payback	Preliminary screens; small or short-lived investments
Profitability Index (PI)	Adjusts for capital constraints; normalizes for project size	Depends on accurate cash-flow forecasting and discounting	Capital-ration scenarios; portfolio selection	Capital-ration scenarios; portfolio selection

# End to End Budgeting Process

01

## Project Identification

Ask teams to share ideas that match the company's big goals.

02

## Cash-Flow Estimation

Estimate how much extra money might come in, go out, and be tied up in day to day operations

03

## Risk Analysis

Run different 'what-if' tests to see how things could change in best, worst and random situations.

04

## Financial Appraisal

Check if the project's worth it through different ways and think through smart options for what comes next.

05

## Strategic Review

Assess alignment with market positioning, ESG, and tech roadmaps.

06

## Decision-Making & Approval

Present business case to leadership; incorporate qualitative factors.

07

## Implementation & Monitoring

Track actual vs. forecasted metrics; perform post-completion audits.

# Case Study: Tesla's Shanghai Gigafactory

## Investment

Total funding includes US\$521M in loans, US\$82M in grants and CN¥14B for land use.

## Capacity

750,000 EVs/year by July 2023, ramping to 950,000 by 2024.

## Appraisal

- Discount rate aligned to WACC (10–12%).
- NPV driven by high volume, local incentives, tariff avoidance.
- IRR estimated above 20%.
- Sensitivity to EUR/USD exchange and input costs.

**Outcome:** Full production in under 10 months at 65% lower capex per unit vs. U.S. facilities, demonstrating strategic agility.







# Case Study: Amazon's 2025 CapEx Plan

## Total CapEx

US\$100 billion in 2025 (vs. US\$83 billion in 2024).

## Allocation

- 70% AWS infrastructure (data centers, AI chips).
- 20% logistics network expansion (80 new warehouses).
- 10% corporate, retail, and Project Kuiper satellites.

## Evaluation

- NPV & IRR models incorporate AI and e-commerce growth forecasts.
- Real options value early deployment flexibility.
- Capital rationing via prioritizing AWS R&D.

**Result:** AWS operating margin at 39.5% in Q1; logistics footprint enables sub one day delivery aspirations.

# Strategic & Financial Considerations

## Cost of Capital

Projects must exceed a WACC threshold (8–12% for tech/logistics).

## Market & Technological Risks

Scenario analysis for AI adoption, supply chain disruptions, geo political dynamics.

## Opportunity Costs

Foregone investments in alternative projects or M&A targets.

## ESG & Sustainability

Integration of carbon pricing and social impact metrics into forecasts.



# Emerging Trends



## AI & ML Analytics

Let tech help you plan ahead, explore 'what-ifs' fast and pick the best mix of options to invest in.



## Sustainability Focus

Figure out how ESG efforts impact profits and make sure they're part of your decision making math.



## Digital CapEx Platforms

Use cloud tools to build and track business cases from start to finish all in one place.



## Generative AI for Business Cases

Automated drafting of investment proposals and consistency checks.

# Conclusion



A solid capital budgeting approach helps companies confidently assess billion-dollar projects. It blends smart financial analysis, risk checks, ESG efforts and AI tools. When firms link these investments with long term goals and future-ready strategies, they stay competitive and grow value for their shareholders.

