

Assessing and Benchmarking Project-oriented Societies

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Abstract

A society, which applies projects and programmes as temporary organisations to perform unique processes of medium or high complexity, can be perceived as a project-oriented society (POS). It is the objective of a POS research initiative, to develop and to apply a model of the POS, which identifies and describes the specific processes and services of a POS, and provides criteria for the measurement of the competences of a POS. This paper reports about the results of this research. It describes the POS model and it shows its application in assessing and benchmarking a group of six project-oriented societies – namely Austria, Denmark, Hungary, Romania, Sweden and the United Kingdom. programm I austria - The Austrian Project Management Initiative is presented as an example for the further development of the competences of a POS.

Selected keywords

Project-oriented society
Project-oriented companies
Benchmarking
Competitive advantage

1. The POS research initiative

The structure of the POS research initiative

The IPMA – International Project Management Association conducts a research initiative with the objective to develop the model of the POS. In a "POS Conception Project" the model of the POS was constructed and elements for the description of a POS were defined. Based on these conceptual results the project "POS Benchmarking" is performed currently. The objectives of this project are to assess the competences of different POSs, to analyse commonalities and differences between these POSs and to define strategies for further developing the competences of the POSs. A first group of POSs has been benchmarked. It is planned to benchmark a further group of POSs in 2002.

The research approach

In the POS research initiative a systemic-constructivistic research approach is applied based on the following three fundamental paradigms:

- the radical constructivism (see Glasersfeld 1992) as the epistemological approach,
- the social systems theory (see Luhmann 1995) as the organisational approach, and
- the qualitative social research (see Lamnek 1995) as the methodological approach.

The research emphasis lies on the generation of hypotheses and the development of the POS model. The empirical assessment and benchmarking work supports the creation of a viable POS model. The research is carried out in a cyclic process and consists of several loops of information gathering, hypotheses generation and reflection. For the information gathering a multi-method approach, including questionnaire based assessments, documentation analyses, observations, and group discussions, is applied. The interpretation of the data gathered and the hypotheses generated is done in several workshops with representatives of the different POSs. The quality of the assessment data depends on the assessment process applied in the single POSs. The benchmarking results represent the perception of the POS Team.

The POS model as well as the assessment and benchmarking results are social constructs. These constructs are further developed and examined in different team structures to allow for different perceptions.

The POS is perceived as a social system. According to Luhmann's categorisation of social systems in interactions, organisations and societies, the society is the most complex social system. Social systems establish and maintain themselves by constructing a difference to their social environment. Therefore, Luhmann (1995) defines a social system as everything, for which a differentiation in internal and external is possible. Other societies as well as the economic and political systems of a society under consideration are defined as context of the POS.

The project-oriented society: Basic hypotheses

More projects and programmes (of projects) are performed in companies, but also in municipalities, schools and even families. "Management by Projects" becomes an organisational strategy of "Project-oriented Companies", to cope with increasing complexities and dynamics in the business environment. The globalisation of the economy, new technologies with ever shorter product development cycles, and the application of a new management paradigm, characterised by virtual organisations, empowerment, knowledge management, etc. promote the application of project and programme management.

Not only traditional industries but also the public sector and non-profit organisations consider projects and programmes as appropriate organisations to perform complex business processes. New project types, such as marketing-, product development-, and organisational development projects, gain in importance. A society, which applies projects and programmes as temporary organisations to perform unique processes of medium or high complexity, can be perceived as a POS.

The research initiative is based on the following hypotheses:

- Societies are becoming more project-oriented. Projects and programmes are applied as temporary organisation forms.
- Project management is not just a micro-economic but also a macro-economic concern.
- POSs can be defined by national or by regional boundaries.
- POSs are characterised by specific processes applied by project-oriented companies, such as project management, programme management, project portfolio management, personnel management, and organisational design, and by specific project management related services, provided by PM education, PM research, PM marketing, and PM standardisation institutions.
- Different POSs have different competences to perform these specific processes and to provide these PM related services. Competences of POSs can be benchmarked.
- The more competences a POS has, the more competitive it is internationally. There is no ideal POS. The competences required by a POS depend on its context, especially on the importance of projects and programmes, and the management culture of the society.
- The competences of a POS can be further developed. This can be done by national project management initiatives.
- POSs with similar competences have a high potential for efficient co-operations. POSs with high competences can transfer their knowledge to societies with little competences.

All but the last hypothesis have been considered in the empirical work and interpretations so far.

2. The model of the project-oriented society

Boundaries of the POS

The perception of a society as a POS is a construction; it requires the observation of a society with a specific “pair of glasses“, the glasses of project-orientation. The focus is on those communications of the society, which relate to projects, programmes and project portfolios.

Generally, the boundaries of societies can be constructed according to different criteria. By applying a functional differentiation as primary differentiation criterion for the construction of societies, subsystems, like economy, science, education, politics, law, art, religion, etc. can be defined. As far as this functional differentiation of the society is concerned, the POS model concentrates on the subsystem economy, but also considers supporting activities of the subsystems education, science and law.

As secondary differentiation criterion for the construction of societies Luhmann (1995) suggests territories and the extent of the economic development. Examples for application of the secondary differentiation criterion are:

- National territory: e.g. USA, Canada, Australia, Sweden, Austria
- Regional economic associations: e.g. EU, Nafta
- Regions with the same language: e.g. English speaking countries
- Extent of economic development: developed , transformation, developing countries.

Here the boundaries of the POS are defined to include all communications of a nation's economy-system, which relate to projects, programmes, and project portfolios and those

communications of a nations science-, education-, and law-system providing services related to project, programme and project portfolio management.

Context of the POS

The competences of a POS are influenced by the importance projects and programmes have for a POS, by the overall structure of the society and by its history and expectations about the future. The importance of projects and programmes for the society can be determined by assessing the number of project-oriented industries and companies. Information about the history and the future of the society can be described regarding the social sub-systems economy, science, education, politics, law, religion, arts, etc.

Processes and services of the POS

The POS model considers on the one hand the processes of project-oriented companies (POCs), such as project management, programme management, project portfolio management, personnel management and organisational design, and on the other hand the services of PM related institutions, such as PM education, PM research, PM marketing and PM standardisation institutions, as elements for describing a POS.

The POS model can be visualised by a spider web. The axes of the spider web represent the processes and services of the POS.

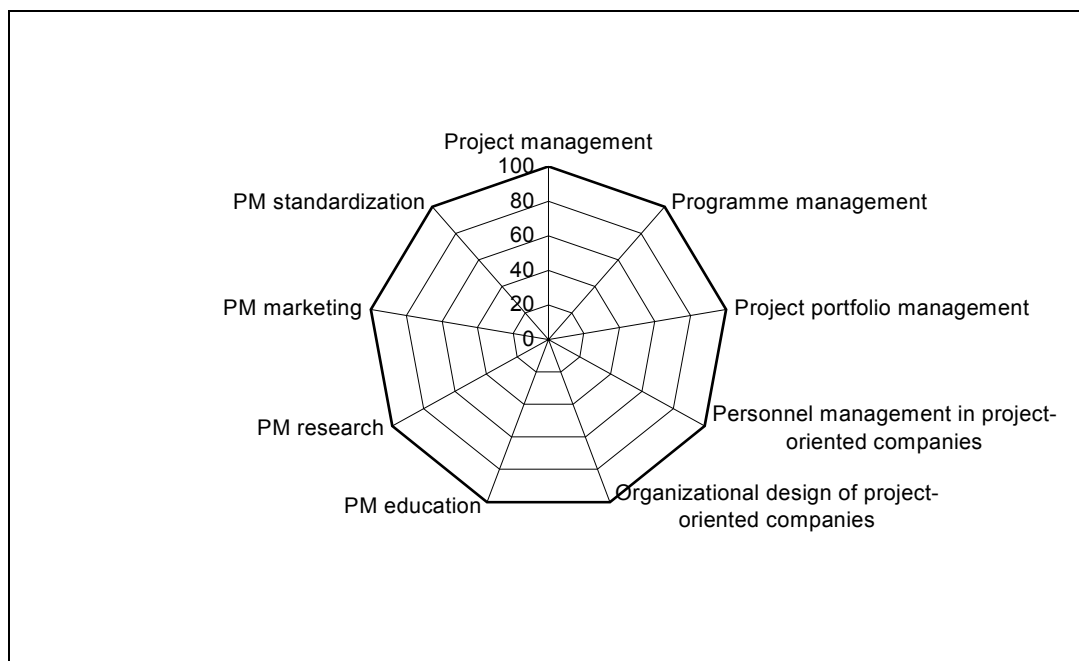


Figure 1. The spider web model of the project-oriented society

Below the elements of the POS are shortly described:

- **Project management:** A project is a temporary organisation for performing a unique, short- or midterm process of medium or high complexity. PM is a business process of the project-oriented company. The PM process starts with the project assignment and ends with the project approval. It consists of the sub-processes project start, project co-ordination, project controlling, project discontinuity management and project close-down.

- **Programme management:** A programme is a temporary organisation for performing a unique, mid-or long term process of high complexity. A programme is a set of projects and tasks which are closely coupled by common objectives. Programmes are limited as to time and budget. Programme management is a business process of the project-oriented company. The programme management process consists of the sub-processes programme start, programme co-ordination, programme controlling, programme close-down and occasional the management of a programme discontinuity.
- **Project portfolio management:** A project portfolio is a set of projects (and programmes), which are performed by a project-oriented company at a certain point in time. A project portfolio is more than the sum of its projects. A project portfolio database is the basis for project portfolio management. Information of this database can be used to decide, if new projects should be started and to establish priorities among projects. The objective of project portfolio management is to optimise the results of the project portfolio.
- **Personnel management in project-oriented companies:** Personnel management processes in project-oriented companies are recruitment, disposition and development of project personnel. In project-oriented companies a PM career path includes the PM-roles Junior Project Manager, Project Manager, Senior Project Manager and PM Executive.
- **Organisational design of project-oriented companies:** Project-oriented companies have specific integrative organisational structures, such as PM Offices, Project Portfolio Groups or Expert Pools, and specific integrative tools such as PM procedures and standard project plans.
- **PM education:** Formal PM education programmes are provided by different institutions and might lead to academic degrees in PM. The PM approach taught and the number of courses vary in different programmes.
- **PM research:** PM research projects and programmes, PM related publications and events and PM related research financing are services provided by PM research institutions.
- **PM marketing:** The primary PM marketing institution in a POS is the national PM association. Services like membership, certifications of project managers, PM events, etc. are services provided by these institutions.
- **PM standardisation:** Services provided by PM standardisation institutions, such as a national norming institute, are PM norms and formal PM requirements for public tenders.

The POS questionnaire

The context of the POS as well as each element of the POS model is specified in detail in the POS questionnaire. The questionnaire consists of

- Part A: Context of the POS and importance of projects and programmes in the POS,
- Part B: Services of PM-related institutions in the POS, and
- Part C: Practices of project-oriented companies in the POS.

Part A of the questionnaire asks for context information regarding the managerial competitiveness of each society based on international competitiveness reports such as the Global Competitiveness Report (Sachs et al. 1998) and the World Competitiveness Report (International Institute for Management Development 1997).

Part B of the questionnaire asks for the services of PM-related institutions such as PM education, PM research, PM marketing and PM standardisation institutions. Part C consists of questions regarding the practices of project-oriented companies in project management, programme management, project portfolio management, personnel management and in organisational design. In Figure 2 and Figure 3 examples of questions of the questionnaire are shown.

At how many schools is it possible to get a formal PM degree? Please make a range estimate.			
	Bachelor	Master	Ph.D.
primary schools			
secondary schools (such as high schools, trade schools, ...)			
Colleges			
Universities			
continuing education institutions			
consulting companies			
other educational institutions (please state)			

1...always, 2...often, 3...sometimes, 4...seldom, 5...never

Figure 2. An example of a PM education related question (Part B)

In the project start process the following PM-methods for the design of the project organisation are used: Project organisation chart, descriptions of project roles, responsibility matrix	
In the Project-oriented Society	
In the IT-Industry	
In the telecommunications industry	
In the building construction industry	
In the engineering industry	
In banking and insurance	
In NPOs	
In another industry (.....)	

1...always, 2...often, 3...sometimes, 4...seldom, 5...never

Comments, interpretations:

Figure 3. An example of a project management related question (Part C)

The questionnaire of the POS model can be applied for assessing and benchmarking POSs.

3. Assessing and benchmarking the competences of POSs

A POS requires competences, i.e. knowledge and experience, to perform its specific processes and to provide the PM related services. The assessing and the benchmarking of the competences of POSs is performed in the project “POS Benchmarking”.

The first level of the work break down structure of the project “POS Benchmarking” is shown in Figure 4.

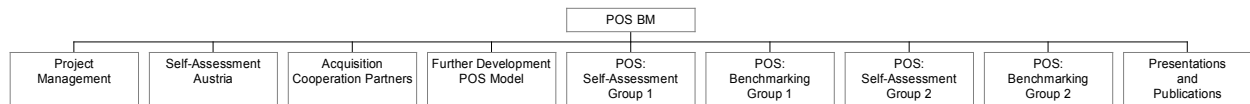


Figure 4. Work break down structure of the project “POS Benchmarking”

The conception of the POS model started in May 1999. The assessments and the benchmarking of the POSs of BM Group 1 was performed in the period from October 2000 to March 2001. It is planned to start the assessments and the benchmarking for the BM Group 2 at the end of 2001. The project organisation chart of the project “POS Benchmarking” is shown in Figure 5. The members of the project organisation are listed in Table 1.

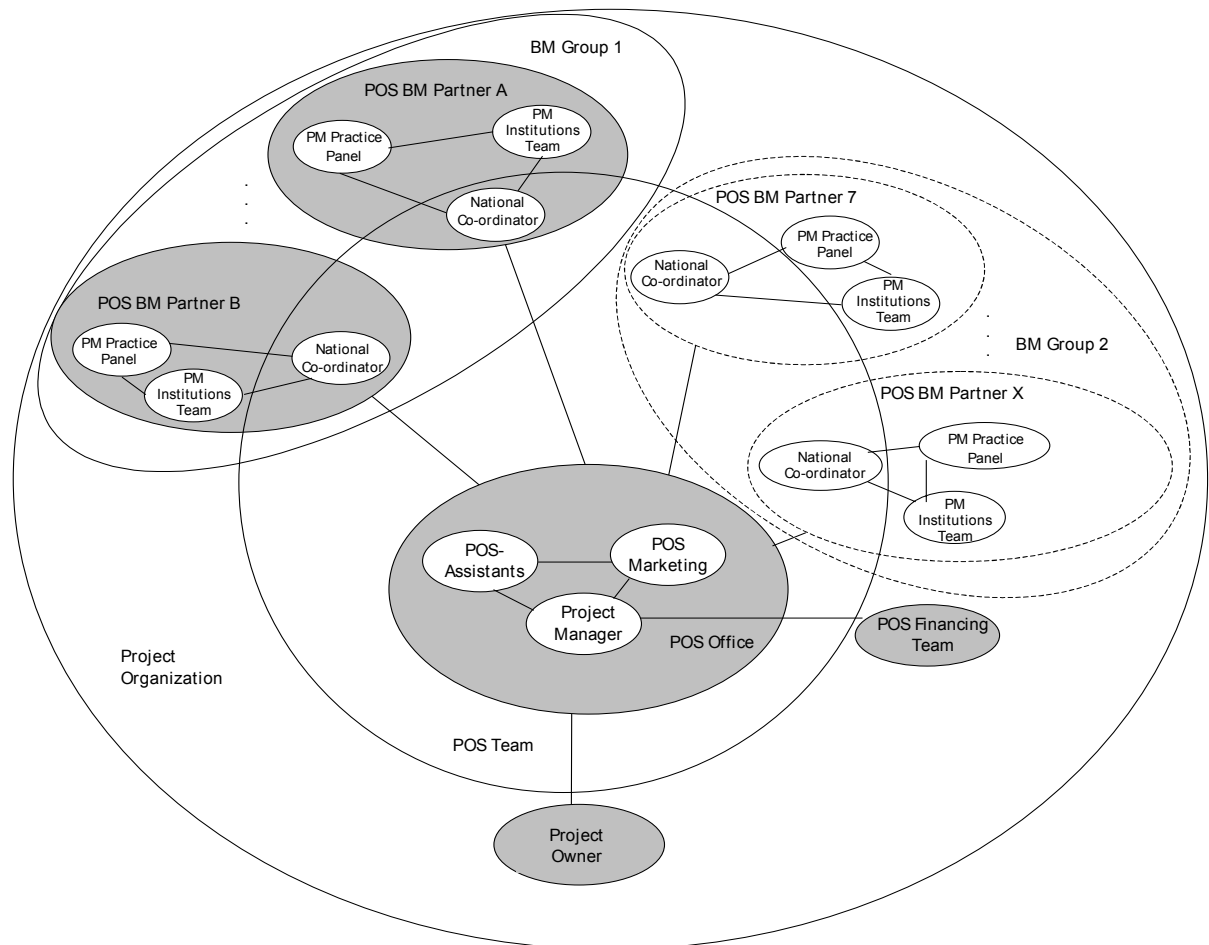


Figure 5. Organisation chart of the project “POS Benchmarking”

Role	Name	Organisation
Project Owner	Rodney Turner and Gilles Caupin	IPMA
Project Manager	Roland Gareis	PROJEKTMANAGEMENT GROUP
POS Office	Martina Huemann and Susanne Hasenhüttl	PROJEKTMANAGEMENT GROUP
Co-ordinator Austria	Roland Gareis	PROJEKT MANAGEMENT AUSTRIA
Co-ordinators Denmark	Kristina Vogelius and Morten Fangel	Danish Project Management Association
Co-ordinator Hungary	Kinga Kovács	Szinergia
Co-ordinator Romania	Constanta Bodea	Romanian Project Management Association
Co-ordinator Sweden	Thomas Blomquist	Umeå School of Business and Administration
Co-ordinator United Kingdom	Rodney Turner	APM

Table 1. List of the organisation members of the project “POS Benchmarking”

The process of assessing and benchmarking the first group of POSs

The project “POS Benchmarking” is performed as a co-operation of IPMA and the PROJEKTMANAGEMENT GROUP of the University of Economics and Business

Administration Vienna with different national PM Associations and organisations representing POSs.

The process of assessing and benchmarking the POSs is the following:

- Each POS nominates a POS Assessment Team with representatives of the national PM association, of project-oriented companies, PM researchers and PM students. A National Co-ordinator represents the POS in the overall POS Team.
- The PM related services provided by institutions (PM education, PM research, PM marketing, PM standardisation) are assessed by national PM Institutions Teams. Internet information and documents, that describe the services of these PM institutions, are analysed. This assessment is questionnaire based. It is supported by interviews.
- The assessments of the practices of the project-oriented companies are performed by national PM Practice Panels in workshop form, considering the practices in project management, programme management, project portfolio management, personnel management and in organisational design. This assessment is also questionnaire based.
- The analyses and the discussions of the results of the assessments of the single POSs are performed by the overall POS Team with representatives of the different POS Assessment Teams in workshop form. Commonalties and differences between the POSs are interpreted. Overall strategies for the further development of the POSs are planned.
- A POS benchmarking report is prepared, and the benchmarking results are published and communicated in the single POSs.

4. Results of assessing and benchmarking the services of PM related institutions

The services provided by PM education, PM research, PM marketing, and by PM standardisation institutions in the different POSs are described and compared.

PM education

In Austria a formal PM degree is provided by three colleges (Fachhochschulen). Three postgraduate programmes in PM exist, but there is no master degree programme in PM. PM is provided in the form of an elective education programme at the University of Economics and Business Administration Vienna. There students can do their PhD thesis or master thesis in PM and by that specialise in PM. In trade schools PM education is provided.

In Denmark there is no formal degree “Master in PM”, but similar as in Austria students can do a master or PhD theses in PM. PM education is provided at six universities. One bachelor degree in PM is offered. None formal degree is granted by continuing education programmes. PM is included in secondary education programmes.

In Romania at the Academy of Economic Studies in Bucharest and at the Ovidiu University Constanta master degree programmes in PM were established in 2000. In some other Romanian universities PM modules have been included. No other formal PM education exists in Romania so far. Some consulting companies offer PM training.

Sweden has two universities providing formal master degree programmes in PM. In many more universities (at least 10) PM education is offered and it is possible to do a master or PhD thesis in PM. No formal degrees in colleges or continuing education institutes exist, but at least 13 colleges and 3 continuing education institutes offer PM education.

In Hungary two master degree programmes in PM are running. PM education is provided in form of single modules at at least three universities and at some continuing education institutions. Some secondary schools in the field of environment protection have included PM in their curricula.

In the UK 13 master degrees in PM (or closely related disciplines) are offered. Of about 120 universities and university colleges in the UK, about 10% offer masters degrees in PM or closely related disciplines. Doctorates in PM can be done at at least 13 institutions. Three bachelor degrees and three diploma programmes in PM exist in the UK.

PM Education \ Country	Primary schools	Secondary schools	Tertiary			
			Doctorates	Master Degrees	Bachelor Degrees	Diploma
Austria	none	Some	possible	none	3	3
Denmark	none	Some	possible	none	1	None
Hungary	none	Some	possible	2	none	None
Romania	none	None	none	2	none	None
Sweden	none	Some	possible	2	none	None
United Kingdom	none	None	13	13	3	3

Table 2. PM education in POSs

In all assessed POSs PM education can be found in tertiary education (universities, colleges, continuing education). UK is the most mature society regarding degrees in PM and formal PM education. Supported by EU funding Romania has established PM master degree programmes. No other formal PM education is provided so far. In Austria and in Denmark no master degrees in PM are provided.

PM is provided in secondary schools in Austria, Denmark, Hungary and Sweden. In all POSs except Romania project work is often included in primary education. But no PM education is provided at this education level.

The PM approach taught in PM education programmes is rather planning oriented in Hungary and Romania, while in Austria and Denmark the approach is rather organisational oriented. Sweden states that their PM education is organisational oriented. In the UK education programmes with different PM approaches exist, ranging from traditionally planning oriented to organisational oriented.

Only Romania states that they have a national institute co-ordinating the PM education. Objects of consideration in this co-ordinations are the contents as well as the teaching methods of the PM education programmes. The co-ordinating institute is also responsible for the co-ordination between education institutes.

PM research

In none of the POSs a national institution co-ordinating PM research exists. Partly the co-ordination is done by national PM associations, like in the UK, where the national association APM also carries out PM research. The assessments show that in Austria, Denmark, Sweden and the UK quite a number of PM research projects (and programmes) have been carried out during the last five years. In Austria for instance within the research programme "Best PM Practice" a process-oriented PM approach has been developed at the University of Economics and Business Administration (1996-1999).

PM research initiatives often support the promotion of PM as a profession in the society. For instance in the UK one of the most important research projects was the renewal of the APM's body of knowledge, which was performed in co-operation with UMIST. In Sweden project sweden - based on a collaboration between universities and industries – aims at enhancing PM competence through research (see also PM marketing table).

In Hungary only some PM research was carried out during the last five years. In Romania PM research has not yet been established. In Austria, Denmark, Sweden and the UK a few PM related research events took place during the last five years.

PM marketing

In all assessed POSs national PM associations exist. In Romania a national PM association was established in 2000 and is currently seeking for IPMA membership. The PM associations in some countries (Austria, Denmark, Sweden and the UK) offer a lot of services like PM marketing, PM events, PM publications, PM discussion platforms and developing PM standards. In Austria, Denmark, Hungary, Sweden and the United Kingdom PM certifications according to IPMA standards are carried out.

In Hungary and in the UK several PM associations exist. In Austria, Denmark, Hungary, Romania, Sweden and the UK also PMI chapters exist. No doubt that APM the Association for Project Management in UK with about 9.000 individual members is a very strong and very active force for promoting PM in the UK. The most important initiative in the last five years was APM's development of a revised body of knowledge. Other national associations are of course smaller because of the number of inhabitants in the country, but probably also because of cultural differences. For instance, while in the UK it is a habit to join clubs or associations, in Austria people do not like to formally join in. Nevertheless there also exist very active small PM associations e.g. in Denmark or in Austria.

The PM approach represented by the PM associations of Sweden and Austria is organisationally oriented. Romania's approach can be characterised as rather organisationally oriented. In Hungary the association follows a rather planning oriented approach. UK stated that within the association all PM approaches ranging from organisationally oriented to planning oriented are represented.

None of the societies stated that the profession project manager has already been formally established. In all POSs PM initiatives are currently running or have been accomplished. These PM initiatives are often aiming at further developing the profession.

Country	Name of initiative	Organising Institution	Objective
Austria	programm I austria	Projekt Management Austria	Further development of Austria as POS
Denmark	PM Body of Knowledge	Danish Project association	Development of the national PM Body of Knowledge
Hungary	MPSZ Accredit	FÖVOSZ	International Accreditation
Romania	EPROM	Academy of Economic Studies in Bucharest	Establishment of PM education at Romanian universities
Sweden	Project Sweden	IMIT	Further development of PM competences in industry
United Kingdom	APM body of knowledge	APM, UMIST	Renewal of the national PM Body of Knowledge

Table 3. Project management initiatives in POSs

PM standardisation

In Austria and the UK national PM bodies of knowledge according to the ICB - International Competence Baseline exist. In Austria there are also some special norms (DIN, ÖNORM) for the standardisation of PM applied. Denmark is currently developing a new PM body of knowledge, which will be issued later in 2001. In Hungary the PMBok and Prince are used widely as a PM standard. In Romania no PM norms or standards exist. The UK is the only society stating that formal PM requirements are asked for in public tenders. Namely Prince and APM competency certificates are asked for.

5. Results of assessing and benchmarking the practices of project-oriented companies

The data resulting from the assessments of the practices of project-oriented companies are average data relating to all project types performed by all industries in the different POSs. Different data might result from assessments of specific industries and/or specific project types in the POSs.

Project Management

The benchmarking results regarding PM are shown in figure 6 and 7. Figure 6 visualises the competences in the project start process. Figure 7 illustrates the competences in the other PM sub-processes, namely the project co-ordination, project controlling, project discontinuity management and project close-down.

Project management – Part 1	Austria	Denmark	Hungary	Romania	Sweden	United Kingdom
PM methods in project start process for planning	always	often	sometimes	seldom	never	never
PM methods in project start process for consideration of the project context	always	often	sometimes	seldom	never	never
PM methods in project start process for the design of project organisation	always	often	sometimes	seldom	never	never
PM methods in project start process for the design of project culture	always	often	sometimes	seldom	never	never
PM methods in project start process for project risk management	always	often	sometimes	seldom	never	never
PM methods in project start process for project discontinuity management	always	often	sometimes	seldom	never	No answer

always	often	sometimes	seldom	never
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Figure 6. Benchmarking results: Project management – Part 1

In Austria in the project start process PM methods for planning (like project goals, wbs, bar chart, project cost plan, project resources plan, business case analysis, etc.), for project context (such as the project environment analysis), design of project organisation (project organisation chart, project role descriptions, etc.) and project risk management methods (such as the project risk analysis) are sometimes applied, while PM methods for designing a project culture (like project name, project slogans, project mission statements etc.) and project discontinuity management (project scenario analysis, escalation plans, alternative plans) are seldom applied.

A similar picture shows Denmark, where also PM methods to design a project culture are sometimes applied. In the project start process in Hungary PM methods concerning the design of the project organisation and the project culture are sometimes applied, while all PM methods for other objects of consideration are seldom used. In Sweden PM methods

considering project context, the design of project organisations and project culture are often applied in the project start process. PM methods for planning, project risk management and discontinuity management are sometimes used. In the UK all PM methods are sometimes used in the project start process.

Regarding the competences for the performance of the project start process the following general interpretations are possible:

- Two groups of POSs can be differentiated. Romania and Hungary show less competences in comparison to the other POSs.
- The scores are seldom or sometimes, only Sweden claims to apply certain methods often.
- There is less application of project risk management and of project discontinuity management than of the other PM methods.

Project management – Part 2	Austria	Denmark	Hungary	Romania	Sweden	United Kingdom
PM methods in project co-ordination process	Dark Grey	Dark Grey	Dark Grey	Light Grey	Black	Black
PM methods in project controlling process, updating plans	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	Dark Grey
PM methods in project controlling process, updating project organisation	Light Grey	Light Grey	Light Grey	White	Dark Grey	Light Grey
PM methods in project discontinuity management process	Light Grey	Light Grey	Light Grey	Light Grey	Dark Grey	Light Grey
PM methods in project close down process	Light Grey	Light Grey	Light Grey	Light Grey	Dark Grey	Light Grey
Project start workshops and project close-down workshops	Light Grey	Light Grey	Light Grey	Light Grey	Dark Grey	Light Grey
Representatives of relevant environments in workshops	Light Grey	Light Grey	Light Grey	Light Grey	Dark Grey	Black
Project specific IT infrastructure	Light Grey	Light Grey	Light Grey	Light Grey	Dark Grey	Light Grey
Project specific telecommunication infrastructure	Light Grey	Light Grey	Light Grey	White	Black	Light Grey

always	often	sometimes	seldom	never
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Figure 7. Benchmarking results: Project management – Part 2

Austria, Denmark and Hungary show similar competences for the performance of the other PM sub-processes. In these POSs PM methods are often used in the project co-ordination process. The project plans (goals, work breakdown structure, schedules, cost plan, etc) are sometimes adapted in the project controlling process.

In Romania less PM methods are used. For instance PM methods like updating the project organisation chart are never used. Sweden and the UK show more competences for the performance of these PM sub-processes than all the other societies. PM methods are always used in the project co-ordination process. In the UK representatives of relevant environments, such as customers and suppliers are always invited to participate in project

workshops. But these workshops like project start or project close-down workshops only sometimes take place.

Regarding the competences for the performance of the other PM sub-processes the following general interpretations are possible:

- The competences for the performance of the project co-ordination process is the highest in all POSs.
- The competences for the project co-ordination and for the project close-down process are pretty homogeneous.
- The competences for the performance of project controlling and for project discontinuity management are very heterogeneous.

Programme Management

Programme management	Austria	Denmark	Hungary	Romania	Sweden	United Kingdom
Sub-processes in programme management are performed						
Programme management methods are applied						
A specific programme organisation is designed						

Always	often	sometimes	seldom	never

Figure 8. Benchmarking results: Programme management

Austria, Denmark, Hungary and the UK show a similar picture in their programme management competences. In Austria and the United Kingdom programme management is seldom applied. Again Romania shows less competence in comparison to the other POSs. In Sweden the sub-processes programme start, programme co-ordination, programme controlling, programme discontinuity management and programme close-down are often performed. Programme management methods are often applied and specific programme organisations are often designed.

Project Portfolio Management

Project portfolio management	Austria	Denmark	Hungary	Romania	Sweden	United Kingdom
Project portfolio management processes are performed						
Project portfolio management methods are used						
Project portfolio group exists in POCs						

Always	often	sometimes	seldom	never

Figure 9. Benchmarking results: Project portfolio management

In general the competences in project portfolio management are rather low in the considered societies. Project portfolio processes (like assigning projects and programmes, managing the project portfolio, etc.) are seldom performed in Austria, Sweden and in the UK, sometimes performed in Denmark and Hungary. In Austria and Sweden project portfolio management methods like project proposals, project portfolio database and project portfolio reports are sometimes applied, while they are seldom applied in Denmark, Hungary and the UK. Sweden states that in project-oriented companies project portfolio groups to manage the portfolio are always established.

Project Personnel Management

Project personnel management	Austria	Denmark	Hungary	Romania	Sweden	United Kingdom
Project personnel development processes are performed in POCs						
Project personnel development methods are applied in POCs						
Project personnel development activities are organised in POCs						
A project management career path exists in POCs						
Project personnel development is supported by specific structures in POCs						

Always	often	sometimes	seldom	Never

Figure 10. Benchmarking results: Project personnel management

Austria and Denmark show a similar picture again. In both POSs project personnel development processes (like assessing project personnel, PM training, PM coaching, etc.) are often performed. In Austria, Denmark and Hungary PM development methods such as internal/external PM seminars, PM certification, coaching of PM personnel and assessment centres for project personnel are sometimes applied. Personnel development activities are sometimes organised for the roles project owner, project manager, project team member and project coach. While in Austria and Denmark seldom a PM career path exists, project-oriented companies in Hungary sometimes have such a career path. In Denmark, Hungary and the UK PM offices, internal PM trainers, PM coaches and networks of project managers sometimes support project personnel development. In Austria such supportive structures seldom exist. Romania shows less competence in comparison with all other POSs. Sweden and UK show high competences in project personnel management. Project personnel processes are often performed and project personnel methods are often applied, often considering all PM roles. In Sweden specific structures for supporting the project personnel development often exist.

Organisational Design

Organisational design	Austria	Denmark	Hungary	Romania	Sweden	United Kingdom
Integrative structures exist in POCs						
Specific tools exist in POCs						
Organisational development processes are carried out in POCs						
PM roles support the organisational development in POCs						

Always	often	sometimes	seldom	never

Figure 11. Benchmarking results: Organisational design

Austria and Hungary show the same picture regarding their competences in organisational design. Integrative structures, like expert pools, project portfolio groups and PM office seldom exist. Specific tools like PM procedures, standard project plans, PM marketing tools sometimes exist, while organisational development processes like auditing, self assessment and benchmarking of the PM process are seldom performed. Roles like PM office manager, (internal) consultants to support the organisational development seldom exist. The UK shows a similar picture. Again Romania shows the lowest competences in organisational design of project-oriented companies within the assessed POSs. Denmark and Sweden have more competences regarding the organisational design of project-oriented companies than the other POSs. In Denmark specific tools and PM roles to support the organisational development often exist. In Sweden integrative structures always exist in project-oriented companies.

6. The overall competences of the assessed POSs

POS competence algorithm

On the one hand the competences of a POS can be shown in a spider web-model and on the other hand a POS ratio can be calculated. The POS ratio is a weighted sum of the competences for performing the specific processes and for providing PM related services. As project management is considered as the most important process in the POS, this process has the weight of 20%. All other processes are weighted with 10%. The weight of each question is proportional to the number of questions per process. The competences are measured according to a scale of 0-100. In table 4 the relations between the competence scale and the answering categories in the POS questionnaire, for questions relating to the practices of POCs, are defined.

Answering Categories in The Questionnaire	Competence Scale
Never	0-20
Seldom	21-40
Sometimes	41-60
Oftentimes	61-80
Always	81-100

Table 4. Relationships between answering categories and the competence scale

The competence scores for the services provided by PM related institutions are determined in a qualitative approach. The quantitative and qualitative data resulting from the answers are integrated. The resulting scores are relative values, relating each national score to those of the other POSs.

POS ratios

Table 5 shows the weighted competences for each process and service, the PM service ratios and the POC practice ratios, and the overall POS ratios for the assessed POSs.

Services and processes	A	DK	HU	RO	S	UK
PM education	40	30	30	30	40	80
PM research	40	30	20	10	40	70
PM marketing	50	50	20	10	50	80
PM standardisation	40	30	10	0	30	60
PM support ratio	170	140	80	50	160	290
Project management	87	92	84	63	127	111
Programme management	30	37	37	17	70	30
Project portfolio management	35	43	37	10	57	30
Personnel management in POCs	50	50	46	26	62	58
Organisational design of POCs	35	55	35	30	65	40
PM practice ratio	237	277	239	145	380	269
POS ratio	407	417	319	195	540	559

Table 5. Weighted competences and POS ratios

Overall one can see that the UK has the highest POS competence, while Romania has the lowest one. There are two pairs of POSs with similar competences: UK and Sweden on the one hand and Austria and Denmark on the other hand. While also the PM service ratios and the PM practice ratios from Austria and Denmark are pretty similar, these ratios show big differences for the UK and Sweden. UK, with a higher PM service ratio has a much lower POC practice ratio than Sweden. This might mean that the provision of a high amount of PM related services by e.g. education and research institutions does not guarantee high quality POC practice in the project-oriented companies immediately. From the Eastern European countries Hungary has a much higher competence than Romania. The POS ratios of the single POSs have to be interpreted within the context.

Interpretation of the competences of the single POSs

Austria

Austria has a lot of small and medium sized industries. Despite this fact the importance of projects has increased in the last few years significantly. Traditionally external projects are performed in the building and construction industry, in the engineering industry and in the IT-industry. Internal projects are performed in different industries only since recently. It is rather difficult to implement internal projects in traditional industries like the engineering industry. Especially in health services and in the public administration the importance of projects continues to rise. There is an increasing demand for PM procedures and for formal PM qualifications, such as certifications for project managers. Working in project-oriented companies is seen as being attractive. Students are interested in studying PM and companies in turn are trying to get in contact with PM graduates.

Competent staff is available in Austria, but there is little flexibility of the people to adapt to new challenges. Further there exist quite a lot of administrative regulations in Austria, which is not too favourable for project work (Sachs et al. 1998, International Institute for Management Development 1997). Austria has a POS ratio of about 400, the PM service ratio of 170 is a bit lower than the POC practice ratio of about 240. This shows that the PM related services provided by institutions are still rather limited, and that the project-oriented industry takes on responsibility to ensure adequate competences for themselves.

Denmark

Denmark also has a lot of small and medium sized industries. In the past PM was only applied in a few industries, like in the building and construction industry. Denmark is now in a change process from companies based on hierarchies to project-oriented companies. Projects are becoming very important in the IT, public and finance industries and are more and more common in other industries and sectors. Projects are common in the areas of change management, internal organisational development and customer oriented product development.

Considering the World Competitiveness Report Denmark shows a good ground for PM, for instance the willingness to work in teams is very high (Sachs et al. 1998, International Institute for Management Development 1997). For Denmark a POS ratio of about 420 has been calculated. Denmark still shows little competence regarding the PM related services (140 out of 400), but more competences regarding the POC practices (277 out of 600).

Hungary

In the past projects and programmes were of little importance for Hungary. Nowadays projects are of medium importance but in the future projects and programmes will gain a lot in importance. The POS ratio calculated is about 320, whereby the POC practice ratio is quite high (239) for the project-oriented companies that exist in Hungary. Less competence is shown regarding the PM related services, where Hungary only reaches 80 out of 400 points. Concerning the managerial context an advantage for PM might be that administrative regulations are rather low and foreign investors are relatively free to acquire control in domestic companies (Sachs et al. 1998, International Institute for Management Development 1997).

Romania

In Romania projects were only used in some specific industries, like building construction, energy, chemistry, engineering and IT. Romania now passes through a rough economic restructuring process, applying projects for privatising large state-owned enterprises, modernising and updating strategic economic units, creating new business units. For all industries and the non-profit sector projects are becoming very important. Companies which

offer consulting services for PM tend to cover a lot of project types from different areas. Demand for the application of projects and programmes of the markets is increasing.

It is not surprising that Romania has the lowest POS ratio with nearly 200. In the last two years emphasis was given to the development of formal PM education programmes, but except that there is not much competence in the other PM related services like research, marketing or standardisation. Nevertheless Romanian project-oriented companies show already some PM competence (63 out of 200), while programme management and portfolio management almost do not exist yet.

Sweden

In Sweden projects are commonly used and important in different industries and in the non-profit sector. Sweden has some big players in telecommunication industry and has a lot of big international companies. Ericsson for instance does 80% of its business in project or programme form. Projects have also grown in importance in the non-profit sector during the last years, due to an increased awareness of EC-projects. Increasing importance of projects can be observed, because of an increase in product development and R&D.

Sweden shows a quite high POS ratio of 540. Concerning the PM related services with a ratio of 160 Sweden shows a similar ratio as Austria. Looking at the POC practice ratio Sweden shows a value of 380. Sweden seems to provide an excellent managerial context for PM (Sachs et al. 1998, International Institute for Management Development 1997).

UK

In the UK there is wide recognition of the role of projects and programmes in the achievement of business objectives. There is growing recognition of when projects need to be used and when routine operations should be used. UK shows a POS ratio of about 560. In providing PM related services a competence of 290 is reached. So the UK is the most mature POS regarding the provided PM services. The POC practice ratio is about 270. An explanation for this imbalance might be found in the managerial context, where structures and people are described as not flexible and adapt rather bad to new challenges (Sachs et al. 1998, International Institute for Management Development 1997).

Overall

Overall it can be observed that all assessed nations are still in an early phase as a POS. There are high development potentials and demands, given the dynamics of the overall economic development in these nations. The performed assessments and the benchmarking give a view at the beginning of 2001 only. It can be assumed that due to the dynamics at the beginning of 2001 the competences of these nations as POSs will be much higher in a few years.

7. programm | austria – The Austrian Project Management Initiative

The dark area in the POS spider web for Austria (Figure 12) shows the assessed competences of Austria as a POS.

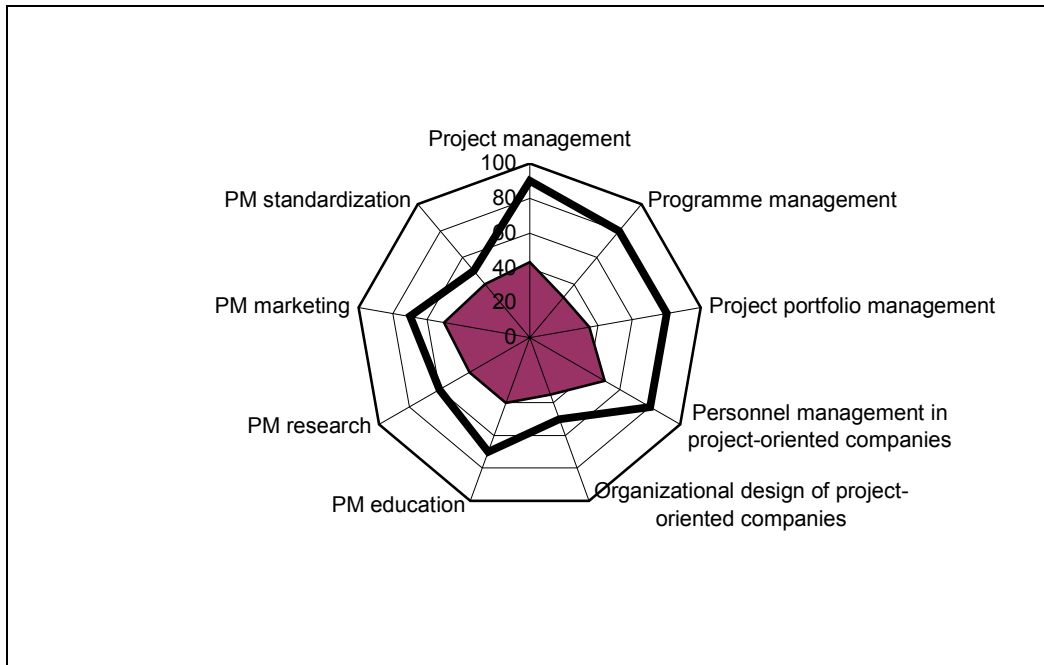


Figure 12: Actual and planned POS competences of Austria

The assessment results show that the competences of Austrian project-oriented companies are most developed in project management and in personnel management, even these competences have a score of 87 (out of 200) and 50 (out of 100) only. Programme management, project portfolio management and the organisational design are even less developed yet. This shows the traditional focus on the development of competences for the management of the single projects. Within the services provided by PM related institutions the PM marketing efforts by PROJEKT MANAGEMENT AUSTRIA result in the score of 50. The other PM service areas are not too well developed. This analysis portrays the development potentials Austria as a POS has. The dark line in Figure 12 shows the planned competences of Austria as a POS in 2010.

In Austria the further development of the POS is organised by programm | austria, which started in October 2000 and has a duration of four years. The promoters of programm | austria are PROJEKT MANAGEMENT AUSTRIA, PROJEKTMANAGEMENT GROUP of the University of Economics and Business Administration and ROLAND GAREIS CONSULTING. The objective of programm | austria is to contribute to the further development of Austria as a POS. By that the international competitiveness of Austria shall be ensured.

The following results shall be achieved by the end of programm | austria:

- PM is well known in the public
- The profession "Project Manager" is implemented and accepted
- Research results on the project-oriented society are published
- Project-oriented companies have analysed and developed their competences
- Networking of project managers and PM Office managers takes place
- A structural basis for the further development of Austria as a POS is provided.

One of the strategies of programm | austria is "PM for everybody". This strategy is implemented by performing projects such as "PM in schools", "PM in families", "PM in small municipalities", etc. Another strategy is the "Further development of project-oriented companies". This strategy is implemented by projects such as "PM Auditing", "Network of PM Office Managers" etc.

8. Conclusion

Projects and programmes as temporary organisations are becoming a broadly applied form of organising for the performance of complex and dynamic processes. Therefore project and programme management is not just a micro economic but it becomes a macro economic concern. The objective of the POS research initiative is to develop a viable model to describe the POS. The empirical application of the POS model in the POS benchmarking project contributes to the development of the POS model.

But there is not only theoretical benefit of this research initiative. The assessing and the benchmarking of the different POSs contribute to the promotion and marketing of project management in these nations. Based on the POS benchmarking results the societies are developing strategies to further develop their society as a POS.

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