



## **BUSINESS PROCESS MANAGEMENT CERTIFICATIONS OVERVIEW AND TRANSFER OF INNOVATION**

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### **Abstract:**

*The purpose of this article is to present early phases of the Leonardo da Vinci – Transfer of innovation project called Certified Business Process Manager (CertiBPM), which was started in Dec. 2010. The goal of this project is to export the BPM knowledge from Slovenia to Romania. The focus of early phases of the project include exploring the existing BPM related certification on the market, designing commonly accepted body of knowledge (skillcard) and translation to English and Romanian language.*

*The research approach consists of qualitative research methods: literature review, existing BPM certifications review and comparison. The existing BPM related certifications were gathered and studied.*

*Key finding of our research is that there are two main types of BPM certifications exist on the market. First distinguishable group of certifications are BPM platform vendor dependent and focused on specific software tool (e.g. IBM). Second group of certifications includes general process management knowledge consistent with specific methodology (e.g. OMG). Moreover, no existing course includes human factors, soft approach to management and motivational factors.*

*Research limitations/implications: Existing course is well established on Slovenian market, and currently there is no evidence that the knowledge will be equally useful by Romanian management students and managers. Researching existing certifications and extracting common knowledge out of them ensures only theoretical comprehensiveness of the course. The usability of the course for the target group is yet to be proven with the research after the knowledge transfer.*

*Most valuable practical implication of our project is unification of the BPM course and certification into coherent European Certification and Qualification association scheme.*

*Keywords: Business Process Management, Certification, Transfer of innovation.*

# 1. INTRODUCTION

## 1.1. Project background

Romanian companies of all sizes must constantly manage and improve their business processes to survive in these tough times on the market. To improve efficiency of their business, they should also automate their business processes using information technology. One of most successful and proved approaches is “process oriented approach”, which is also advocated in ISO9001 quality standards. Proof of that are new, but already mature information technologies (BPM systems), which directly support this approach. BPM was designed to bridge the gap between business and technical people (CertiBPM project, 2009).

The aim of this project is to improve existing course and educate Romanian people (students, trainers, managers and other employees), how to identify, document, manage, measure, analyze, implement, optimize, automate, maintain business processes in their companies as a part of their life-long learning and in the context of continuous improvement processes.

Using the knowledge, gained in this transfer, efficiency of business processes in Romania can be greatly improved and the number of 'ad-hoc' business processes in companies can be lowered. One of the steps to this improvement is to educate students and industry representatives in the BPM field of knowledge.

This project will improve their management skills and also influence entrepreneurial spirit. Trainees from target groups (Romanian students and industry representatives) will learn how to get transparent insight in business processes.

Main objectives of the project are:

- *Objective 1:* to adapt existing Business Process Management course to ECQA (European Certification and Qualification Association) certification scheme and establish job role, which is valid across the Europe, translate it to Romanian and English language.
- *Objective 2:* to adapt the course to the University - Bologna Masters level for Romanian Universities.
- *Objective 3:* to transfer the knowledge (CertiBPM project) to the Romanian market (to students from the Universities, industry representatives).
- *Objective 4:* to educate 110 trainees and 14 trainers (regardless of the age, sex, nationality, religion).
- *Objective 5:* to create distant learning course, that will allow training people from different locations.

The project consortium includes partners from Romania (UPT and Denkstatt RO) that will act as a target of knowledge transfer and dissemination centres, Slovenia (BICERO, proHuman), which act as a source of innovation transfer and partner from Austria (ISCN), which established ECQA certification scheme and online learning system.

Our vision is to create great impact in Romanian companies. One certified Business Process Manager influences the whole company. One certified Business Process Management trainer will impact additional trainees. 40 industry representatives from biggest companies in Romania (from the West, North-West regions and Bucharest) will be included, who will directly influence their companies and trigger improvement thinking and activities. Also, 70

students of last year of university study (master programs) will employ themselves in companies in few years and will also have initial knowledge how to improve business processes.

## **1.2. Relation of the project to EU priorities**

The following EU priorities were addressed during preparation of the project application:

*Transparency and recognition of competencies and qualifications (in harmony with national priority in Romania)*

A clearly defined skill set, the transparency and recognition of qualifications and competencies will be improved by having one European certification for Business Process Management Course. Currently skill sets and similar BPM courses are very unclear and fragmented. This objective will meet an important desire of enterprises. Linking the development of competencies will be taken into account by developing the training content for Initial VET. Each CertiBPM level (basic, advanced) will be linked to a certain amount of European Credits.

*Developing the quality and attractiveness of VET systems and practices*

Defining a curriculum for Initial VET in a minor construction (CertiBPM) will bridge the gap between Initial VET and RO enterprises since it will teach the business process management methodology that can be applied in many companies.

*Developing the skills and competencies of VET teachers, trainers and tutors*

Train-the-trainer events will be organized for trainers and tutors from Romania. The competencies of the teachers will be improved and clearly linked Initial VET to competencies required in SME and big enterprises.

*Develop Vocational Skills considering the labour market needs*

Various BPM methodologies are currently applied in many enterprises. Currently employees from the industry do not talk the same language and do not apply the same methodology in business process management activities as information technology engineers, who build their information systems.

This project will result in students from Initial VET talking the same language and applying the methodology and basic tools as information technology engineers within enterprises.

This project also bridges the differences in formal, non-formal and informal education.

- formal education: CertiBPM-Basic will be taught at Initial VET
- non-formal: All levels of CertiBPM can be taught in enterprises and SMEs
- informal: individual learning will be possible by ECQA e-learning system

### **1.3. Business Process Management background**

Various BPM courses, books and literature from different vendors exists, which show different aspects of Business Process Management field of knowledge, but there is no coherent course for the students and the market.

Business Process Management (BPM) is the discipline, which covers identification, modelling, analysis, documentation, automatization, maintenance and optimization of business processes (Silver, 2009).

Current market situation in the BPM area is well described in report "State of Business Process Management - 2010" by (Harmon & Smith, 2010). This report summarizes the survey analysis of 264 respondents (companies) from all over the world / across all kinds of industries. This analysis stresses that the major drivers of introducing BPM to a company are: "need to save money by reducing costs and/or improving productivity", "need to improve management coordination or organizational responsiveness", "improve customer satisfaction", "improve products". The report statistics shows that more skills are needed and more managers should be trained to improve business processes.

### **1.4. BPM teaching course background**

Existing Slovenian course "Business Process Management" evolved over the years from technical aspects of business process management to project, organizational, human and managerial aspects. The course was also well accepted on the Slovenian market and it is appropriate for the transfer to the Romania. First draft of the content was developed by doc. dr. Tomislav Rozman and doc. dr. Romana Vajde Horvat in year 2001 for faculty course Standards and Organization (University of Maribor, Faculty of electrical engineering and computer science). The course materials evolved over the years from technical aspects of business process management to project, organizational, human and managerial aspects. The course was also well accepted on the Slovenian market. Content of the course matured over the time, therefore it is appropriate for the transfer to the Eastern and Central EU countries, where managerial, organizational and information technology skills are most needed. In the last 5 years, the following organizations participated in the course: students of 3rd and 4th year of study of Computer Science, company representatives at Chamber of Commerce Slovenia, Agenda d. o. o., Telekom Slovenija d. d., Elektro Maribor d. d., Informatika d. d., Farmland and forest fund of Republic Slovenia, Ministry of interior of Republic Slovenia, Nevtron.si, Bank Intesa Saopalo, Kopa d.d., Slovenian Institute for Standardization.

This course is also used as initial seminar (first phase) for the Business Process Renovation projects. The BPM methodology, presented in this course, was already used with success in real-life projects. This fact ensures that the content has strong theoretical and practical value.

## **2. BUSINESS PROCESS MANAGEMENT CERTIFICATIONS COMPARISON**

### **2.1. BPM teaching course development process**

As already mentioned, first task in our project is to adapt the existing course to the ECQA certification scheme (Korsaa et al, 2010), to include latest BPM knowledge and translate it to

English (Picture 1) and Romanian language and lastly to include market needs research results from the Romanian companies. These phases ensure that: 1. the course will be compatible with EQF (European Qualification Framework), 2. The course will include comprehensive body of knowledge and 3. The course will be adapted to the specifics of Romanian market. As a part of course content update, existing BPM certifications must be studied and compared.

**Picture 1:** BPM course, learning material example page



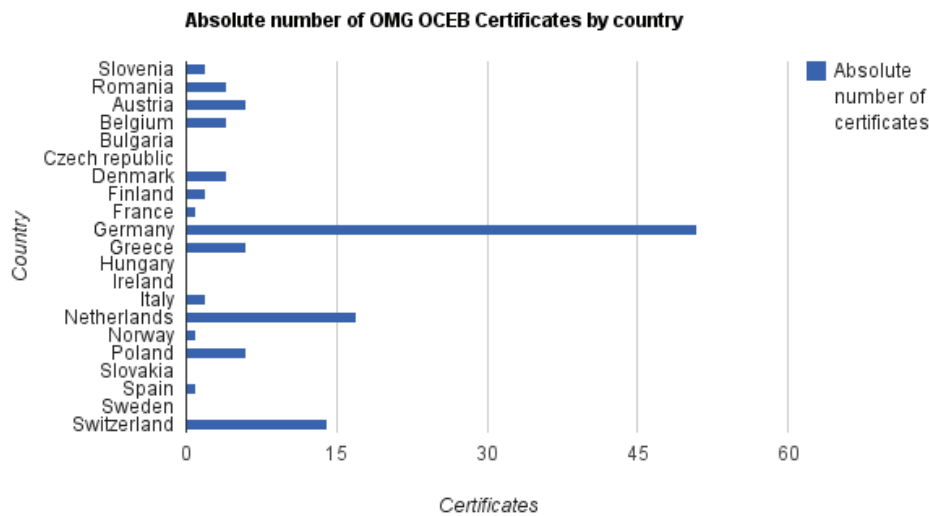
## **2.2. BPM certifications comparison**

In last few years, several BPM related certifications appeared on the market. We will present two most widely known BPM certifications: OMG OCEB and ABPMP.

One of most known and widely recognized is OMG OCEB (Object Management Group Certified Expert in BPM) certification (OMG, 2010). OMG is a not-for-profit computer industry consortium; the majority of the membership is IT vendor related companies (ABPMP, 2010). It is very IT centric in nature and leans on their own standards such as BPMN (Business Process Modelling Notation) and BMM (Business Motivation Model).

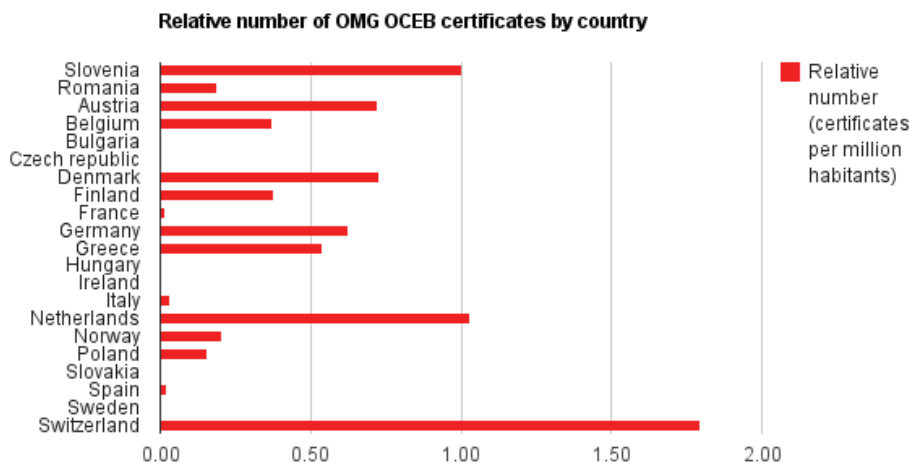
The body of knowledge of this certification is comprehensive and includes general process management principles, process modelling technique (BPMN), process frameworks and methodologies. The emphasis of this certification is on process modelling (40 % of exam).

**Picture 2:** Absolute number of OMG OCEB certificates by EU country



There is no unified course, but the list of related books, articles and web links. Certification exam can be passed in Pearson VUE online exam centres in each major city in the world. There are three difficulty levels of certification (basic, intermediate, advanced) and two tracks (technical, business). Although OMG offers entry level exam (basic), it is not widely spread, there are only 2 certified professionals in Slovenia and 4 in Romania, according to OMG OCEB Professionals Directory (OMG, 2010)<sup>1</sup>. The situation is similar in other EU countries (Picture 2), except Germany (51), Netherlands (17) and Switzerland (14) lead in number of certificates. (Picture 3) shows relative number of OMG certificates per million of habitants, therefore it represents more realistic comparison between countries.

**Picture 3:** Relative number of OMG OCEB certificates by EU country



The low number of OMG OCEB certificates could be caused by several factors:

- the entry level certificate is too difficult to pass for average process or quality manager in company,

<sup>1</sup> The numbers represent only registered certified professionals, who inserted their data into directory themselves.

- the certificate is not widely spread and well known to target group,
- there is no interest in obtaining the certificate for target group (managers, analytics).

This could be the hint for the project group to design different entry certificate, which can be passable by average company manager or student and would represent a starting point for advanced certifications.

Next, ABPMP association (ABPMP, 2010) offers Certified Business Process Professional certification program. ABPMP is a non-profit, vendor independent professional organization. It is led by practitioners, not BPM vendors, which should ensure more vendor independent view on BPM body of knowledge. Greatest difference with OMG certification is pre-requirements for the certification. One of pre-requirements is 4 years of BPM experience (Process management, Process improvement, or Process transformation). The exam (3 hours) itself includes 140 questions. The person who wants to obtain a certification should also agree on professional code of conduct and commit to maintain active credentials. Recertification is mandatory in three-year cycle.

These pre-requirements also show that this exam is not entry level, but it requires comprehensive experience in this field and it is targeted to experienced professionals. Currently, there have been around 200 certificates awarded, mainly in Switzerland, Austria and Germany.

Similar to OMG's certification, ABPMP pre-requirements could be de-motivational for people, who are interested in BPM and wish to start with professional development in this area.

The third BPM related certification is offered by International Process and Performance Institute, a non-profit organization.

IPAPI CPP(C) Certification is a competency-based program that requires all candidates to successfully apply the IPAPI CEM Method on a minimum of 3 case studies (IPAPI, 2010). According to IPAPI professionals register, there are around 570 Certified Process Professionals worldwide. The certification can be obtained through self-directed study and performing a case study using the Institute's methodology. Certification can be obtained also by 3-day instructor-led courses, where 3 case studies are performed. The certification offers the following competence tracks: CP+O (Certified Practitioner in Optimization), CP+A (Certified Practitioner in Alignment), CP+I (Certified Practitioner in Innovation), CPP (Certified Process Professional). Pre-requirements are not clear from their public presentation.

The fourth important player in this area is BPM Council (BPM Council, 2010). The BPM Council created the original BPM Professional Certification Program and industry designation (P.BPM). BPM Council certification uses a competency based method. Certification is obtained by taking exam and passing 90% score. Students must apply tools and techniques to the real case studies. On-line training is also available. Number of certified managers is not known, neither pre-requirements for a certification.

The BPM community at large is currently fragmented but this is a natural situation that precedes a more cohesive BPM community that will soon emerge (BPM council, 2010).

Other technical and vendor related BPM certifications are presented along summarization of existing certifications, which were included in our research and comparison (Table 1).

**Table 1:** BPM Certifications, methodological group

Provider	Description	Certificate / Title
OMG	-Independent association, -2 tracks (business and technical), -3 levels -World's most recognized certification	Business: -OCEB Certified Professional, Basic -OCEB Certified Professional, Intermediate Business -OCEB Certified Professional, Advanced Business  Technical: -OCEB Certified Professional, Basic -OCEB Certified Professional, Technical Intermediate -OCEB Certified Professional, Advanced Technical
ABPMP	-Based on BPM CBoK -German / French initiative	Certified Business Process Professional
International Process and Performance Institute	Emphasis on EMF method IPAPI	-Certified Practitioner + IPAPI -Certified Process Professional IPAPI -IPAPI Certified Process Manager -Certified Process Director IPAPI -Certified Process Expert IPAPI
BPM Council	Advanced BPM certification targeted for top level managers	BPM Council Certified

**Table 1:** BPM Certifications, technical group

Provider	Description	Certificate
IBM	-Emphasis on IBM WebSphere Business Modeler Advanced -BPMN modelling using Rational System architect	-IBM Certified Business Process Analyst - WebSphere Business Modeler Advanced -IBM Certified Business Process Analyst - WebSphere Business Modeler Advanced
AuraPortal	Emphasis on BPM Suite AuraPortal	-AuraPortal Certified Consultant -AuraPortal Certified Senior Consultant
Bizagi	Emphasis on BPM BizAgi suite	Bizagi Specialist
Ultimus	Emphasis on Ultimus Adaptive BPM Suite	Ultimus BPM Certified Professional
IDS Scheer	Emphasis on ARIS	-Certified ARIS Professional, Business Designer -Certified ARIS Professional, Business Architect
webMethods	Emphasis on webMethods BPM Suite	-Certified webMethods BPMS Developer
IBM Lombardi	Emphasis on IBM WebSphere Lombardi Edition V7.1	-IBM Certified Associate Administrator - IBM BPM Blueprint; IBM WebSphere Lombardi Edition V7.1 -IBM Certified Associate Analyst - IBM BPM Blueprint; IBM WebSphere Lombardi Edition V7.1 -IBM Certified Associate Developer - IBM BPM Blueprint; IBM WebSphere Lombardi



		Edition V7.1 -IBM Certified Associate Program Manager - IBM BPM Blueprint; IBM WebSphere Lombardi Edition V7.1
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Also PkBOK (Process Body of Knowledge) initiative (Process Knowledge Initiative, 2011) is worth mentioning. The Process Knowledge Initiative is a collaborative industry and academic endeavour with the sole purpose of creating an open source body of knowledge on process management. The initiative does not offer the certification. It represents an effort to standardize BPM knowledge, which is currently very fragmented. The body of knowledge is represented in a form of user editable wiki web page.

### 3. CONCLUSIONS

Designing an unified and independent course and certification system in the field of Business Process Management seems like an impossible task. The proof for this statement is numerous BPM certifications, which cover various aspects of BPM, from managerial to technical.

Our approach is different – we started with the course, which is already recognized on the Slovenian market and it is being upgraded with knowledge from professionals from different countries and fields and most important, with market research. Our BPM certification does not try to supersede any of other certifications, but tries to include their best practices and useful parts. The main result of the BPM certification providers' analysis is that there is no entry-level certification on the market; therefore our effort will be targeted towards creating one.

### 4. AKNOWLEDGEMENT

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