Project Management Globalization and Unification for Transition and Developing Economies*

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INTRODUCTION

Modern Project Management (PM) understanding was formed in 70s - 90s basing on the experience of technically developed countries with relatively stable economic conditions. Among such countries we should mention: Great Britain, Germany, Holland, USA, Canada, Australia, Japan. Most complete description of PM understanding is given in collective works, connected with forming PM BOK and some other similar research.: PMI [1], [2]; INTERNET [3], [4]; AIPM; ISO and so on.

In the present time project managers from developing and transition economy countries are actively joining the "World of Project Management". The movement for PM professional development bears now the global character. Two stable tendencies can be marked here:

- Growing number of firms and companies from developing countries involved in the international economic activity, including cooperation with developed countries.
- Growing number of investors and other project participants from developed countries engaged in projects and programs implemented in developing countries.

These processes show intensive integration of both the world economy and the whole world community. It is obvious, that this process requires development of common language for business communication and creation of professional business culture and joint creative activity. There is no doubt that modern PM can and, to our opinion, must be such universal tool, which is confirmed by a long practice of its application.

Though developing countries can choose between several ways of PM development and application:

- To take as a basis the experience of the North America - PMI [1], [2].
- To take as a basis the experience of Europe - former INTERNET (now IPMA) [3], [4].
- To choose orientation to neighboring and other countries - Australia, Japan and so on.
- To develop its own approach to PM development and application basing on home experience, achievements, traditions and culture.
- To take the most advanced experience and knowledge of the world and develop the national PM basing on international cooperation on PM unification and globalization, taking into consideration and saving national traditions and culture.

The last way is much more preferable, efficient and practical for developing countries, as it allows to overcome dragging behind the world level and avoid possible problems and mistakes.

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For this purpose the world community should unite their efforts to solve the problems of PM globalization, unification and required international cooperation in this field. Though the problem stated arises a number of questions:

1. What is the essence of developing countries economies?
2. What are the principal differences between social and economic systems of developing and developed countries from PM point of view?
3. What is the influence of such differences on PM and its components?
4. Is it possible to form global PM understanding and recognition and if possible, then, to what extent?
5. What PM spheres are subject to unification and what require taking into consideration special local cultural, economic, social, historical and other features?
6. By whom, when and for what money should PM global unification be realized?

It is obvious that solution to these problems requires durable period of time and concentration of efforts of all the world community of project managers.

Here we only touch upon some of these problems and try to state our point of view and invite all persons concerned to further discussion.

1. CHARACTERISTICS OF SOCIAL AND ECONOMIC ENVIRONMENT IN DEVELOPING COUNTRIES

To our mind special features of project environment in developing countries are mainly caused by changes connected with dynamics of development. Possible influence of dynamic factors on PM depends on how deep and intensive the changes in the country and its economy are. The deepest large-scale and rapid changes have occurred since the early 90-s in Russia, former USSR republics and countries of Eastern Europe. Therefore we make our statements mainly basing on Russian data and experience, because they reflect general tendencies of modern world development and can be applied, to a certain extent, to all developing countries.

Some preliminary comments and statements

I should agree with Dr. Martin Barnes [5] that nowadays all countries are developing and their division into developed and developing is just conditional and depends on the achieved level of development, intensity of development and level of social and economic environment stability. Proceeding from the above it is useful to emphasize 3 levels of changes in Earth's countries:

1. *Developed countries* - slow evolutionary development in stable social and economic environment (Great Britain, USA, Japan and so on).
2. *Developing countries* - rapid evolutionary development in relatively unstable social and economic environment (China, India, Indonesia and so on).

3. *Transition economy countries* - very rapid development with changes of revolutionary type in unstable social and economic environment (former USSR, Eastern Europe countries and so on).

Dynamic factors of development in all countries allow to formulate a row of statements related directly to Project Management and project managers:

- In a sense, we all live in developing and changing countries.
- As far as it depends on our efforts we should assist in management of such changes trying to use them for the good of our countries and the whole mankind.
- Existing changes themselves form the "nutrient medium" for development of PM and the world community of project managers and serve as a basis for PM global unification.

1.1. A BRIEF COMPARATIVE CHARACTERISTIC OF DIFFERENT SOCIAL AND ECONOMIC SYSTEMS

It is certainly impossible to give a thorough analysis of different systems within the frames of the present paper. Though we would like to mention some most substantial characteristics and outline the dynamics of environment changing. It will give an opportunity to feel changes and realize the following:

- Where did we come from?
- Where are we now?
- Where are we carried to by the stream of events?

So, let us try to review 3 types of social and economic environment reflecting dynamics and mile-stones of Russia's development:

- centralized or planning economy (before 1991);
- transition economy with its crisis conditions in 1991 - 2000 (data as of the middle of 1995);
- market economy after 2000 (forecast).

Here we consider the following characteristics as the most important for PM development:

- General characteristics of social and economic environment.
- Structure and characteristics of project environment and projects in different social and economic environment.
- Main characteristics of managing projects in different social and economic environment.

The data given below are based on official statistics [6] - [12], [17], but, nevertheless, they are approximate and serve to show a general picture of changes.

1.1.1. GENERAL CHARACTERISTIC OF SOCIAL AND ECONOMIC ENVIRONMENT

The most substantial indices characterizing the dynamics of changes occurred or to be occurred (forecast) in Russia in 1980 - 2010 are given in Table 1. All data are given in % or ranging from 0 to 1.

Table 1.

N	Characteristics, factors	Social and economic environment		
		Centralized (before 1990(	Transition (1991-95)	Market (after 2000)
1	2	3	4	5
1.	Property relations (%) - state - collective - private - mixed	 90 - 95 7 - 8 0 0 100	 31 - 35 30 - 33 20 - 24 15 - 18 100	 14 - 16 8 - 12 70 - 75 6 - 8 100
2.	Land property	State and collective with the right of usage	Mixed without the right to sell and partly private property	Mainly private with the right to sell and inherit
3.	Political stability (from 0 to 1)	0.95 - 0.99	0.4 - 0.5	0.75 - 0.85
4.	Economic stability (from 0 to 1)	0.9	0.2 - 0.3	0.7 - 0.8
5.	Level of monopoly in economy and production	0.85 - 0.95	0.6 - 0.8	0.2 - 0.25
6.	Rate of inflation (% per year)	8 - 10	150 - 170	2 - 5
7.	Dynamics of production	Decrease by 4 - 6 % per year	Decrease by 15 - 20 % per year	Increase by 3,5 - 5 % per year
8.	Annual increase of level of living	+ (2- 3 %)	- (8 - 10 %)	+ (5 - 10 %)
9.	Influence of shadow and criminal structures (% of state budget)	7 - 10	30 - 50	10 - 15
10.	Provision with normative and legal regulations	up to 0.95	0.4 - 0.5	up to 0.95
11.	Social maintenance	0.85 - 0.9	0.35 - 0.45	0.75 - 0.8
12.	Share of foreign investments (% of the total volume)	2 - 4	3.3. - 4.1	21 - 25
13.	Share of Russian investments abroad (% of the total volume)	10 - 12	3 - 5	15 - 20
14.	Annual increase of gross national income (% of prior period)	+5	- (10 - 15) Total decrease for 1991-94 made 35,2 % (*)	+ (6 - 7)

* According to corrected data of the State Statistic Committee and the World Bank.

Fig.1 shows the qualitative picture of tendencies of changing the most important characteristics of social and economic environment in Russia for the period of 1980 - 2010.

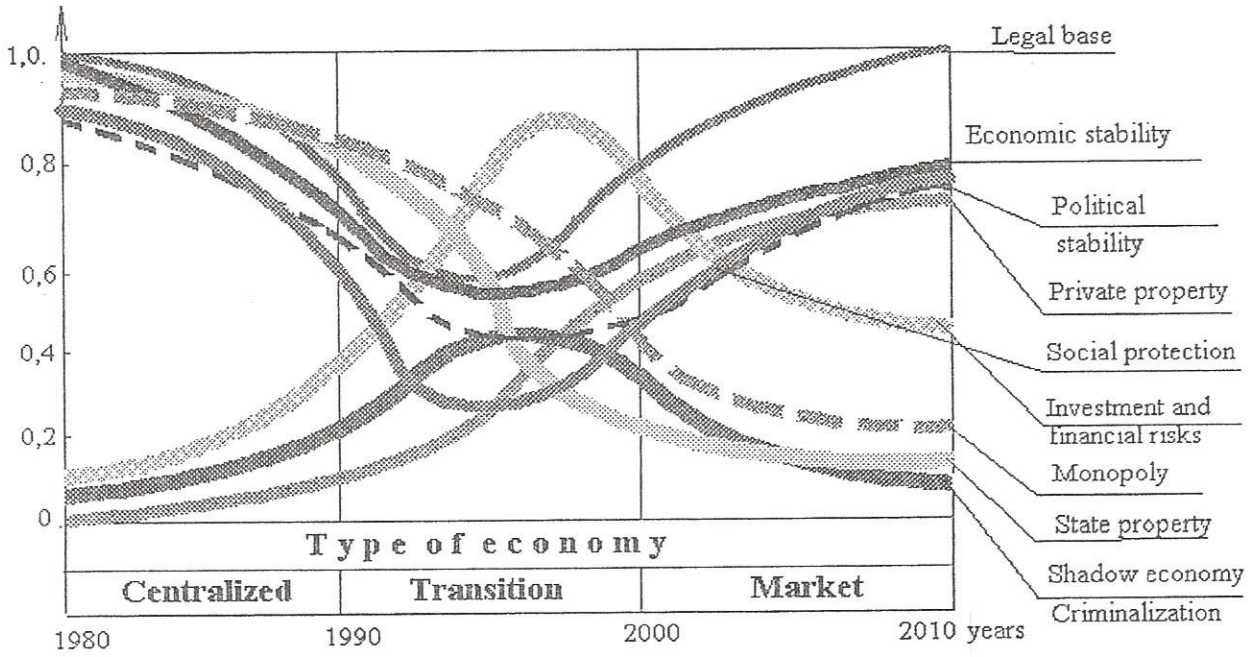

Fig. 1. Major tendencies of social and economic systems changing in Russia.

From the analysis of the data given above and other sources it is possible to make some conclusions concerning the general status of social and economic environment of Russia. They are the following [9], [10], [13], [17]:

- sharp changing property relations;
- political and economic non-stability;
- sharp differentiation and decrease of living conditions with simultaneous decrease of social and legal guarantees for the population;
- high tax rates;
- crisis of economy and production;
- lack of legal regulation, especially in the sphere of investment;
- non-coordinated activity of Federal power structures and subjects of Federation;
- underdeveloped market infrastructure.
- high degree of criminal structures influence.

From PM point of view all these processes show high level of close and distant project environment changes and financial and other risks at great demand of investments and relatively cheap market of labor and services.

1.1.2. STRUCTURE AND GENERAL CHARACTERISTIC OF PROJECTS AND PROJECT ENVIRONMENT

Together with the above mentioned changes of social and economic environment in Russia the restructuring of priorities, spheres of investments, programs and projects to be implemented is in progress. Table 2 shows statistic and expert data on dynamics of changes in the sphere of project-oriented activity.

Table 2.

N	Characteristics, factors	Type of social and economic system		
		Centralized (before 1990)	Transition (1991 - 1995)	Market (after 2000)
1	2	3	4	5
1.	Types of projects (% of total volume)			
	- technical	60 - 65	30	56 - 65
	- organizational	7	20 - 23	12 - 15
	- economic	2	15 - 20	6 - 10
	- social	25 - 30	22 - 25	7 - 10
	- mixed	3	10 - 15	6 - 10
		100	100	100
2.	Classes of projects (% of total volume)			
	- mono-projects	17	50	60 - 65
	- multi-projects	25	37	25 - 30
	- mega-projects	58	13	10 - 15
		100	100	100
3.	Duration of projects (% of total volume)			
	- long-term (> 5 years)	75	3 - 5	5 - 7
	- medium-term (3 - 5 years)	20	10 - 15	25 - 30
	- short-term (1 - 2 years)	5	80 - 87	63 - 70
	Average duration	7 - 12 years	1 - 2 years	3- 4 years

4.	Major spheres of investments by branches of industry, % (priority order)	Military industry. Aero-space projects. Heavy industry, metallurgy. Fuel enrgetics. Chemistry and oil chemistry. Agriculture and light industry. Construction. Transport and communications. Social and cultural sphere. Other.	Fuel energetics (up to 40%). Transport and communications (14 - 17%). Agriculture, light industry (5 - 8%). Metallurgy (4 - 7%). Construction (4 - 6%). Machine building (4 - 5%). Chemistry and oil chemistry (2 - 3%). Forest and wood processing industry. (1%). Other branches (23 - 27%). Total 100%	Competitive products, goods and services. New construction and reconstruction of residential areas. Social development programs. Aero-space, defense and state security.
5.	Project orientation	State interests, manufacturers and contractors	Investors and consumers with consideration of interests of manufacturers and contractors	Owner, customers, users and consumers
6.	Structure of capital investments (%) by forms of property - state - municipal - collective - private - mixed	 75 - 80 15 - 17 5 - 7 - - 100	 31 7 15 17 30 100	 10 - 13 3 - 5 70 - 75 5 - 7 7 - 10 100

The analysis of the data from Table 2 allows to estimate the project-oriented activity in Russia in transition period. This kind of activity is characterized by the following:

- rapid changing the structure of projects and multiple increase of the number of projects in non-traditional spheres: organizational, social, economic and mixed;
- decrease of the number of long-term programs and mega-projects in connection with risk increase and reducing share of centralized investments;
- changing traditional spheres of project activity application and their re-orientation to branches with short payback periods and to owners (customers) and users;
- changing the investment policy, structure and sources of investments including reducing investments to the sphere of production from 70% to 50% and increase of investments to non-production sphere (up to 50%).

1.1.3. CHARACTERISTIC OF MANAGEMENT SYSTEMS AND PRACTICE IN DIFFERENT SOCIAL AND ECONOMIC ENVIRONMENT

The changes having occurred lately in social, economic spheres and project-oriented activity and given in Tables 1, 2 are closely connected with Project Management. Table 3 shows generalized data characterizing the dynamics of changes in managing projects at different stages of economic reforming development in Russia.

Table 3.

N	Characteristics, factors	Type of social and economic system		
		Centralized (before 1990)	Transition (1991 - 1995)	Market (after 2000)
1	2	3	4	5
1.	General style of management	Administrative, coordinated by party structures representatives, party headquarters	Elements of administrative style. Forming profes-sional project management	Professional management (project manager and team)
2.	State influence on implementation of programs and projects	Directive planning, finance and resource allocation. Direct management of programs and projects	Planning and control of federal programs and projects. Forecast of development, coordination of investment process.	Forecast of national economy development. Regulation of tendencies of development. Planning and control of federal programs and projects.

3.	Investors	State structures and branches	Mixed - state - collective - private - foreign	Predominance of private investments (up to 80%)
4.	Customers	Representatives of state structures	Representatives of owners	Juridical and natural persons representing owners
5.	Procedure of work assignment, concluding contracts and agreements	State plan, decisions of party and state governing bodies	State orders, traditional economy relations, initiating tenders and market competition	Market competition - tenders - competitions
6.	Market competition	Monopoly of manufacturers and contractors	Reducing monopoly, starting competition	Market competition. Monopoly is limited by the law
7.	General contractor	Does not exist. Partly the functions of general contractor are fulfilled by general executors assigned by the state	Forming the institute of contractors, mixed methods of their assigning	Selected by the owner on the basis of competition
8.	General executor	Assigned by the state in accordance with the plan	Assigned or selected on the basis of competition	Selected by the customer or general contractor on the basis of competition
9.	Principal suppliers	Assigned according to the order or state plan	Mixed way of selecting - old relations - state order - competition	Selected basing on market competition

10.	Distribution of functions between project participants	Fixed in state normative documents	Predominance of fixed functions, forming contract relations	Regulated by the system of contract relations within the frames of the law
11.	System of sanctions and motivation	Party administrative regulation with weak economic mechanisms	Administrative regulation, developing economic mechanisms	Economic motivation and regulation. Professional rating.
12.	Contract discipline and liabilities observance	Party and state control and arbitrage	Transition to legal regulation. Partly using power methods	Legal regulation, economy responsibilities Arbitrage and court
13.	Legal and normative base of project activity	State and branch standards, norms and rules, fixed rights and duties	Mixed - old norms and rules - forming new laws and regulations - contract relations	Regulation by the law, systems of contract relations
14.	Prices and norms of resource expenditure	State, branch. Obligatory	Recommended norms. Contract prices. Regulated prices for a row of resources and services	Reference indices. Market prices.
15.	Information, statistics, reporting	State informational system, statistics and reporting according to fixed standards	Mixed informational service. Simplified statistics. Reporting within the company.	Commercial informational systems. Limited statistic reporting. Reporting within the company or project

The analysis of Table 3 allows to realize the status of managing projects in transition period and trace the dynamics of its changing on the way from centralized to market economy.

In this sphere we have unstable conditions and heightened risk, too. It is connected with such negative factors of the centralized economy as the monopoly, lack of competition, underdevelopment of economic methods of economy regulation, lack of legal and normative base, underdevelopment of market relations, infrastructure - which still affects the national economy.

The changes in project sphere influence the PM BOK structure and other PM components as follows:

- necessity of taking into consideration in PM intensive and often non-realized changes and heightened risk factors;
- necessity of introducing transition organizational structures of matrix and mixed type, with changing competence, responsibilities, economic methods of stimulation and sanctions;
- necessity of developing special methods and recommendations on PM application in conditions of transition economy, specific for each country.

1.2. SOME CHARACTERISTICS OF THE INFLUENCE OF DIFFERENT ECONOMIES ON PROJECT MANAGEMENT AND ITS COMPONENTS

The data given in Tables 1,2,3 show substantial differences in project activity in different social and economic systems. These differences should influence PM itself and its components.

Political and economic changes occurred in Russia caused changes both in project-oriented activity and in style and methods of management. In the first place, it is seen in changes of the project context including:

- Changing the structure, type, scale and duration of projects and programs as well as the spheres of their application.
- Changing the structure of project participants, their mutual relations, property relation within the project, functions, motivation system, sanctions, etc.
- Changing organizational forms and structures of project-oriented activity.
- Changing close and distant project environment.
- Changing the structure of expenses during the project life-cycle.

These changes, in their turn, caused considerable difference between such PM characteristics as:

- Changing project purposes, scope, conditions, limits and requirements.
- Changing systems of values and ethical norms, criteria of project analysis efficiency and project results estimation.

Comparative analysis of life-cycles of construction projects implemented in different economies

Table 4.

N	Project phases	Centralized economy		Transition economy		Market economy	
		Work context	Expenses %	Work context	Expenses %	Work context	Expenses %
1	2	3	4	5	6	7	8
I	CONCEPT (conceve)	*Feasibility:* • Technical and economic research • Technical assignment • Work initiation	0.7 - 1.5	*Feasibility and analysis of financial sources:* • Feasibility study • Business-plan • Decisions on investments • Technical assignment	3.5 - 7.0	*Feasibility:* • Project formulation • Feasibility studies • Strategy design and approval	7 - 10
II	DEVELOPMENT (develop)	*Designing:* • Technical design • Execution design • Construction management plan	3.5 - 6.0	*Designing:* • Technological design • Construction design • Working drawings and specifications • Master-plan	8 - 15	*Planning and design:* • Base design • Cost and schedule • Contract terms and conditions • Detailed planning and design	20 - 25

1	2	3	4	5	6	7	8
III	IMPLEMENTATION (Execute)	*Project realization:* • Preparation for production • Production and supply of materials and equipment • Construction and erection work • Starting-up and adjustment • Testing & putting into operation	80 - 95	*Project realization:* • Organization • Tenders and contracts • Acquisition, delivery • Construction and assembling • Starting-up and adjustment • Testing and putting into operation	70 - 85	*Production:* • Manufacturing • Delivery • Civil work • Installation • Testing	56 - 60
IV	TERMINATION (finish)	• Mastering • Liquidation of defects • Commercial production	0 - 1.5	• Run trial • Commercial production and reaching design capacity • Final payments and project closing-down	3 - 6	*Turnover and start up:* • Final testing • Maintenance • Review & accept • Document results • Reassigning project team	9 - 12

- Changing integrative processes in PM: concept and project development, planning, control, system of documentation and reporting.
- Changing the structure, role and methods of realization of project management functions.

First of all, it relates to change, cost, risk, contract, procurement, resource, personnel and configuration management.

Below we give an illustration of project context changing as for the life-cycle of construction project and some PM functions.

1.2.1. SPECIFIC FEATURES OF PROJECT LIFE-CYCLE IN DIFFERENT ECONOMIC SYSTEMS.

Defining project life-cycle and phases given in [1], [2], [3] is connected with the market economy. In conditions of the centralized and transition economies of Russia the life-cycle of project and its structure have their specific features related to the context of project and its environment (see Tab. 1.2.3).

Differences in the structure of project life-cycle and in efforts distribution by its phases is illustrated as for construction projects described in [15], [16]. The data of analysis of construction projects in conditions of centralized, transition and market economies are given in Table 4.

The curves in Fig. 2 show distribution of efforts by phases of project life-cycle in different economies and are built basing on the data of Table 4.

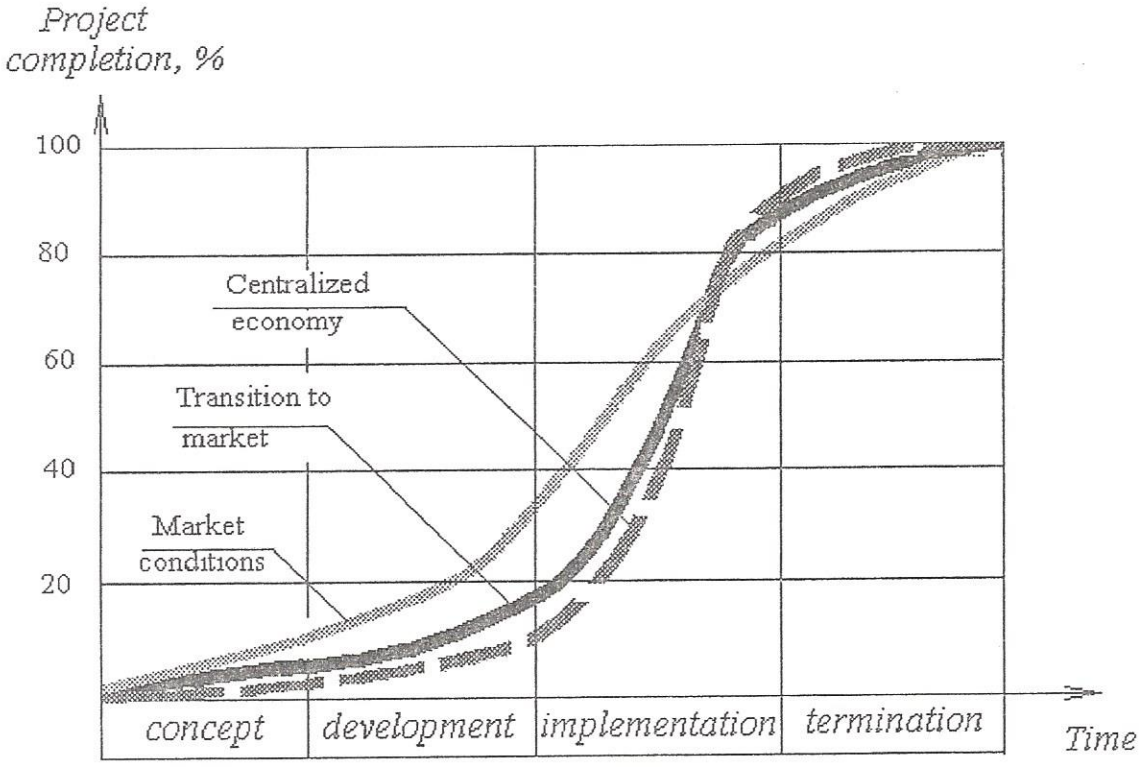

Fig. 2. Structure of efforts by project phases in different economies.

Fig. 3 shows typical forms of project life-cycles implemented in different social and economic environment (according to Tables 1 - 4). Differences in life-cycles are caused by different work and efforts structures connected with specific features of social and economic systems, styles and methods of project management and realization in these systems. Simultaneously, the similarity of life-cycles shows that PM complex is invariant to the spheres of project implementation.

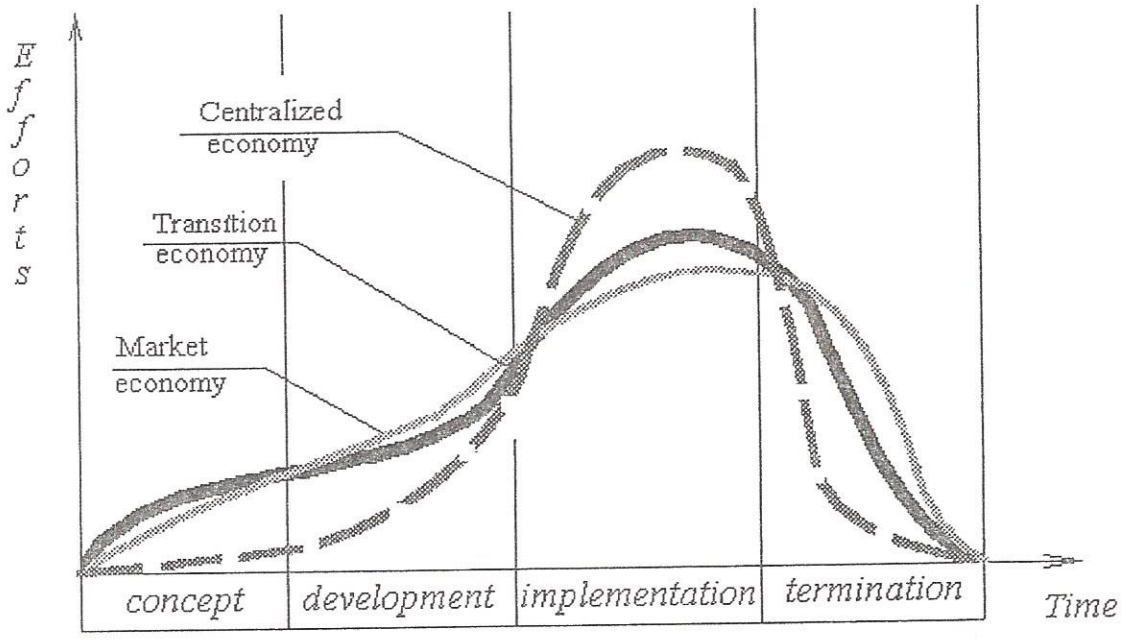

Fig. 3. Typical life-cycles of projects implemented in different social and economic environment.

1.2.2. SPECIFIC FEATURES OF SOME PM FUNCTIONS IN DIFFERENT ECONOMIES

The results of research [14], [16] and experience of PM application in Russia show that specific features of certain PM functions in different social and economic environment depend, to our opinion, on two factors:

- objective necessity of the given PM function in conditions of the existing stage of social and economic development;
- how the economy is "advanced" on its way to market.

Both these factors are connected with the fact that in the West PM was brought to life by the market economy in order to increase the efficiency of project realization. In order to build a hypothetical picture of tendencies of changing role, place and importance of each PM function in different social and economic environment let us introduce a system of expert estimations and some initial statements for further analysis.

Assume that the estimation of objective necessity of the given PM function - F_i is changed from 0 to 1, where fixed values of estimations mean the following:

$F_i=0$ - PM function is not required.

$0,5 > F_i > 0$ - the function is required, but in complex with the other, more important functions. It is not used as a separate function.

$0,8 \geqslant F_i \geqslant 0.5$ - the function is used separately.

$1 \geqslant F_i \geqslant 0,8$ - the function requires close attention and development of special methods and tools for solving tasks in the given conditions.

The above statements allowed to make expert estimates for principal PM functions in the centralized, transition and market economies basing on Tables 1 - 4 and [14], [16]. The results are given in Tab. 5.

Table 5.

N	Characteristics, factors	Social and economic environment		
		Centralized (before 1990)	Transition (1991-95)	Market (after 2000)
1	2	3	4	5
1	Scope	0,6	0,8	0,7
2	Quality	0,4	0,65	0,8
3	Time	0,65	0,75	0,85
4	Cost	0,35	0,7	0,9
5	Risk	0,1	0,9	0,7
6	Labor resources	0,55	0,65	0,75
7	Procurement, contracts	0,5	0,8	0,7
8	Communications, information	0,4	0,7	0,6
9	Changes	0,15	0,95	0,55
10	Configuration	0,2	0,7	0,5
	Average	**0,39**	**0,76**	**0,71**

The analysis of Table 5 allows to make some interesting conclusions:

- Necessity of modern PM in centralized economy doesn't allow it to become a sphere of professional activity. Before the reforms in Russia started (in 1990) PM was not applied in practice in full volume.

- In transition period, when the risk and level of changes in project environment are very high, the degree of objective PM necessity is the highest, too.
- In market conditions the level of PM necessity remains very high, though it is lower than in transition period. This is connected with stable social and economic environment and reduced risk.
- The level of all PM functions necessity on the way to market increases. The functions most sensitive to changing are changes, risk, procurement, contracts, scope, configuration, communications, information reach the maximum in transition period. The functions less exposed to these factors - quality, time, cost, human resources - increase monotonously as they approach the market economy.

Figs. 4, 5 show curves built according to the data of Table 5. The curves show the dynamics of changing the role of PM functions in transition from centralized to market economy.

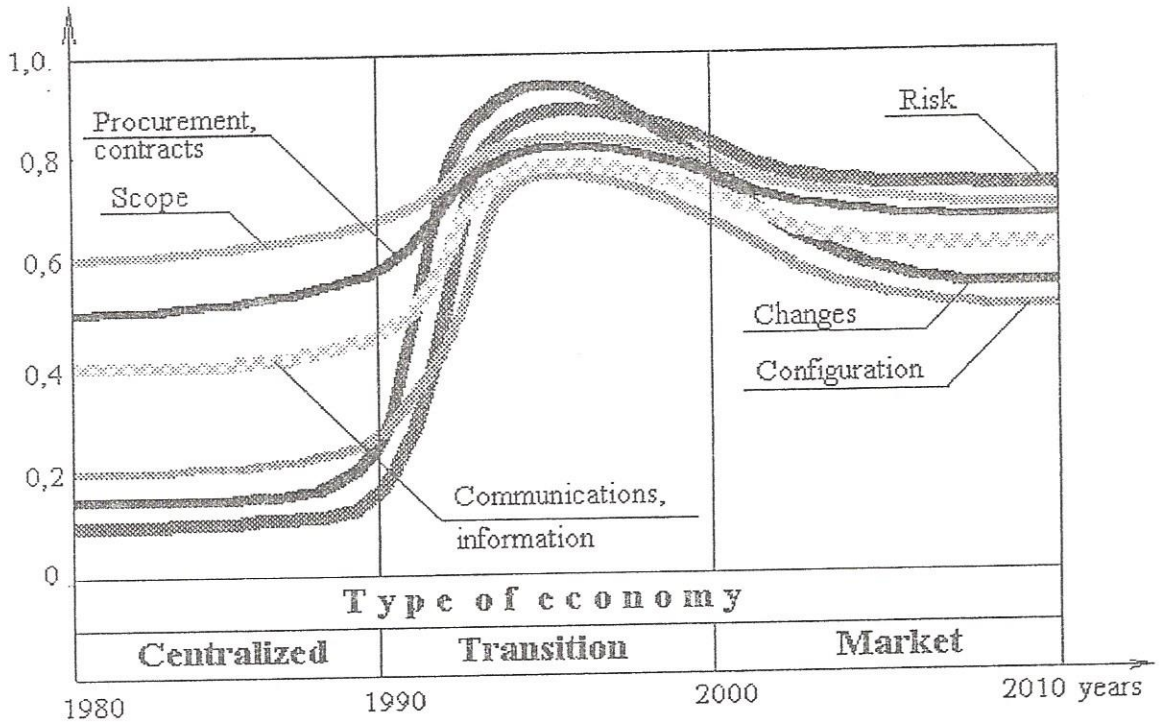

Fig. 4. Scheme of tendencies of changing necessity of PM functions, more sensitive to risk factors, in different economies as for Russia.

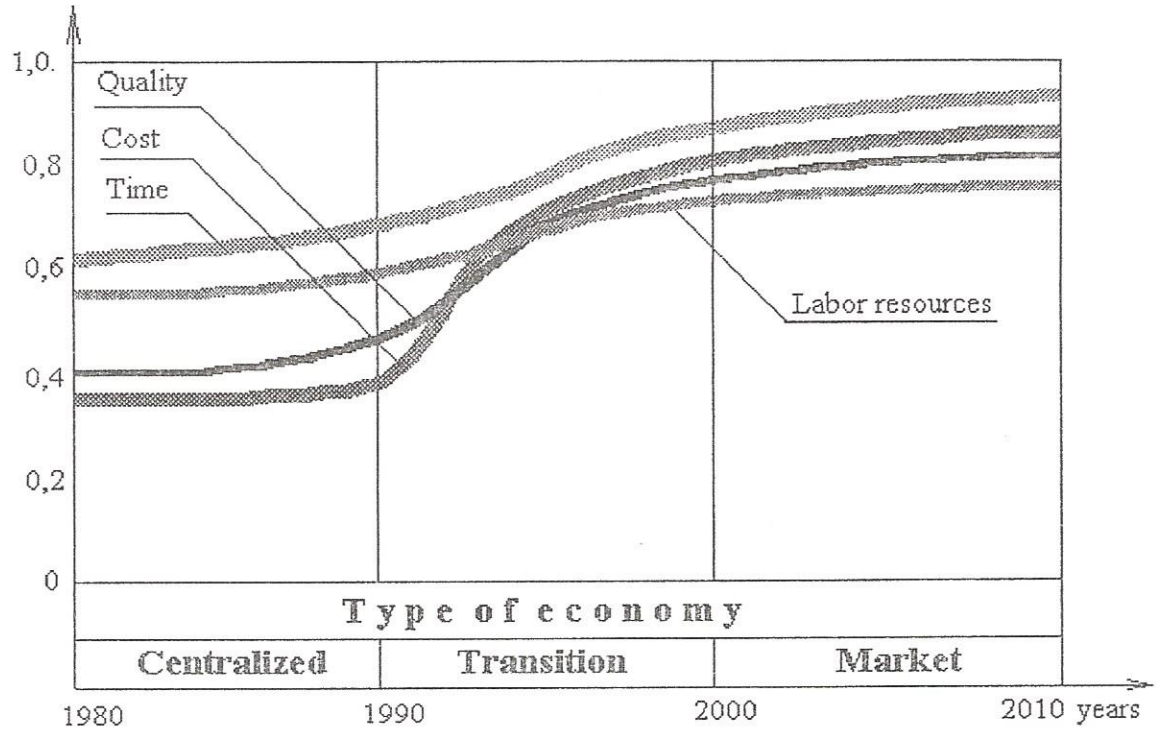

Fig. 5. Scheme of changing necessity of PM functions, less sensitive to risk factors, in different economies.

1.2.3. GENERAL CONCLUSIONS

Basing on the data of Tables 1 - 5 and Figures 1 - 5 it is possible to make some general conclusions concerning PM in different social and economic conditions.

1. Social and economic environments of all types are exposed to changes and, therefore, they can be considered as developing.
2. Transition economy by frequency and intensity of changes can be considered, from PM point of view, as the most common case of social and economic project environment.
3. All types of economies need PM application.. Though, in transition from centralized economy to market one, the necessity of all PM functions and, hence - PM methods and tools application, considerably grows..
4. The PM scientific basis, the PM BOK structure and core, including the context of PM functions, has evidently the common character, in spite of the difference between economics themselves.
5. The difference in PM for different social and economic environments is not principle and does not affect the PM basis. As a rule, the difference is connected with differences in types and kinds of projects implemented, with specific features of spheres of their application, the natural environment, as well as methods of PM practical use. All these differences can be considered within the frames of local supplements to the PM BOK core and in special guides and recommendations on PM application.
6. In transition to market the probability of changes in project and its environment, as well as risks, increase sharply. The tendency is also peculiar to the market economy. In this

case, common for all economies, we can define Project Management as managing changes in changing "parent" organization under the influence of changing external environment. This circumstance requires introducing a new PM integrative function "Change Management" which should cover traditional functions of Configuration Management and Overall Change Control and have not only operative, reactive character, but also solve tasks of change forecasting and preventing. Change Management is connected with all aspects of the project itself, all PM functions and processes. Fig. 6 shows the context of this function.

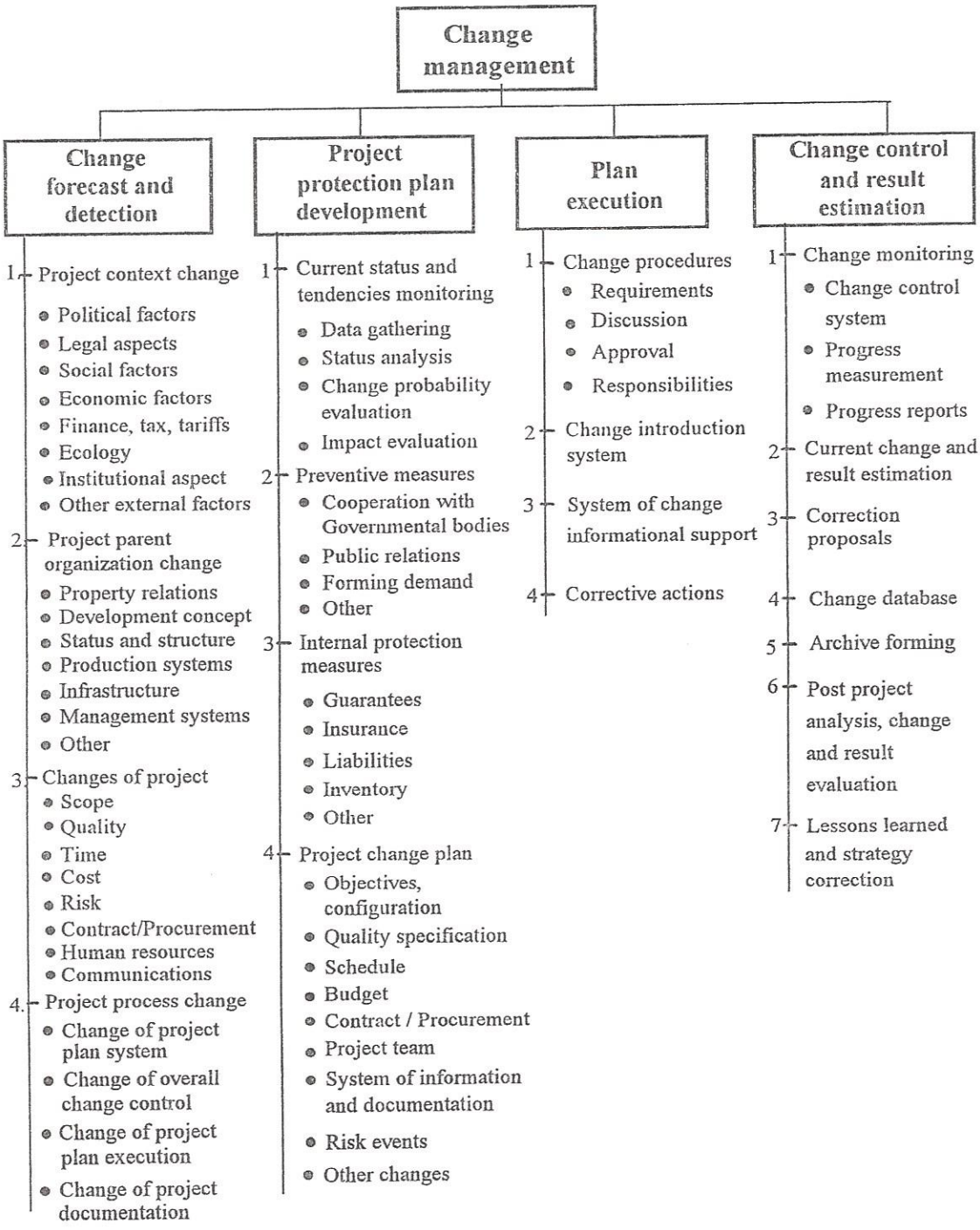

Fig. 6. Overview of Change Management.

2. RATIONAL WAYS OF PM DEVELOPMENT TAKING INTO CONSIDERATION THE SPECIFIC FEATURES OF DEVELOPING COUNTRIES

2.1. GENERAL

The analysis of the status, tendencies, dynamics of PM changing in different social and economic environment in Russia, given in Section 1, allows to formulate substantiated offers on the trends of PM efficient development. The offers are based on the fact that the modern PM reached such level of development that it made it possible and necessary to put the question of creating acknowledged all over the world: *a specific sphere of PM activity, including new complex applied scientific discipline "Project Management" and the world profession of project manager.* It is known that each applied science is intended for solving practical vital tasks and based on professional knowledge and activity.

PM as a sphere of activity should have the following basic components:

- scientific basis and applied knowledge;
- spheres of application;
- methodology and practice of application;
- professional specialists.

- ***Scientific basis:***

  - main notions, terms, their definitions forming the professional language and culture;
  - PM basic theory and methodology
  - PM BOK as the core of the discipline, invariant to the spheres and methods of PM application.

- ***Spheres of application:***

  - various spheres of human purposeful activity (branches of industry, agriculture, economy, culture, administrating, public affairs and so on);
  - all possible projects and programs;
  - geography of application (countries, regions, continents, etc.);
  - different environment of application (social and economic, political, national, cultural, technological, etc.);
  - project-oriented companies, organizations and their associations.

- ***Methodology and practice of PM application*** includes the whole spectrum of scientific, methodical, organizational, technical and other methods and tools, processes and procedures oriented to the practical PM usage in specific spheres of application. Here we should also include the PM legal and normative base.

- ***Professional PM personnel*** includes scientists, developers, teachers, experts, project managers of different levels and specialization, users and other specialists engaged in the sphere of PM professional activity and united in different organizational and production structures, including systems of education, training, qualification, certification of specialists and accreditation of professional organizations..

Fig. 7 shows the general scheme of PM professional activity.

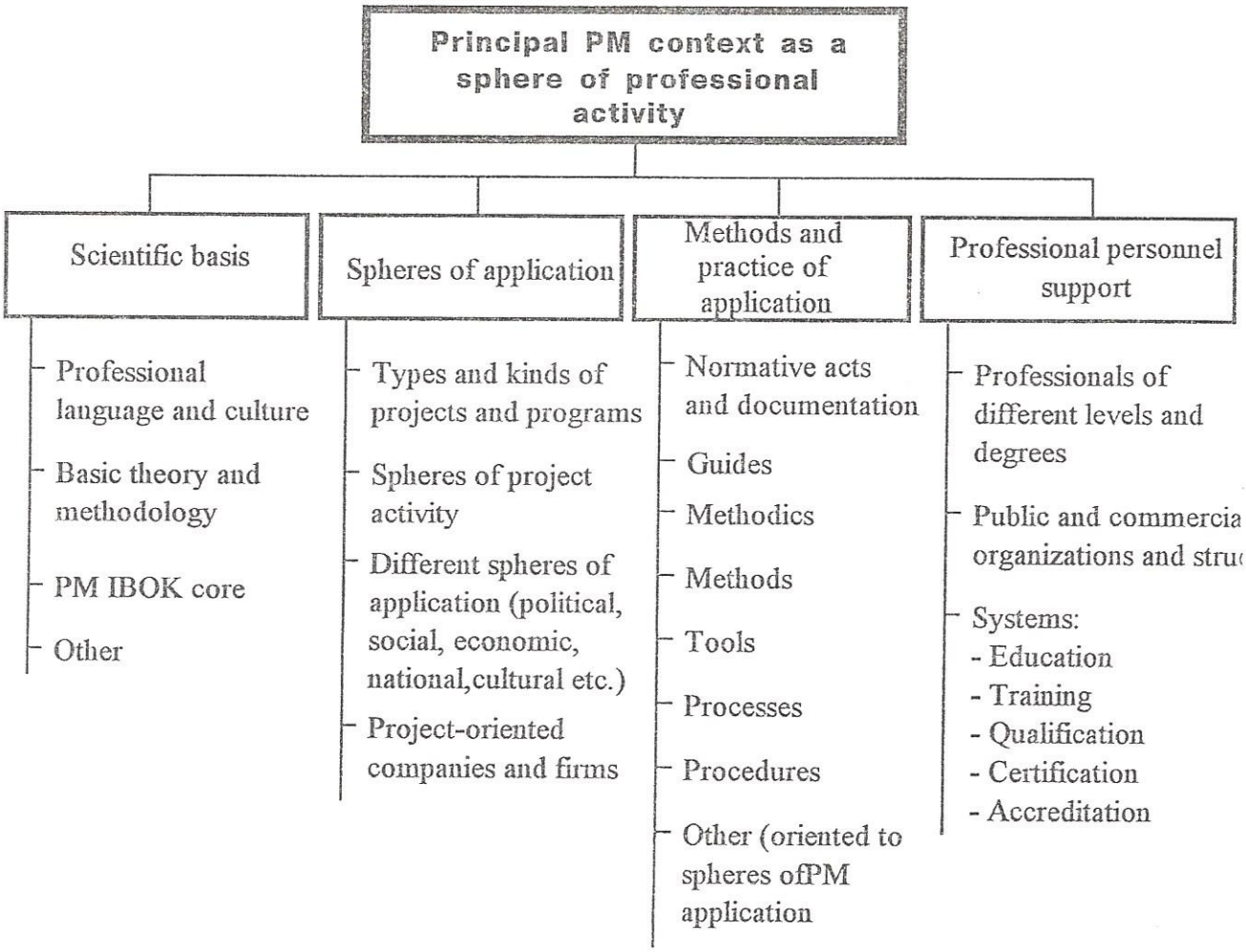

Fig. 7. The general scheme of PM professional activity.

2.2. TRENDS OF PM DEVELOPMENT

The efficient trends of PM further development, as a sphere of professional activity, both in developing and developed countries should be formed basing on two closely connected approaches: global and local.

- **Global development** is international and covers components of PM professional activity invariant to PM practice and spheres of application.

- **Local development** is national or oriented to another specific sphere of application (for example, country, region, trans-national company, branch, etc.). In local PM development we should take into account political, social, economic, technological and other specific features of PM practice and spheres of application.

According to this division further PM development, to our opinion, should be performed in the way of:

- globalization,
- unification,
- localization.

PM globalization is forming the global, common for all countries PM understanding and world-wide recognition as:

- special sphere of professional activity spread world-wide and covering all possible spheres of PM application;
- separate, complex applied scientific discipline with its theory, methodology, spheres and practice of application;
- profession of project manager which requires special knowledge, skills and competence for successful project management.

PM unification is forming and developing the unified PM components, elements, processes and procedures for all countries.

PM localization is forming and working out various PM components, elements reflecting specific features of different spheres of PM application and practical experience.

2.2.1. PM GLOBALIZATION

It is seen from the above that PM globalization should solve the following problems:

- Forming and providing global PM understanding and recognition as a sphere of special activity, scientific discipline and profession.
- Forming scientific PM basis including:
  - international PM language (terms, definitions, notions, glossary, thesaurus, dictionaries, etc.);
  - developing basis of PM theory and methodology;
  - developing PM international core and PM BOK invariant to the spheres of PM application and practice.
- Organization, support and coordination of global cooperation of PM organizations and specialists.

2.2.2. PM UNIFICATION

PM unification should include the efforts to developing:

- The unified structure of ~~PM BOK~~ International Body of Knowledge (PM IBOK) including the invariant core and distant sectors with flexible structure reflecting specific features of spheres and conditions of PM application (see Fig. 8).

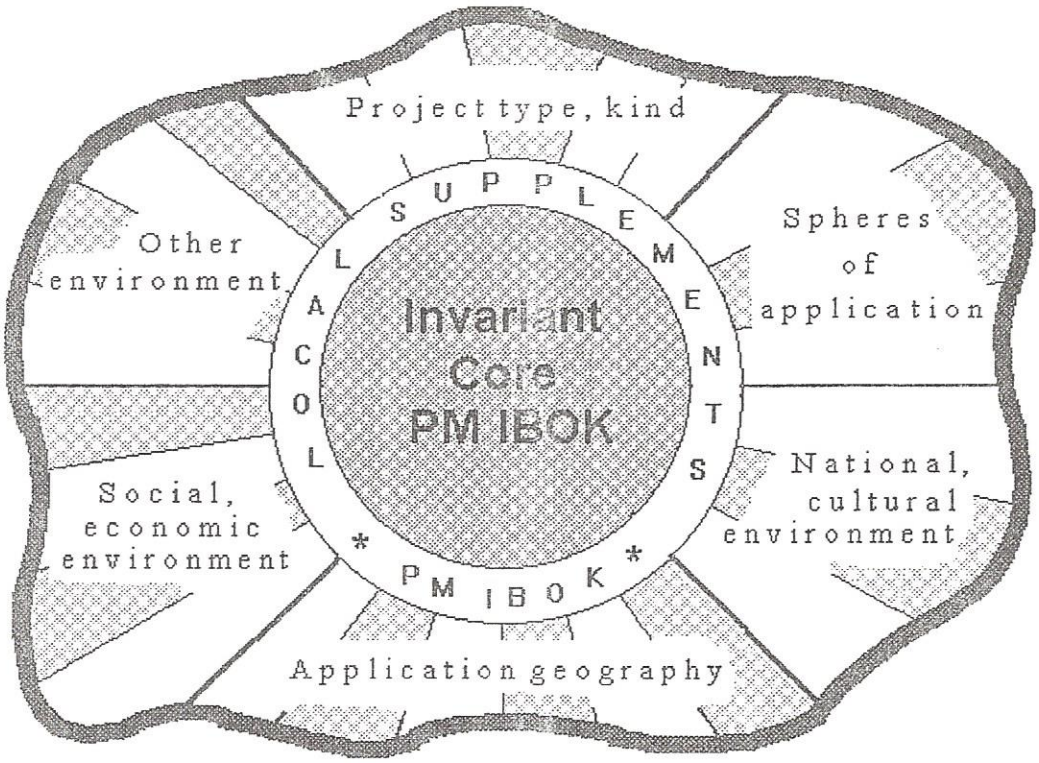

Fig. 8. The scheme of the unified PM IBOK structure.

Note. The unified structure of PM IBOK will assist to each country, branch, company in forming their own individual PM IBOK configurations in order to consider all specific conditions and requirements of the spheres of PM application and practice.

- Common approach (concept) to the system of education, personnel training and project managers of all levels.
- International program based on PM IBOK for preparing specialists.
- International concept, requirements, programs and procedures for certification and accreditation of PM specialists and organizations with the international recommendations for national PM organizations and trans-national companies.

As the first step in PM unification the following could be performed:

1. Developing the international program and procedures of PM specialists knowledge *qualification* basing on PM BOK and certification programs PMP worked out in PMI and updated with materials of IPMA, AIPM, ISO and so on (1-st level of certification).
2. Developing the international program and procedures of *certification* of project managers for confirmation of their competence basing on PM IBOK and IPMA certification programs updated with PMI and other international organizations materials (2-nd level of certification).
3. The same on the program of accreditation see Sections 1, 2).
4. Appropriate national certification programs can be developed basing on 1, 2, 3.
5. The system of international standards and normative bases on unified PM components and elements and putting them into practice through the international organizations.

The plan of creating the international system of qualification, certification and accreditation is given in Fig. 9.

Stages	Scientific and technical base	Procedures and result	Period of realization
PM Qualification			
a) Temporary variant	Temporary program based on PM BOK PMI, IPMA, ISO, AIPM	Examination, qualification PMP - PMI and IPMA	One year
b) Permanent variant	PM IBOK by FPMA	Examination, qualification FPMA	Two-three years
PM Certification of project managers by their qualifications			
a) Temporary variant	IPMA programs of certification with PMI supplements	Interview + experience report. IPMA Certificate	One year
b) Permanent variant	Certification program of FPMA	Interview + experience report. FPMA Certificate	Two years
PM Accreditation			
a) Auditors (examiners)	Temporary IPMA, PMI Agreement	Interview, IPMA Diploma	Two-three years
b) Professional organizations	Accreditation programs FPMA	Interview, FPMA Diploma	Three years

Fig. 9. The plan of creating the international system of qualification, certification and accreditation.

2.2.3. PM LOCALIZATION

Our understanding of PM localization includes development of local supplements, adaptation of global and unified PM components and elements to specific conditions of the spheres of PM application and practice. Such supplements include:

- Adaptation of PM IBOK to specific conditions.
- Creating the national PM language compatible with the international one.
- Creating the national system of education, certification, qualification of specialists and accreditation of PM organizations.
- Development of special PM methods and tools, methodical recommendations and guides on PM application taking into consideration local conditions and requirements.
- Development of guiding and methodical PM materials within the frames of a firm.

So, specific trends and practical course of PM application in Russia should be defined in the process of localization taking into consideration specific features of transition economy and results of PM unification and globalization.

2.2.4. PRINCIPLES OF INTERNATIONAL ORGANIZATION AND COORDINATION OF WORK ON PM DEVELOPMENT

For realization of the international program of PM development appropriate organizational forms, intellectual and financial support are necessary.

Organizational forms of supporting global PM complex development can differ much. The most acceptable form is creating the International Federation of PM Associations (FPMA), which can unite all existing international, regional and national PM associations and organizations.

The main purposes of FPMA could be:

- global PM profession development and recognition as a professional sphere of activity and its promotion to new countries, regions and new spheres of application;
- PM unification and standardization;
- development and realization of international programs and projects on education, scientific research, qualification, certification of project managers and accreditation of PM organizations;
- organization and holding PM world forums;
- information and publishing activity and services for FPMA members;
- organization and coordination of FPMA members in PM development.

FPMA should be managed by the elected for 2-3 years coordination group and should not have rigid vertical hierarchic structure of bureaucratic type.

To create FPMA it is necessary:

- to create the initiative group;
- to develop the concept and draft Charter of FPMA;
- to obtain consent of international and national organization to join FPMA and come to agreement on constituent documents;
- to hold the Constituent Conference.

Intellectual support of global PM development and unification should be performed by and under the aegis of FPMA members.

For this purpose the following should be done:

- forming temporary working commissions and groups from authorized experts for realization of FPMA projects. The list of experts should be confirmed by FPMA members;
- periodical discussions on work results, projects and programs during FPMA working meetings and forums;
- review and approving the final PM documents on FPMA projects;
- presenting approved PM documents to competent international organizations.

Financial support of projects and programs on PM globalization, unification and localization should be performed by international foundations, international financial and crediting institutions, governments of countries concerned, national organizations and trans-national companies.

The proposed approach to further PM development in the world and each separate country allows to obtain the following profits:

- acceleration of the process of integration of the world community and its social and economic development;
- providing further efficient development of PM all over the world;
- acceleration of PM knowledge and experience transfer to developing countries and their social and economic, scientific and technical progress;
- expanding the experience, achievements, national and cultural values of all countries in the field of PM;
- opening new spheres of PM application in our developing world.

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