

Module 7: Knowledge Management

Evaluation of KM effectiveness: Tools
and metrics

Ethical, legal, and managerial issues

1- Evaluation of KM effectiveness: Tools and metrics

Topics covered-

Return on investment for KM investments.

- Benchmarking as a comparative knowledge metric.
- Evaluating KM ROI by using the balanced scorecard (BSC) method.
- Use quality function deployment for creating strategic knowledge metrics.

Alternative metrics: Skandia and FASB

Traditional metrics: Financial ROI (return on investment) and Tobin's q

- Tobin's *q* measures the ratio between the firm's market valuation and the cost of replacing its physical assets.
- It does not tell how it can create further value, prevent imitation or substitution, and leverage its knowledge assets to gain a sustainable competitive advantage.
- Measuring **returns on investment in KM**, two conventional approaches are in common use: putting a monetary figure on intellectual assets, and determining the money saved or earned by using existing knowledge.

Total Cost of Ownership

- This methodology identifies and measures components of IT expense beyond the initial cost of implementation.

Drawbacks:

- It leaves out significant cost categories, such as complexity costs.
- It ignores benefits beyond pure costing.
- It neglects strategic factors.
- It provides little or no basis for comparison with other department and other companies, such as competing firms operating in the same markets.
- Life cycle costs are difficult to gauge

Learning From the Phone:

Justifying the cost

- It is hard to cost-justify and evaluate for a phone. Similarly, Firms find it difficult to cost justify **KM** in the face of other need investments but is something they want and should have.
- Middle managers feel the need for a strong KM initiative, convincing senior management to shell out the couple of million rupees for an initiative with intangible results can be hard sell.

Two ways to measure cost

- The short-term gains to demonstrate the need for, and the extent of the longer-term *guess estimations of value added by KM* to the firm's bottom line and competitive standing.
- **Cost based approach**-Did it reduce costs? Did we accomplish more by spending the same?
- **Market-value-based approach**- improve market leadership, bring more stability to the company, increase market share or stock value
- **Effect-on-income approach**- effect on expense reduction, customer retention, repeat business, profit margins, bottom line.
- put a monetary value on the company's intellectual assets on KM investments

The Metric is the Limitation

- A recurring problem is posed by a lack of standard metrics for measuring the impact of KM.
- No metrics is better than one that is absolutely wrong.
- A choice of a wrong metric can have more ill effects than positive ones.
- Metrics, when applied to knowledge work or in general, are vulnerable.

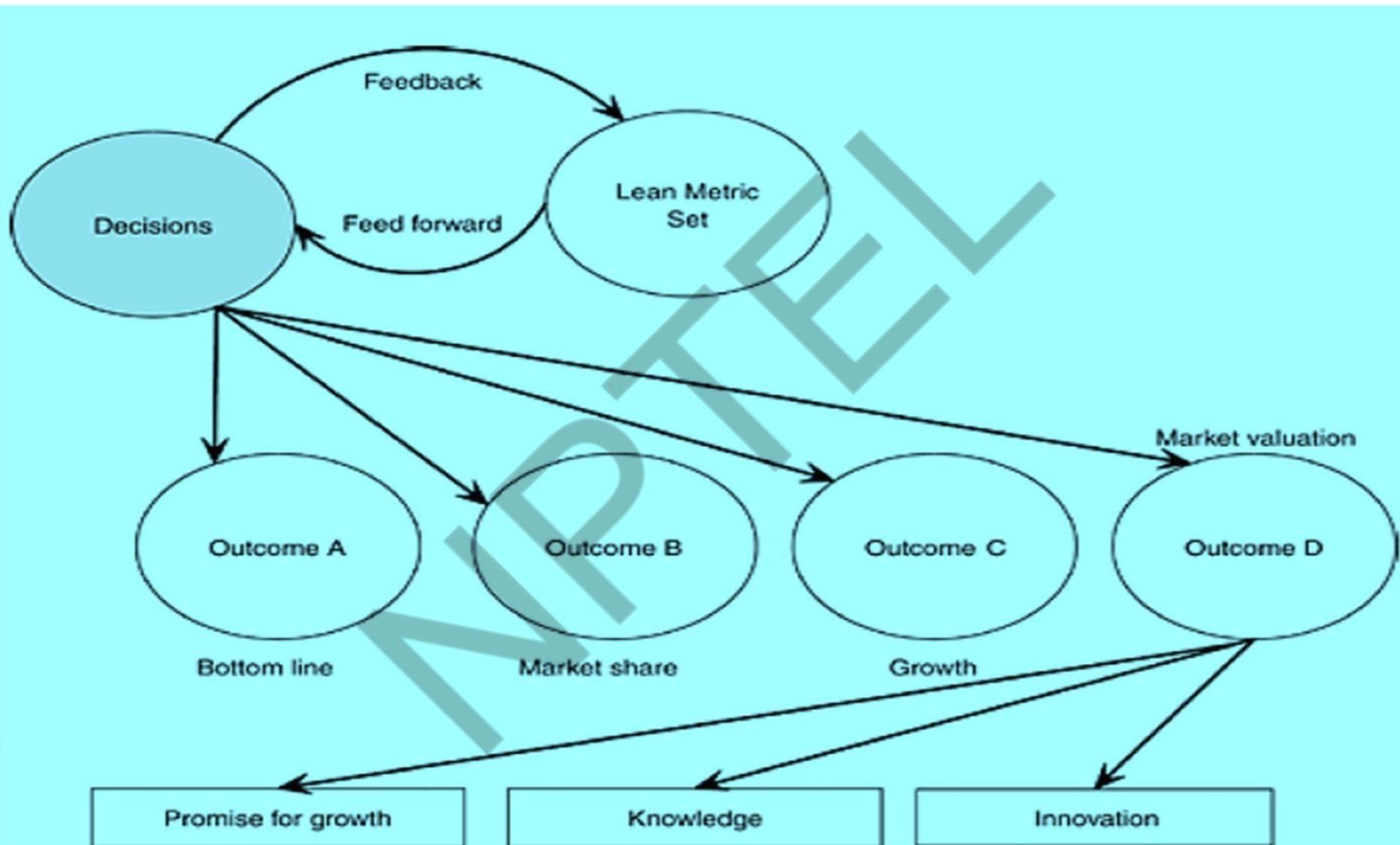
Common Traps In Choosing Metrics

- **Trap1: Using Too Many Metrics**
 - A few robust metrics are better than a number of marginally ones.
 - They need to focus on the past, present, and future simultaneously to be able to relate past performance, present processes, and future results.
 - Use 20 as a cutoff rule of thumb number for the few but essential metrics that can be simultaneously tracked.
- **Trap 2: the Consequences of Delayed Rewards**
 - Delayed rewards will only bias employees to work toward metrics that deliver short-term payoffs to them

Common Traps In Choosing Metrics

- **Trap 3: Metrics That Are Hard to Control**
 - Companies often make the grave mistake of implementing metrics that are beyond the control of their employees.
- **Trap 4: Metrics That tear People away from Business Goal**
 - The key idea is that the metrics that you select must encourage individual decisions that also move your company in the same directions as its long-term goals.
 - Some metrics might seem reasonable, but when they are put into action, they result in counterproductive consequences.
 - Many companies hard financial results while neglecting or ignoring soft results such as employee attitude and behaviour.

With a good set of lean metrics decisions that improve them are the same decisions that improve the company's desired long term outcome



Source: Tiwana, A.: Knowledge Management Toolkit (2002)

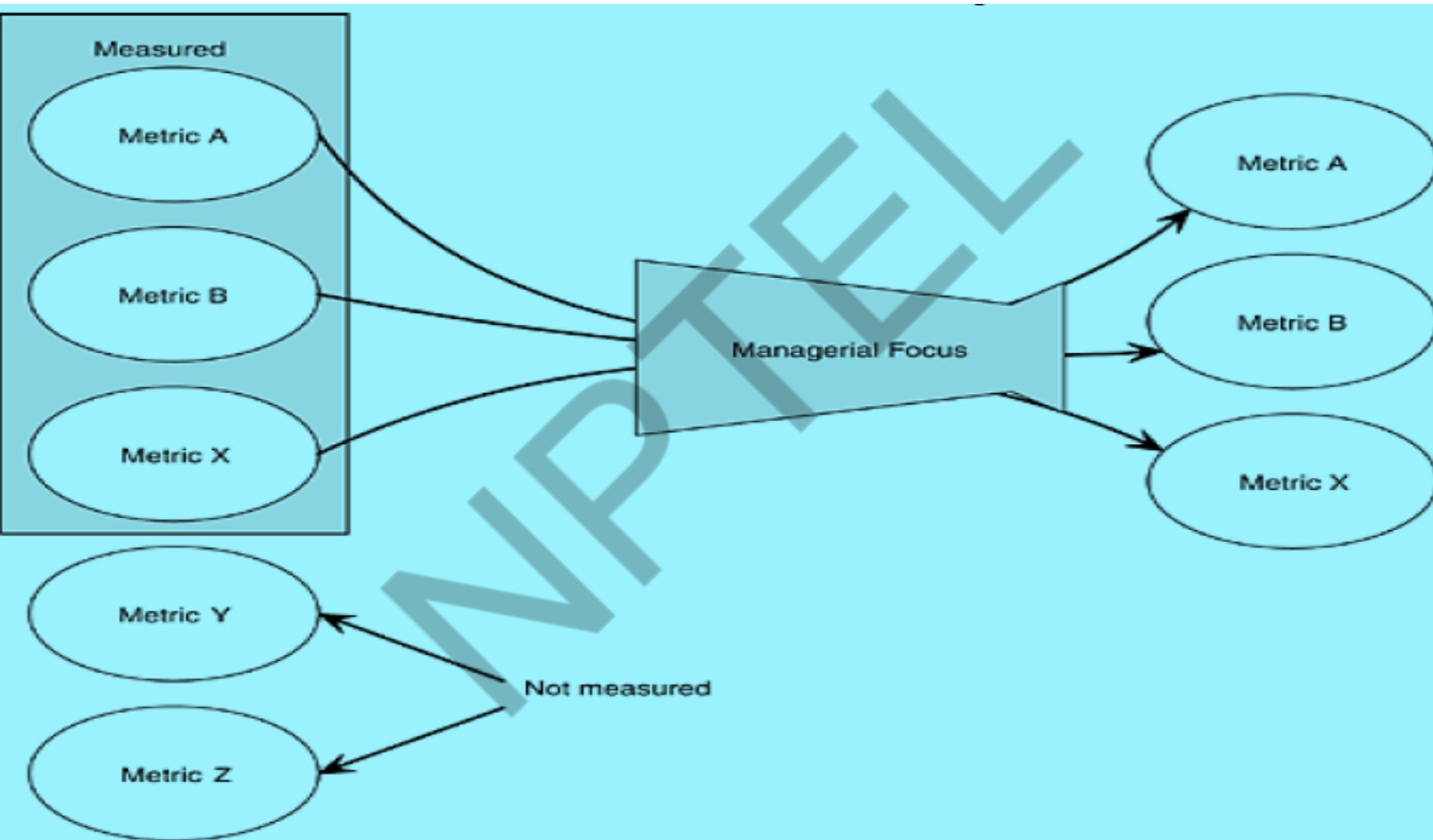
Agency Agent Conflict

- A manager or employee will maximize the metrics that are actually measured.
- If a manager is told that a high market share for a product, even though quality (not measured) might be equally important.

Are the right things not measured

What is desired

What is maximized



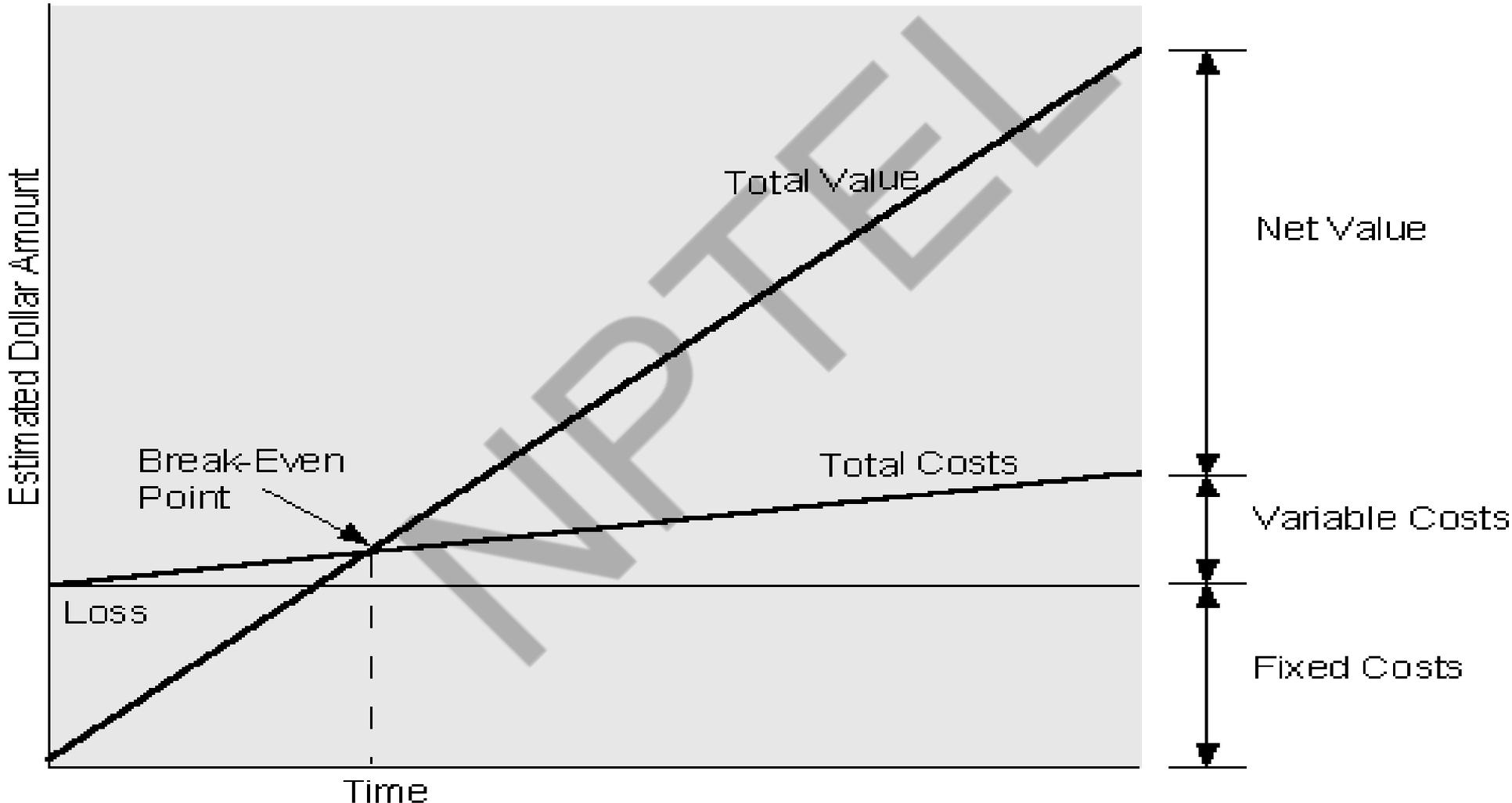
Source: Tiwana, A.: Knowledge Management Toolkit (2002)

Real-options analysis

- Real option analysis can reduce uncertainty and help quantify expected outcomes and risks.
- The strength of options-based analysis lies in its ability to account explicitly for the value of flexibility for which traditional metrics cannot account.
- This approach befriends uncertainty that other approach fear.
- This approach also encourages managers to think of every investment in KM as an initial investment against a unexpected innovation, or regulatory change.

Real-options analysis

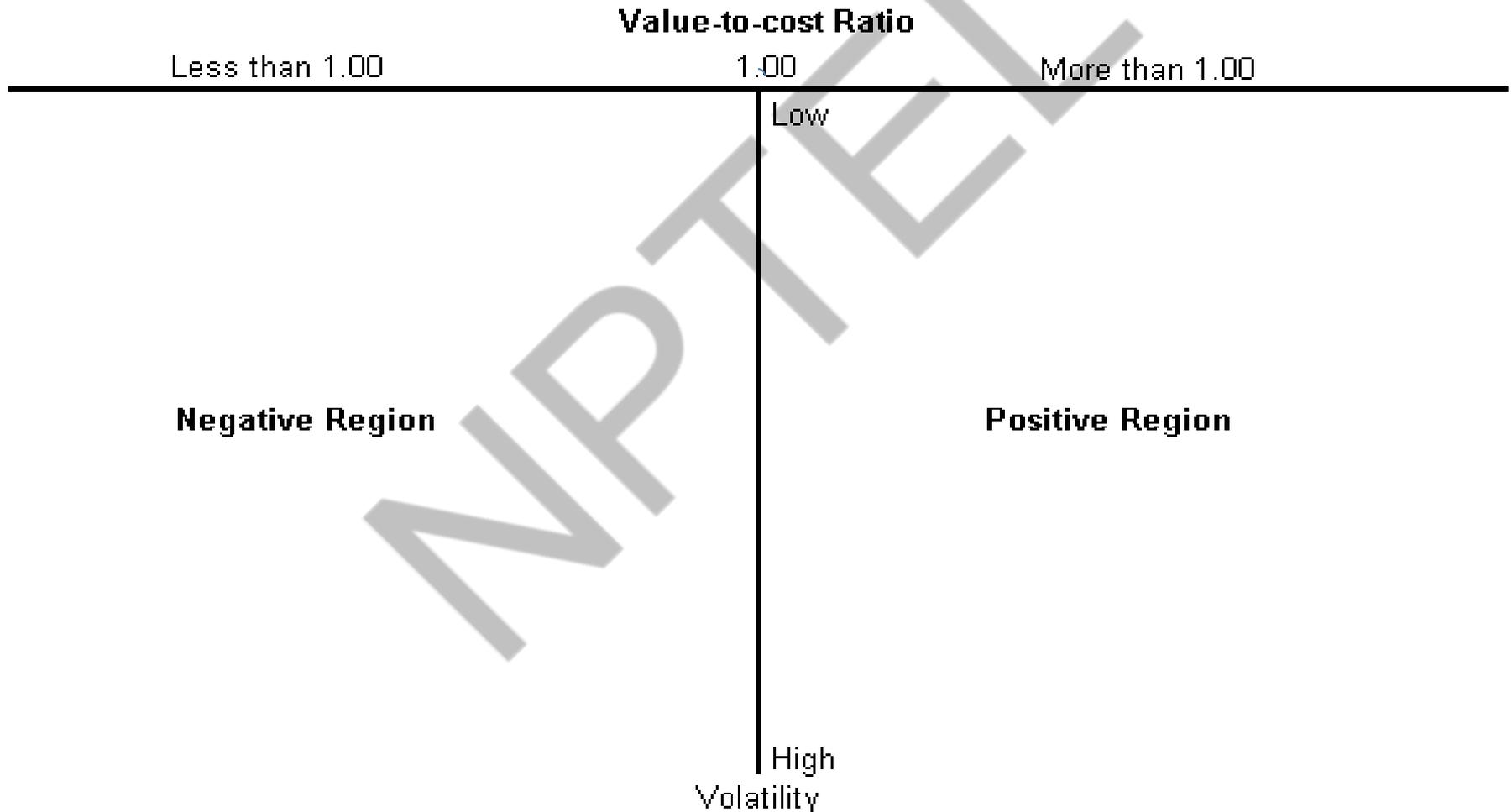
- A KM project results in an initial cost that is fixed and irrecoverable. In addition, each increment adds some variable cost to the picture



Source: Tiwana, A.: Knowledge Management Toolkit (2002)

The option space

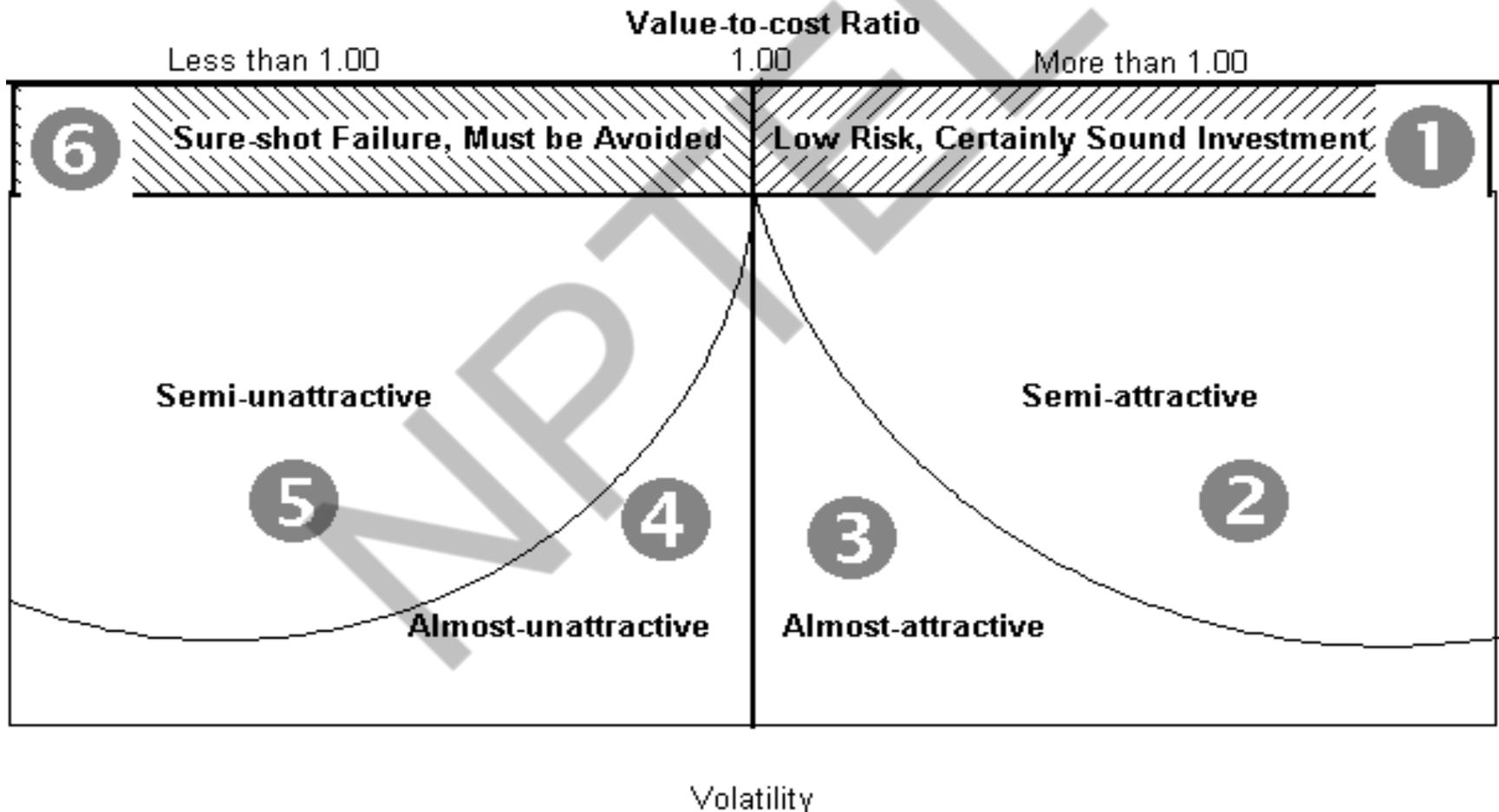
- The ratio of the net value to the sum total of such costs for each independent and decomposable investment is the starting point for options-based analysis-



Source: Tiwana, A.: Knowledge Management Toolkit (2002)

The option space

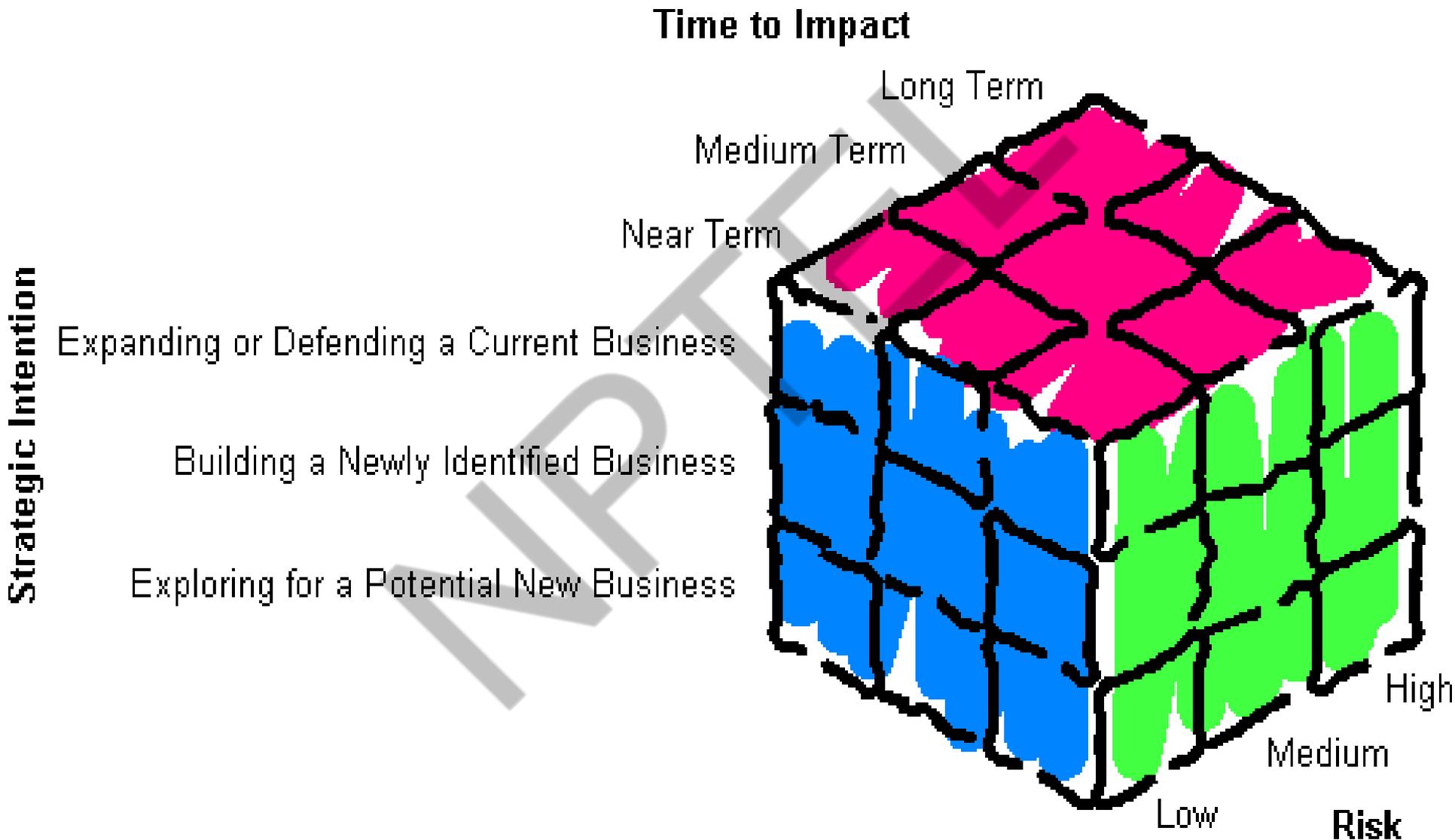
- The option space can further be divided into a half-dozen segments that represent relative differences, compared with the adjacent segments.



KM investment as portfolio of options

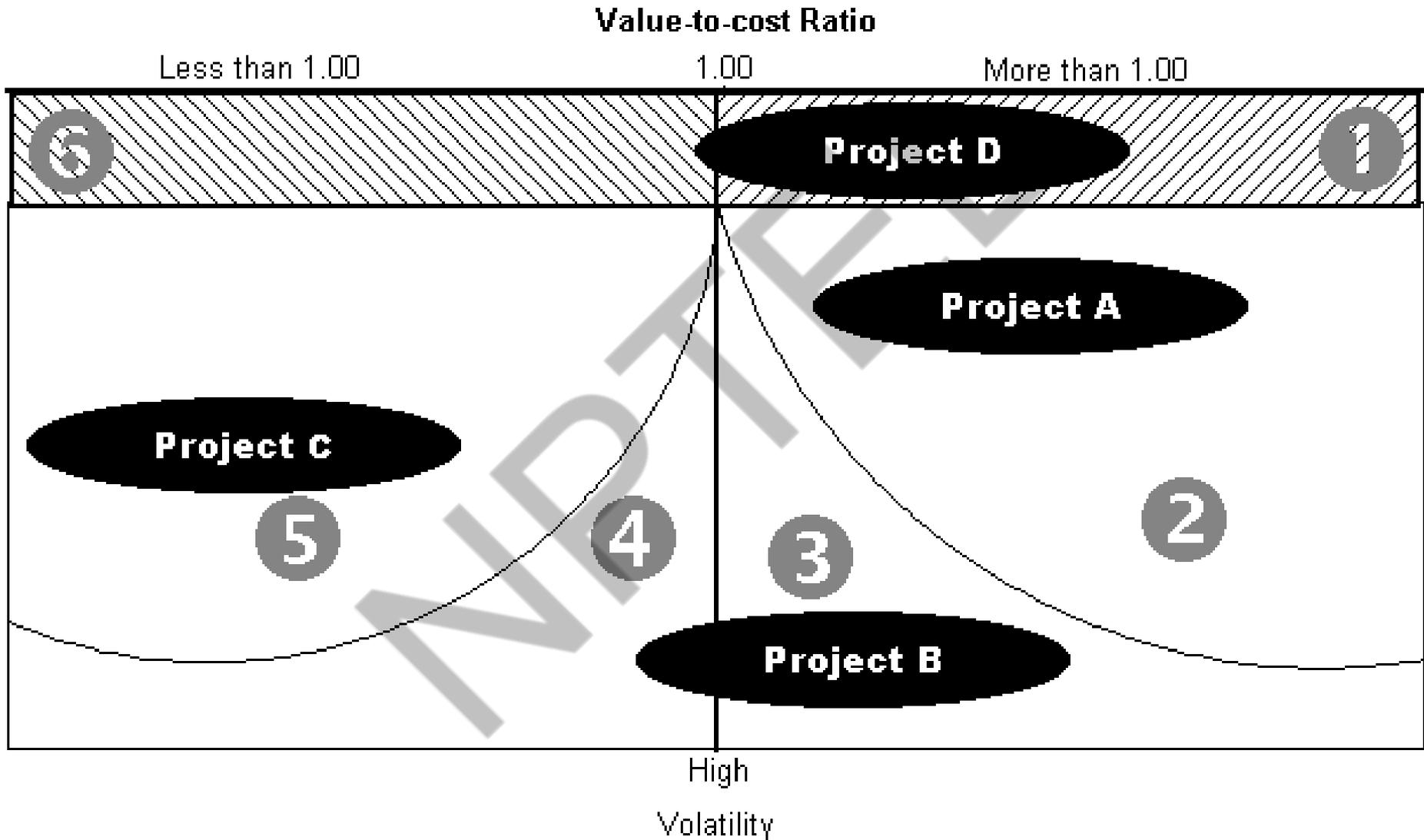
- A series of investment in a KM initiative can be thought of as a series of options that build toward a portfolio.
- Each investment might have a different level of risk, strategic intent, and time to fruition.
- The goal is to nurture and manage a KM initiative as portfolio of well-balanced investments.
- Real-options analysis can allow manager to think several moves ahead of their present investments.

Impact of risk, strategic intent, and time to fruition



Source: Tiwana, A.: Knowledge Management Toolkit (2002)

Value to cost ratio across projects and volatility



Source: Tiwana, A.: Knowledge Management Toolkit (2002)

Measuring Inputs for Real-Options Models

- Benchmarking.
- The Benchmarking Process
- Benchmark Lessons
- House of Quality and Quality Function Deployment
- The Balanced Scorecard Technique

Benchmarking

- Many large firms have adopted benchmarking as a significant, systematic technique for measuring the company's performance toward its strategic goals.
- Benchmarking can also provide insights into areas such as:
 - Overall productivity of knowledge investments
 - Service quality
 - Customer satisfaction and operational level of customer service
 - Time to market in relation to other competitors
 - Costs, profits, and margins
 - Relationships and relationship management

Benchmarking

- The wise learn many things from their enemies
 - By benchmarking your own business against your competitor's, you get information on how to tweak your company's performance goals to stay competitive, in relation to your competitors
 - Benchmark Targets

What Do You Benchmark Against?

Benchmark Target	Upsides	Downsides
Other units within your company	This breaks down internal barriers to communication and conversation between various divisions and offices of your company; targets are easily accessible.	Internal policies might come into play; the measures are not indicative of what is considered superior performance in your industry.
Competing firms	Your company is measured against its direct competition; you get a fair understanding of the knowledge assets of your competitors as an aggregate; partners can easily be identified.	Legalities can make this very difficult; if a trusted third party such as a consulting firm is brought in, additional costs are imposed.
Industry	All of the above; this also lets you gauge your company's standing in the overall market	This can be very expensive; privacy issues begin to surface.
Cross-industry	You might be able to gain valuable insights from noncompeting firms and apply them to your own company.	All of the above; this does not let you gauge your company's standing in relation to your competitors; the sample population is not truly representative of your own industry or sector; it is often difficult to persuade companies to participate in such an effort; the cost of such an effort is rarely worth it.

Source: Tiwana, A.: Knowledge Management Toolkit (2002)

The benchmarking process adapted to knowledge work.

- Spendolini has suggested **a five-step procedure for benchmarking efforts**. An adaptive version of this process applied to knowledge work.
- The benchmarking process can be used for self-comparison.

Benchmark Lessons-

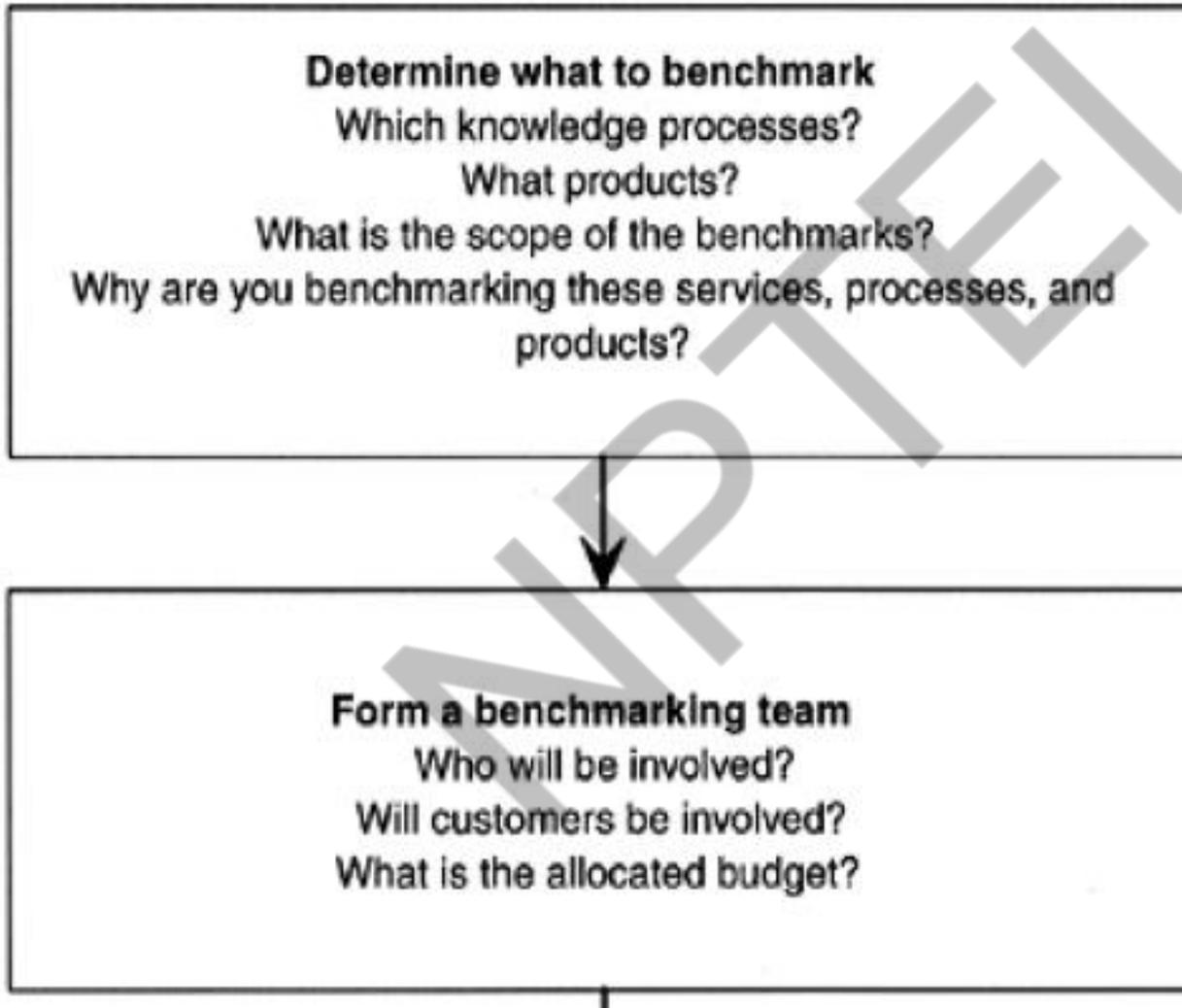
1. Make it valuable.
2. Make it rare.
3. Make it hard to copy.
4. Make it hard to substitute.

Prevalent role models in the benchmarking process

Performance Areas	Commonly Accepted Role Models
Speed of product development	Netscape Corporation
Knowledge management integration	Buckman Labs
Knowledge management technology implementation	Platinum Technology
Software development and marketing	Microsoft Corporation
Innovation and new product development	3M
Customer loyalty	Apple Computer
Brand management	Disney
JIT manufacturing	Toyota
Logistics and enterprise-wide IT leverage	Wal-Mart
Knowledge management measurement efficacy	Skandia
Mail order	Dell, L.L. Bean, Lands End, Gateway
Franchising	McDonald's
Quality management	Motorola
Product line recognition	O'Reilly publishers
Strategic planning	General Electric
Cost-based competition through logistics and market demand volume	E-machines Inc., Airtran, Southwest Airlines, Apollo Printers

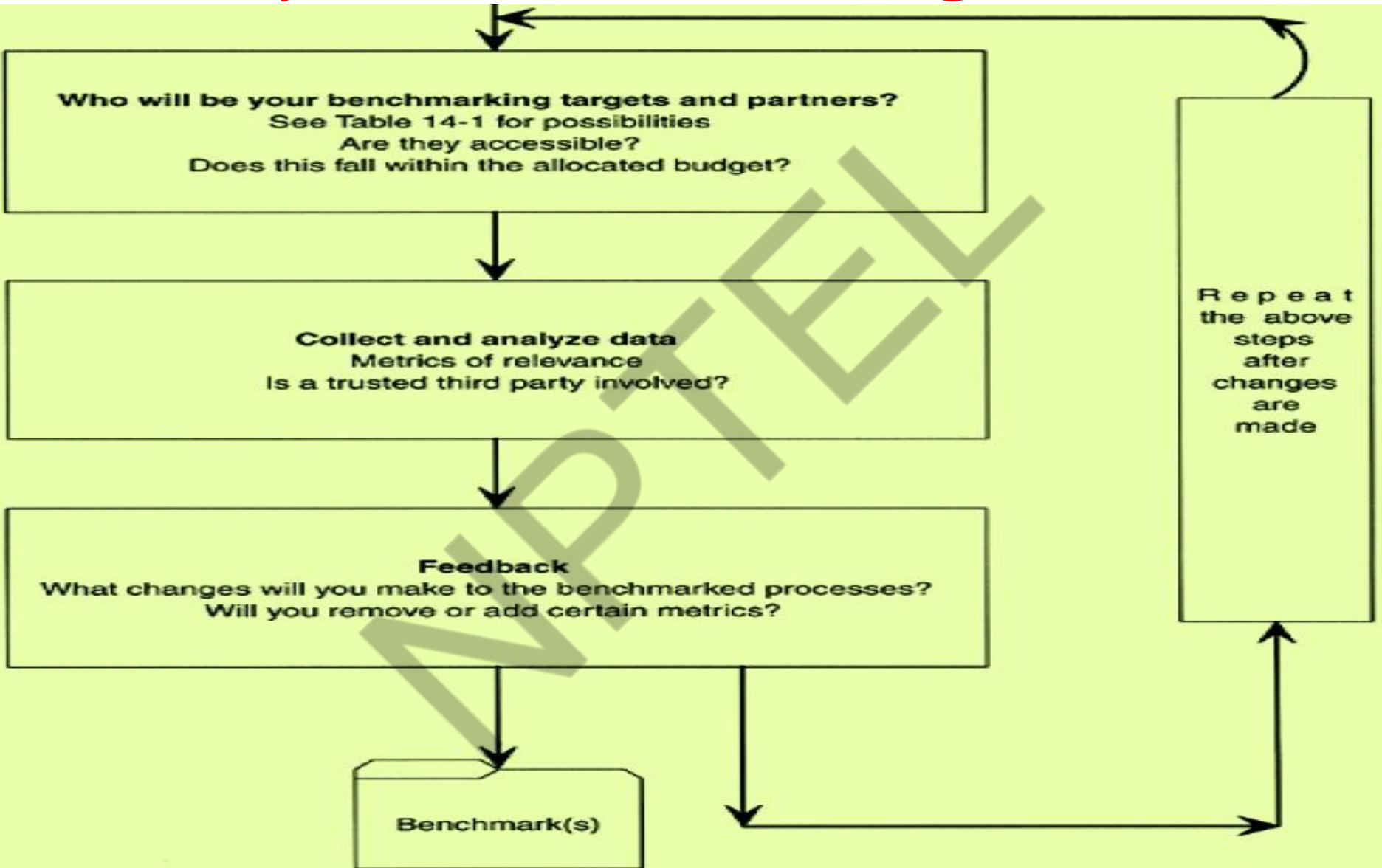
Source: Tiwana, A.: Knowledge Management Toolkit (2002)

Steps of Benchmarking Process



Source: Tiwana, A.: Knowledge Management Toolkit (2002)

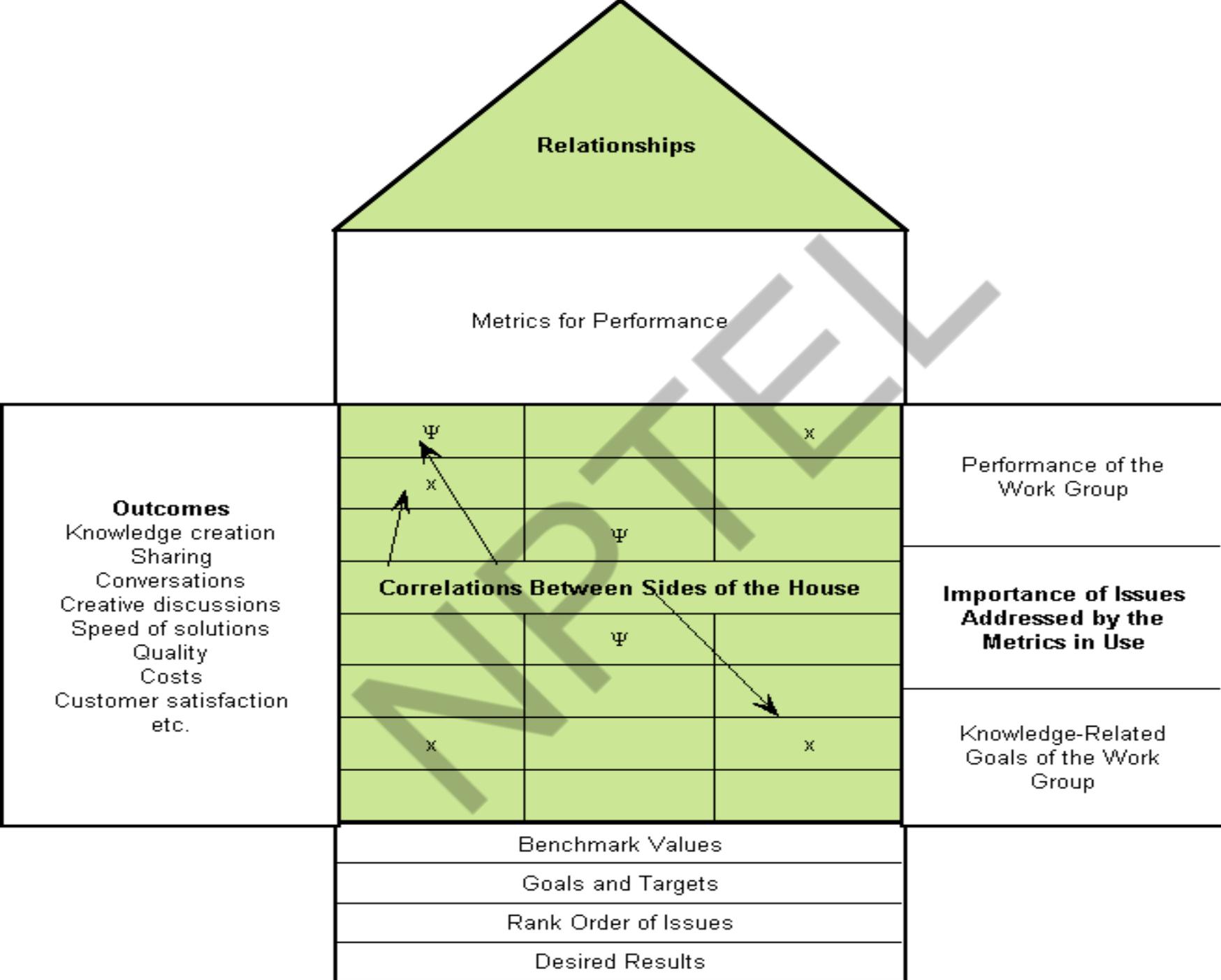
Steps of Benchmarking Process



Source: Tiwana, A.: Knowledge Management Toolkit (2002)

Quality Function Deployment

- The House of Quality approach was developed by **Hauser and Clausing** in an original paper that appeared in the Harvard Business Review.
- The use of this technique is commonly referred to as Quality Function Deployment (QFD).



Source: Tiwana, A.: Knowledge Management Toolkit (2002)

House of Quality Metrics Matrix

- Be careful to select outcome that are clearly observable without much delay.
- Examples of such outcomes include:
 - **Improve knowledge sharing** to a level where 20% of an average employee's work is based on existing knowledge
 - **Speed up problem solving** by a factor of 5% over the next six months
 - **Improve quality** such that the rate of failure of product X decrease by 15% within the next 12 months
 - **Generate more conversation among employees**
 - **Increase customer satisfaction** level by 50%

The Balanced Scorecard Technique

- The Balance Scorecard provides a technique to “maintain a balance between long-term and short-term objectives, financial and nonfinancial measures, lagging and leading indicators and between internal and external perspectives

What is the face that we want to show to our shareholders?

The Financial Perspective				
Goals	Metrics	Targets	Initiatives	

How should our customers perceive us?

The Customer Perspective				
Goals	Metrics	Targets	Initiatives	

Are our internal processes effective, efficient, and at their best?

The Internal Business Process View				
Goals	Metrics	Targets	Initiatives	

Vision
Strategy

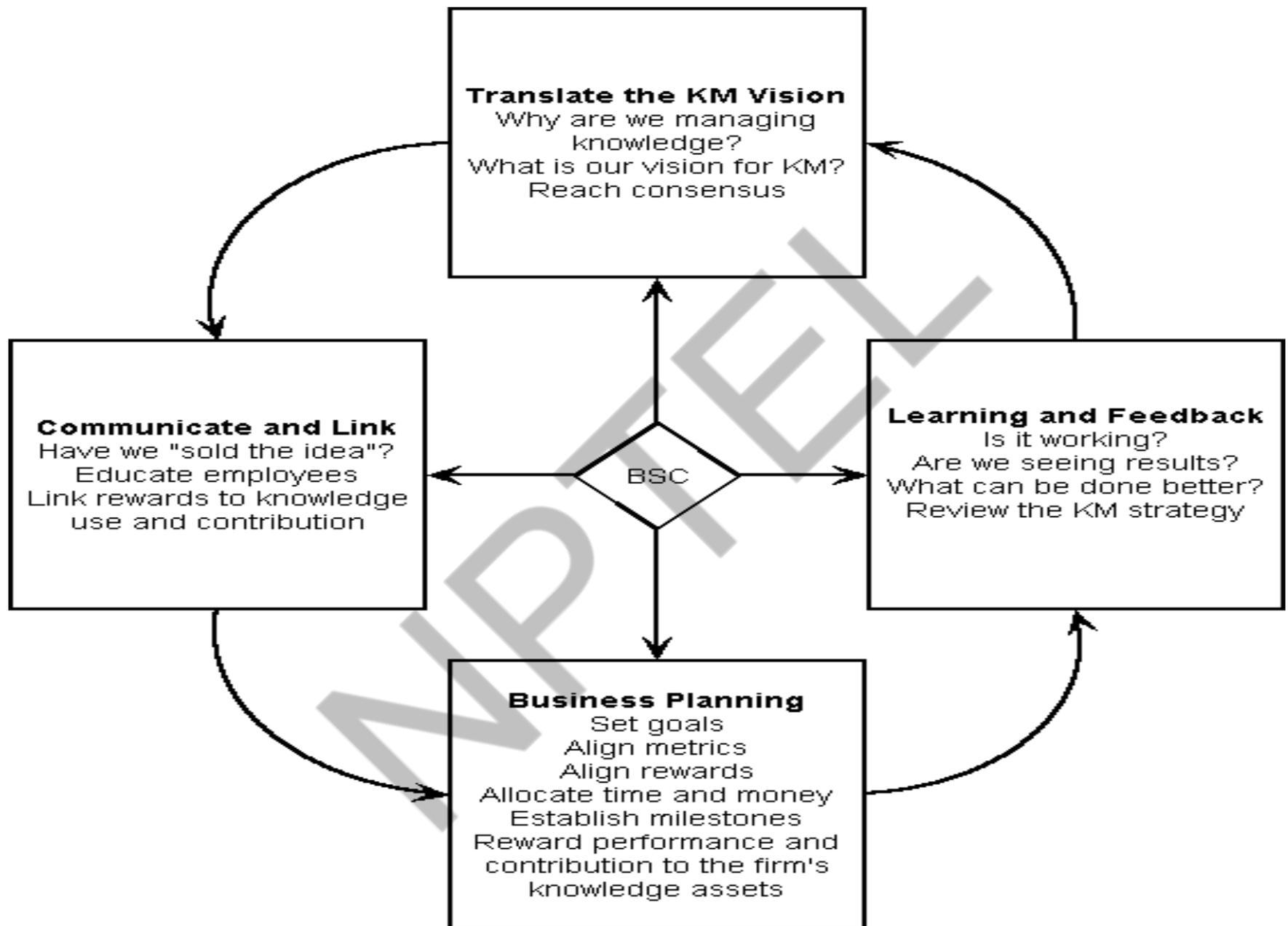
The Learning and Growth Perspective				
Goals	Metrics	Targets	Initiatives	

How can we sustain our competitive advantage over time?

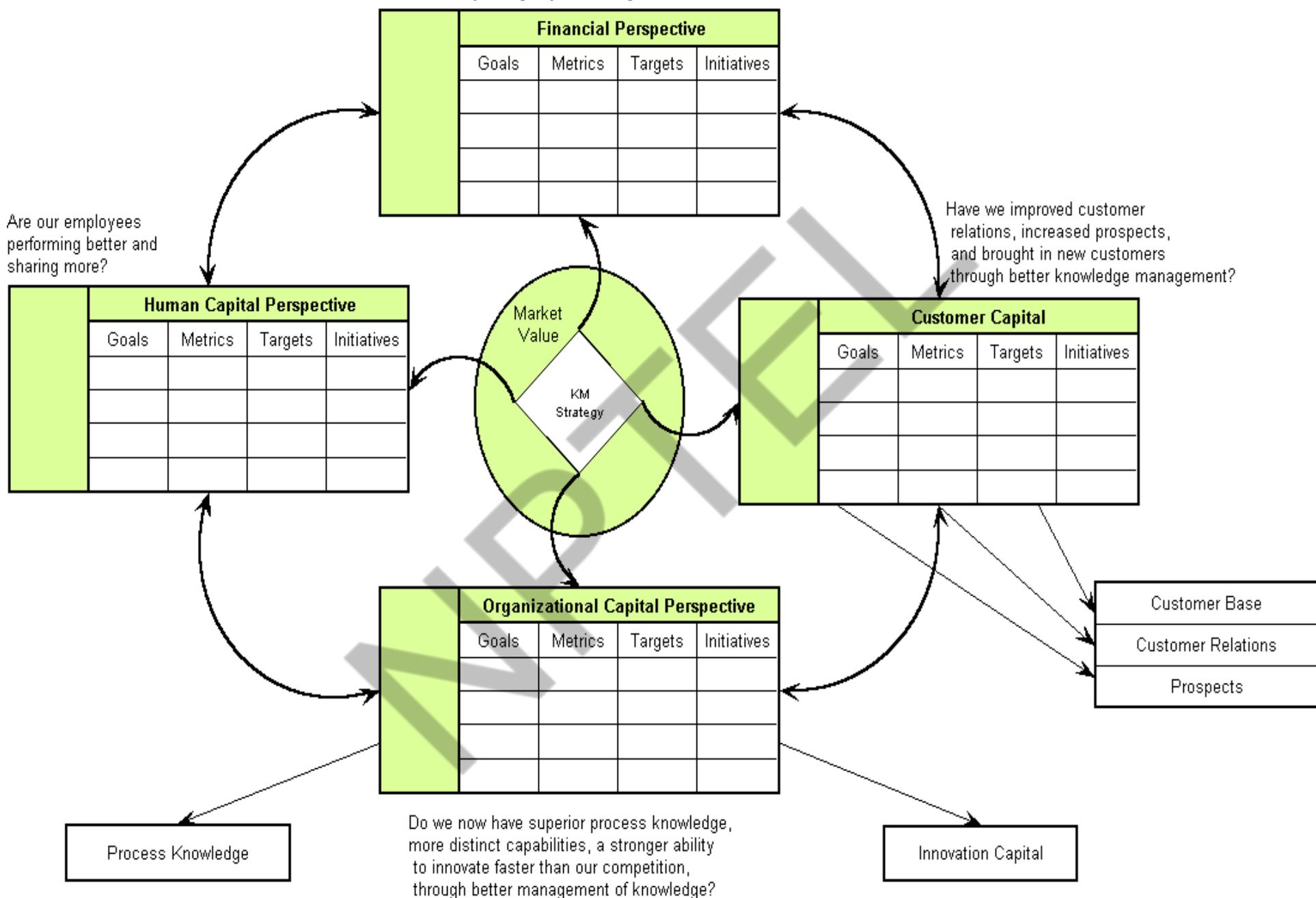
Source: Tiwana, A.: Knowledge Management Toolkit (2002)

The KM Balance Scorecard

1. Translate the KM vision
2. Communicate and link
3. Do a reality check
4. Incorporate learning and feedback



Is our investment in KM yielding any financial gains on the balance sheet?



Source: Tiwana, A.: Knowledge Management Toolkit (2002)

KPMG's Choice of Dimensions for its Balanced Scorecard

Balanced Scorecard Dimensions	Questions
Client orientation	What do I want to achieve with my existing clients?
Market orientation	What am I going to do to decrease existing client turnover and find new clients? What am I going to do to strengthen my position in the business?
People orientation	What am I going to do to enable the team that I am managing to function better and to help my employees gain stronger competencies?
Result orientation	How can I attain better results with the same inputs? How can I increase the added value of my teams and myself?
Personal effectiveness	What am I going to do in the coming year to improve weak points and strengthen strong points?
Professionalism	How do I keep abreast of the newest developments? How do I collaborate with my peers more extensively?

Source: Tiwana, A.: Knowledge Management Toolkit (2002)

Advantages of KM balanced scorecards

- The ability to provide a snapshot of the intellectual health of your firm at any point in time.
- Built-in cause-and-effect relationships that can help you guide your KM strategy.
- A sufficient number of performance drivers and metrics.
- Capability to communicate the KM strategy throughout the firm.
- Capability to link individual goals with the overall knowledge strategy of the firm

Advantages of KM balanced scorecards

- A direct, and often missing link between long-term knowledge and competence goals of the firm and its annual budget.
- Translation of the lofty visions of a firm into more doable, realistic, manageable, and specific performance goals.
- Logical integration into the overall strategy of your business while still making sense

Advantages of KM balanced scorecards

- Objective measurement of the contribution of knowledge to the more intangible source of competitive advantage, such as customer satisfaction and employee skills and competencies.
- A direct link to financial measures and your KM system's effect on the company bottom line.

Limitations of KM Balanced Scorecards

- On the downside, a well-designed Balance Scorecard is more difficult to develop than a similar quality function (QFD) model.
- It is rarely possible to adopt directly another firm's Balance Scorecard because subtle differences exist even between very similar firms

Alternative Metrics

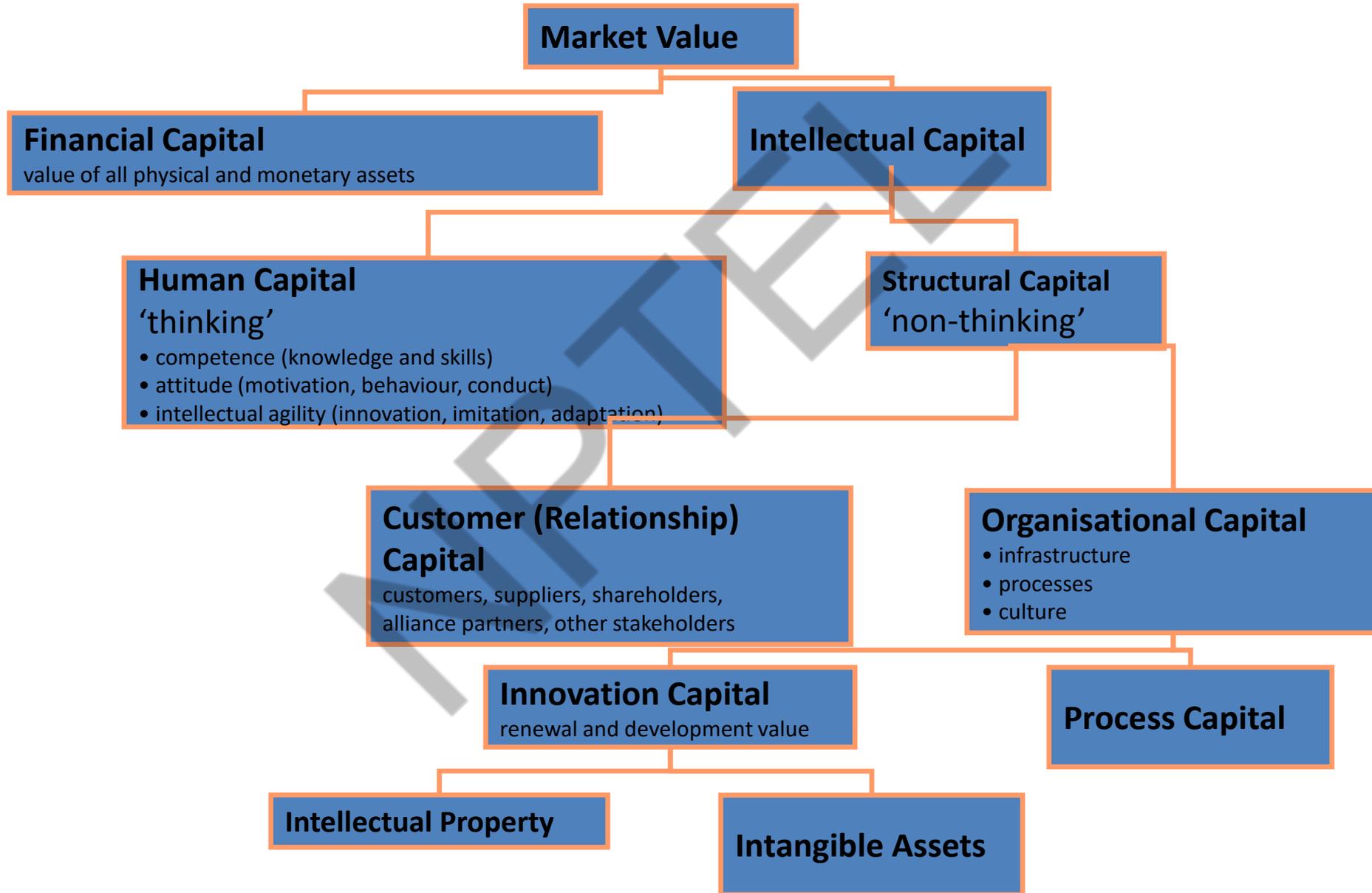
- The Skandia Method.
- The FASB Method.

NPTEL

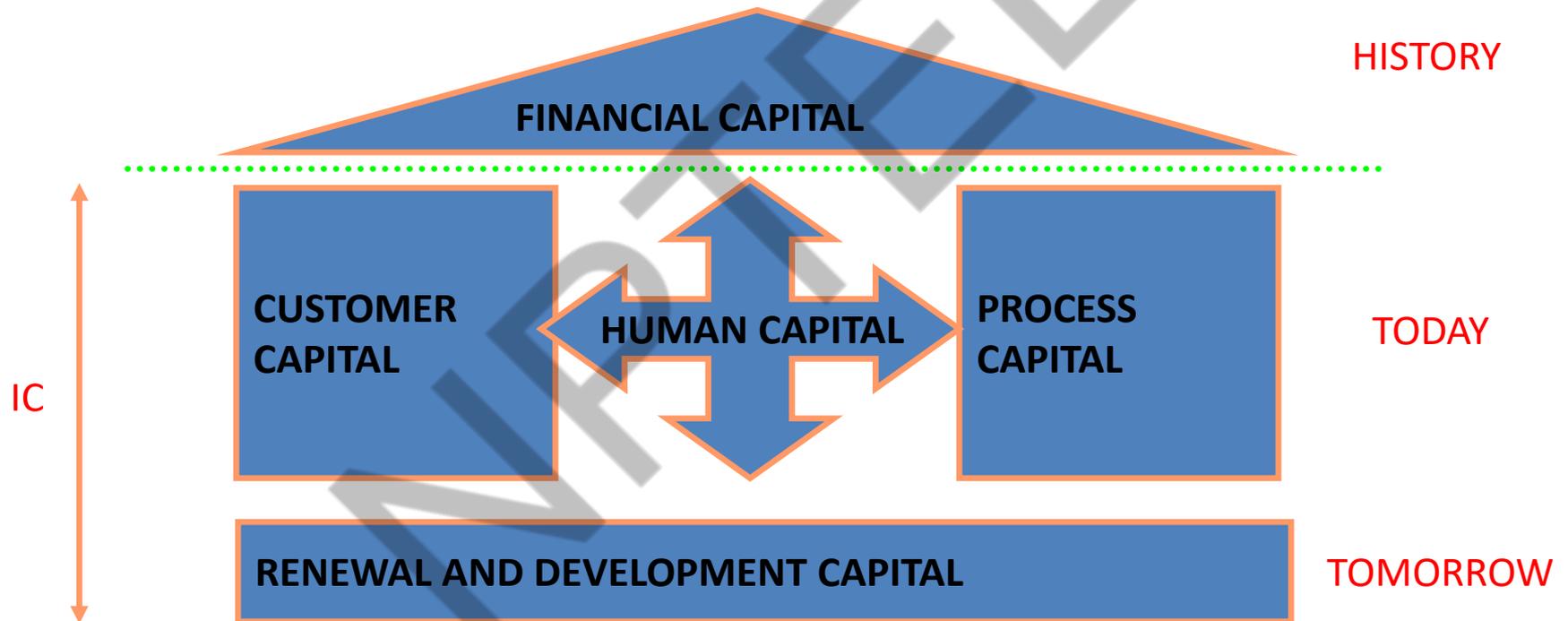
Skandia: The Early Pioneer

- Skandia - a Fortune 500 Swedish insurance and finance company
 - one of the first companies to issue an Intellectual Capital Report as a supplement to its Annual Report for shareholders (1994)
 - Leif Edvinsson
 - as one of the first ever directors of intellectual capital in a firm, was the principal architect of Skandia's initiative
 - intellectual capital guru
 - developer of an IC reporting model called the Navigator

The Skandia Model (adapted from Roos et al, 1997)



Edvinsson's Navigator



Skandia IC Measures (from Bontis, 2001)

Skandia's value scheme therefore contains both financial and non-financial elements to estimate the company's market value.

Skandia uses 91 new IC measures (or metrics) along with 73 traditional (accounting) measures in the five focus areas.

Strengths of the Navigator model

- One of the first attempts to create a taxonomy to measure intellectual capital
- Recognises the importance of
 - customer capital
 - organisational attributes (e.g. its processes and development)in creating value for an organisation

The FASB Method

- Established in 1973, the Financial Accounting Standards Board (FASB) is the independent, private-sector, not-for-profit organization establishes financial accounting and reporting standards for public and private companies and not-for-profit organizations that follow Generally Accepted Accounting Principles (GAAP).
- The mission is to establish and improve financial accounting and reporting standards to provide useful information to investors and other users of financial reports and educate stakeholders on how to most effectively understand and implement those standards

Recommendations for KM Assessment

- Why doing KM
- Establish a baseline
- Also Consider qualitative approaches along with quantitative approaches
- Avoid KM metrics that are hard to control
- Measure at the appropriate level
- Link reward to KM assessment results
- Be conservative in your claims

2. Ethical, Legal and Managerial Issues

– Topics Covered-

- Knowledge owners
- Legal issues- liability, basis of liability, copyrights trademarks, trade names, warranties, strict liability, Legal disputes in KM, The malpractices factor
- The ethical factor- Ethical decision cycle, threats to ethics
- Improving the climate- code of ethics, Privacy factors
- Challenges
- Implications for KM

Issues

- Who is the custodian of the company's knowledge base.
- How to manage company's sensitive knowledge
- How to be the corporate conscience of knowledge
- How to handle tough corporate questions regarding the consequences of knowledge based questions.
- What are the ethical legal dilemmas faced by the company in KM

Knowledge Owners

- Your knowledge is your own when transferred from parents or from one craftsman to another through apprenticeship
- In a corporate environment, owners of knowledge are the expert, the company, and the user who acquires the knowledge automation system.
- Knowledge ownership may be an issue if
 - an expert is selling his personal knowledge
 - If an expert is unwilling to release his knowledge gained on the job.

Releasing Knowledge Gained on the Job

- Unless an intellectual property agreement is signed in advance, one's knowledge on the job is his or her own
- Ideally, companies have the expert sign a pre-employment contract, releasing his knowledge gained during employment to the employing organization

Legal Issues

- Regardless of where knowledge originates, when it is misused or misrepresented, liability will become an issue
- If a knowledge repository produces the wrong solution, which causes losses or injury to others, it triggers litigation
- Users and developers should be aware of legal ramifications arising from knowledge sharing and automation.

Some examples of legal issues

- A physician diagnoses a patient after consultation with his knowledge based system for treatment, but the patient dies as a result of misdiagnosis and treatment
- A knowledge based system used by an architect incorrectly determines the stress requirement of a new building and later on it collapses killing people.
- A lawyer using a knowledge base legal system advises his client of the tax forms to file and what to include in his return to get tax exemption. The client is later issued notice by the IT department for wrong information.

Liability question

- Any knowledge that is misused is a liability.
- The blame may be on knowledge developer who might have tapped wrong knowledge.
- It may be with repository that produces the wrong solution
- In day to day business operations tort and contract laws pose challenges for organizations and legal community.

Liability of the Knowledge Developer

- The developer is vulnerable to charges of personal liability under the doctrine of *respondeat superior*
 - If the designer is an employee of the company that sells the software, the firm is involved in the negligence action
 - Either way, the company is responsible for certifying the system before it is released for commercial sale

Liability of the Expert

- Expert involvement and potential liability vary, since limited cases have been litigated
- If the knowledge automation system is faulty due to poor expert advice, litigation is bound to follow
- Experts open up their knowledge to scrutiny, even when the resulting system is far removed from the expert's control

Liability of the User

- End users of a knowledge based system are not immune to law.
- Users are directly responsible for proper use of the system
- By not properly using an available resource, users could be negligent by omission or “passive negligence

The basis of liability

- Tort law is major area of concern with the issues of strict liability and negligence falling under it.
- A special area of law that remedies wrongs between parties
- Settles contract problems between the domain expert and the employer in terms of knowledge ownership
- A business could be found negligent if it did not exercise due care in monitoring and safeguarding its intellectual property
- Misrepresenting a product is subject to litigation

Knowledge—A Product or a Service?

- If knowledge is what you say, not what you see, it can be viewed as a service
- If knowledge is codified and packaged as a mass-marketed item, it is viewed as a product
- Many legal experts want knowledge-based systems to be considered as services in order to avoid the strict liability associated with products

Knowledge—A Product or a Service?

Knowledge as a Product	Knowledge as a service
Off the shelf software	Custom design software
Mass marketing software	
Custom designed but affects a large number of customers	Negligence principles used
Proving negligence unnecessary to holding developer	Negligence caused of action more difficult for plaintiff to prove
Uniform commercial code liability limit allowable via disclaimer of warranty	For liability law of state applies rather UCC

Source: Awad and Ghaziri: Knowledge Management (2007)

Copyrights, Trademarks, and Trade Names

- An area that falls under intellectual property law
- Copyright is ownership of original work created by an author
- Copyright law gives author the right to exclude others from using the finished work

Copyrights, Trademarks, and Trade Names (cont'd)

- In KM, a knowledge repository and the way it is organized are copyrightable
- Logos and trademarks are also copyrightable
- On the Web, images and banners are protected by copyright laws

Copyrights, Trademarks, and Trade Names (cont'd)

- A trademarks means registration of a company's trade name so that others cannot use it.
- A trademark is also a symbol or a word that distinguishes a good from other goods
- An outsourced Web site is intellectual property and belongs to the company under contract

Warranties

- An assurance made by seller about the goods sold
- An express warranty is offered orally or in writing by the maker of the product
- An implied warranty is part of a sale that has been made that the good will do what it is supposed to do—implied warranty of merchantability
- A DICLAIMER is the seller's intention to protect the business from unwanted liability.

STRICT LIABILITY

- Joint & several liability for developers, manufacturers & distributors if tort theory applies
- Protects web visitor regardless of whether anyone is at fault
- **TAXATION ISSUES-** Controversial
 - Different jurisdiction
 - Consumers' reaction

Legal disputes in knowledge based system

- In KM several disputes issues may arise having legal implications
- An expert owns the knowledge of the work if there is no prior agreement.
- If a knowledge developer builds the system and a problem arises, he is subject to charges of personal liability under the doctrine of respondent superior.

Legal disputes in knowledge based system

- If the developer is a company employee, the organization is also involved in the negligence action.
- If a knowledge based system is a product, proving negligence is unnecessary to hold the developer liability
- If a knowledge based system is a service contract law of the state will apply.
- Case involving warranties require the uses to show who is at fault.

Web linking domain name issues

- In E-commerce unique knowledge about a product, a company or service resides in websites.
- Hyperlinks- infrastructure of the internet is designed around to link text or images addresses automatically
- This jumping from one page to another raises some legal issues-
 - Referencing a linked site without permission from the site owner
 - retrieving or downloading information without referencing or permission
 - Unauthorized use of company's trademark
 - Adding a web programme to a company's website without permission

Domain name issues

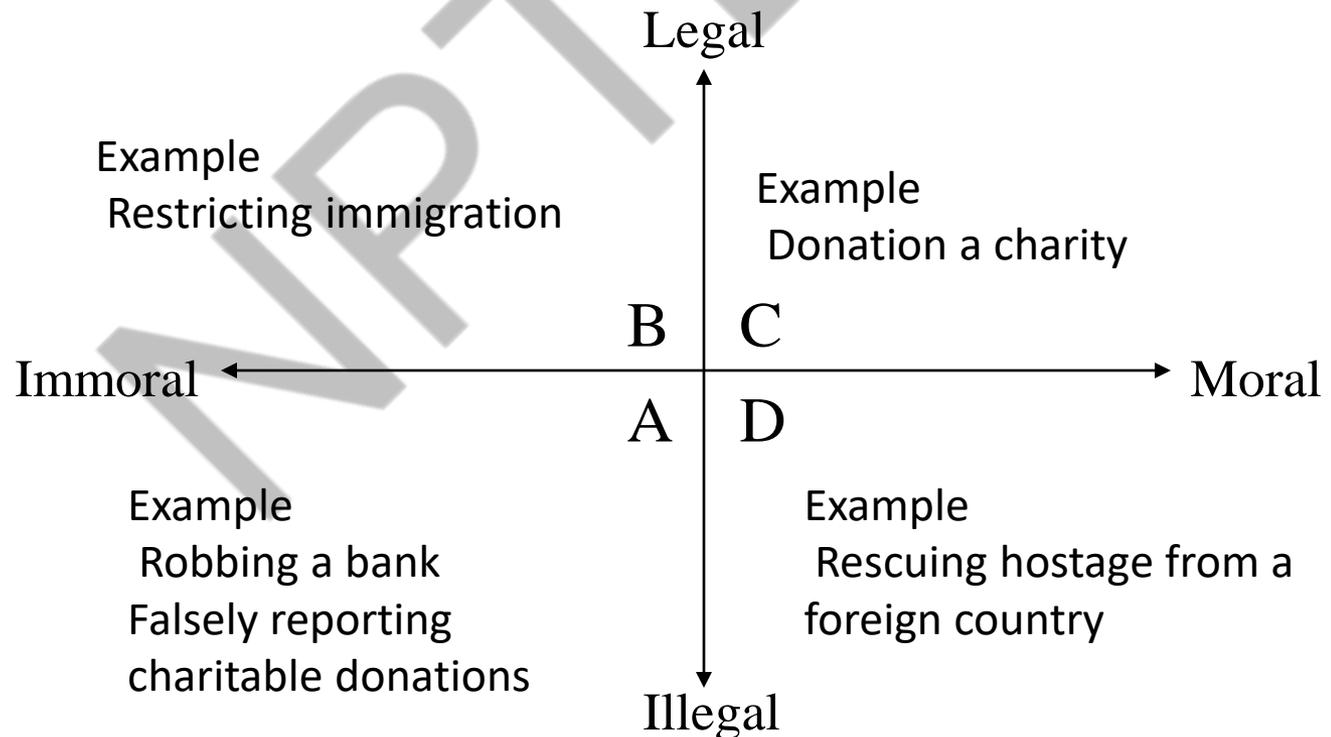
- It represents a company's intellectual capital.
- There could be dispute as who is the owner of the domain name.
- InterNIC (Internet network information centre) manages the domain names on a first come first serve basis,
- **Idea about the use of domain name and trade marks-**
 - *Make sure that domain name does not infringes any trade mark*
 - *Secure registration for the domain name*
 - *Register your domain name with Internet Nic.*
 - *Get permission before linking to other websites to avoid liability issues*

The malpractice factor

- Malpractice in KM is negligence applied to knowledge developers for design defects in KM system for professional use.
- Knowledge developers must be professionals to be held liable for malpractice.
- There is no standardization or certification for knowledge developers

The Ethical Factor-

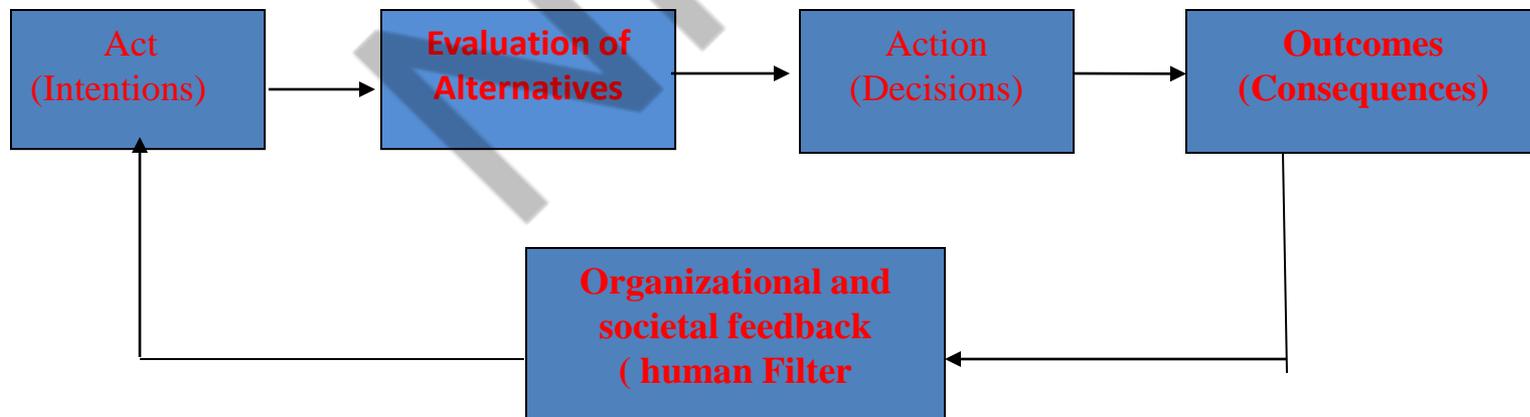
- **Ethics** –Fairness, justice, equity, honesty, trustworthiness & equality Subjective
- Stealing, cheating, lying or backing out on one's word are descriptions of lack of ethics.



Ethical Decision cycle

- Knowledgeable people are expected to follow Ethical behaviour and consider a number of elements to make ethical decisions-
 1. The nature and essence of the act- Is it fair reasonable or conscionable
 2. The consequences of the action or inaction on the parties involved
 3. The far reaching consequences of action or inaction on the organization or society.

Ethical Decision Cycle



Major threats to Ethics

- Faster computers & networks
- Sophisticated telecommunications & routers
- Massive distributed databases
- Eases of access to information & knowledge base
- Transparency of software

Improving the ethical climates

- Top management support
- Code of ethics
- Strong Ethics training program
- Motivation to focus on honesty & integrity
- Prompt dealing of unethical behaviour

WHERE TO START

- Bottom-up
 - Inculcates ethics behavior at the employee level with full support of top management
- Top-down
 - The actions of the company start with the CEO
 - Extend to a variety of stakeholders

Code of ethics

- A declaration of principles and beliefs that govern how employees of a corporation are to behave
- Inspirational & disciplinary
- All-compassing & stable over time
- **Self- Assessment-** A question-and-answer procedure
- Allows individuals to appraise & understand their personal knowledge about a particular topic
- An educational experience

Privacy factor

- Notice
 - Right to be told in advance
 - Choice
 - Final say regarding the use of personal info
- Access
 - Access & correct any personal info
- Security/integrity
- Enforcement
 - Backed by the courts if any principles are violated

New technology related ethical problems

- Traditional rules of conduct are not always applicable to a new medium
- A question that often arises: Should a device, a technique or technology be restricted because people can use it for illegal or harmful actions as well as beneficial ones?

Example

Mobile phones with cameras. Pupils at school take photos of other pupils in the shower, and publish the pictures on the Internet

Information Technology Ethical Challenges

- No Form of licensing for computer professionals
 - Results in no real way to enforce ethical standards within the computing field
 - There is movement within the industry to create a licensing process but there are many issues to be resolved
 - What will be included on the exam?
 - How often will an IT professional be required to renew the license?
- Developed by several organizations
 - Adoption
 - Implementation
 - Monitoring
 - Example: <http://www.acm.org/constitution/code.html>

Web Design Related Challenges:

- Implementation of features
 - Pop ups
 - Blocking/filters
 - Aliases and redirecting
 - Cookies
 - Privacy policies
 - Security policies
 - Spyware
- Use of other design features
 - Javascript
 - Graphics - pictures, buttons, logos, icons
 - Content
 - Design layout
 - Accountability/responsibility
 - Outdated material, inaccurate material

Commerce Related Challenges

- Fraud
- Taxation
- Free Trade
- Gambling
- Auctions
- Spamming
 - Who were Canter and Siegel?
 - Spamming cell phones?
- Term papers for sale
 - Atlanta Journal Constitution article

Workplace Challenges

- Accessibility
- Ergonomics
- Outsourcing
- Telecommuting
- Customer relationships – Vendor relationships
- Should IT professionals be in the ethics business or should other areas of the business handle these issues?
- *Monitoring*
 - Should your employer have the right to monitor private email messages?
 - What are the two most popular Web sites for American workers? *Playboy and ESPN*

Workplace Challenges

- Employers monitoring employees' email and Internet use cite legal liability as the primary reason to monitor.
- Some companies that monitor have a written email Policy, an Internet Policy, and a Software Policy.
- Some employers have disciplined or terminated employees for violating ePolicy.
- Some organizations having email retention & deletion policies in place.
- Some companies have been ordered by courts to turn over employee email related to workplace lawsuits.
- Many organizations have battled sexual harassment and/or sexual discrimination claims stemming from employee e-mail and/or Internet use.
-

Music Downloads

- **Risk of getting caught**

- Studies have shown that a majority of the people who share music on the Internet are aware that their actions are illegal,
- But they also know that the chances of getting caught are pretty remote"
- Why is “getting caught remote”?
 - There are peer-to-peer network subscribers in the US with tens of millions more in other countries
- The RIAA(Recording industry association of America) is seeking out people who make their music files available for others to download.
 - The networks have features that allow users to block others from downloading their files but allow them to continue to download files

Challenges: Computing Resource Abuse

- Computers in the Workplace and the Classroom
 - Use or Abuse
 - Internet Access
 - Instant Messenger
 - Laptop use in the classroom
 - Email
 - Legal document
 - Can be modified
 - Flaming
 - Access: Computer Usage policy, Email policy
- Computer Crime: Viruses, [Hackers](#), Theft
 - *“These cyber swindles and dot-cons present new challenges to law enforcement” said John Ashcroft*

Challenges: intellectual Property

- Electronic Copyright
- Licensing
- Interoperability
- Licensing
 - Cyberlicenses, Shrinkwrap, Shareware, Freeware
- MP3
 - court case against college students
 - University Internet Usage policies
- Internet Downloads
 - Files
 - Graphics
 - Text

Challenges: Intellectual Property

- Patent, trade secrets, and copyright law
 - Who owns the program
 - Who owns the algorithm
- Software Piracy
 - Why shouldn't I use pirated software? Who am I hurting by doing so?
 - Piracy exists in everywhere.
 - Loss of revenue hurts everyone.
 - All software piracy is illegal and **Software piracy is unethical.**
 - Various studies have found that the software industry loses approximately \$12 billion every year .
 - State Industry Study
- CD-RW

Other Challenges

- Decision making using Expert Systems
- Network Security
- Software accuracy and reliability who is ethically responsible?

Some Ideas to Ponder

- **Computer ethics today is now a global effort**
 - The gap among the rich and poor nations, rich and poor citizens exists. How can it be eliminated or reduced ethically and morally to provide information and services that will move them to into the world of cyberspace?
 - Will the poor be cut off from job opportunities, education, entertainment, medical care, shopping, voting - because they cannot afford a connection to the global information network?
 - Whose laws will apply in cyberspace when hundreds of countries are incorporated into the global network?
- **What happened? Where did our knowing right from wrong go too?**
 - Are we missing an opportunity to introduce ethics at an early age in children by not integrating these thoughts and practices in video games?
 - Should more controls and regulations be introduced into the system? Will they actually help to improve our moral and ethical behavior?
- **Unethical behavior continues to permeate industry**, what measures, policies, codes of conduct be changed to change this behavior?

Managing KM: Chief Learning Officer

- CLO is charged with KM in the organizations where the emphasis is on the social aspects.
- CLO is the business leader of corporate learning and leads the organization's learning and development strategy, processes and systems.
- CLO usually focuses on human resource development, and employees' learning and training
- CLO's role increasingly involves utilizing ITs to improve KM, often in collaboration with the CIO

Leadership of Knowledge Management

- The CEO designates the KM leadership who could be the Chief Knowledge Officer, Chief Learning Officer or the Chief Information Officer
- The chief knowledge officer is usually expected to balance social and technical aspects of KM,
- The chief learning officer and the chief information officer are generally charged with KM in organizations where the emphasis is on the social aspects and technical aspects, respectively

Chief Knowledge Officer

- CKO is in charge of management of the organization's intellectual assets and knowledge management
- CKOs are technologists because they invest in IT, and they are environmentalists because they also create social environments that stimulate conversations and knowledge sharing.

Factors Change Leaders Consider

- Focus less on problems and more on successes and opportunities
- Adopt an attitude that views challenges as opportunities
- Work on creating tomorrow's business instead of hammering on yesterday's problems

The Soft Side of management Always Wins

- Encourage every team member to create new knowledge in the interest of the project
- Help knowledge workers do their jobs
- Allow knowledge workers to participate in major company decisions, which can pay off in intrinsic and extrinsic benefits for the company and employees alike
- Encourage knowledge workers and employees to learn as they earn a living on a regular basis

Linking Incentives and Motivation with KM

- Link incentives to a team approach, where team performance will determine size and nature of the incentive
- Use awards for teams as well as individuals for unique contributions
- Flextime allows the team to decide on when to work, when to quit, and so forth
- Monetary rewards, bonuses, and special prizes can be a hit with the winning team
- Publicize success throughout the firm

Implications For KM

- The legal implications of KM is a problematic area as what rules should govern KM is still debatable.
- Long range effect of continued hoarding of knowledge as way to safeguard knowledge
- Protect knowledge the knowledge for competitive advantage- How to stop abuse
- Integrity of knowledge developers, experts and corporation
- Management focussing on legal and employee protection on issues surrounding KM ownership