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DEVELOPMENT AND COMPARATIVE ANALYSIS OF THE PROJECT MANAGEMENT BODIES OF KNOWLEDGE[1]

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Abstract: Some international-influence project management associations, as well as bodies of knowledge, are reviewed. Comparative analysis on the bodies of knowledge is made in the terms of content, structure and guideline. Finally, this article suggests a uniform project management body of knowledge should be formed and researched further.

Key words: Project Management Associations, Bodies of knowledge, Comparative Analysis

1. INTRODUCTION

Project management is a managerial approach, which has developed by middle of 20th century. Project management has improved management effectiveness and performance radically,[5] and was applied in developed countries firstly. A project is a temporary endeavor undertaken to create a unique product, service, or result.[6] For a given organization, reachable resources are limited, which means that special controlling is necessary. Then, project management has proposed. Project management is the application of knowledge, skills, tools and techniques to project activities to meet people requirements.[7] The theory and approach of project management has been perfect with development of academic researches, which has become a integrated knowledge. Project management has played a much more important part in many areas with globalization.

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[5] Qiu Guanhua, Project management-engineering method and practice. Beijing: Science Publication, 2001.
[6] Project Management Institute A Guide to Project Management Body of Knowledge (Third Edition), Newtown Square, PA: Project Management Institute;2004.
[7] Project Management Institute A Guide to Project Management Body of Knowledge (Third Edition), Newtown Square, PA: Project Management Institute, 2004.

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2. PROJECT MANAGEMENT INSTITUTIONS AND BODIES OF KNOWLEDGE

The project management body of knowledge (PMBOK) is the sum of knowledge within the profession of project management. The complete PMBOK includes proven traditional practices that are widely applied, as well as innovative practices that are emerging in the profession, including published and unpublished material. PMBOK was documented firstly by American Defense and NASA. However, project management institutes have accelerated the growth of the knowledge and practices in the field of project management during 60s-70s of 20th century, which was marked by the spring up of project management institutes.

PMI (Project Management Institute) was founded in 1969, which has more than 200,000 members now. Based on the two assumptions: 1. the knowledge and practices are applicable to most management activities;2. PMBOK is not only beneficial for project practitioner but also suitable for teachers and auditors, PMI began to form general criterions to project activities in 1969.[8] In 1983, PMI firstly made PMBOK standardization. PMI released the first edition of PMBOK in August of 1996, and updated editions in 2000, 2004.

Started in 1965, IPMA（International Association of Project Management）is the oldest project management institutions of the world. The member of IPMA is primarily national project management associations. These national associations serve the specific needs of project management professionals in their own country in their own language. IPMA serves those needs at an international level. The first version ICB1.0 was released by IPMA in 1996, which was firstly used in Sweden, Germany and other European countries. Then, ICB2.0 was release in 1999. As a great milestone in project management, ICB3.0 was release in March of 2000.

As the member of IPMA in England, APM (The Association for Project Management based in the United Kingdom) is the largest professional project management organization in Europe. APM Body of Knowledge was firstly released in 1992, which was modified in 1994.The third version was released in the next year. In 2000, APM released the forth version of APMBOK, which contained 42 areas such as strategy, control, and the number increased to 52 in the fifth version released in January of 2006.

In addition, P2M（Project and Program Management）was proposed by ENAA(The Engineering Advancement Association of Japan). First committee of Chinese project management conference compiled C-PMBOK in 2002, which made great contributions to generalization and level of project management.

PMBOK is the foundation of project management theory, which makes comparative analysis on the bodies of knowledge sense.

3. COMPARATIVE ANALYSIS OF THE PROJECT MANAGEMENT BODIES OF KNOWLEDGE

3.1 PMBOK® Guide

The 2000 edition of PMBOK® Guide divides the Project Knowledge Areas into nine parts: project integration management, project scope management, project time management, project cost

[8] William R Duncan. Developing a project-management body-of-knowledge document: the US Project Management Institute's approach. International Journal of Project Management Vol.13,No.2,89-94,1995.

management, project quality management, project human resource management, project communication management, project risk management and project procurement management,[9] which organizes 44 project management processes（Fig.1）. In addition, PMBOK® Guide provides a basic framework for understanding project management as well as the standard for project management of a project.

In the view of PMBOK® Guide, project management aims to accomplish three requirements: time, cost and project scope. Accordingly, PMBOK® Guide focuses on knowledge areas of project management, and pays a little attention to techniques and approaches, and how or when to use them. Meanwhile, PMBOK® Guide doesn't analyze how economical and social environment affect project management as well.

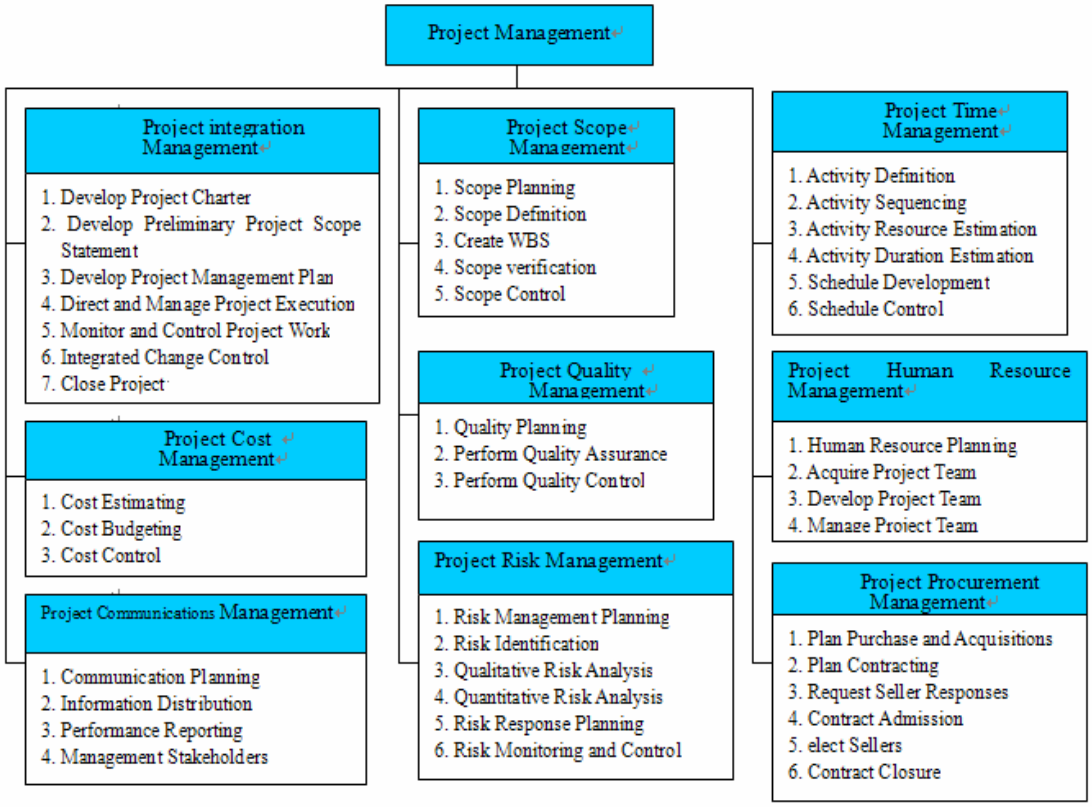

Fig.1. PMBOK® Guide 2000 Edition

3.2 USA-ICB

The ICB contains basic items, tasks, practices, skills, functions, management processes, methods, techniques, and tools that are commonly used in project management, as well as specialist knowledge, where appropriate, of innovative and advanced practices used in more limited situations. ICB offers an access to the knowledge, experience and personal attitudes in project attitudes in project management. It is the basis for all certification progrmmes of the national associations and their certification bodies that are validated by IPMA. ICB3.0 enhances personal abilities, and professional competence. The ICB consists of 42 elements for knowledge and experience in project management (28 core elements and 14 additional elements) as well as 8 aspects for personal attitudes and 10 aspects for the general

[9] Project Management Institute A Guide to Project Management Body of Knowledge (Third Edition), Newtown Square, PA: Project Management Institute; 2004

impression .[10]

Different with PMBOK that focuses on project procedure, ICB is a managerial model to evaluate project management competence. ICB establishes knowledge index based on competence factors. ICB not only describes the knowledge areas, but also defines general framework to evaluate management competence.

Each national association is responsible for establishing its own detailed documents for its certification, especially the National Competence Baseline (NCB). USA constructed USA-NCB according to ICB. USA-ICB 1.5 edition contains three parts: contextual competences, technical competences and behavioral competences, which organizes 49 sub-factors (Fig.2）.

1. Contextual Competences	2.Technical Competences	3.Behavioral Competences
1.1 Projects and Project Management	2.1 Project Success Criteria	3.1 Leadership
1.2 Programs and Program Management	2.2 Stakeholders and Interested Parties	3.2 Engagement and Motivation
1.3 Portfolio Management	2.3 Objectives and Strategies	3.3 Self-Control
1.4 Project, Program and Portfolio Orientation	2.4 Risk: Threats and Opportunities	3.4 Assertiveness
1.5 Permanent Organization	2.5 Project Quality	3.5 Relaxation
1.6Business Processes	2.6 Teamwork	3.6 Openness
1.7Systems Approach and Integration	2.7 Project Organization	3.7 Creativity
1.8 Human Resource Development	2.8 Problem Solving	3.8 Results Orientation
1.9 Safety, Security, Heath, and Environment	2.9 Project Scope	3.9 Efficiency
1.10 Legal Aspects	2.10 Product Scope	3.10 Consultation
1.11 Finance and Accounting	2.11 Project Life Cycle and Phases	3.11 Negotiation
1.12 Management of Change	2.12 Schedules	3.12 Conflict and Crisis
	2.13 Resources	3.13 Reliability
	2.14 Cost	3.14 Values Appreciation
	2.15 Procurement and Contracts	3.15 Ethics
	2.16 Configuration Management	
	2.17 Project Control	
	2.18 Documentation, Information, and Reporting	
	2.19 Communication	
	2.20 Performance Measurement	
	2.21 Project Startup	
	2.22 Project Closeout	

Fig.2 USA-NCB 1.5th version [11]

3.3 APMBOK

The fifth edition of APMBOK consists of seven categories: project management in context, planning the strategy, execution the strategy, technique, business and commercial, organization and governance, people and the profession（Fig.3）.

Form framework consisting of technique, environment, external factors, human factors, commercial

[10] Gerrit Koch, Hans Knoepfel. International Project Management Institution Competence Baseline.PMI.No.6,13-15,2006

[11] ASAPM: American Society of the Advancement of Project Management. USA National Competence Baseline(NCB) (version1.5), 2006

factors, APMBOK defines the project scope and some behavioral characteristics. In addition, APMBOK insists that success project management comes from the integration of suitable knowledge (personal experience) and attitude, not a set of competences, or too much behavioral characteristics.[12]

Project Management in context				
Project Management Portfolio Management	Project Contex Project Office			
Planning the strategy				
Project Success Criteria and Benefits Management Stakeholder Management Value Management	Quality Management	Project Management Plan Risk Management Heath, Safety & Environment		
Execution the Strategy	**Techniques**	**Business & Commercial**	**Organisation & Governance**	**People & the Profession**
Scope Management Scheduling Resource Management Budgeting & Cost Management Change Control Earned Value Information Management And reporting Issue Management	Requirements Management Development Estimating Technology Management Value Engineering Modeling & Testing Configuration Management	Business Case Marketing & Sales Financial Management Procurement Legal Awareness	Project Life Cycle Concept Definition Implementation Hand-over and Close-out Project Reviews Organization Structure Organizational Roles Method and Procedures Governance	Communication Teamwork Leadership Conflict Management Negotiation Human Resource Management Behavioural Characteristics Learning & Development Professionalism& Ethics

Fig.3. APM BOK 5th version

3.4 P2M

P2M consists of project management framework and principles, program management framework and principles, project and program areas（Fig.4）.[13]

As the first guideline of enterprise project and program management, P2M, from Japanese commercial practice, manages project and program in the view of enterprise, not traditional project. Different from European project management guidelines, P2M reforms current project management models. P2M builds new commercial model basing on enterprise innovation, system innovation, and application innovation. An outstanding trait of P2M is its emphasis on applying external change and project team to project practice. P2M also focuses on project supplies, the accumulation of knowledge data, and enlarges former project management scope.

[12] Association for Project Management Body of Knowledge(5th),High Wycombe:APM,2006
[13] ENAA P2M: A Guidebook of project and program management for enterprise innovation: Summary translation. Japan: Project Management Professionals Certification Center(PMCC), 2002

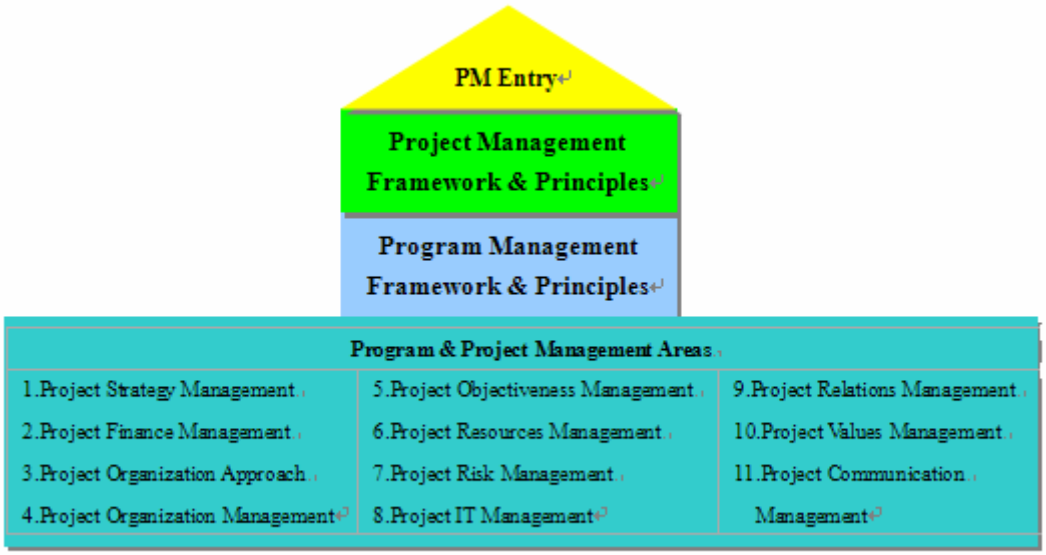

Fig. 4 P2M

4. CONCLUSION

From comparative analysis of typical project management bodies of knowledge (PMBOK), we can make a conclusion that they are different in guidance, content and framework. Based on different recognition, different PMBOK are proposed. However, so many PMBOK make understanding, studying and application of project management knowledge difficult, So it is necessary to integrate these different PMBOK, and to form a uniform PMBOK in the world.