ECQA SUPPORT FOR BUSINESS PROCESS MANAGER TRAINING AND CERTIFICATION

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Abstract:
Taking the opportunity offer by Education, Audiovisual and Culture Executive Agency through the Lifelong Learning Programme (LLP), in the context of this article, there will be presented a successful and new initiative/project for the Business Process Manager (BPM) skills development (training and certification). This initiative is a Transfer of Innovation action from Slovenia to Romania in the framework of a Leonardo da Vinci project. The paper content is focused on two main issues: (1) the BPM training materials development through the preliminary skill card establishment, and (2) the description of the European Certification and Qualification Association (ECQA) schema that establish the learning and certification procedures for many professions including BPM. The described approach is a classical one for skill set provision (qualification - certification) on the ECQA platform (www.ecqa.org). The presented CertiBPM skill card (training program structure) is the result of virtual and face-to-face meetings of the partners involved in the project. The certification procedure allows total and partial certificates. The defined skill set map will allow the training materials development. For Romania, these will be included in the master programs in the field of production management that already exist because most of the master students are also employees and they express specific needs for the BPM certificates.

Keywords: Business Process Management, European Certification and Qualification Association, Skill Card, e-Learning Platform, Training, Certification

1. INTRODUCTION INTO THE RESEARCH CONTEXT

Since March 2000, the European Council set up a strategic goal for the next decade regarding the learning need in Europe, in the new context of the knowledge based society. This was then translated into specific actions goals collected in the Education and Training 2010 program in order to *"improve the quality and effectiveness of EU education and training systems; to ensure that they are accessible to all; and to open up education and training to the wider world"*. For attending these objectives, there have been consider the actual conditions of the training and education development when the information and communication technologies (ICT) wide spread and diffusion have offer new opportunities based on innovative pedagogical approaches development. We assist at the increasing of the importance and need of new digital skills and competencies (as key competencies) that are necessary for employment, education and training, self-development and involvement in the society. On the other hand, the new learning process is supported not only of traditional formal learning institutions (e.g. schools, college, universities and existing training organizations), but more efficient training practices (for unemployed and employed, too) embrace other forms of adult education, informal learning and learning based on ICT (European Commission, 2004). At the European level, the Education, Audiovisual and Culture Executive Agency (EACEA) gives the financial support of EU programs in the field of education, culture and audiovisual. One of the initiatives is Lifelong Learning Programme (LLP) that includes sectoral and transversal actions (European Commission, 2006).

Taking the opportunity offer by EACEA through the LLP, in the context of this article, there will be presented a successful and new initiative/project for the development of the Business Process Manager (BPM) skills. This initiative for BPM training and certification was developed as a Transfer of Innovation action from Slovenia to Romania in the framework of a Leonardo da Vinci project. This collaboration has started in 2010. The described approach core is linked with the BPM multimedia training materials development (together with the certification procedure using European Certification and Qualification Association schema – e-learning facilities) in accordance with the specific market needs identification (marketing survey applied for companies of the West part of Romania for the new competencies identification). The paper content is focused on two main issues: (1) the BPM training materials development, and (2) the description of the European Certification and Qualification Association (ECQA) schema that establish the learning and certification procedures for many professions including BPM.

2. BUSINESS PROCESS MANAGER SKILL CARD DEVELOPMENT

Business Process Management represents a holistic management approach based on continuous improvement processes, change management theories, and support by modern ICT. This approach aim to attend an optimal balance between organization's external environment dynamics and its internal processes functionalities based on innovation, flexibility and agility. Agile Business Process Management helps organizations achieve business results by addressing requirements for continuous process optimization, collaborative process workflows to support team-based initiatives, and to extend business processes beyond the enterprise. Business Process Management Institute and the Association of Business Process Management Professionals agree on a common definition of the concept and its relation with the continuous improvement process (Treat, 2006).

Figure 1 shows the diversity and the complexity of the Business Process Management framework (process phases and factors). In addition, the current references have described the current market situation and tendencies (Wolf & Harmon, 2010).

Figure 1: Business Process Management Framework Description
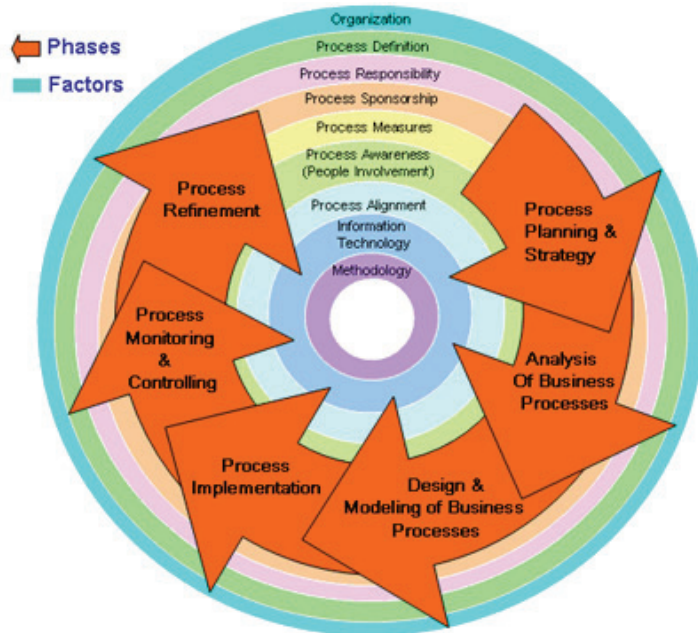
Source: Treat, 2006.

BPM knowledge is not country-dependent, but it is developing at a global scale. Many European companies train people in various methodologies of business process management. Existing university and market courses of this knowledge area are not directly comparable, because they cover different knowledge areas. For example, all major BPM information technology platforms providers (such as IBM, BizAgi, Ultimus, IDS Scheer) offer technical oriented courses and certifications, targeted for their software tools (Ward-Dutton, 2010). Various professional associations such as Object Management Group (OMG), International Process and Performance Institute (IPAPI), Association of Business Process Management Professionals (ABPMP) have developed and offer their own version of courses and certification procedures, too. Learning BPM and being certified in the field has become an important issue of most companies (Leyking et.al, 2007).

The availability of an independent European certification and self-assessment system will give the possibility to assess if one trainee meets a certain level of expertise and competencies that can be used in every European country. The result of the research and creativity work of all project (CertiBPM, 2010) partners will get to an adaptive multimedia material and training program that will allow trainees from Romania to join the BPM community. The CertiBPM qualification and certification addresses itself to employees from companies departments related to: QM (Quality management), CRM (Customer Relationship Management), ERP (Enterprise Resource Planning), SCM (Supply Chain Management), and enterprise information system's specialists etc. who want to complement and/or certify their advanced BPM skills. The target group typically has abilities for self-development and self-learning, creativity, innovative initiatives etc. One of the biggest challenges is to conceive a training program that covers the complete skills set that better satisfy the target group specific needs.

Table 1 shows the adopted working procedure for the establishment of the CertiBPM skill card and Figure 2 shows a knowledge map of the skill set which provides the basis for the future research and development activities (the training materials development). It is the result of an initial consolidation of our experiences in research, education, as well as in collaboration with industrial partners, and other business organizations (e.g. Chamber of Commerce, students' organizations, clusters in the business environment etc.).

Table 1: The CertiBPM Skill Card Development Process

No.	Stage of work (research developed)	Results / Time / Responsibility of
1.	Define the CertiBPM specific procedure for the transfer of innovation process (from Slovenia to Romania)	Kick-off meeting in Timisoara, January 2011 (duty of all partners)
2.	Translation of the existing materials from Slovenian into English; Collecting relevant references; Collecting and processing training feed-back on Slovenian market	Preliminary training material in English language; Training feed-back report; February – June 2011 (duty of Slovenia partners)
3	Reference collecting; Information about existing training programs and BPM organization in Romania	Reference data base report; Report regarding the BPM state in Romania February – April 2011 (duty of Romania partners)
3	Training needs identification (observations, interviews and marketing research)	The marketing niche definition/characterization Project advertizing in Romania February – April 2011 (duty of Romanian partners)
4	Skill card definition: units; elements; performance criteria	Preliminary definition of the CertiBPM skill card, May 2011 (duty of all partners) - Virtual meetings
5	Complete skill card definition and content description: units and elements; defining the performance criteria; harmonization of the partners' involvement.	Complete skill card definition with brief description of the components (project meeting in Maribor, Slovenia) – June 2011

Figure 2 shows the initial CertiBPM skill card (as was suggested by the CertiBPM project proposal) visualized with MindManager software. The main branches consist of the skill units and the second branches that are the correspondent skill elements. The third braches are allocated to the performance criteria of each element that are in direct relation with the questions that shall be settled for the examination process related to the certification of the job role.

This representation of the skill card allowed an optimal visualization of the completely developed work (in different project stages) and the harmonization and integration of the partners for attending the project objectives. The skill set map is also a good tool of communication between the partners and the information technology specialists involved in the project that will transfer the research results on the e-learning platform.

After some virtual meeting and discussions, the actual state of the CertiBPM skill set map was developed as it is shown in Figure 3. This will be the base of the future project meeting as described in phase 5, Table 1. Based on the structure of the skill card there will be developed the training materials, they will be adapt to the specific trainees targets and specific exercises will be prepared.
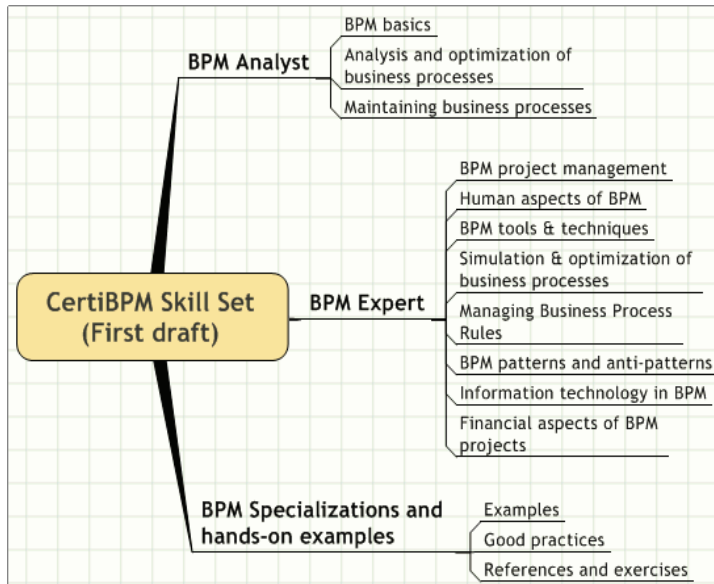
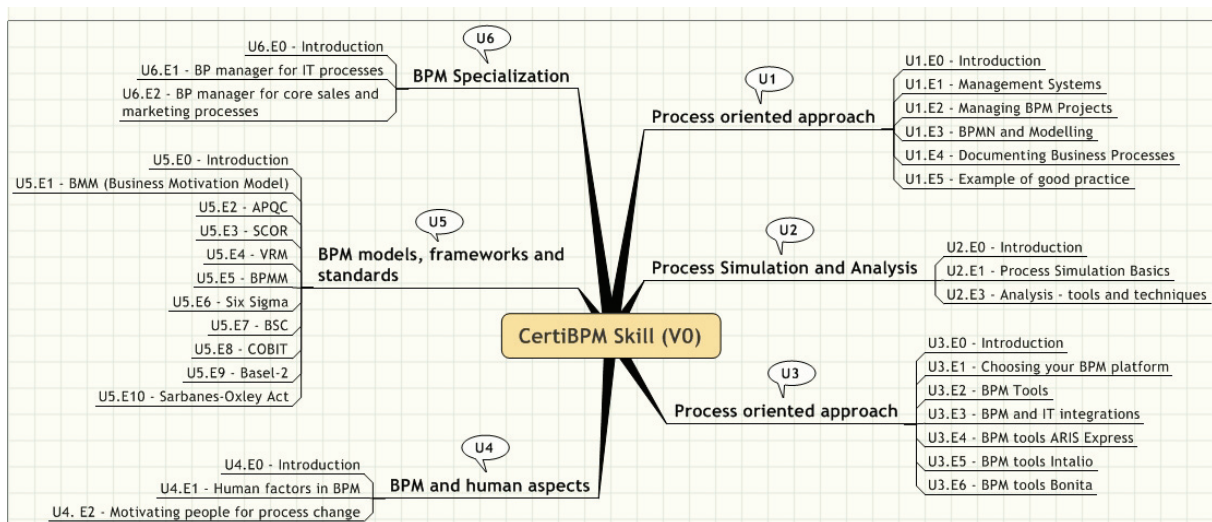**Figure 2:** The Initial CertiBPM Skill Set Map

Figure 3: The Detailed CertiBPM Skill Set Map – Intermediary Development

# 3. THE EUROPEAN CERTIFICATION AND QUALIFICATION ASSOCIATION (ECQA)

In the following there will be described the ECQA association based on the available information on her web page and on our experience gain in common projects (Draghici et.al, 2009), (Draghici et.al, 2010). This approach is important for the European level understanding of the qualification and certification procedures adopted.

ECQA was established by a number of EU supported initiatives (projects and different other dissemination actions at the EU level) in the last ten years where in the European Union Life Long Learning Program different training/education bodies/organizations (public and private, together with industrial partners) decided to follow a joint process for the certification of persons in the industry. The common interests of these organizations (currently organizations from 18 countries participate) was to establish an association (external organism) developing and maintaining a set of *quality criteria and common certification rules* which are applied across the different European regions in the Life Long Learning scope in the information technology and services, engineering, finance and manufacturing sectors. The result of this initiative was a *pool of professions* in which was expected to be gained a high level of European comparability by a common an Europe-wide agreed syllabus and skills set, an European test questions pool and European exam (computer automated by portals) systems, and a common set of certificate levels and a common process to issue certificates. ECQA facilitate processes as training, qualification, learning in different fields (training needs expressed by industry) by attending courses for a specific profession in one country and perform a Europe-wide agreed examination that was called the certification process. European training organizations and institutions in 18 member countries recognize the certificate obtained by one trainee.

The motivation for this approach has been identified on the European labour market and its dynamics. European work forces have to be highly flexible and adaptable to the dynamics of the labor market and they need to work for industries across Europe. There can be easy imagine that one trainee/employee is attending a course in one European country and that he/she performs and passes the certification exam at the end of the course. The certificate will be then recognized by certifiers and training organizations in all European countries including large countries like France, Germany, Spain, Italy, Scandinavian countries, all Eastern European countries etc. This will automatically lead to a higher recognition of the certificate and higher chances of working for customers in an open European market.

The ECQA initiative has started since 1998 with a FP5 project MM 1032: CREDIT - Development of skills portals, skills assessment functions, standards for skills sets in Europe. In Figure 4 there are described the aims of the association.

Figure 4: ECQA Aims
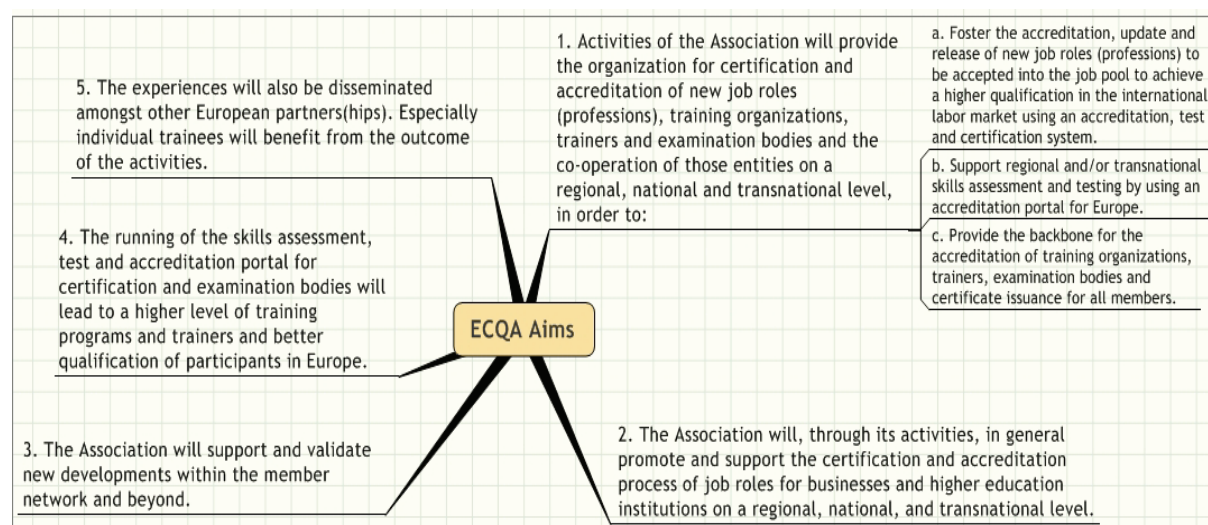
The training needs expresses (and collected) by employees for better satisfied their work duties and also by the managers to better attend their tasks and objectives are direct linked with ECQA initiatives as long life learning projects developed with the financial support of the European Commission. Usually, employees and companies that express a specific training or qualification need becomes the target groups involved in the projects.

One of the most important activities of ECQA is developed through the *Learning Service offers:* Skills Browsing; Self Assessment with Multiple Choice Test Questions; Learning References; Attending On-line Courses; Collecting Evidences of Learning for Portfolio Building.

The examination service of ECQA has been used since 2001 in more than 16 European countries with participants from small and medium enterprises, large multinational companies as well as non-profit organizations, university, learning centres, education institutions and colleges. More than 3000 participants used the *ECQA Examination Service* (connected with the certification procedure) to perform online multiple-choice exams, for example 770 participants for the Certified Innovation Manager; 530 participants for the Certified EU Project Manager; 130 participants for the Certified e-Security Manager; 125 participants for the Certified Internal Financial Control Assessor etc. Only in the last two years (2009 and 2010) more than 1000 people (trainees) were certified for the following ECQA certified professions: e-Learning Manager, EU Internal Financial Control Assessor, EU Project Manager, Incubation Manager, Innovation Manager, Integrated Design Engineer, SPI Manager and Terminology Manager – Basic.

4. ECQA TRAINING AND CERTIFICATION SHEMA (LEARNING AND CERTIFICATION PROCEDURES)

This chapter gives an overview of the learning and certification procedures implemented by the ECQA members/community (Messnarz, et. al., 2007), (Messnarz, et. al., 2008). Based on an e-learning platform developed over years with funding support of the European Commission, the ECQA has created an extensible pool of knowledge for specific professions (www.ecqa.org). This pool is implemented by the following core elements: (1) Self-Assessment Portal; (2) e-Learning Platform with discussion forum; (3) on-line Examination System. Figure 5 gives an overview of the fundamental process of training supported by the above mentioned systems.

The developed ECQA schema is built as a learning platform based on the web based public domain learning management system Moodle (www.moodle.com). The so-called Capability Adviser supports the examination, evaluation process, which is a web based assessment portal system with a defined database interface to connect the systems. A person can attend a course for a specific job role on-line through this advanced learning infrastructure. The student/trainee typically starts with a self-assessment against the skills. Then he/she can sign into an on-line course. Here he/she is guided by a trainer (also certified by ECQA) who sets up the course program, defines exercises and schedules on-line sessions (via videoconference, Skype or other networking tools), during which questions to the training material, and exercises will be debated and solve. The student/trainee uploads the solve exercises as homework on the platform for discussion in the networking session, and for correction by the tutor before, during or after that session. Finally, the homework and the real work done in his or her profession or PhD project are sufficient to demonstrate the skills. Currently open

courses, as well as the self-assessment portal can be accessed via the ECQA website, by going to the *Learning Services* section, and registering as a student. As it can be seen in Figure 5, the blocks presented in the diagram have the following significance (Table 2 and 3):

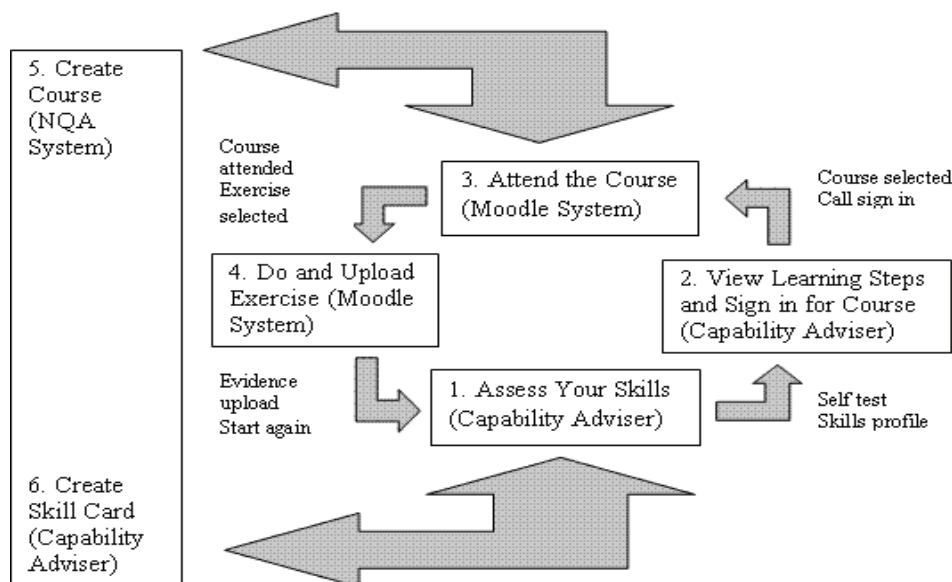**Figure 5:** The Learning Process Supported by the ECQA Schema (using the ECQA platform)

Table 2: The Implemented Learning – User level: Trainee/Student/Lerner

No.	Trainee/Student/Lerner – Steps of Action
1	Participants (Trainee) log into the *Capability Adviser*, browse the skills tree, assess their skills against performance criteria, upload evidences to prove their skills, and print a skills profile.
2	Participants (Trainee) select the *Learning Steps* option the Capability Adviser, access recommended learning references, and can call *Sign In* to log into courses on the Moodle web based training server system.
3	Users (Trainee) on the Moodle System, attend the courses, perform exercises, upload homework results, and receive feedback from the trainer.
4	Users (Trainee) switch to the Capability Adviser window (if you did all in one session) or log into Capability adviser as participant and upload their homework results as evidence into the system to prove their competence.

Table 3: The Implemented Accreditation Process - User level: Assessor/Accreditation Body

No.	Assessor/Accreditation Body – Steps of Action
5	Users (Trainee) inform Assessors. Formal Assessors log into the Capability Adviser, assess the evidences, assess the performance criteria, and produce a formal skills profile of the user. The results of the formal assessor display separately. The Implemented Course and Skills Development System - User level: Course and Skills Developer/ Administrator - Course Developers (Trainers, Accreditation Institutions etc.) log into an e-working space where course material development work can be shared in a team. The system offers team management, working scenarios, version control, and an interface to:
6	Export the training and reference materials in the Moodle based training system.
7	Enter and administer a skill card on-line, which forms the basis for step 1 in Figure 3.

5. CONCLUSIONS

This paper discussed the opportunity of learning (training and qualification) in the field of business process management as a major challenge offer by the CertiBPM project. In this context, the described approach is a classical one for skill set provision (qualification - certification) on the ECQA platform (www.ecqa.org). The presented CertiBPM skill card (training program structure) is the result of virtual and face-to-face meetings of the partners involved in the project. Also, a training need survey was developed by each partner (in his/her area of action, country) to better underline the specific needs for the training materials adaptation. The training materials will be developed in accordance with the skill card definition, the relevant references collection and for satisfying the training needs collected from the survey.

The certification procedure allows total and partial certificates. The defined skill set map will allow the training materials development. For Romania, these will be included in the master programs in the field of production management that already exist because most of the master students are also employees and they express specific needs for the BPM certificates.

ECQA was described in the paper with respect of the association aims and objectives. ECQA is a non-for-profit association, joining institutions and several thousands of professionals from all over the Europe and abroad. ECQA provides a worldwide unified certification schema for numerous professions. The same exam pool, exam rules and the same electronic exam system are used for certification exams in any participating country.

ECQA joins experts from the market and supports the definition and development of the knowledge (Skills Sets) required for professions. Experts, joined in so called Job Role Committees, are initiating new professions and updating the existing professions as needed on the market.

ECQA defines and verifies quality criteria for Training organizations and Trainers to assure the same level of trainings all over the world. The certification procedure offers modularity of certification therefore, also modularity of trainings all over the world should be assured. Only verified and approved organizations and individuals may become ECQA certified service providers.

ECQA centrally promotes all certified professionals. Databases of certified professionals are publicly available to help organizations on the market in seeking for the organizations and individuals for cooperation.

The ECQA schema and system for the qualification and certification procedures of many existing professions will be applied in the case of BPM, too. The developed ECQA schema is built as a learning platform based on the web based public domain learning management system Moodle (www.moodle.com).

6. AKNOWLEDGEMENT

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