



PERANCANGAN SISTEM INFORMASI

Session 2 Project Initiation

Based on System Analysis & Design 2nd Edition

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Objectives

- Understand the importance of linking the information system to business needs.
- Be able to create a system request.
- Understand how to assess technical, economic, and organizational feasibility.
- Be able to perform a feasibility analysis.
- Understand how projects are selected in some organizations.



Key Concepts

- An opportunity to create business value from using information technology initiates a project.
- Feasibility analysis helps determine whether or not to proceed with the IS project.
- Projects are selected based on business needs and project risks.
- The project sponsor is a key person who identifies business value to be gained from using information technology.
- The approval committee reviews system requests from groups throughout the organization and selects projects for the benefit of the business.



IDENTIFYING PROJECTS **WITH BUSINESS VALUE**



How Do Projects Begin?

- Business needs should drive projects.
- Project sponsor recognizes business need for new system and desires to see it implemented.
- Business needs determine the system's functionality (what it will do).
- The project's business value should be clear.



System Request

- A document describing business reasons for project and system's expected value.
- Lists project's key elements
 - Project sponsor
 - Business need
 - Business requirements
 - Business value
 - Special issues or constraints



System Request Examples

- **Project sponsor** – VP of Marketing
- **Business need** – Reach new customers and improve service to existing customers
- **Business requirements** – Provide web-based shopping capability
- **Business value** - \$750,000 in new customer sales; \$1.8M in existing customer sales
- **Special issues or constraints** – System must be operational by holiday shopping season



Preliminary Project Acceptance

- System request is reviewed by approval committee
- Based on information provided, project merits are assessed.
- Worthy projects are accepted and undergo additional investigation – the feasibility analysis.



Your Turn

- If you were building a web-based system for course registration,
 - What is the business need?
 - What would be the business requirements?
 - What would be the business value (tangible and intangible)?
 - What special issues or constraints would you foresee?



FEASIBILITY ANALYSIS



Feasibility Analysis

- Detailed business case for the project
 - Technical feasibility
 - Economic feasibility
 - Organizational feasibility
- Compiled into a feasibility study
- Feasibility is reassessed throughout the project



Technical Feasibility: *Can We Build It?*

- Users' and analysts' familiarity with the business application area
- Familiarity with technology
 - Have we used it before? How new is it?
- Project size
 - Number of people, time, and features
- Compatibility with existing systems



Economic Feasibility: *Should We Build It?*

- Identify costs and benefits
- Assign values to costs and benefits
- Determine cash flow
- Assess financial viability
 - Net present value
 - Return on investment
 - Break even point



Identify Costs and Benefits

	Costs	Benefits
Tangible	* * *	* * *
Intangible	* * *	* * *



Assign Cost and Benefit Values

- Difficult, but essential to estimate
- Work with people who are most familiar with the area to develop estimates
- Intangibles should also be quantified
- If intangibles cannot be quantified, list and include as part of supporting material



Determine Cash Flow

Microsoft Excel

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A1 =

CostBenefitAnalysis.xls

	A	B	C	D	E	F	G
1		Year 1	Year 2	Year 3	Year 4	Year 5	Total
2							
3	Costs						
4	Development	\$\$					\$\$\$\$
5	Operational	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$\$\$
6	Total Costs	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
7							
8	Benefits						
9	Tangible	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$\$\$
10	Total Benefits	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
11							
12	Costs - Benefits	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
13							
14							

Sheet1 Sheet2 Sheet3

Ready NUM



Assess Financial Viability – *Net Present Value*

■ **NPV** = $\sum PV(\text{future cash inflows}) - \sum PV(\text{future cash outflows})$

■ **PV** = Cash flow amount
 $(1 + \text{interest rate})^n$, where

- interest rate = required return
- n = number of years in future



Determine NPV

Microsoft Excel

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A1 =

CostBenefitAnalysis.xls

	A	B	C	D	E	F	G
1		Year 1	Year 2	Year 3	Year 4	Year 5	Total
2							
3	Costs						
4	Development	\$\$					\$\$\$\$
5	Operational	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$\$\$
6	Total Costs	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
7	PV of Costs	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
8							
9	Benefits						
10	Tangible	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$\$\$
11	Total Benefits	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
12	PV of Benefits	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
13							
14	Costs - Benefits	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
15							
16	NPV						\$\$\$\$
17							

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Assess Financial Viability – *Return on Investment*

Microsoft Excel

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A1 =

CostBenefitAnalysis.xls

	A	B	C	D	E	F	G
1		Year 1	Year 2	Year 3	Year 4	Year 5	Total
2							
3	Costs						
4	Development	\$\$					\$\$\$\$
5	Operational	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$\$\$
6	Total Costs	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
7	PV of Costs	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
8							
9	Benefits						
10	Tangible	\$\$	\$\$	\$\$	\$\$	\$\$	\$\$\$\$
11	Total Benefits	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
12	PV of Benefits	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
13							
14	Costs - Benefits	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$	\$\$\$\$
15							
16	NPV						\$\$\$\$

Sheet1 Sheet2 Sheet3

Ready NUM



Assess Financial Viability – *Break Even Point*

- How long before the project's returns match the amount invested
- The longer it takes to break even, the higher the project's risk.



Organizational Feasibility

If we build it, will they come?

- Strategic alignment
 - How well do the project goals align with business objectives?
- Stakeholder analysis
 - Project champion (s)
 - Organizational management
 - System users



PROJECT SELECTION



Project Selection Issues

- Approval committee works from the system request and the feasibility study
 - **Project portfolio** – how does the project fit within the entire portfolio of projects?
 - **Trade-offs** must be made to select projects that will form a balanced project portfolio
 - **Viable projects** may be rejected or deferred because of project portfolio issues.



Summary

- **Project initiation involves creating and assessing goals and expectations for a new system**
- **Identifying the business value of the new project is a key to success**
- **Feasibility study is concerned with insuring that technical, economic, and organizational benefits outweigh costs and risks**
- **Project selection involves viewing the project within the context of the entire project portfolio, and selecting those projects that contribute to balance in the portfolio**

