



Slide # 4

CSI 311: System Analysis and Design

Feasibility Study

Feasibility Study

Economical, Technical and Behavioral study

Feasibility Study

A **Feasibility Study** is an Assessment of the Practicality/**Sustainability** of any proposed Project or System.

Types of Feasibility:

a) **Economical/ Financial**

b) **Technical / Technological**

c) **Behavioral**

Others: HR/ Legal / Schedule etc. (optional)

Economical /Financial Feasibility

- Known as cost benefit analysis
- To determine costs/**Expenses** VS. benefits/**Revenue**
- Determine the **Profit/Loss** of the proposal
(NPV, Cash-flow methods..)

Technical Feasibility:

- Checks whether the **Existing Technology** supports the Proposed system or not
- Major areas of consideration: existing Technology, Hardware etc.

Feasibility Study

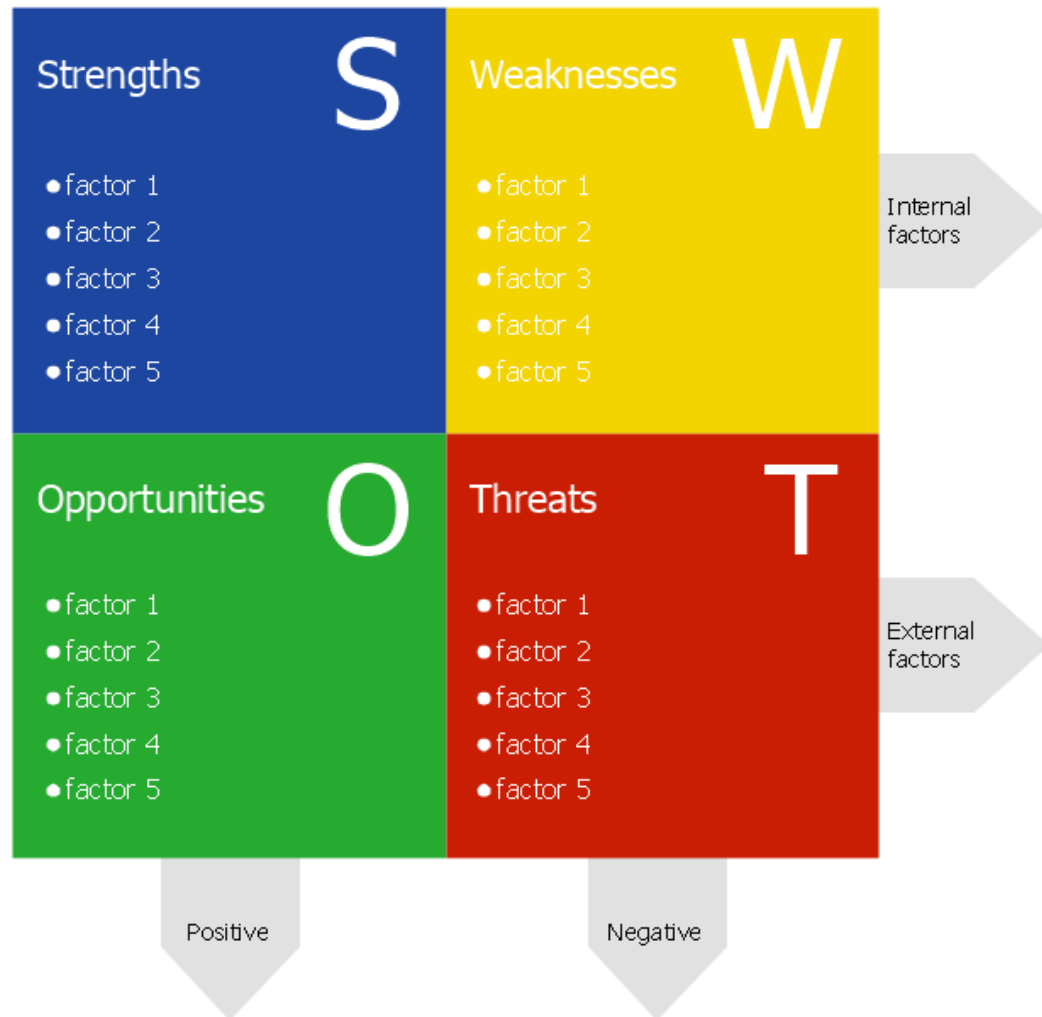
Behavioral Feasibility:

- Estimating the **Reaction/Acceptance** on **Proposed software/system** from **User** perspective.

SWOT Analysis:

- **S**trength
- **W**eakness
- **O**pportunity
- **T**hreat

SWOT Analysis:



SWOT Analysis:



Case Study





STRENGTHS:

- We have sufficient financial resources to participate in such project.
- Core competence in the key areas
- Better advertising campaigns.
- Acknowledged market leader



WEAKNESSES:

- Don't paying much attention to marketing
- Website purely informational and static
- Don't have a marketing plan
- Don't have much of a marketing budget



OPPORTUNITIES:

- FEW COMPANIES
- EMERGING NEED OF THE PRODUCT
- SUFFICIENT WORK-FORCE
- TAKE ADVANTAGE OF INCREASING POPULARITY OF BOOKING SYSTEM



THREATS:

- CUSTOMER'S DIVERSION
- COST OF TECHNOLOGY
- UN-LOYAL PARTNER
- OTHER BOOKING BUSINESS IN TOWN, COMPETITION IS RISING

Financial Feasibility

Profit / Loss Calculation:

- **Cash Flow Analysis**
- **Net Present Value Analysis**
- **Break Even point**

Types of Cost:

- **Tangible or Intangible costs**
- **Fixed or Variable costs**

* **Tangible** costs are the obvious costs we need to pay, it is measurable

* **Intangible** costs: May not be measured clearly. Good will, loss during old employee leave etc.

***Total Cost/Expenses:** HR Cost + H/W Cost + S/W cost (optional) + Office Overhead + Training + Transportation-Communication + Depreciation

Suppose you are investing \$5000, \$4000 and \$2000 at present, after 1 year and after 2 years respectively. In return after 2, 5 and 6 years you will get **Revenue** \$2000, \$5000 and \$8000 respectively.

Find out **Profit / Loss** through

- i. **Cash Flow Method**
- ii. **Net Present Value (NPV) Method**

Consider bank interest **10%**

Cash Flow Analysis

	Year 0 (present)	Year 1	Year 2	Year 3	Year 4	Year 5
Expenses (NPV)	5000		4000	3000	2000	
Revenue (NPV)			2000	2500	5000	7000
Cash Flow = Rev. – Exp.	(5000)		(2000)	(500)	3000	7000
Accumulating Cash Flow	(5000)	(5000)	(7000)	(7500)	(4500)	2500

* amounts are in \$

So, It is profitable

NPV (exp.) = 10288

NPV (rev.) = 9271

$$\text{Net Present Value} = \frac{\text{Future Amount}}{(1 + \text{rate of interest})^{\text{no. of years}}}$$

PV Calculation Steps

	Year 1	Year 2	Year 3	Year 4	Year 5
Future Cash Flow	5,000	6,000	8,000	7,000	4,000
$\frac{\text{Cash Flow}}{(1 + \text{Interest Rate})^{\text{Time period}}}$	$\frac{5,000}{(1 + 0.08)}$	$\frac{6,000}{(1 + 0.08)^2}$	$\frac{8,000}{(1 + 0.08)^3}$	$\frac{7,000}{(1 + 0.08)^4}$	$\frac{4,000}{(1 + 0.08)^5}$
	$\frac{5,000}{1.08}$	$\frac{5,000}{1.17}$	$\frac{5,000}{1.26}$	$\frac{5,000}{1.36}$	$\frac{5,000}{1.47}$
Present Value of future cash flow	4,630	5,144	6,351	5,145	2,722

Sum of Present Value 23,992

Investment Value 20,000

Profit/Loss: 23,992 – 20,000 = 3,992

Others Feasibility

- **Technical Feasibility**
- **Behavioral Feasibility**

Feasibility Report

<https://mymanagementguide.com/feasibility-study-template/>

6 Key Sections of Feasibility Study

1. Executive Summary
2. Introduction
3. Justification
4. Solution
5. Alternatives
6. Cost-Benefit Analysis

5 Factors that Determine Project Viability

- Economic Feasibility
- Technical Feasibility
- Operational Feasibility
- Schedule Feasibility
- Contractual Feasibility

Feasibility Report

<https://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/ti-it/etivcarftp-idsfvfrmd-eng.html>

Instructions

Authority Signatures

1. Executive Summary

2. Problem Statement

3. Project Business Requirement

4. Assessment of Options

5. Risk Assessment of Viable Options

6. Recommended Options for Further Analysis

List of Appendices

Appendix 1—References

Appendix 2—Glossary