

# Managing Knowledge in Projects

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## Managing Knowledge in Projects

### Introduction

- Knowledge is light, weightless, intangible, and is attributed to organizational assets
- Knowledge economy has replaced traditional economic models
- Knowledge Management (KM) is the systematic process of identifying, capturing, organizing, and disseminating or sharing knowledge assets
- KM draws from many different disciplines

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## Managing Knowledge in Projects

### Project Management

- Organizations are focusing more and more on projects to meet their objectives
- Internal and external forces control organizations and projects:
  - Internal—business plans, strategy, funding, staff, processes, architecture, politics, and culture
  - External—industry, market, economic, political, social, and technology environments

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### Managing Knowledge in Projects

#### Project Management (Cont'd)

- Project management is different from general management
  - A project is a temporary endeavor to create a unique product, service, or result (Project Management Institute)
  - Every project is unique in nature and has a temporary structure
  - Every project has start and end dates, a detailed project plan, budget, schedule, human resources, and deliverables
  - In the project environment, tacit knowledge of individuals plays an important role in the success of projects and strengthening the organizational knowledge base

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### Managing Knowledge in Projects

#### Background

- KM has emerged through an interdisciplinary approach dealing with all aspects of knowledge in projects
  - Aspects include knowledge creation, codification, organization, sharing, and application
  - Assets include databases, documents, policies and procedures, and uncaptured expertise in individuals
- KM addresses the issues of knowledge capture and access in projects

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### Managing Knowledge in Projects

#### Why KM in Projects Now?

- The advancement of technology
  - Laptops, Internet, cell phones, etc. have altered both our working and social lives
  - Harnessing technology to manage knowledge gives an advantage to projects in managing assets
- The exploding nature of online information
  - Digital information is taking over hard copy and other media
- Competition for organizational survival through projects
  - Organizations are acquired, merged, or claim bankruptcy if they cannot compete
  - Global projects pose more strategic challenges

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### Managing Knowledge in Projects

#### Why KM in Projects Now? (Cont'd)

- Regulatory reforms at the national level and the fast growing global environment
  - Organizations have realized that the culture of managing projects should change from hoarding to sharing knowledge
    - △ Collaboration will increase trust and morale and will cut costs
- Influence of external economic conditions and internal political conditions in the project environment
  - The current environment dictates to increase productivity with less resources
  - Knowledge in projects must be managed properly in order to accomplish this objective

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### Managing Knowledge in Projects

#### Debriefing in the Project Environment

- Debriefing is a systematic process that gives staff the opportunity to reflect on their experiences and identify lessons learned
- It is done in one-to-one or in team interviews with deliverables, milestones and other assignments during the project and after the completion of the project
- It is audiotaped or videotaped and made available to the debriefee for approval before disseminating to users
- Objectives and activities of debriefing include:
  - Capturing experiences
  - Sharing lessons learned
  - Interpreting quality at entry, and at each stage, and exit

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### Managing Knowledge in Projects

#### Debriefing in the Project Environment (Cont'd)

- In projects, debriefing is increasingly applied to capture and share operational experiences
  - It can help learning before, during and after tasks in projects
  - It can help in sharing knowledge about task processes and achievements
  - It increases the knowledge base of good practices and helps avoid repeating mistakes
  - It can point to available resources and identify knowledge gaps
  - It helps us to understand what works and what does not work to improve quality
- The World Bank conducts debriefing on projects by audiotaping or videotaping interviews
- The U.S. Army's After Action Review (AAR) is an example of debriefing that takes place as a group discussion moderated by the leaders

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### Managing Knowledge in Projects

#### Project Life Cycle

- Projects can be divided into phases, although different project life cycles will connect the beginning of a project to its end
- Life cycles generally cover technical work, deliverables, human resources and a plan to control and approve at each phase
- Life cycle descriptions can be general or detailed, and are usually sequential
- There are four basic phases:
  - Identification of problem or need
  - Development of a proposed solution
  - Doing the project- utilizing resources, and meeting stated objectives
  - Terminating the project

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### Managing Knowledge in Projects

#### Project Life Cycle (Cont'd)

- PMBOK Guide identifies nine areas of project management:
  - Project Integration Management
  - Project Scope Management
  - Project Time Management
  - Project Cost Management
  - Project Quality Management
  - Project Human Resources Management
  - Project Communications Management
  - Project Risk Management
  - Project Procurement Management

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### Managing Knowledge in Projects

#### Project Life Cycle (Cont'd)

- All projects do not include all nine areas, but knowledge is generated in all areas included in the projects
- Knowledge is created in and flows through all nine areas and all phases of the project life cycle
- Projects need to learn to manage the knowledge they acquire effectively, so the current and other projects in the organization will benefit
- Knowledge gained from success or failures in projects is vital for the long term sustainability of the organization
- Knowledge types in projects may include sector knowledge and technical knowledge, and assisting organizations to grow as a learning organization
- Knowledge management helps project managers address various problems including resources, deadlines, deliverables, planning, communication, and conflicts.

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### Managing Knowledge in Projects

#### Criteria and Role of KM in Projects

- The knowledge environment in projects is influenced by staff, culture or behavior, politics, architecture, process, strategy and relevant resources
- The problem in capturing knowledge is not with technology but with people
- Kliem mentions several positive effects of KM in projects:
  - Dealing with “gray” situations with greater confidence
  - Encouraging greater collaboration among employees
  - Identifying the best practices
  - Improving the capacity for product and process innovation
  - Increasing the competencies of existing employees
  - Minimizing the negative impacts of employee turnover
  - Responding cost-effectively to rapidly changing environments

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### Managing Knowledge in Projects

#### Criteria and Role of KM in Projects (Cont'd)

- Koskinen describes KM as a necessity in project management for harnessing tacit knowledge since all individuals in a project carry valuable tacit knowledge
- Koskinen also describes different environments in which KM influences project management:
  - Mechanical Project Management Environment primarily relies on explicit knowledge
  - Organic Project Management Environment is more likely to rely on tacit knowledge
  - Semi-mechanical and Semi-organic Environments are more common than the first two environments
- The two hybrid environments seem more effective than the purely mechanical or organic ones

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### Managing Knowledge in Projects

#### Benefits from KM in Projects

- Avoid Reinventing the Wheel
  - KM enables us to tap existing knowledge in the current project environment to be applied toward future projects
  - Managing knowledge in projects provides a strategic advantage to the organization
  - It helps to avoid waste and duplication
- Capture Lessons Learned
  - We can learn from the problems or issues encountered and solutions devised in the past projects and apply them to current projects
  - Managing knowledge in projects helps share the best practices
- Enterprise Project Software (ERP)
  - Collaborative tools in ERP allow the project team to share knowledge and collectively manipulate and analyze knowledge so it becomes valuable for the current project
  - Managing knowledge in projects promotes successful innovation

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### Managing Knowledge in Projects

#### Benefits from KM in Projects (Cont'd)

- Customer Services Function
  - KM streamlines customer service through response, products, and services
- Other Benefits
  - The major benefits of KM in projects are cost savings, time savings, and consistency (quality)
  - KM enables the project manager to make faster and better decisions, reduce project cost, and increase efficiency and trust among team members
  - Managing knowledge in projects enhances retention of project staff
  - KM increases the rate of return in projects

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### Managing Knowledge in Projects

#### Recommended Business Case to Manage Knowledge in Projects

- Understand the total design of the project analyzing and understanding the nine knowledge areas discussed in the PMBOK Guide
  - Knowledge in some areas needs to be evaluated whether or not it is critical to the project
  - When a project manager applies KM to the project team, they transform tacit knowledge into explicit knowledge
- Develop project profiles in a wide variety of formal and informal formats
  - Project proposal or RFP will provide relevant information on projects and planning
  - Once project is ongoing, document knowledge on:
    - △ problems or challenges faced/solved
    - △ lessons learned
    - △ questions answered
    - △ knowledge required at each phase
    - △ knowledge sharing tools used
    - △ unexpected outcomes
    - △ actors affecting outcomes
    - △ innovation
    - △ products of project
    - △ amount of knowledge captured by project

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### Managing Knowledge in Projects

#### Business Case to Manage Knowledge in Projects (Cont'd)

- The knowledge contained in documents must be compared, with the project people involved through interviews, as most documents are sanitized and do not discuss undesirable aspects of a project which may be valuable for future project designs
- To maximize knowledge capture from projects, a mechanism must be created to debrief project team members periodically

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