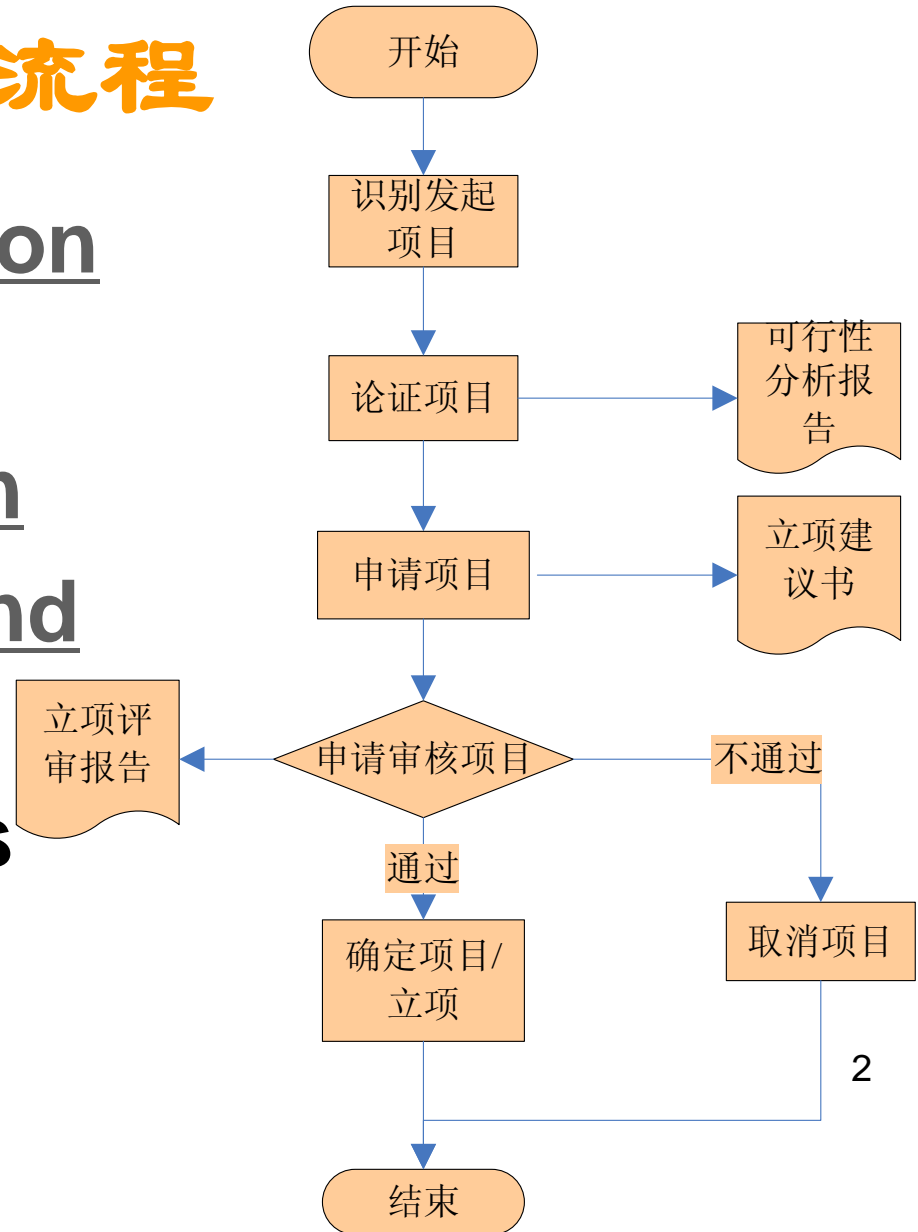# Chapter 2:

software project establishment

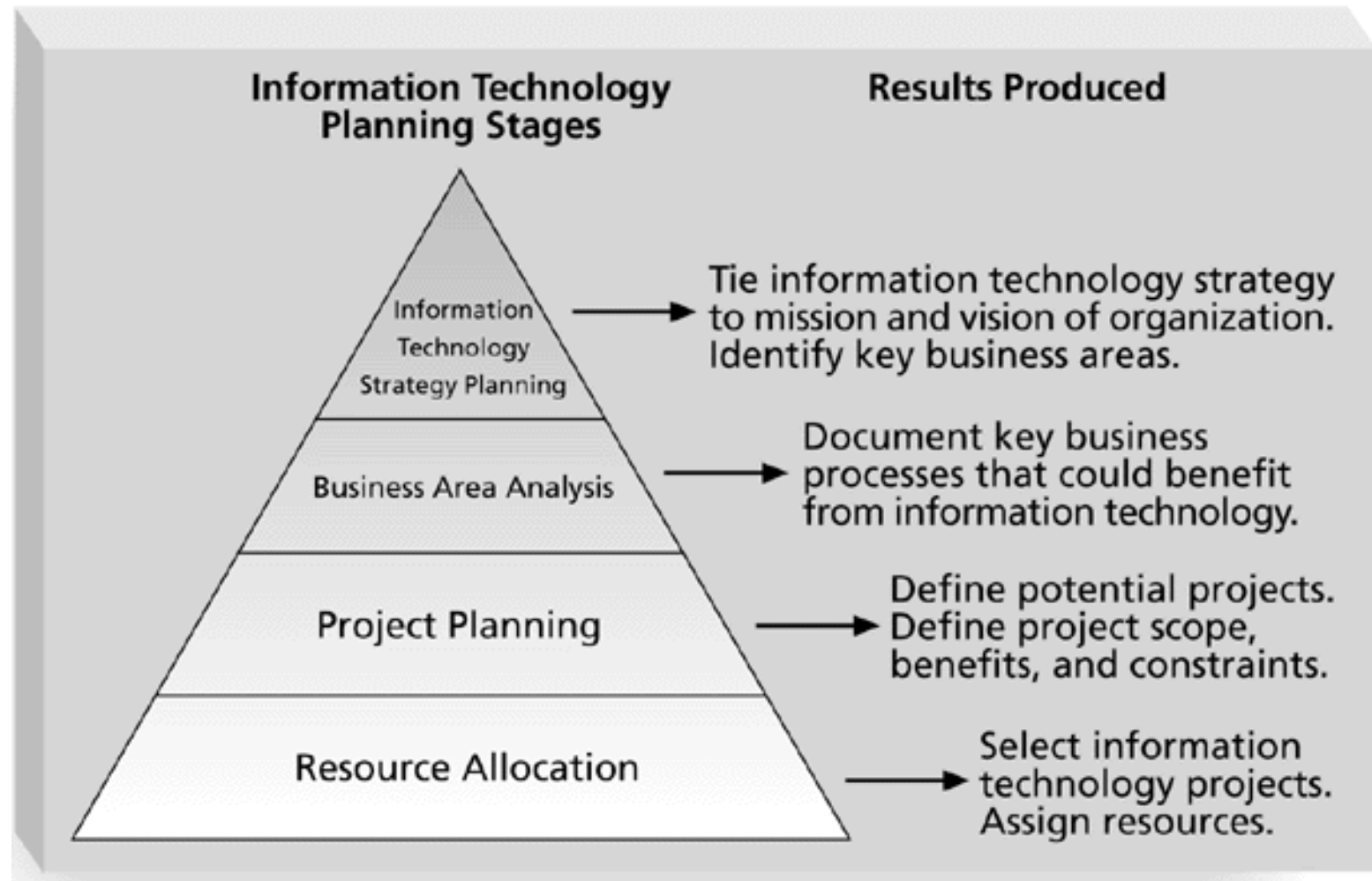# 软件项目立项流程

- **project Identification**
- **Project evaluation**
- **Project application**
- **Project auditing and establishmet**
- **Literature analysis**

开始

识别发起项目

论证项目 → 可行性分析报告

申请项目 → 立项建议书

立项评审报告 ← 申请审核项目 → 不通过
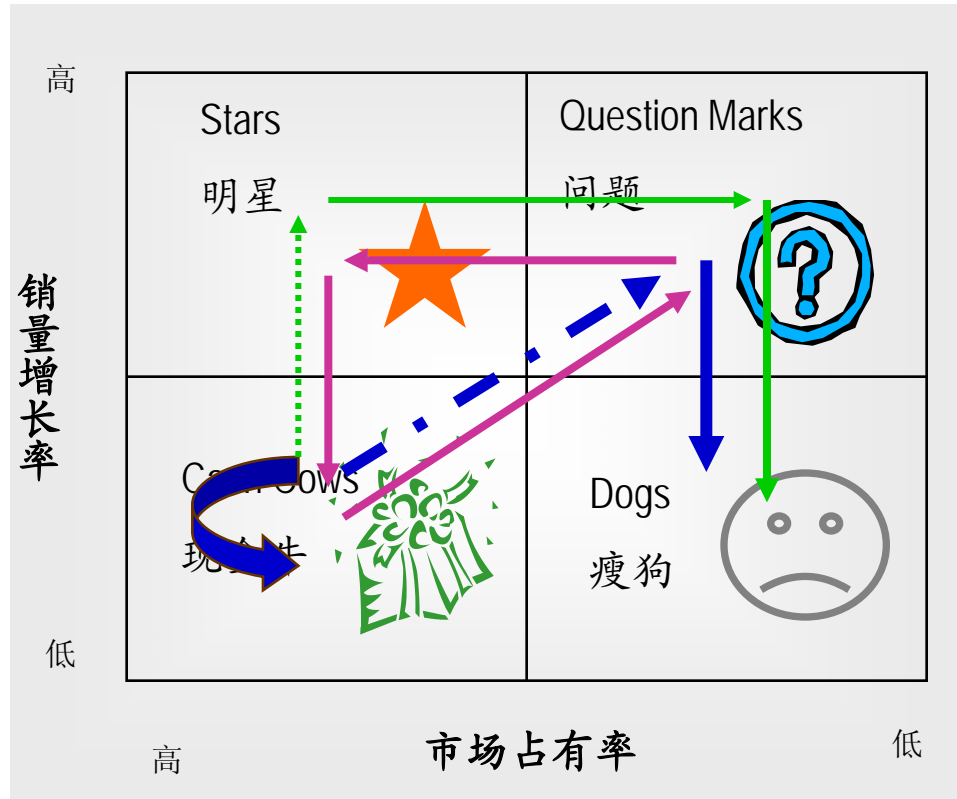
通过

确定项目/立项

取消项目

2

结束

Identifying Potential IT Projects

Business Factors for Selecting Projects

Methods for Selecting Projects

- **Methods include**
  - **Focusing on broad needs**
  - **Categorizing projects**
  - **Financial methods**
  - **Weighted scoring models**

In practice,organization usually use a combination of these approaches to select projects. Each approach has advantages and disadvantages, and it is up to management to decide the best approach for selecting projects based on their particular organization.

5

Broad Organizational Needs

- **It is often difficult to provide strong justification for many IT projects, but everyone agrees they have a high value**

- **Three important criteria for projects:**
  - **There is a *need* for the project**
  - **There are *funds* available**
  - **There's a strong *will* to make the project succeed**

Categorizing IT Projects

- **One categorization: whether project addresses**
  - **a problem**
  - **an opportunity**
  - **a directive**

major criteria for project selection

- project must have the support of management
- project must be timed appropriately for a commitment of resources
- project must move the organization toward achieving its goal
- project must be practical
- project must be important enough to be chosen among other possible projects

questions

- **What kind of people will be concerned about the feasibility analysis of a project?**

- **The role of feasibility analysis in project management**

- **How to conduct the feasibility analysis**

Feasibility Analysis for a Software Project

- The overview of software project evaluation

- The contents of a software project feasibility analysis report

The definition

- **Feasibility** is the measure of how beneficial and practical the development of an information system will be to an organization.

- **Feasibility analysis** is the process by which feasibility is measured. This analysis recurs throughout the life cycle.

——"System analysis and design methods"(Jeffrey L. Whitten)

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The meaning of evaluation

没钱赚的事我们不干；有钱赚但投不起钱的事不干；有钱赚也投得起钱但没有可靠的人选，这样的事也不干。

——柳传志

Why Firms Invest in IT

REASON FOR INVESTING IN INFORMATION TECHNOLOGY PROJECTS	RANK BASED ON OVERALL VALUE OF PROJECTS
Supports explicit business objectives	1
Has good internal rate of return (IRR)	2
Supports implicit business objectives	3
Has good net present value (NPV)	4
Has reasonable payback period	5
Used in response to competitive systems	6
Supports management decision making	7

Why Firms Invest in IT

Meets budgetary constraints	8
High probability of achieving benefits	9
Good accounting rate of return	10
High probability of completing project	11
Meets technical/system requirements	12
Supports legal/government requirement	13
Good profitability index	14
Introduces new technology	15

Bacon, James. The Use of Decision Criteria in Selecting Information Systems/Technology Investments, *MIS Quarterly*,

The meaning of evaluation

- There are usually more projects than available time and resources to implement them

    - Therefore: It is important to follow a logical process for selecting IT projects to work on

The meaning of evaluation

- " do or not to do "is determined by feasibility analysis.

" Nothing to be done " Is always a optional scheme

- "what is to be done, and what is not to be done" is determined by requestment analysis.

Feasibility checkpoints

- systems analysis -- study
  - urgency? rough cost estimate
- systems analysis -- definition
  - clearer scope, refined cost estimate
  - Because the problems are better understood, the analyst can make better estimates of costs and of the benefits to be obtained form the project.

Feasibility checkpoints

- systems design -- selection
  - adjust scope, schedule, costs
- systems design -- detail design
  - one last chance to cancel or downsize

Feasibility Analysis:
"Once is not enough"
(Creeping Commitment approach)

influencing factors of feasibility Analysis

How to do the feasibility analysis?
What will affect the feasibility analysis?

Feasibility Analysis of influencing factors：
- **Type of project**
- **The position of analyst: Party A, Party B**

The content of feasibility Analysis report

- **Project background**

- **Client requirement**

- **Business foreground**

- **Evaluation content**

- **conclusion**

  - **Case 1**

  - **Case 2**

Project background

Project origin

- 项目来源涉及到项目的环境，商务实施条件，客户合作关系等要素。

Project stakeholders

- 项目涉及的干系人，利益和影响分析

A bad example about
project origin

客户的需求

商务需求：

- 客户为了实现商务目标而制定的计划和目标。

功能需求：

- 为了实现商务需求而制定的技术要求和流程。

潜在需求：

- 项目未来可能或必然的需求。

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客户的需求

商务需求：

- "系统能够实现医院的招投标采购，集中并规范管医药交易市场。"

功能需求：

- "医院利用电子药房客户端的采购系统，将采购药品的规格、数量、包装等信息发布到交易系统的最新采购的数据库中。

潜在需求：

- "实现医院与药品批发企业的物流配送管理。"

A bad example

商务前景

- 项目完成以后的商务影响：
  - 是否可持续发展？-项目维持
  - 是否可更新换代？-项目升级
  - 是否可扩展壮大？-项目扩展

Areas of concern during feasibility analysis

- **Strategy feasibility**
- **Operational feasibility**
- **Schedule feasibility**
- **Technical feasibility**
- **Political feasibility(organizational….)**
- **Market feasibility**
- **Economic feasibility**
- **Risk feasibility**

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战略评估中的项目群管理

- 项目群管理（Programme management）
  - "项目群是一组协调管理的项目，通过将项目组成项目群，将获得比单个管理项目更大的效益。"
- 有效的项目群管理需要有一个项目群目标，项目必须根据项目群目标来选择
- 在大的组织中，将可能有项目群管理的机构，例如项目群主管或者项目群经理
- 即使没有专门的组织来管理项目群，项目的选择也需要根据组织的整个业务目标来评价

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战略评估重点考虑的内容

- **目标**：提出的系统对组织目标具有怎样的贡献？例如它是否能够增加市场份额。
- **IS计划**：提出的系统如何与IS计划相适应？它将替换或者与哪些系统接口？它与将来开发的系统有何交互关系？
- **组织结构**：新系统对目前的部门和组织结构有何影响？例如一个新的订单处理系统是否与目前的销售与库存控制的功能相重叠？
- **MIS**:系统将在组织的何层次上提供何种信息？它将以何种方式对现存管理信息系统进行补充和提高？
- **人员**：系统将以何种方式影响人力水平何现存雇员的技术？它对组织整个人员开发策略有何影响？
- **情形**：系统将使客户对组织的态度有何变化？是否采用一个自动化的系统将与提供友好的服务相冲突？

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战略评估中的业务管理

业务管理(Portfolio management)

- 选定的项目将成为业务的一部分，项目将对资源产生竞争

Operational feasibility

- **Operational feasibility is a measure of how well the solution will work in the organization. It is also a measure of how people feel about the project. there are two aspects to be considered:**
  - **Is the problem worth solving, or will the solution work to the problem?**
  - **How do the end-users and managers feel about the solution?**

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- **Project personnel feasibility.**

Operational feasibility

- **Is the problem worth solving, or will the solution work to the problem?**
  - likelihood of project attaining desired objectives
  - how new system will affect organizational structures and processes,
  - how it fits into current day-to-day operations

Operational feasibility

- **How do the end-users and managers feel about the solution?**
  - **Dose the management support the project?**
  - **How do the end-users feel about their role in the new system?**
  - **What end-users or managers may resist or not use the system? People tend to resist change. Can this problem be overcome?**
  - **How will the working environment of the end-users change?**

Schedule feasibility

- Schedule feasibility is a measure of how reasonable the project timetable is.
  - Estimated time required for completion of the Project
  - Assess the adequacy of the project time
- Two questions:
  - Can the project deadlines be met? (likelihood that timeframes can be met and that this is adequate to meet organization's needs)
  - What will it cost to accelerate development?
- Some projects are initiated with specific deadlines. You need to determine whether the deadlines are mandatory or desirable.

Technical feasibility

- **Technical feasibility is a measure of the practicality of a specific technical solution and the availability of technical resources and expertise.**

- Technical feasibility addresses three major issues:

  - Is the proposed technology or solution practical?

  - Do we currently possess the necessary technology?

  - Do we possess the necessary technical expertise, and is the schedule reasonable?

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Is the proposed technology or solution practical?

- Whether the technology is mature enough to be easily applied to the project.
  - State-of-the-art
  - laboratory technology
  - Mature and proven technology
- Market demand of technology
  - Compared with the competitive technology, what advantages and defects are the technology to be used?
- Technology conversion cost
- Technology development trend and prospects
- Technological selection conditions

Technical scheme

- can the project be done?
  - In a given period of time can achieve the customer requirement?
- can the project be done well?
  - How about software quality?
- can the project be done quickly?
  - How about software productivity?

political feasibility

- Whether the project meet the need of all stakeholders?

- how key stakeholders in organization view system

- system can affect distribution of information, thus power

- copyrights, anti-trust laws (systems that share data across organizations), financial reporting requirements, contractual obligations, software ownership, outsourcing arrangements, etc.
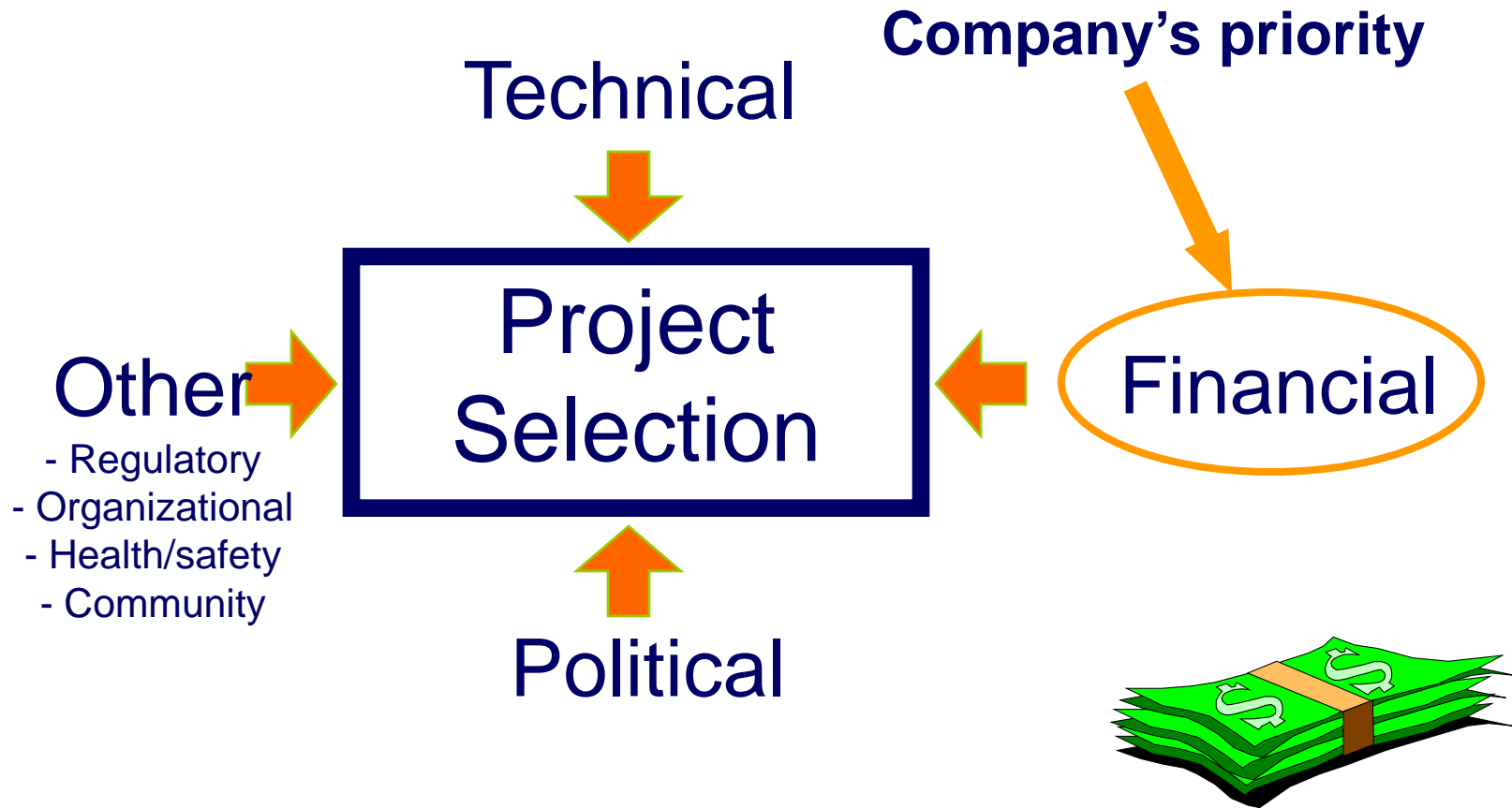
Market feasibility

- 分析市场发展历史与发展趋势，说明本产品处于市场的什么发展阶段。
- 本产品和同类产品的价格分析
- 统计当前市场的总额、竞争对手所占的份额，分析本产品能占多少份额。
- 产品消费群体特征、消费方式以及影响市场的因素分析。
- 分析竞争对手的市场状况；
- 分析竞争对手在研发、销售、资金、品牌等方面的实力；
- 分析自己的实力
- SWOT分析

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Economic Feasibility

Technical

Company's priority

Project Selection

Other
- Regulatory
- Organizational
- Health/safety
- Community

Financial

Political

Economic feasibility

- **The bottom line in many projects is economic feasibility.**

- **Economic feasibility is a measure of the cost-effectiveness of a project. This is often called a cost-benefit analysis.**

Economic Analysis

- Cost estimates
  - acquisition or development costs
  - operation and maintenance costs
- Benefit estimates
  - tangible benefits
  - intangible benefits

Estimating Costs

- acquisition or development (one time)
- operation and support (ongoing)

- in these expense categories
  - personnel hours
  - tranning
  - equipment and software

Estimating Development Cost

- break project up into tasks
  - estimate SDLC tasks independently
- take advantage of analogy/experience
  - how much have similar projects cost?
- calculate function point metric
  - estimate "size" of project from inputs, outputs, etc.
  - apply productivity rate

Estimating Operation and Support

- client/user personnel
- technical personnel
- training
- equipment and software support
  - repair
  - enhancement

可能的IT成本

先期成本

- 采购成本:硬件、软件、办公用品、场地、通信设施
- 启动成本：招聘人员、安装各种软、硬件
- 前期市场调查、可行性分析、需求分析的交际费用等
- 其他费用：盖章成本
- 管理成本

可能的IT成本

运行成本

- 人员成本：工资、奖金、加班费、使用系统的培训费
- 办公消耗：打印、复印、水、电、资料费等
- 资产贬值
- 产品宣传费用：比如网站建设费用
- 管理成本：租金

可能的IT成本

后期成本

- 用户培训
- 系统维护
- 数据存储费用
- 管理成本：人员工资、通信费用等。

Estimating Tangible Benefits

- reduced costs
  - manual operations
  - computer operations
  - programmed decisions
- increased revenue
  - new services
  - differentiated product
  - faster delivery
  - better quality
  - larger market share

Estimating Intangible Benefits

- information quality
  - precision
  - timeliness
  - integration
  - presentation
- job satisfaction
  - participative design
  - job enrichment
  - improved tools
- external standing
  - responsiveness
  - corporate image

经济性评估

- 是否任何一个项目效益大于成本就可以去实施呢？
- 未必，因为
  - 可能有更好的项目（资金成本）
  - 可能你的资金不够
  - 可能项目的风险太大
- 所以它只是一个待选项目

Profitability Indicators

- **Definition: "a single number that is calculated for characterisation of project profitability in a concise and understandable form"**

- **Common indicators**
    1. **Payback period**
    2. **Return on Investment (ROI)**
    3. **Net Present Value (NPV)**
    4. **Internal Rate of Return (IRR)**

Cash Flow Concept

Common management planning tool

Distinguishes between

- **Costs: cash outflows**
- **Revenues/savings: cash inflows**

Types of Cash Flow

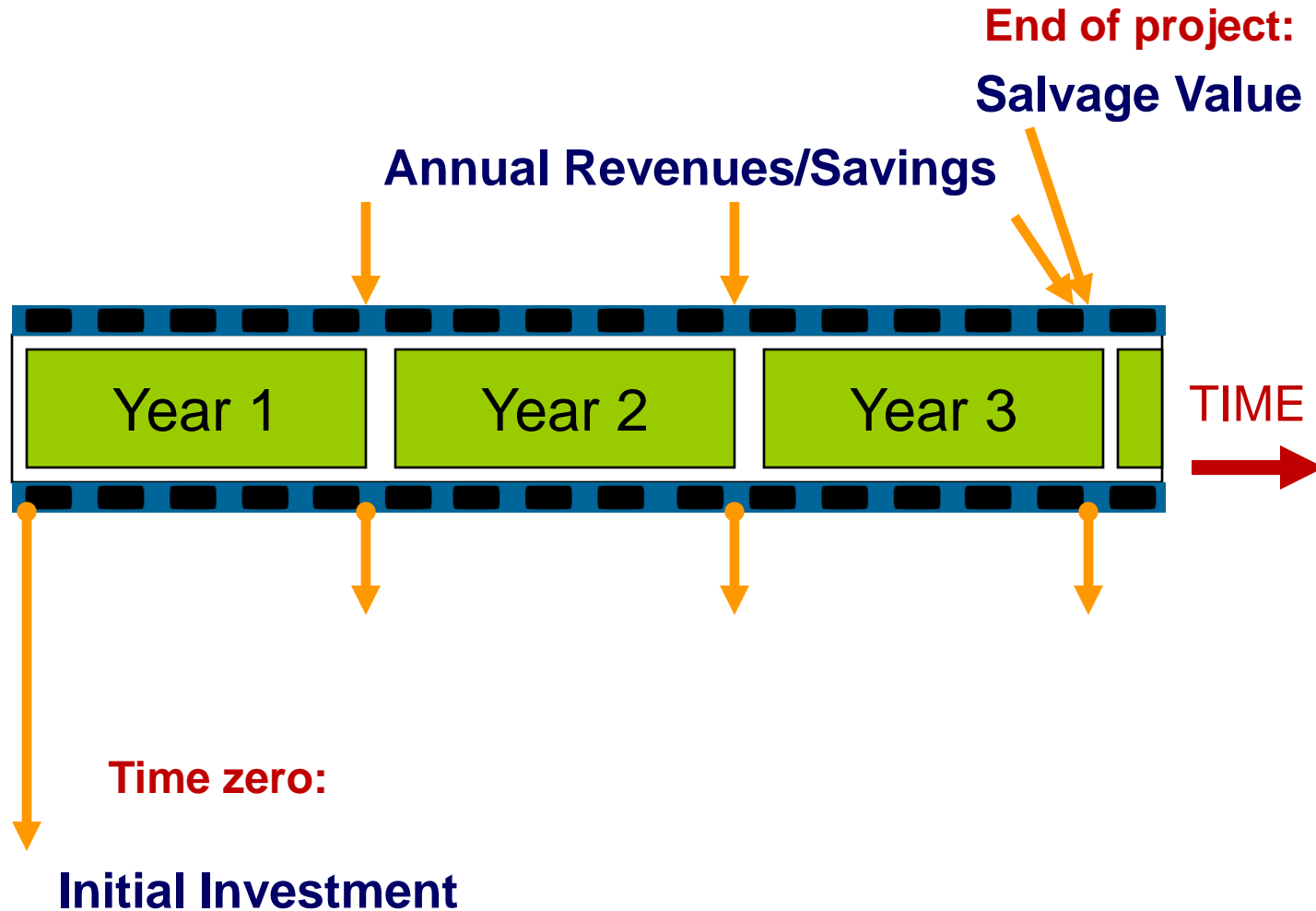|	Outflow	Inflow
One-time	Initial investment cost	Equipment salvage value
Annual	Operating costs & taxes	Operating revenues & savings
Other	Working capital	Working capital

Working Capital and Salvage Value

- **Working capital: total value of goods and money needed to maintain project operations**
  - **Raw materials inventory**
  - **Product inventory**
  - **Accounts payable/receivable**
  - **Cash-on-hand**

- **Salvage Value: resale value of equipment or other materials at the end of the project**

Cash Flow—— Timing

End of project:

Salvage Value

Annual Revenues/Savings

| Year 1 | Year 2 | Year 3 | |

TIME

Time zero:

Initial Investment

现金流预测

Table 3.2 *Four project cash flow projections – figures are end of year totals (£)*

Year	Project 1	Project 2	Project 3	Project 4
0	−100,000	−1,000,000	−100,000	−120,000
1	10,000	200,000	30,000	30,000
2	10,000	200,000	30,000	30,000
3	10,000	200,000	30,000	30,000
4	20,000	200,000	30,000	30,000
5	100,000	300,000	30,000	75,000
Net profit	50,000	100,000	50,000	75,000

请按照财务期望的次序来排列这四个项目

在考虑成本效益时，必须考虑时间因素和投资规模问题.

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Net Profit

- 净利润（Net Profit）:项目的净利润是在项目生命周期内总的收入与总的成本的差。

  - No Think Time Value of Money

Payback Analysis

- determines how long it will take for accrued benefits to overtake accrued and continuing costs
  - most companies want quick payback
  - 3-5 years is typical

请将前面的项目按回收期限排序

Payback period

- **Project 1: 5年**
- **Project 2: 5年**
- **Project 3: 4年**
- **Project 4: 4年**
- 如果我们的预测是以月为单位的，那么项目**3**显然时间更短

ROI

- 投资回报率(Return on investment):也被称为会计回报率(accounting rate of return)(ARR)
  - ROI=（平均年利润/总投资）×100%
  - ROI = (benefits - costs) / costs)
  - 例如项目1：
    - 净收益：50，000，所以平均年利润：50，000/5＝10，000
    - ROI=10,000/100,000*100%=10%
- 缺点：
  - 没有考虑时间因素
  - 该回报率易与银行利率混淆
- 请计算其余三个项目的投资回报率

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- Project 1: 10%
- Project 2: 2%
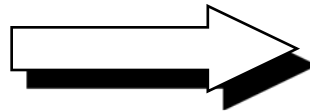- Project 3: 10%
- Project 4: 12.5%

NPV:
Time value of money——inflation

Money loses purchasing power over time as product/service prices rise, so a dollar today can buy more than a dollar next year

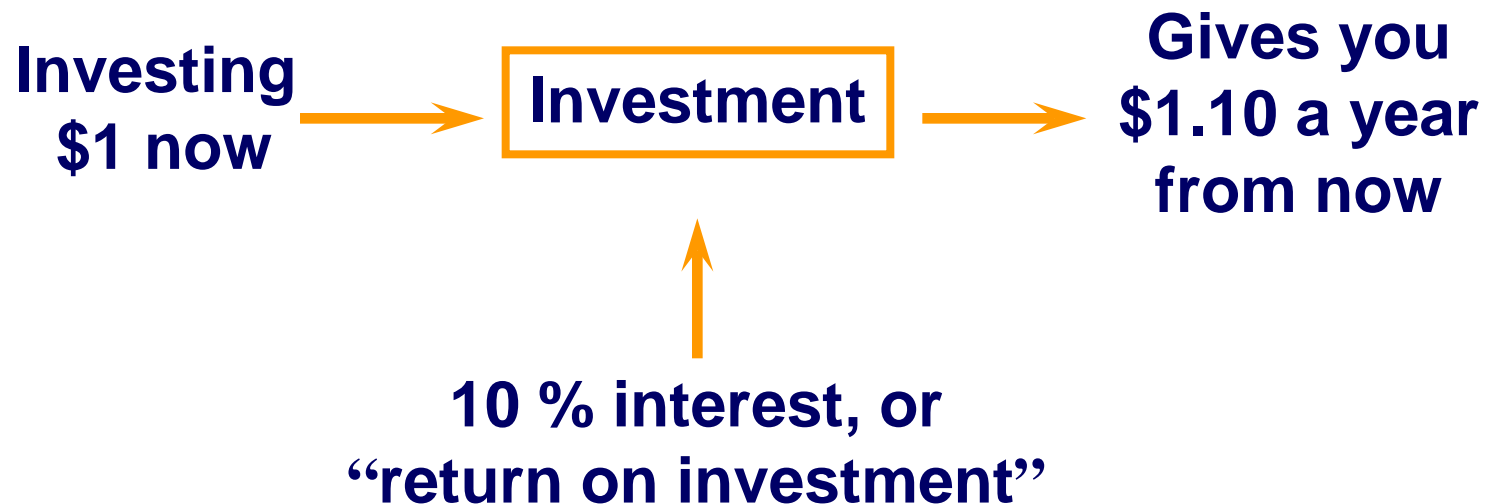**inflation 5%**

costs $1
now

costs $1.05
next year

NPV:
Time value of money——opportunity

A dollar that you invest today will bring you more than a dollar next year — having the dollar now provides you with an investment opportunity

Investing $1 now → **Investment** → **Gives you $1.10 a year from now**

10 % interest, or "return on investment"

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Time Value of Money

- **Money is worth more now than in the future because of**
  - **Inflation**
  - **Investment opportunity**

- **"Time value" of money depends on**
  - **Rate of inflation**
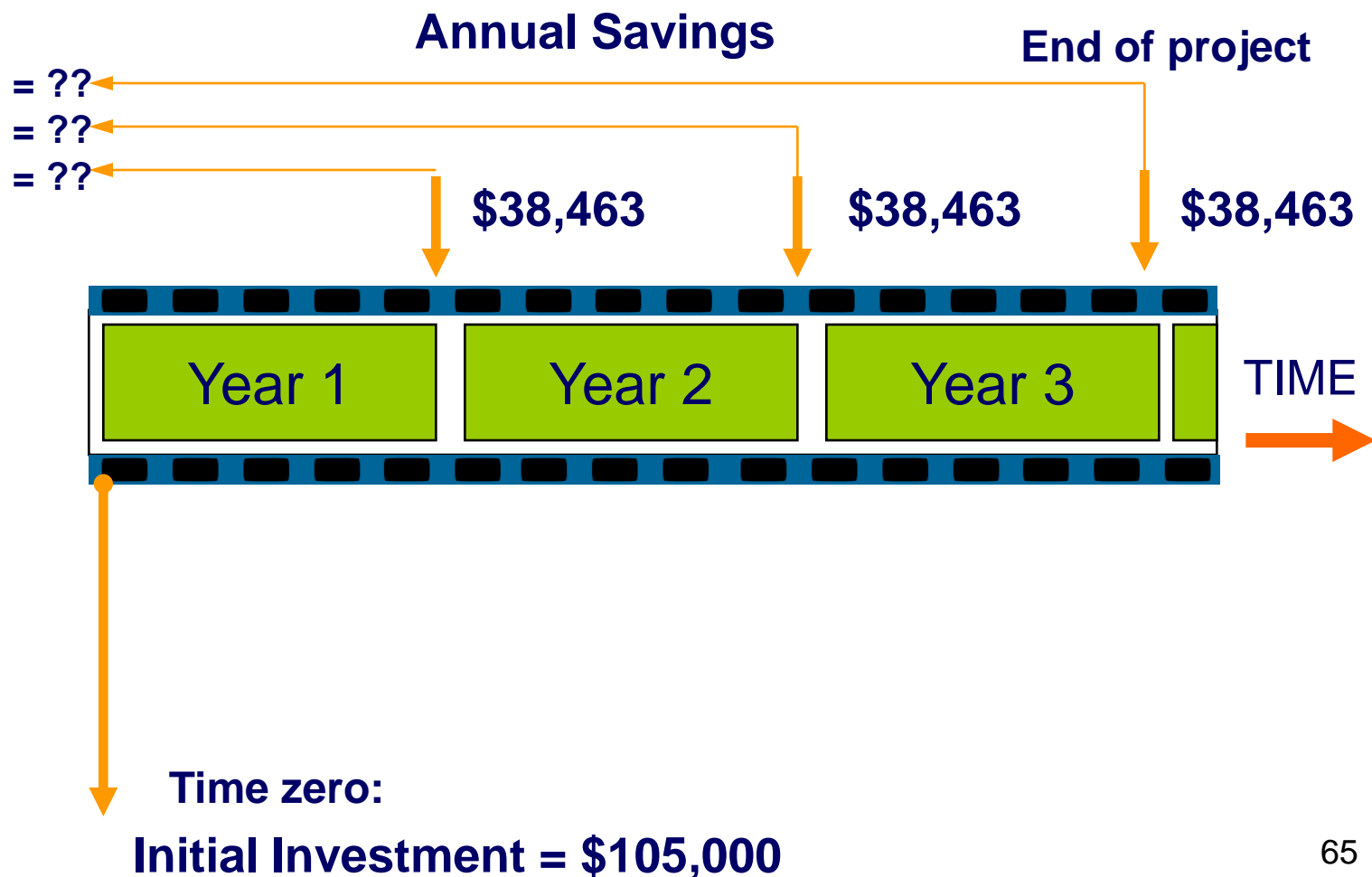 - **Rate of return on investment**

NPV: Cash Flows from Different Years

- **Before you can compare cash flows from different years, you need to convert them all to their equivalent values in a single year**

- **It is easiest to convert all project cash flows to their "present value" <u>now</u>, at the very beginning of the project**

Converting Cash Flows to Present Value

Annual Savings

End of project

= ??

= ??

= ??

$38,463 $38,463 $38,463

| Year 1 | Year 2 | Year 3 |

TIME

Time zero:

Initial Investment = $105,000

Converting Cash Flows to Present Value

Discount rate(贴现率):

- **Converts future year cash flows to their present value**

- **Incorporates:**
  - **Desired return on investment**
  - **Inflation**

- **Reverse of an interest rate calculation**

Discount Rate & Interest Rate

Invested at an interest rate of 20%, how much will $10,000 now be worth after 3 years?

$10,000 x 1.20 x 1.20 x 1.20 = $17,280

At a discount rate of 20%, how much do I need to invest if I want to have $17,280 in 3 years?

$$\frac{\$17,280}{1.20 \text{ x } 1.20 \text{ x } 1.20} = \$10,000$$

Net Present Value (NPV)

- **Definition: sum of present values of all project's cash flows**
  - Negative (cash outflows)
  - Positive (cash inflows)
- **Characterises the present value of the project to the company**
  - If NPV > 0, the project is profitable
  - If NPV < 0, the project is not
- **More reliable than Simple Payback or ROI as it considers**
  - Time value of money
  - All future year cash flows

$$NPV = \sum_{t=0,n} A\big/(1+r)^t \quad > =0$$

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NPV

Value of the cash flow in year n

Net Present Value = Future Value$_n$ x (NPV Factor)

Value of cash flow at "Time Zero," i.e. at project start-up

Net Present Value (NPV) Factors or "discount factors"

- **For various values d (discount rate): 10%, 15%, 20%**

- **For various years n (number of years)**

- **Tables available**

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The Value of a Future $1

Discount rate (d):	10%	20%	30%	40%
Years into future (n)				
1	.9091	.8333	.7692	.7142
2	.8264	.6944	.5917	.5102
3	.7513	.5787	.4552	.3644
4	.6830	.4823	.3501	.2603
5	.6209	.4019	.2693	.1859
10	.3855	.1615	.0725	.0346
20	.1486	.0261	.0053	.0012
30	.0573	.0042	.0004	.0000

← **Net Present value factors**

例子

Table 3.3   *Table of NPV discount factors*

Year	Discount rate (%)					
	5	6	8	10	12	15
1	0.9524	0.9434	0.9259	0.9091	0.8929	0.8696
2	0.9070	0.8900	0.8573	0.8264	0.7972	0.7561
3	0.8638	0.8396	0.7938	0.7513	0.7118	0.6575
4	0.8227	0.7921	0.7350	0.6830	0.6355	0.5718
5	0.7835	0.7473	0.6806	0.6209	0.5674	0.4972
6	0.7462	0.7050	0.6302	0.5645	0.5066	0.4323
7	0.7107	0.6651	0.5835	0.5132	0.4523	0.3759
8	0.6768	0.6274	0.5403	0.4665	0.4039	0.3269
9						
10						
15						
20						
25						

请计算其它项目的净现值

Table 3.2   *Four project cash flow projections – figures are end of year totals (£)*

Year	Project 1	Project 2	Project 3	Project 4
0	−100,000	−1,000,000	−100,000	−120,000
1	10,000	200,000	30,000	30,000
2	10,000	200,000	30,000	30,000
3	10,000	200,000	30,000	30,000
4	20,000	200,000	30,000	30,000
5	100,000	300,000	30,000	75,000
Net profit	50,000	100,000	50,000	75,000

- 项目1：618
- 项目 2： －179，770
- 项目 3： 13，721
- 项目 4： 21，662

NPV的问题

- 贴现率难以给定

Year	Cash flow values (£)		
	Project A	Project B	Project C
0	−8,000	−8,000	−10,000
1	4,000	1,000	2,000
2	4,000	2,000	2,000
3	2,000	4,000	6,000
4	1,000	3,000	2,000
5	500	9,000	2,000
6	500	−6,000	2,000
Net Profit	£ 4,000	£ 5,000	£ 6,000
NPV @ 8%	£ 2,111	£ 2,365	**£ 2,421**
NPV @ 10%	£ 1,720	**£ 1,818**	£ 1,716
NPV @ 12%	**£ 1,356**	£ 1,308	£ 1,070

- 难以与现行的利率比较，同时，软件具有更高的风险，如何反映也是一个问题

Which Discount Rate?

- Equal to the required rate of return for the project investment, based on

  - A <u>basic</u> return - pure compensation for deferring consumption

  - Any '<u>risk premium</u>' for that project's risk

  - Any expected fall in the value of money over time through <u>inflation</u>

- At least cover the costs of raising the investment financing from investors or lenders (i.e. the company's *"<u>cost of capital</u>"*)

- Discount rate can be used as a target profit rate.

Internal Rate of Return (IRR)

- **Definition: discount rate for which NPV = 0, over the project lifetime**

- **Tells you exactly what "discount rate" makes the project just barely profitable**

- **Similar to NPV, considers**
  - **Time value of money**
  - **All future year cash flows**

IRR

IRR的计算方法：两点法

设定一系列折扣率，计算净现值，然后画出若干点，然后画直线，与横坐标相交的位置就是内部回报率

The IRR may be estimated by plotting a series of guesses:

For a particular project, a discount rate of 8% gives a positive NPV of £7,898; a discount rate of 12% gives a negative NPV of −£5,829. The IRR is therefore somewhere between these two values. Plotting the two values on a chart and joining the points with a straight line suggests that the IRR is about 10.25%. The true IRR (calculated with a spreadsheet) is 10.167%.
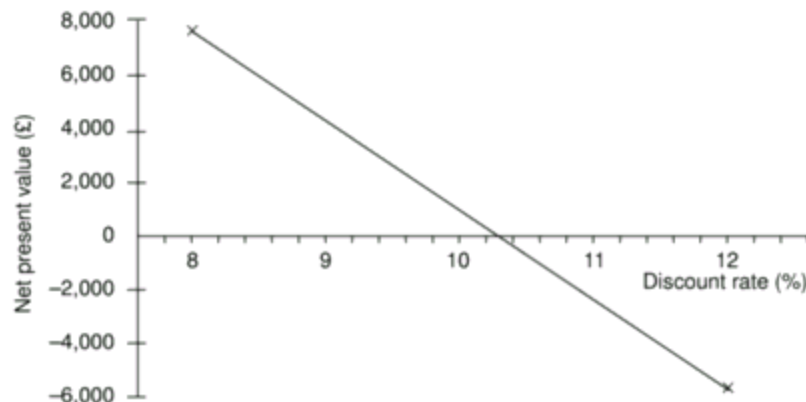
Figure 3.3 *Estimating the internal rate of return for project 1.*

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IRR

$$IRR = i_1 + \frac{|NPV_1|}{|NPV_1| + |NPV_2|}(i_2 - i_1)$$

- **Characterises the IRR of the project to the company**
  - **If IRR > the target profit rate, the project is profitable**
 - **If NPV < the target profit rate, the project is not**

Profitability Indicators Summary

	Advantages	Disadvantages
Payback & ROI	**Easy to use**	**Neglect TVM** **Do not indicate project size**
NPV	**Considers TVM** **Indicates project size**	**Needs firm's discount rate**
IRR	**Considers TVM**	**Requires iteration** **Does not indicate project size**

成本效益分析

例：假设某软件项目生命周期为**5**年。现在投资**20**万元，平均年利率**3%**。从第一年起，每年年底收入**4.2**万元，问该项目是否值得投资？

P = 20万	4.2万	4.2万	4.2万	4.2万	4.2万
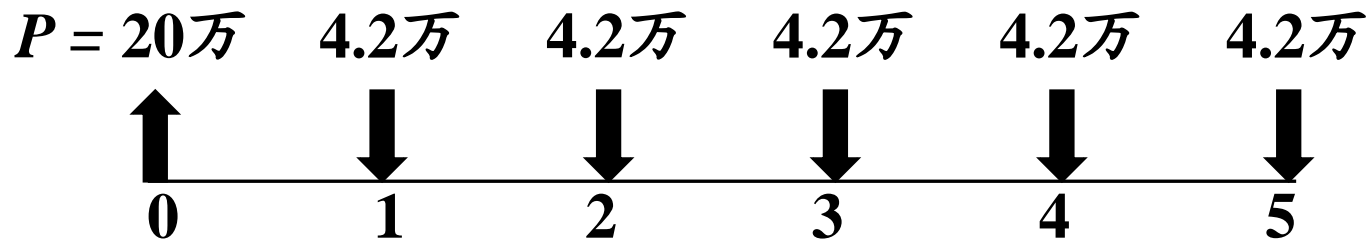
$$F = P(1 + i)^n$$ 其中 P 为初始投资, i 为年利率,

F 为第 n 年底 P 的值

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成本效益分析

到第5年底结算时：

投资额 ＝ $200000 \times (1+3\%)^5 \approx 231855$（元）

收入 ＝ $42000 \times [(1+3\%)^4 + (1+3\%)^3 +$
$(1+3\%)^2 + (1+3\%) + 1]$
≈ 222984（元）

不合算！

成本效益分析

(1) **NPV**

= 折合现价的总收入 - 当前投资额

=

$$42000 \times \left[\frac{1}{1.03^5} + \frac{1}{1.03^4} + \frac{1}{1.03^3} + \frac{1}{1.03^2} + \frac{1}{1.03} \right] - 200000$$

$$\approx -7652(元)$$

(2) 投资回收期(考虑了资金的时间价值)

例：第6年底可收回

$$42000 \times \frac{1}{1.03^6} \approx 35174(元)$$

$$\frac{7652}{35174} \approx 0.22(年) \Rightarrow 回收期 \approx 5.22年$$

成本效益分析

(3) IRR：设为 j

$$200000 = 42000\left[\frac{1}{1+j} + \frac{1}{(1+j)^2} + \frac{1}{(1+j)^3} + \frac{1}{(1+j)^4} + \frac{1}{(1+j)^5}\right]$$

$\Rightarrow j \approx 1.65\%$ < 年利率 3%

风险分析

风险管理
- 风险评估
  - 风险识别
  - 风险分析
  - 风险优先级
- 风险控制
  - 风险管理计划
  - 风险化解
  - 风险监控

风险矩阵

风险	重要性	可能性
软件根本无法完成或交付	H	-
在设计阶段后取消项目	H	L
开发预算超过**20**％以上	M	M
维护成本高于实际值	L	H
不能满足响应时间目标	L	H

风险分析对经济的影响

- 风险和净现值：更高的贴现率**2％，5％**
- 评估每种可能的结果

销售额	每年销售收入	概率	期望值
	i	P	i*p
高	800 000	0.1	80 000
中	650 000	0.6	390 000
低	100 000	0.3	30 000
期望收入			500 000

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决策树风险分析

决策树

			乘	产出
= 预期资金		某产出结果	P=20%	
高估日程				X + $100,000
= +$20,000			P=80%	
决策	EMV=$4000			X - $20,000
= -$16,000		某产出结果	P=30%	X - $20,000
= -$6,000	保守日程		P=70%	
= +$7,000	EMV=$1000			X + $10,000

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风险剖面分析－蒙特卡洛仿真

Software：@risk
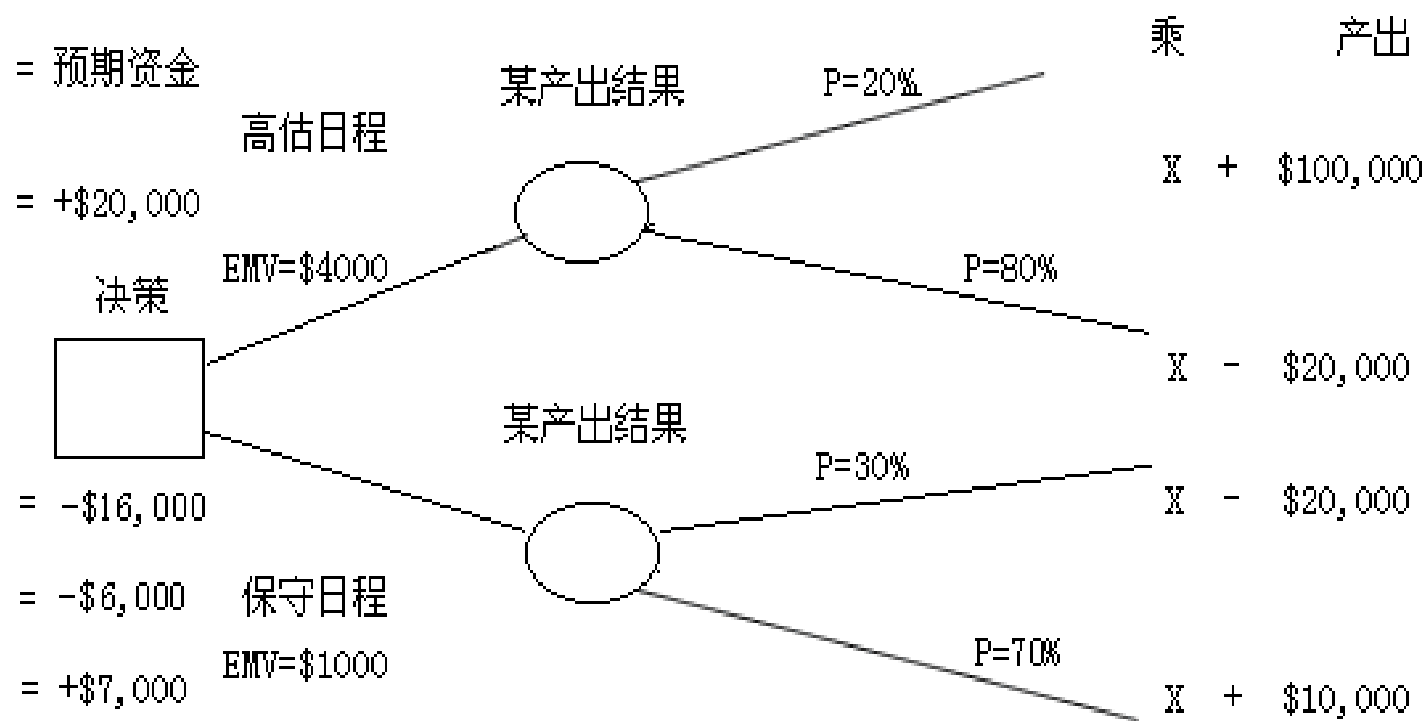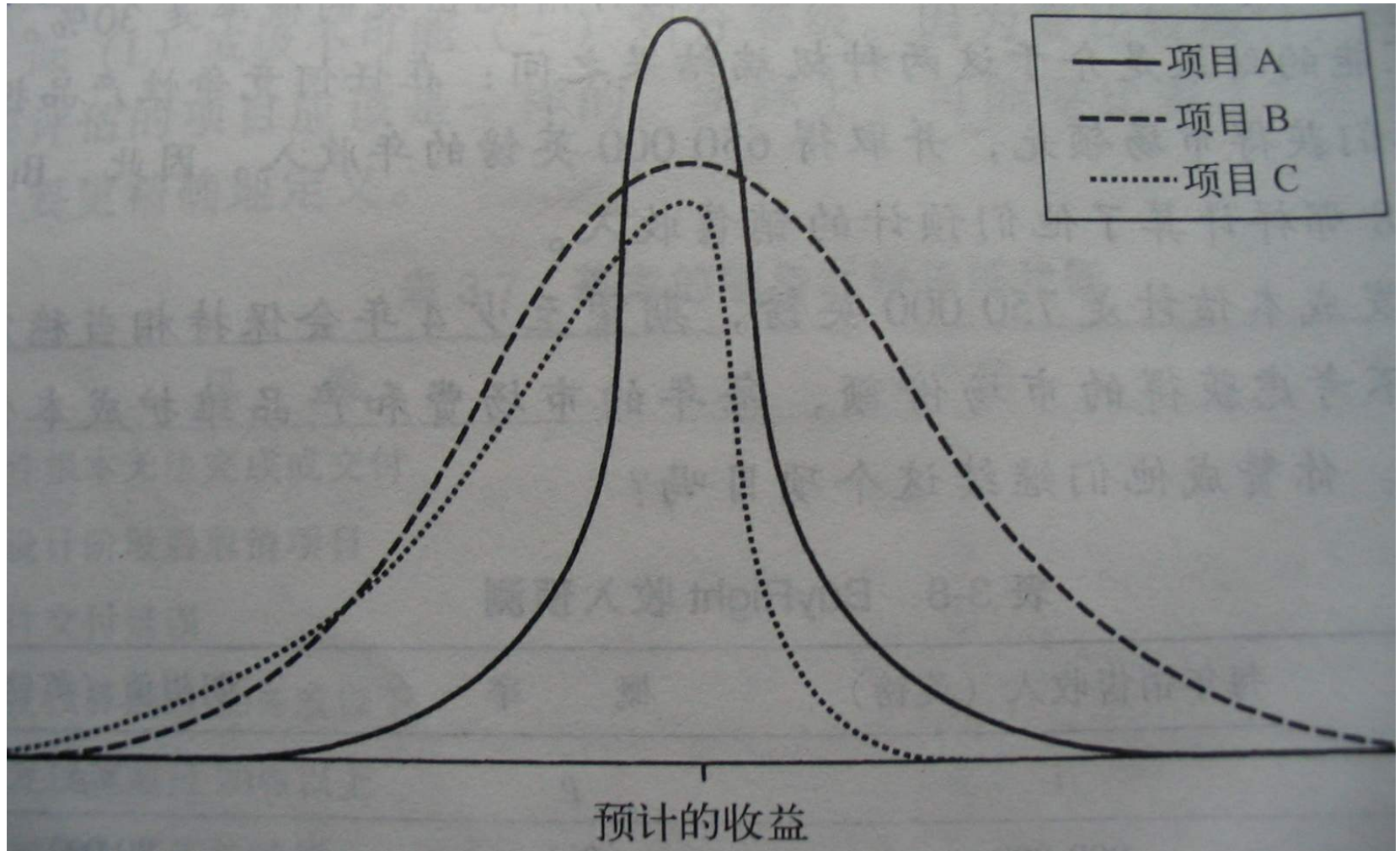
单一项目评估结果

- 可以立即动手
- 需要推迟到某些条件落实后才能够进行
- 不能进行或不必进行

策略上不可行

技术上可行

用户不可能操作

操作上可行

……

不合算

经济上合算 ⟹ 进度表
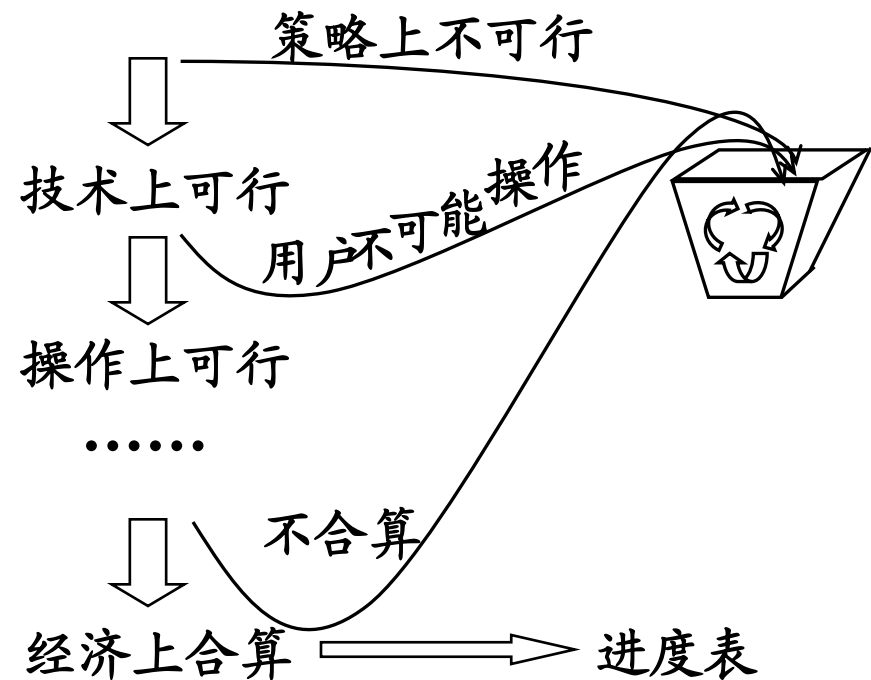
项目群综合评估

- 我们的目的是最后确定是否实施该项目
- 因此我们要将这些评估加以综合考虑
- 如何综合考虑？
  - 对比评估每一项，对候选项目打分
  - 给出评估每一项的权值
  - 计算候选项目的获得分值
  - 选择分值高的项目

| Feasibility Analysis | | 10.13.01 | | |

Feasibility Criteria	Weight	Candidate 1	Candidate 2	Candidate 3
Operational Feasibility	30%			
Functionality: To what degree does the candidate solution benefit the organization? **Political:** How well will the solution be received by users? Management?		Only supports Members Services requirements and current business processes would have to be modified	Fully supports required functionality	Same as Candidate #2
		Score: 60	**Score: 100**	**Score: 100**
Technical Feasibility	30%			
Technology: Assessment of maturity, availability, ability to acquire, and desirability of computer technology needed to support the candidate. **Expertise:** Assessment of the technical expertise needed to develop, operate, and maintain the candidate system		Current release of Platinum Plus is 1.0; only on market 6 weeks	Current technical staff only has Powerbuilder experience. Staff thinks Access app is simple.	
		Score: 50	**Score: 95**	**Score: 60**
Economic Feasibility	30%			
Cost to Develop		$350,000	$418,040	$400,000
Payback period (discounted)		4.5 years	3.5 years	3.3 years
Net Present Value		$210,000	$306,748	$325,500
Detailed Calculations		See attachment A	See Attachment A	See Attachment A
		Score: 60	**Score: 85**	**Score: 90**
Schedule Feasibility	10%			
Assessment of how long the solution will take to design and implement.		Less than 3 months	9-12 months	9 months
		Score: 95	**Score: 80**	**Score: 85**
Ranking		60.5	92	83.5

可行性分析报告

- CMMI给出的可行性分析报告模版
- 样例4

项目申请

- 项目发起人或单位为寻求支持，要以书面材料的形式递交给项目的支持者和领导，使其明白项目的必要性和可行性。这种书面材料称为项目发起文件或项目建议书。

- 项目经过论证并且认为可行后，还需要报告主管领导或单位，以获得项目的进一步审核，并得到他们的支持，

立项建议书

- 模版
- 案例1

项目审核立项

- 项目立项：项目通过可行性分析和主管部门的批准后，将其列入项目计划的过程，叫做项目立项

literature

- Development of a framework to assess and guide IT investments: An analysis based on a discretionary–mandatory classification
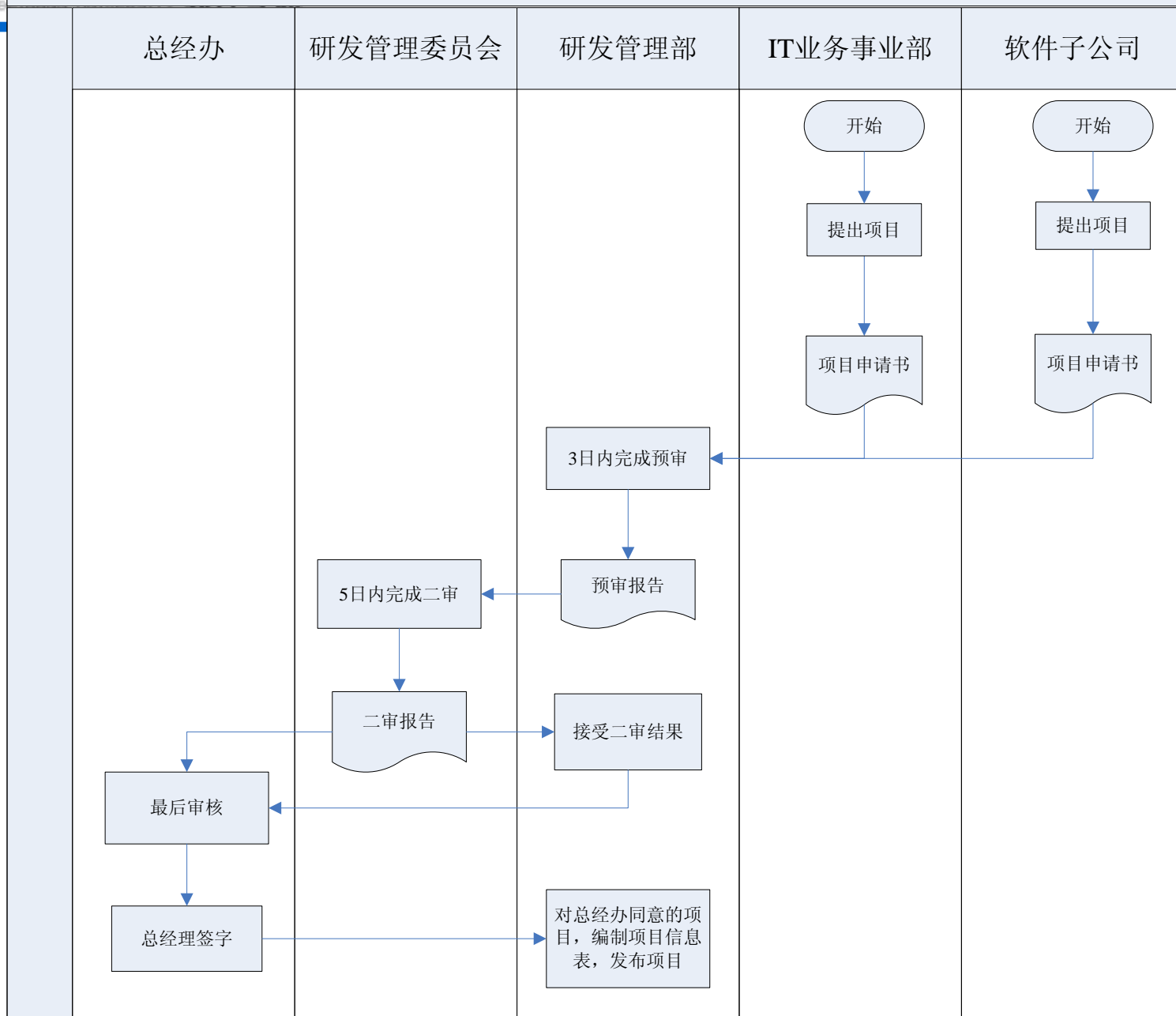
literature

- Development of a framework to assess and guide IT investments: An analysis based on a discretionary–mandatory classification

X IT公司项目立项流程

总经办	研发管理委员会	研发管理部	IT业务事业部	软件子公司

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课程回顾

- 项目立项流程
- 项目立项选择方法
- 可行性报告主要内容
- 主要的评估内容
- 成本效益分析技术