

# Information Technology Investment: Decision Making Methodology

## Chapter 1

### Introduction to Information Technology Investment Decision-Making

# I. Introduction

The **productivity paradox**: The relationship between spending (IT) and its resulting contribution to profitability.

**A statements that is seemingly contradictory or opposed to common sense and yet is true**

There needs to be a way to show this relationship to justify the investment!



# I. Introduction

Robert Solow felt...

**Level of Analysis**  
**Economy : negative??**  
**Industry : mixed ??**  
**Firm : positive??**

Other researchers have been surprised...

Several other researchers have concluded that...



**No single methodology that'll give a consistent IT investment solution**

## II. Types of IT Investment Decision-Making Problems

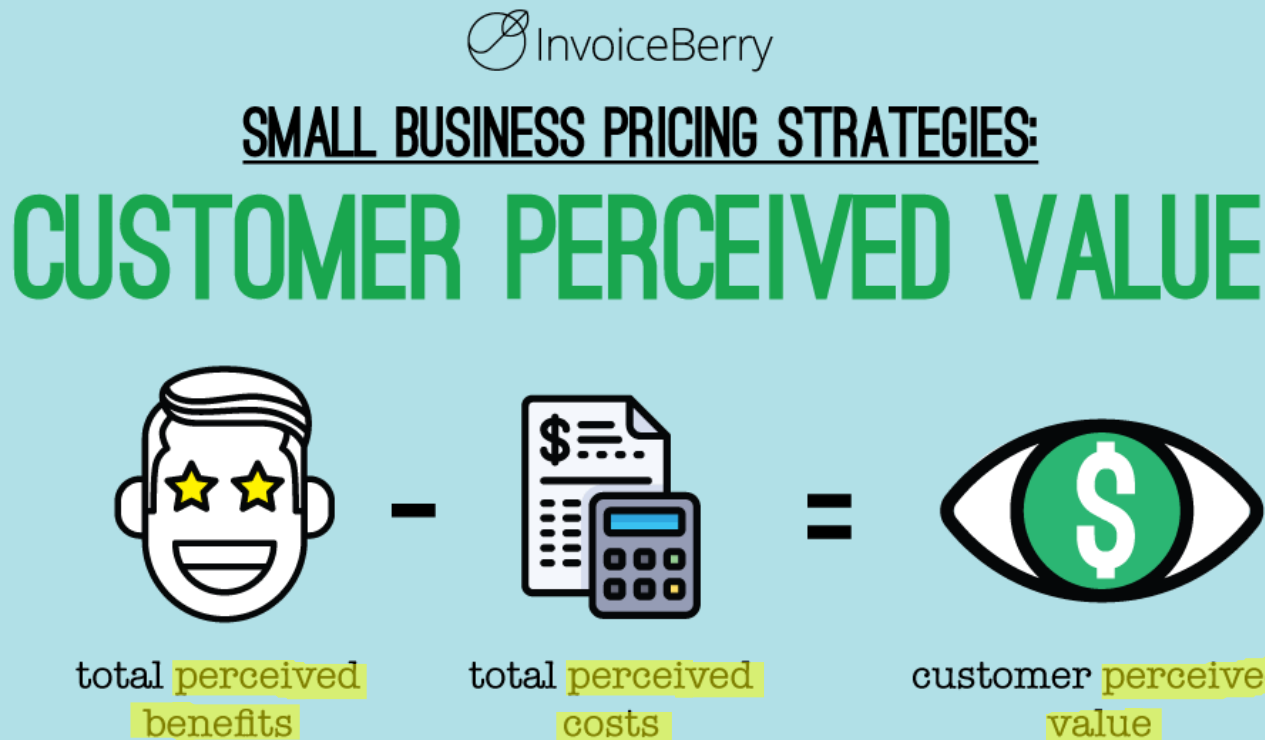
Complexity in even the simplest of IT decision-making problems can offer challenge to managers.

Need to show that IT investment returns “perceived value” to the firm

1. Cost

2. Primary  
features

3. Secondary  
features



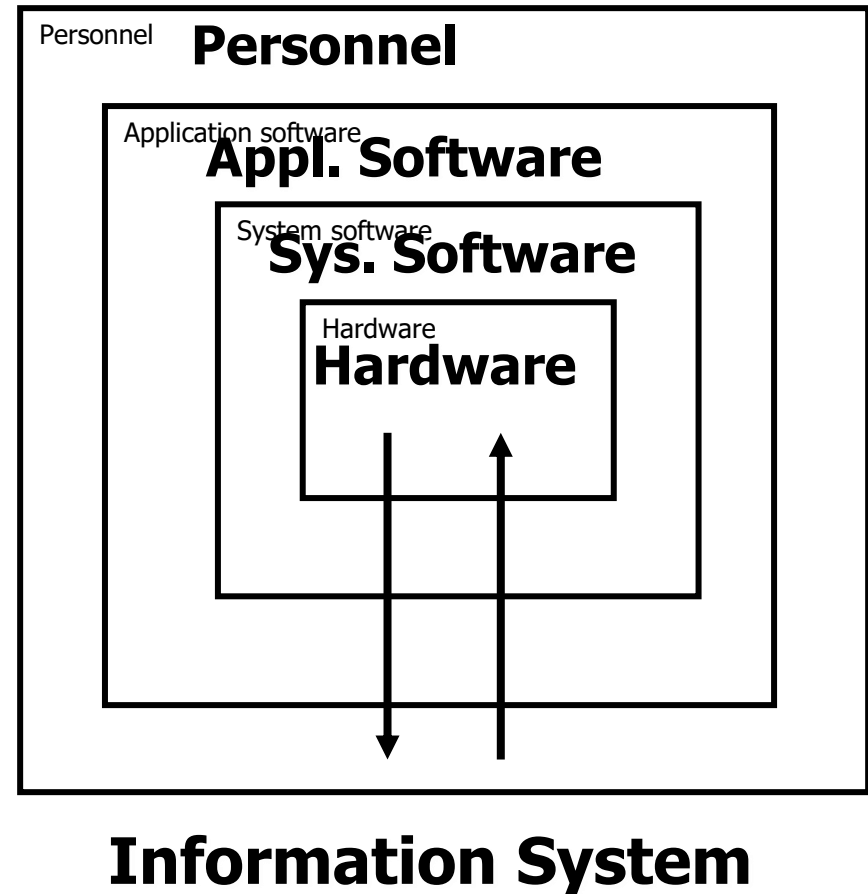
## II. Types of IT Investment Decision-Making Problems

### IT investment decision-making problems:

- What are the most appropriate quantitative **methods and techniques** for the evaluation of IT ?
- What quantitative and qualitative **measures** can be used in the assessment and evaluate IT investments?
- How can we **objectively render an IT decision** when we use highly complex, multiple and conflicting criteria?
- How do we choose **the best alternative** from a set of alternative IT projects?
- How can we **justify** our IT decisions?

# III. What are IT Investment Decision-Making Methodologies?

- *IT investment* can be defined as the investment decisions of allocating all types (i.e., human, monetary, physical) of resources to an IS
- tangible vs. intangible
- quantitative and qualitative
- Various methodologies in Table 2.



# IV. Why Study IT Investment and Decision-Making Methodologies

## ■ Means of achieving *competitive advantage*

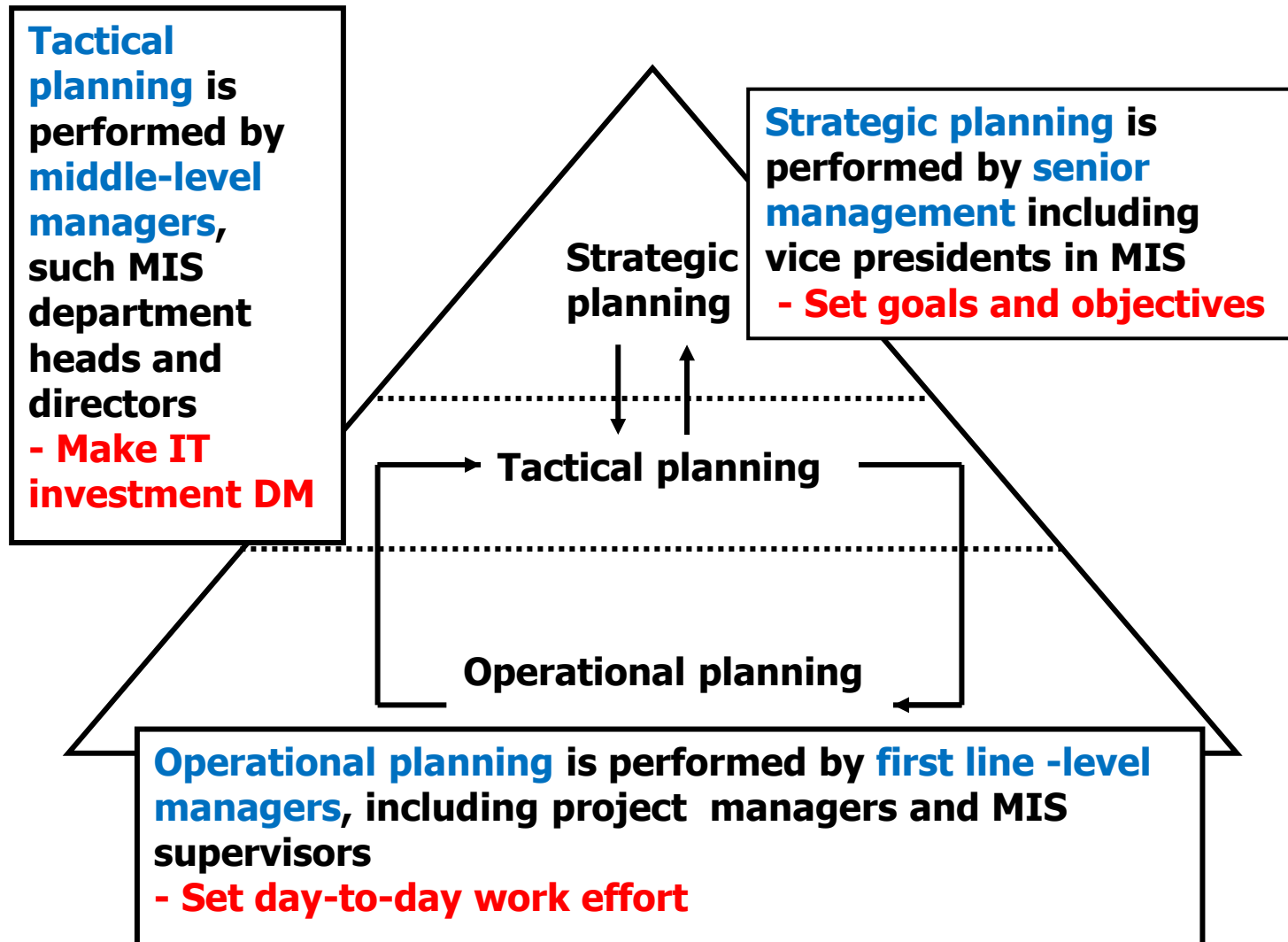
- By helping stakeholders (stockholders + partnering companies) perform their biz functions much better
- Multiply the efficiency and productivities of one firm over another

## ■ Poor investments can be a competitive disadvantage

- By increasing costs, delaying orders, disrupting communications, and decreasing employee morale

# V. Organizational Strategic Planning in IT Investment Decision-Making

**All planning follows a hierarchical planning process of stages**

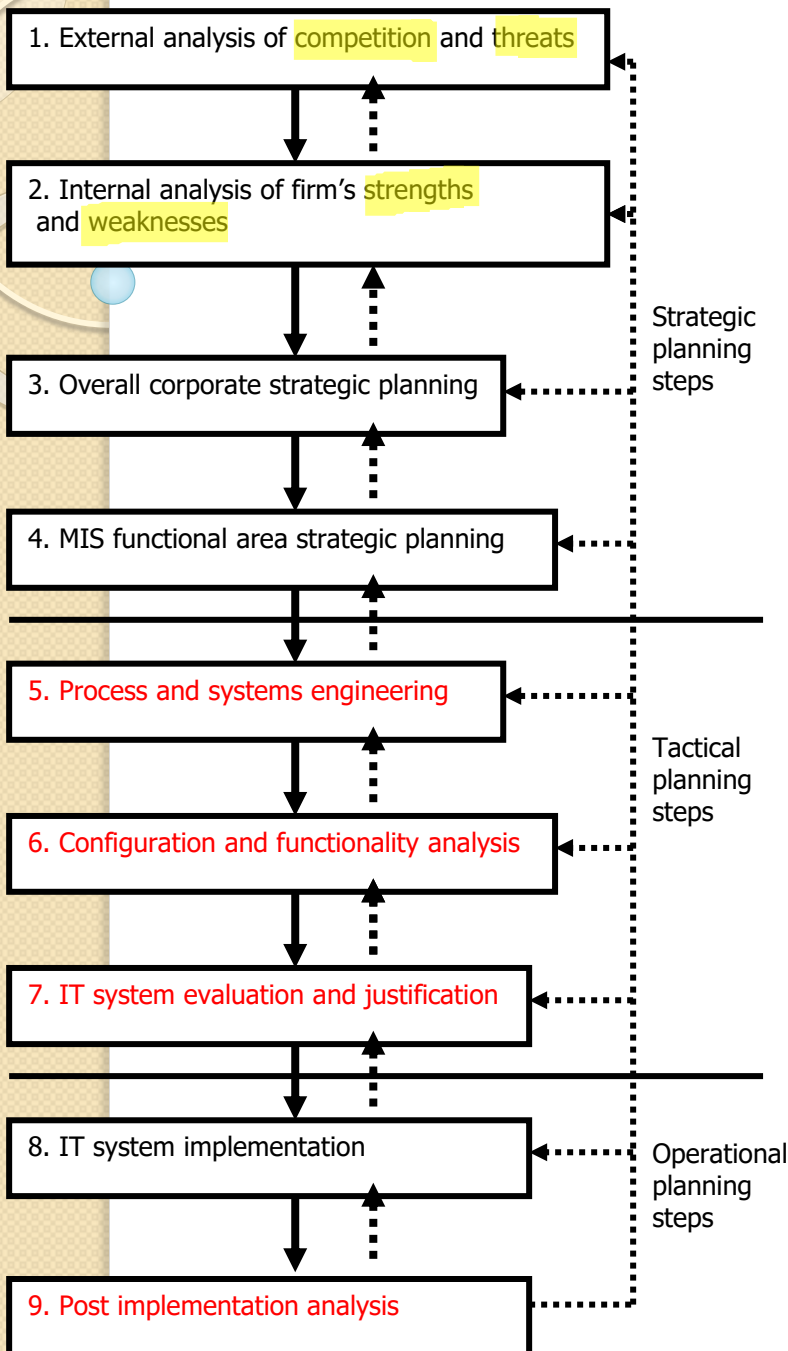




# V. Organizational Strategic Planning in IT Investment Decision-Making

This figure details the IS hierarchical planning of IT systems

Our focus is mainly on the Tactical Steps and particularly Step 5, 6, 7, and 9



## V. Organizational Strategic Planning in IT Investment Decision-Making

All organization planning begins at the top:

**Strategic Plan For  
Organization-wide**

**Growth in sales**

**Strategic Plan  
For IT**

**Expand information systems  
capability to handle growth in sales**

**Tactical Plan  
For IT**

**Purchase new information systems  
to increase sales growth capability**

**Operational  
Plan For IT**

**Make the new information systems  
work to actually handle new sales**

**Alignment**