



## Meeting Minutes Report

Meeting Subject:	QCMB meeting			
Date of Meeting:	<b>30 January 2019</b>			
Minutes Prepared by:	Supapan Chaiprapat and Kunlapat Thongkaew	Location:	Chiang Mai University, Thailand	

#### 1. Attendance at Meeting

	Name	University
1.	Dr. Supapan Chaiprapat	Prince of Songkla University
2.	Dr. Kunlapat Thongkaew	Prince of Songkla University
3.	Dr. Jorge Cunha	Universidade do Minho
4.	Dr. Robert Ulewicz	Czestochowa University of Technology
5.	Dr. Anintaya Khamkanya	Thammasat University
6.	Dr. Weerapoj Meethom	King Mongut Unversity of Technology North Bangkok
7.	Dr. Sirorat Pattanapairoj	Khon Kaen University
8.	Dr. Andrei Dumitrescu	Polytechnic University of Bucharest
9.	Dr. Huynh T. Luong	Asian Institute of Technology

#### 2. Purpose of Meeting

- To communicate with all members of QCMB how the project has progressed with respect to the project timeline.
- 2. To seek opinions from all members about how the upcoming tasks will be handled, especially Task 4.2 and 4.3

#### 3. Meeting Agenda

- 1. Progress of all WPs, report of delay and adjustment of the workplan
- 2. Preparation of QCM plans of the upcoming tasks of each workpackage.
  - 2.1 WP2
  - 2.2 WP4
- 3. Notification of the next meeting.

MF-MMR-V2

# Curriculum Development of Master's Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry



#### 4. Meeting Notes, Decisions, Issues

#### 1. Progress of WPs, report of delay and adjustment of the workplan

WP4 Co-Leader reported that now WP1 was finalizing its jobs, with the delay from WP1 other WPs would have to reschedule their workplan and submit their new adjusted plan.

**Decision:** WP4 Leader must have all WPLs confirm their new schedule.

#### 2. Preparation of QCM plans of the upcoming tasks of each workpackage.

1) WP4 Co-Leader reported that from the PEC meeting there was a confusion about definitions of "start date" and "end date" for all the tasks. Their clear definitions must be established and communicated among project members for better understanding of how the project was proceeded, and for facilitating the responsible of Task 4.2.

Decision: WP Co-leader will further discuss with WP Leader.

Discussion of the project delay was brought up and Dr.Luong gave clarification of how the deliverables of WP1 were achieved through perseverant collaboration among responsible partners. However, the delay of WP1 would undeniably affect other workpackages schedule.

**Decision:** To prevent more delay, QCMB will have to give warning to the responsible WPL when the deadline is approaching.

3) The schedule of Task 2.3 (conducting a pilot test) was discussed. All members agreed that the task could start soon after the key courses were decided. The QCM responsible for establishing evaluation identification criteria was listed as Dr.Luong. However, as he was the one who would be conducting the test, he proposed that the responsible for the ECI must be a different person to avoid conflict of interest.

Decision: WP Co-leader will further discuss with WP Leader.

4) For the task 2.3, the pilot test on key courses will be tested in all university partners. The task leader listed in the table of "contact information" was Dr. Luong. The responsibilities of the task leader included not only conducting the course himself, but also coordinating with the teaching volunteers to perform the test.

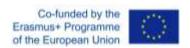
**Decision:** Dr. Luong will need to establish a framework of this task, that will be shared among the volunteers. The procedure of how the pilot courses will be handled and how to evaluate the effectiveness of the course management will be detailed in the framework.

5) For the task 4.3, the task leader distributed the draft ECI for consideration. Comments included removal of redundant criteria and qualifications such as education and recognition of an audit firm should be represented by worked experiences. Requirements on auditor personalities and simplification of the score rating table were also suggested.

**Decision:** The ECI is to be revised as per suggestions from the members.

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# Curriculum Development of Master's Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry



6) Auditor candidates (Dr. George G.Q. Huang from University of Hong Kong, Dr. David W. Rosen from Georgia Institute of Technology, USA, Dr. Ajaree Supasuteekul from Srinakarinwirot University, Thailand, and Mr. Giuseppe D'Angelo from Italy) were presented. Concern on availability of most candidates to accept obligations as an auditor of the project was raised and all members were asked to propose more candidates within a time frame given.
Decision: QCMB members to propose more candidates within 2 weeks from the meeting, or the task leader will proceed with the existing candidate list.

#### 3. Notification of the next meeting.

The next meeting will be held in Poland during 3-7 June 2019. The schedule will be released later.

#### 5. Action Items

	Action	Assigned to	Due Date
1.	Submission of a new adjusted plan	All WPLs	Upon acceptance from PC
2.	Clarification of "start date" and "end date" of all the tasks	Task 4.2 leader	ASAP
3.	Appointment of a responsible for ECI establishment for Task 2.3	WPL4	1 week from
4.	Review of ECI of Task 4.3	QCMB	2 weeks from now
5.	Submission of auditor candidates	QCMB	2 weeks from now

#### 6. Attachments (documents/handouts to bring, reading material, etc.)

Description	Prepared by
1. Auditor candidate	Supapan Chaiprapat
2. ECI of Task 4.3	Supapan Chaiprapat
3. WP4_03_Report	Livia Lazar

#### 6. Next Scheduled Meeting

Date:	To be scheduled between 3-7 June 2019	Time:	TBS
Location:	Czestochowa, Poland		

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## Candidate I

## Prof. George G.Q. Huang

Head of Department of Industrial and Manufacturing Systems Engineering

#### **University of Hong Kong**

Prof. George G.Q. Huang is Chair Professor and Head of Department in Department of Industrial and Manufacturing Systems Engineering, The University of Hong Kong. He gained his BEng and PhD in Mechanical Engineering from Southeast University (China) and Cardiff University (UK) respectively. He has conducted research projects in the field of Physical Internet (Internet of Things) for Manufacturing and Logistics with substantial government and industrial grants. He has published extensively including over two hundred refereed journal papers in addition to over 200 conference papers and ten monographs, edited reference books and conference proceedings. His research works have been widely cited in the relevant field. He serves as associate editors and editorial members for several international journals. He is a Chartered Engineer (CEng), a fellow of ASME, HKIE, IET and CILT, and member of IIE.

Prof. George G.Q. Huang has been serving on editorial boards of a number of international journals. He is Editor for Asia Pacific for International Journal of Computer Integrated Manufacturing, Associate Editor of International Journal of Production Research, Area Editor for Business & Management for International Journal of Research in Engineering Design, and Associate Editor for Journal of Intelligent Manufacturing.

Prof. George G.Q. Huang received 2014 First-Class Guangdong Province (Department of Science and Technology) on "Mass-Customized Design and Production System", 2007 First-Class Natural Science Award from Chinese Ministry of Education on "Service-oriented manufacturing execution in extended enterprises", 2007 Outstanding Young Researcher Award (Overseas) from Natural Science Foundation of China and 2001 The University of Hong Kong Outstanding Young Researcher Award.

#### https://www.imse.hku.hk/people/huang-g-q

Remark: Prof. Huang is a well-known researcher in the field of advanced industrial technologies. His research presently discusses realization of the Industry 4.0 concept in management and manufacturing. He published extensively in peer-review journals. He also an editor of several books and respective journals in this area. In my opinion, his expertise in the Industry4.0 is well recognized. Although his experience on development of an educational program is not clear, his responsibility as head of the Industrial and Manufacturing Systems department at University of Hong Kong more or less allows him to have a sense of quality assessment of curriculum development. Experiences on EU projects auditing and the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) EU cannot be found.

## Candidate II

## Prof. David W. Rosen

The George W. Woodruff School of Mechanical Engineering

#### Georgia Institute of Technology, USA

#### Education

- Ph.D, University of Massachusetts, 1992
- M.S., University of Minnesota, 1987
- B.M.E., University of Minnesota, 1985

#### **Research Areas and Descriptors**

<u>Computer-Aided Engineering and Design</u>, <u>Manufacturing</u>, and <u>Mechanics of Materials</u>;
 Virtual and rapid prototyping and intelligent CAD/CAM/CAE

#### **Background**

Dr. Rosen's research interests lie at the intersection of design, computer-aided design, and manufacturing. His design research includes product family and configuration design (what components and subsystems should be in the design and how should they be connected?), sponsored by the Ford Motor Company and National Science Foundation. This work benefits from the collaboration of Drs. Janet Allen, Bert Bras, and Farrokh Mistree. His research in CAD and manufacturing is focused on rapid prototyping - or additive fabrication - technologies and their applications. In particular, he is exploring methods and technologies that take advantage of the unique capabilities of additive fabrication (e.g., stereolithography, selective laser sintering, etc.) to fabricate devices that cannot be produced using conventional processes. The work is sponsored by NSF and member companies of the Georgia Tech Rapid Prototyping and Manufacturing Institute. Collaborations with faculty from the Schools of Mechanical and Chemical Engineering and the Colleges of Computing and Management are critical to the success of this research.

Graduate students benefit from the world-class facilities, industry interaction, and teamwork of Dr. Rosen's research labs, the SRL and RPMI. Students do not just learn about new technologies - which become obsolete - they gain knowledge and skills that enable them to become the thought leaders of tomorrow. Their educational experience is tailored to meet their objectives and provide them a foundation for their careers.

Dr. Rosen's research results should help define new technologies for computer-aided design systems, particularly for earlier design stages, improve the engineering characteristics of physical prototypes, and lead to new rapid manufacturing technologies. These objectives serve to guide Dr. Rosen's research for the next several years.

#### **Distinctions**

- American Society of Mechanical Engineers
  - Computers and Information in Engineering Conference Best Paper Award, 2009 and 2005

- Design for Manufacturing and Life Cycle Conference Best paper Award, 2008
- Fellow, 2003
- o Computers and Information in Engineering Division Chair, 2001
- Journal of Computing and Information Science in Engineering Associate Editor, 2000-2006
- o Computers in Engineering Conference Technical Program Chair, 1998
- Design Theory and Methodology Conference Distinguished Paper Award, 1996
- Computers in Engineering Conference (Artificial Intelligence and Expert Systems Section) Paper Award, 1992
- Woodruff School Faculty Fellow, 2002-2007
- Solid Freeform Fabrication Symposium
  - o Outstanding Paper Award, 2008 and 2005
  - Best Presentation Award, 2007
- Loughborough University (U.K.) Department of Mechanical and Manufacturing Engineering visiting Professor, 2005-present
- 3D Systems User Group Conference, Selective Laser Sintering Excellence (First Place) Award, 2009
- Sigma Xi (Georgia Tech Chapter) Best Masters Thesis (Advisor to Matthew Bauer), 1998
- Society of Professional Engineers (Metro Atlanta Section) Engineer of the Year in Education, 1997
- Association for Computing Machinery Siggraph Symposium on Solid Modeling and Applications Co-Chair, 1997

http://www.me.gatech.edu/faculty/rosen

**Remark:** Prof. Rosen is specialized in computerized technologies. He was an Academic Director of the Georgia Tech Rapid Prototyping and Manufacturing Institute (RPMI). His records show a number of published books and research articles in digital manufacturing; however, I cannot find his responsibilities related to curriculum development or academic program assessment. His academic competency especially in the field of manufacturing digitalization is not in doubt but his capability as an academic program assessor is not clear. Experiences on EU projects auditing and the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) cannot be found.

## Candidate III

# Ass.Prof. Ajaree Supasuteekul

Associate Director of Strategic Wisdom and Research Institute

#### Srinakarinwirot University, Thailand

#### **Education**

PhD Building Technology/Sustainable Energy Technology, School of the Built Environment, University of Nottingham, Nottingham, UK [2008]

MEngSc Refrigeration and Air Conditioning, School of Mechanical and Manufacturing Engineering, University of New South Wales, Sydney, Australia [2003]

BEng Mechanical Engineering, Sirindhorn International Institute of Technology, Thammasat University, Patumthani, Thailand [2001]

Dr. Supasuteekul is a registered assessor for AUN-QA (Asian University Network-Quality Assurance). She is a well-known assessor who performs the academic program assessment for several universities around Thailand and ASEAN communities. She is also a frequent speaker on academic quality assurance at seminars and conferences.

http://research.swu.ac.th/index.php?option=greeting2

**Remark:** Dr. Supasuteekul is highly accredited for her expertise in academic quality assurance program in ASEAN. She is a frequent invited speaker at different universities and also a certified trainer for development of an academic quality assurance system. The workpackages, tasks, and deliverables in our MSIE4.0 project are parallel to what are stated in the AUN-QA requirements. Her familiarity with the AUN-QA system is a strength. But experience with Industry 4.0 is not clear. Experience on EU projects auditing and the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) cannot be found.

# Candidate IV Mr. Giuseppe D'ANGELO

#### **Education**

Theoretical Physics [1979]

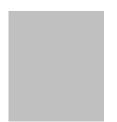
His CV is as attached in the last pages.

**Remark:** Mr. D'Angelo has extensive technical experiences in both industries and education institutes. His involvement in several projects as a project manager and a consultant will allow him to be able to give insight comments on how our MSIE4.0 is being handled. His familiarity with innovative education systems can be found in his publications, though skills and competences related to advanced industrial technologies cannot be clearly indicated. His past experiences working with universities and the Ministry of Public Education are his strength; his knowledge about the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) can then be assumed.



#### PERSONAL INFORMATION

#### Giuseppe D'ANGELO



▼ Via dell'Assunzione, 45 G – 00168 Rome (Italy)

**\** 0039-06-6144759 **\** 0039-338-6719355

giuseppe.dangelo.csi@virgilio.it

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Sex Male | Date of birth 04/03/1955 | Nationality Italian

From 16/4/2009	Manager in Public Administration
	Regional Council of Campania (Giunta Regionale della Campania)
	Rome site: via Poli, 29, 00187- Rome (Italy)
	Naples site: via G. Porzio, Centro Direzionale, Is. C3 – 80143 Naples (Italy)
	Actually
	National Technical Coordinator of the Commission for Infrastructures, Mobility and Territorial Government of the Conference of Regions and Autonomous Provinces (from 01/10/2010)
	Manager of the Unit "Sustainable mobility and relationship with central Administrations" of Directoral General for Mobility
	<ul> <li>Until 16/4/2017</li> <li>Manager of the Unit " Regional, National and Community Funds" of Directorate-General for Mobility</li> </ul>
	<ul> <li>Until 14/11/2013</li> <li>Manager of the Unit "Operational Structure of the European Social Fund (ESf) Managing Authority 2007/2013"</li> </ul>

#### Premise

To read clearly my CV is indispensable to provide a series of general indications about my professional career.

After my graduation with honors in Theoretical Physics (1979) my career can be divided into three periods:

#### - 1980-1985

- Employed in computer companies with programmer, analyst programmer, Designer
- Researcher at the Institute of Theoretical Physics of the University of Bologna

#### - 1985-2009

- Teacher of General informatics in industrial technical institutes (high schools)
- Consultant for public administrations, universities, public and private research centres, foundations, multinationals, large enterprises and small and medium-sized enterprises, consortia, third sector enterprises and voluntary service
- Professor of Fundamentals of computer science at the Faculty of Engineering of the University of Naples Federico II and the second University of Naples
- Author and curator of volumes and articles in the areas of education and training, social and working inclusion, credit to enterprises, logic and formal languages, innovation, culture, engineering and architecture
- Designer and project Manager of projects in the fields of vocational education and training, job inclusion, research, technological innovation, ICT, publishing, public administration.



- <u>From 2009</u>: Public Administration manager with following areas of activity and competences:
  - technical Coordinator of the Committee on Infrastructures, Mobility and Government of the territory of the Conference of Regions and Autonomous provinces;
  - expert in local public transport, sustainable mobility, tourism mobility, infrastructures, construction, public works, social housing;
  - European Social Fund expert and European Fund for Regional Development;
  - (until 2017) Responsible for regional, national and Community funds of the Campania region for a total value of more than 3 billion euros;
  - organizer of conferences, seminars, working groups in the areas of mobility of infrastructures and public works and Government of the Territory;author and curator of articles and reports of study and research;
  - expert on regional, national and Community legislation on mobility, infrastructures, housing and urban planning.

This part of my professional life is not described in detail in this CV, so it is not reported all the macro-activities carried out during my current career as a manager in the public administration.

2002-2009	SILABO - Information Society Laboratory Ltd			
2002-2003	Consultant			
	Consultant			
	Project Manager of the projects:			
	- "LeTS - Language ETeacher Services"			
	- "LeTS Go"			
	- "TRAIN-ABILITY - Integrated System for the Access at the Training for Occupational aims of the Weak Target".			
	- "B3 - BUSINESS VS BASEL II"			
	Expert Support of the projects:			
	- "e-LMaP-WIS e-Learning Management Profiles and Work Inclusion System"			
	- "T&T – Telework and Training"			
	- "EFIS - Service de Formation pour l'Employabilité Féminin des Italiennes En Suisse"			
	- "eGov – eGovernment Village"			
	- "FILOME - Feminine Inclusion: Local Opportunity with Micro Enterprise".			
1999-2009	Industrial Technical Institute "F. Giordani" (Naples, Italy)			
	Project Manager			
	Projects:			
	- "HeLPS Transfer - Helps for high training and high schoof"			
	- "HeLPS - High e-Learning Professional Skills"			
	- "TES – Telework Education System"			
	- "VGC – Virtual Guidance Center"			
	- "www.festpop.edu - An Internet site about European folk festivals"			
1998-2002	Naples Municipality (Italy)			
	Consultant			
	Project Manager Support of the Project:			
	- "Telework and Local Development"			
	- "FIT – FASTRACK TO IT"			
1997-2006	Consorzio Editoriale Fridericiana (Publishers and University Consortium)			
	Consultant			
	Technical-Scientific support to the Project Management of the projects:			
	- "Let it Fly - Learning Education and Training In The Foreign Languages in italY"			
	- Training Courses in multimedia and telematics sectors			
	- "Introduction to the Methodologies and Technologies in the Editorial Productive Process" (Research Programme of Ministry of University and Research. Cluster C16			



	iguori Editore Srl – Naples (Italy)
	Consultant
	Project Manager of the research and development project:
	"TESAURO – Information Technologies applied to Ancient Printed Book"
	Inistry of Public education
	Expert
Т	Member of the National Commission for the definition of Experimental IT Programmes in echnical High Schools
	Multinational EDS – Electronic Data System, Italy
_	Consultant
	Development of the Projects:
	"POLO EDITORI" (Publisher Pole)
	"Virtual Software Factory" (Research and development in advanced ICT)
	"L2E-L RE-ENGINEERING SYSTEM" (Research and development in advanced IT)
	"LoRiET – Low Risk Enterprise Transformation" (Research and development in
	advanced ICT)
	Ministry of Public Education  ─rainer
	rainer of teachers for the "Educational Planning and Project" initiative.
	ndustrial Technical Institute "F. Giordani", Caserta (Italy)
	Female Technical Institute "Vittorio Emanuele II", Naples (Italy)
_	Consultant
	Designer and Teacher in post-higher diploma courses
	Second University of Naples – Aversa (Italy) Professor
	Foundation of Computer Science" – Semesterly courses for Engineering Faculty (Civil
	and Transport)
	Jniversity of Naples Federico II – Naples (Italy)
F	Professor
	Foundation of Computer Science" – Semesterly courses for Engineering Faculty
	Mechanic)
	S&M-EDS Group, Naples (Italy) – ICT enterprise
	Consultant
	Responsible of the Training Division / Expert support in the training and vocational areas
	Inistry of Public Education
	rainer
	rainer of mathematics and physics teachers in the "ICT National Plan".
	nformatica Meridionale Ltd, Naples (Italy) (IT entreprise)
	Consultant
	raining Division Responsible
	ndustrial Technical Institute "Francesco Giordani" – Naples (Italy)
	Teacher Teacher
	eacher of Computer Science.
	TM - Informatica Telematica Meridionale, Naples (Italy) (ICT enterprise)
	Consultant.
Т	raining Division Responsible
	Datitalia Processing Co. – Naples (Italy)
	Employee
A	Analyst Programmer and Project Responsible



1981-1984	University of Bologna (Italy) - Department of Physics Research collaborator Research activities in the framework of fields and unification theories
1980-1983	S&M - Systems & Management Ltd – Modena (Italy) Employee Programmer and Analyst programmer
1978-1980	Institute for professional start-up "Arti e Scienze", Naples (Italy)  Vocational Trainer  Courses of FORTRAN e COBOL programming languages

#### **EDUCATION AND TRAINING**

2004	Eligibility of Public Manager Campania Region public administration Winner of public contest
1996	Qualification of Teacher Trainer for the Project Area in Technical School Ministry of Education Public selection
1987	Qualification of Teacher Trainer for the Informatic National Plan Ministry of Education Public selection
1984	Teaching qualification in public schools Ministry of Education Public contest
1979	Graduate with honors University of Naples "Federico II" Degree in Theoretical Physics

#### PERSONAL SKILLS

Mother tongue(s)

Italian

#### Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
C1/2	C1/2	C1/2	C1/2	C1/2
B1/2	B1/2	B1/2	A1/2	A1/2
DIZ	DI/Z	DI/Z	A I/Z	A I/Z

Spanish

English

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user Common European Framework of Reference for Languages

Communication skills Organisational / managerial skills Job-related skills Very large and consolidated skills in communication, organisation and managing, Job relationship acquired during my career due to the roles I have held as manager of public administration, tutor, trainer, teacher, university professor, researcher, project manager, writer.

#### Digital skills

	SELF-ASSESSMENT					
Information processing	Communication	Content creation	Safety	Problem solving		
Proficient user	Proficient level	Proficient level	Proficient level	Proficient level		



#### Main ICT competencies:

- Proficient user of office suite (word processor, spread sheet, presentation software)
- Proficient user of photo editing and painting/graphic software
- Proficient user of publishing software
- Proficient user in Computer programming
- Proficient user in Computer Networking
- Independent user in Web mastering

#### **ICT-certificates**

All ICT competences were acquired in the work activities. I certified as:

- Consultant in ICT companies (Big and SMEs)
- Teacher of Computer science in Technical High School
- Professor of Informatic Foundations in University Engineering Faculties

#### Other skills and competences

#### Main general Skills

I have acquired consolidated skills and competences – in local, national, Community and international contexts and in Public and Private fields - in the following areas:

- High Education,
- Education and Vocational Training,
- Organizational transformations,
- Technology transferring,
- Innovation of Process and of Product,
- Technological innovation,
- Job inclusion,
- Equal Opportunities,
- Innovation of the public administration,
- Monitoring, Certification, validation of projects
- Administrative and accounting management of projects,
- Fund raising,
- Computer systems.

#### Skills in the sectors of Research (pure and applied)

- Pure Search
  - Research in theoretical physics in the area of the application of differential geometry in unification and large unification theories.
- Applied Research and R&D Competences acquired in the following areas:
  - Computer Science Management,
  - Industrial Computing,
  - Publishing
  - Multimedia and computer graphics,
  - Libraries and archives,
  - Cultural heritage and Tourism,
  - Teleworking and e-Working
  - Guidance and training,
  - e-Learning,
  - e-Government.

#### Skills in transnational projects

- Community programme and initiatives:
  - Adapt BIS,
  - Comenius,
  - Grudving,
  - Leonardo da Vinci,
  - Research Framework Programme,
  - EQUAL First and Second.
  - ALFA Third,
  - Erasmus and Erasmus Plus.



- Community Funds:
  - ESF European Social Fund;
  - RDEF Regional Development European Fund;
  - NOP National Operative Programme.

#### - Relationship

Consolidated relations with universities, research centres, training institutions, schools, public administrations, companies from the following countries: Austria, Cyprus, Finland, France, Germany, Greece, Hungary, Ireland, Iceland, Lithuania, Malta, The Netherlands, Poland, Portugal, United Kingdom, Czech Republic, Romania, Slovakia Spain, Sweden, Switzerland, Turkey

**Driving licence** 

Driving licence category: B

#### ADDITIONAL INFORMATION

#### Publications Articles

- G. D'Angelo, "E-AUTHORING-DIDACTIC titled and MODELS OF e-LEARNING CONTENT DEVELOPMENT", In Acts of 4ª International Conference "Language, Culture and Technologies"-Organized by Faculty of Humanities of Kaunas University of Technology, Kaunas (Lithuania), 19-21 May 2006;
- T. Savu, G. D'Angelo, B. Abaza, "STRATEGIC STRUCTURE OF E-LEARNING PROJECTS", In Acts Of Symposium "Educational Technologies on Electronic Platforms in Engineering Higher Education" - Organized From Technical University of Civil Engineering of Bucharest (Romania), 27-28 May 2005;
- G. D'Angelo and others, "The Project TES", In Acts of the "XI International Telework Conference"-Organized by/TA-International Telework Academy, Crete (Greece), 6-10 September 2004;
- G D'Angelo, "Telecommuting and local development: the experience of Comune di Napoli On ofsSkilled", in Proceedings of the Conference "Telecommuting in Public administration: organizational flexibility and new job opportunities", organized by the province of Trento and held in Trento on 5/11/1999;
- G D'Angelo, "Operational aspects of the telecommuting project and local development of the Comune di Napoli", In Multimedia acts of the Transnational Conference "Telework, Flexibility and Local Development ", organized by Comune di Napoli e Held in Naples in November 1998;
- G. D'Angelo, The training of Experts, in: Informatics, Telematics and School, McGraw-Hill Books Italy (ed.), Year III, No. 1, February 1989, Pp 33-36;
- G D'Angelo, Computer Science in Design (computer methods and technologies in engineering and architecture), in: Review Aniai (National Association of Engineers and Architects), year XII, No. 3, July/September 1988, Pp 16-21;
- G D'Angelo, In Proceedings of the Conference "Education and work", a project for Naples, the youth and the school, promoted by the Center for Problems of Education of the Provincial administration of Naples, 14-16 October 1986, Pp 88-89;
- S. Bergia G. D'Angelo V. Monzoni, Waves in five dimension and quantum physics in O. Klein's Paper of 1926, in: Proceedings of the Fourth Marcel Grossman Meeting on General Relativity, R. Ruffini (ed.), Elsevier Science Pubblishers B.V., pp 1795-1803, 1986;
- S. Bergia G. D'Angelo V. Monzoni, Fibrate spaces and multidimensional unitary theories, published by the Department of Physics of Bologna with PRProtocol D.F.U.B.-16/84, 1984.

#### Publications Books:

- G. D'Angelo, G. Faiella, T. Savu (Edited by), "INTRODUCTION TO TELEWORK", 2009, pp. 496, Naples, Liguori Editore.

  Printed version: Editions in Italian, English and Remanian
- Printed version: Editions in Italian, English and Romanian.
- G. D'Angelo and I. Mambri (Edited by), "TRAINABILITY. Innovative models and tools for accessible training", 2009, pp. 496, Naples, Liguori Editore Printed versions: Editions in Italian and English.

E-Book versions: <a href="http://www.liguori.it/schedanew.asp?isbn=4808">http://www.liguori.it/schedanew.asp?isbn=4800</a> (English)
Attachment: CD-ROM with in-depth materials in Italian and English.

 G. D'Angelo and Adriano Giannola (edited by), "CREDIT FOR SMALL AND MEDIUM-SIZED ENTERPRISES. Basel 2 and changes in knowledge, skills and bank-enterprise relationship", 2009, pp. 445, Napoli, Liguori Editore.

Printed versions: Editions in Italian and English.

E-Book versions: <a href="http://www.liquori.it/schedanew.asp?isbn=4640">http://www.liquori.it/schedanew.asp?isbn=4640</a> (English) Attachment: CD-ROM with in-depth materials in Italian and English.



- G. D'Angelo (edited by), "WORK INCLUSION THROUGH ENTREPRENEURSHIP. Inclusion models for the job market in Europe", 2007, Pages. 50 Monaco, Equalmunchen Printed version: English edition.
- G. D'Angelo (edited by), "FROM DIDACTIC TO E-DIDACTICS. Paradigms, models and techniques for e-learning", pp. 445, Naples, Liguori EDITORE

1th Edition 2007

Printed versions: Editions in Italian and English.

E-Book versions: http://www.liquori.it/schedanew.asp?isbn=4065 (Italian) - http://www.liquori.it/schedanew.asp?isbn=4067 (English)

2th Edition revised and enlarged 2010

Printed versions: Italian, English, Lithuanian, Romanian, Swedish, German and Turkish. Attachment: CD-ROM with in-depth materials.

- G. D'Angelo (edited by), "NON-TRADITIONAL PATHS FOR THE ACCESS TO THE WORLD OF WORK. A model of inclusion in the labour market by categories excluded or at-risk exclusion", 2005, Naples, Intra Moenia
  - Printed versions: Editions in Italian and English (essay).
- G. D'Angelo- Anna Perrotta, LOGIC AND FORMAL LANGUAGES. An integrated educational path of mathematics and computer science for the high school, 2 volumes, 1995, Padova, Ed. Cedam.

#### **Projects**

List of Project realised from 1996-2009

- "e-LMaP-WIS e-Learning Management Profiles and Work Inclusion System". Promoter: Italian temporary-scope association "City of Knowledge", coordinated by Research Center in pure and Applied mathematics, University of Salerno (Italy). Years: 2009. Found: Foundation for the Sud Italy. Programme: Support for high education Development of the human capital. Aim: Realisation of two high postgraduate training courses in Campania and Calabria regions for 'e-learning System Leader' and 'e-learning Project Manager'. Value: 0.6 M€.
- "EFIS Service de Formation pour l'Employabilité Féminin des Italiennes En Suisse". Promoter: Italian-Switzerland temporary consortium. Years: 2008-2009. Found: Ministry of Labour and Social Security. Programme: Guidance and training interventions for the training of Italians not residing in EU. Aim: Improve access, participation and position of women in the labour market in Lausanne and Geneva, in particular women Italian emigrated through specific training paths. Value: 0.45 M€.
- "T&T Telework and Training. Work at Distance to Teach at Distance". Promoter: Politehnica University of Bucharest Center for Advanced Technologies (CTANM), (Romania) coordinator of a partnership from Romania, Greece, Italy, Spain. Years: 2008-2009. Found: EU. Programme: Leonardo da Vinci Transfer of Innovation. Aim: transfer the results of TES Project [See below] to Telework Training of Education and Training Operators through the adaptation of the Training Modules to the e-Training context, the linguistic localization and the structural adaptation of the main TES products. Value: 0.3 M€.
- "HELPS TRANSFER Helps for high training and high school". Promoter: Industrial Technical Institute "F. Giordani" (Italy) coordinator of a partnership from Sweden, Turkey, Romania, Lithuania. Years: 2008-2009. Found: EU. Programme: Leonardo da Vinci − Transfer of Innovation. Aim: Transfer the professional figures elaborated by the Project "HeLPS" [see below] and related training paths towards three areas different: the high education, university education, scholastic education. Value: 0.45 M€.
- "LeTS GO". Promoter: Industrial Technical Institute "Leonardo da Vinci" (Italy) coordinator of a partnership from Spain, Poland, Romania, Germany. Years: 2008-2009. Found: EU. Programme: Leonardo da Vinci − Transfer of Innovation. Aim: Promote the development of quality e of innovation in training sector, through the use of e-learning addressed to foreign languages teaching. for such goal yes è intended transferring the results of the project "LeTS" [see below]. Value: 0.45 M€.
- "Portal and Museum of the Institute Banco di Napoli Foundation". Promoter: IBNAF Institute "Banco di Napoli" Foundation (Italy. Years: 2007-2009. Found: Private + UE. Programme: European Regional Development Fund. Aim: Valorization of IBNAF activities and of its Historical Archive, the biggest archive in the banking area (more than 300 millions of documents from 1574. Value: 0.3 M€.
- "MOSE An Innovative Training MOdel For Social Enterprises Professionals/Qualifications". Promoter: API Naples (Italy) coordinator of a partnership from Greece, Italy, Poland, United Kingdom, Spain. Years: 2006-2007. Found: EU. Programme: Leonardo da Vinci Second Phase. Aim: devising, implementing, verifying and validating an innovative model of vocational training (called the MOSE) for social enterprises managers and expert. Value: 0.5 M€.
- "TRAIN-ABILITY Integrated System for the access to the training for employment of vulnerable target groups of the labour market". Promoter: API Naples (Italy) coordinator of a partnership from Germany, Greece, Italy, United Kingdom, Switzerland, Turkey. Years: 2006-2007. Found: EU. Programme: Leonardo da Vinci Second Phase. Aim: Devise, realise and test an integrated system, called Train-Ability, for the accessibility, adaptability and validity of professional training processes for employment purposes, aimed at targets of weak social groups. Value: 0.5 M€.
- "Let it Fly Learning Education and Training In The Foreign Languages in italY". Promoter: Consorzio Editoriale Fridericiano (Italy. Years: 2005-2006. Found: EU. Programme: European Social Found 2000-2006. Aim: National research on needs of linguistic training in Italy. Value: 1,2 M€.
- "LETS Language ETeacher Services". Promoter: Industrial Technical Institute "Leonardo Da Vinci" (Italy) coordinator of a partnership from Italy, Germany, Spain, Ireland, Lithuania, Poland, Slovakia. Years: 2005-2007. Found: EU. Programme: Leonardo da Vinci Second Phase. Aim: *To create a high degree of*



flexibility and personalization system for the upgrading of language teachers to use e-Learning methodologies and technics. Value: 0.5 M€.

- "CECA Implementation of an Innovative Model and Self-Sustainable System of ECDL-CAD Training/Testing Center". Promoter: Polytechnic of Bucharest (Romania) coordinator of a partnership from Romania, Italy, Lithuania, Malta, The Netherlands. Years: 2005-2007. Found: EU. Programme: Leonardo da Vinci Second Phase. Aim: To create an innovative training model to provide high-level skills for the acquisition of the ECDL-CAD (European Computer Driving License in Computer Aided Design) and a prototype CAD Training Centre integrated with specific e-learning courses. Value: 0.2 M€.
- "FILOME Feminine Inclusion: Local Opportunity with Micro Enterprise". Promoter: Naples Municipality (Italy) coordinator of a partnership of six Italian partners and involving partnerships from Germania, Czech Republic, Portugal, Sweden, Poland. Years: 2005-2007. Found: EU. Programme: EQUAL Second Phase. Aim: To increase female employability through self-entrepreneurship for women with personal and/or family critical situations. Value: 0.75 M€.
- "CRESO Growth of food and wine resources for development and employability". Promoter: ENCO Ltd. (Italy) coordinator of a partnership of five Italian partners and involving partnerships from France and Spain. Years: 2005-2007. Found: EU. Programme: EQUAL Second Phase. Aim: *To increase employability in the food and wine sectors.* Value: 0.5 M€.
- "B3 Bussines Vs Basel 2". Promoter: "Banco di Napoli" Foundation Institute (Italy) coordinator of a partnership of five European countries (Italy, Greece, Austria, United Kingdom, Romania. Years: 2005-2006. Found: EU. Programme: Leonardo da Vinci Second Phase. Aim: To create an integrated system of training, information and distance guidance about Capital Agreement Basel 2, called B3 (B-Cube), addressed to the different professional skills in the field of SMEs. Value: 0.5 M€.
- "IT&T Instructional Theories & E-Trainers Designing For the future of Education". Promoter: Evrematia S.A. (Greece) coordinator of a partnership from Greece, Italy and Iceland. Years: 2005-2006. Found: EU. Programme: Leonardo da Vinci Second Phase Valorisation. Aim: *To realize an analysis for the definition of the professional competences of the e-Trainers and to develop a valorisation of Leonardo da Vinci projects in the area of e-Learning realized by European partnerships*. Value: 0.11 M€.
- "MATTIA MaThematics Training by means of Internet ApplicationS". Promoter: HERMES Consortium (Italy) coordinator of a partnership from Italy, Finland, Austria, Spain, Ireland, United Kingdom. Years: 2004-2005. Found: EU. Programme: Leonardo da Vinci Second Phase. Aim: *To create a web-based system for the fruition, sharing and personalization of didactic and training contents to support the learning of mathematics*. Value: 0.5 M€.
- "eGov e-Government Village ". Promoter: Naples Municipality (Italy) coordinator of a partnership from Italy, Greece, Spain, Romania. Years: 2004-2007. Found: EU. Programme: Leonardo da Vinci Second Phase. Aim: To create a village for e-Government for the training of public and private operators in the specific field of innovative public communication and territorial Marketing for the e-government management in the public administrations. Value: 0.5 M€.
- "HELPS High e-Learning Professional Skills". Promoter: Industrial Technical Institute "F. Giordani" (Italy) coordinator of a partnership from six European countries (Italy, Switzerland, Greece, Spain, Ireland, Romania. Years: 2004-2007. Found: EU. Programme: Leonardo da Vinci Second Phase. Aim: *To create a system for the training of high-profile professional figures in the e-Learning sector*. Value: 0.5 M€.
- "ISLES- Integrated System for Education, Training and LEarning Services". Promoter: Salerno Municipality (Italy) coordinator of a partnership from Italy, Cyprus, Spain, Romania, United Kingdom. Years: 2003-2006. Found: EU. Programme: Leonardo da Vinci Second Phase. Aim: *To create an integrated system for the provision of advanced services and training for operators in the educational and vocational area.* Value: 0.5 M€.
- "ECU (Electronic Content Unit) Intelligent Factory Development". Promoter: Consortium "Città del Libro" (City of the Book) Italy. Years: 2001-2004. Found: Italian Ministry of University and Research. Programme: Law N. 297/1999 titled "Support of scientific and technological research". Aim: Development of an integrated system for the archiving, retrieval, management, multichannel distribution of digital content and experimentation of innovative techniques for the creation and use of new forms of book in the publishing sector. Value: 5 M€.
- "I-Book A System for the Intelligent Re-Use of Contents". Promoter: Consorzio Editoriale Fridericiano (Italy) coordinator of a partnership from Italy, Germany, United Kingdom. Year: 2001. Found: EU. Programme: 5th Framework Programme, IST Research Programme, Theme IST-2001-3.1.1. Aim: Conception, design and prototyping of an editorial production system, based on an intelligent infrastructure to make Re-Usable Content Sets to provide contents and services to different user types. Value: 2 M€.
- "FIT FASTRACK TO IT". Promoter: Naples Municipality (Italy) coordinator of a partnership from Italy, Ireland, Greece, United Kingdom. Years: 2001-2003. Found: EU. Programme: EQUAL 2001. Aim: Development of innovative training system for people at risk of exclusion from the labour market to employment in the Information Technology industries. Value: 2,5 M€.
- "TES Telework Education System". Promoter: Industrial Technical Institute "F. Giordani" (Italy) coordinator of partnership from Italy, Greece, Spain, Ireland, Romania. Years: 2000-2003. Found: EU. Programme: Leonardo da Vinci Second Phase. Aim: Creation of a system for training, guidance and information on telework. Value: 0.8 M€.
- "LoRiET Low Risk Enterprise Transformation". Promoter: Multinational Corporation EDS (Italy. Years: 2000-2002. Found: Italian Ministry of University and Research. Programme: Research Development. Aim: Identify a model to transform Business Information Systems and its application system based on an innovative Project Management methodology, defined Rb-PM (a risk analyses and risk reduction methodology, Value: 4 M€.



"L2E-L RE-ENGINEERING SYSTEM". Promoter: Multinational Corporation EDS (Italy. Years: 2000-2002. Found: Italian Ministry of University and Research. Programme: Research Development. Aim: Realization of a complex methodological-technological system to transfer traditional legacy environments (owners) in e-legacy environments. Value: 3,5 M€.

"TELEWORK AND LOCAL DEVELOPMENT". Promoter: Naples Municipality (Italy. Years: 1999-2003. Found: EU. Programme: ADAPT BIS. Aim: Realisation of an innovative technological-organisational system for the introduction of telework in public administration. Value: 2 M€.

"Tesauro – Information technology applied to the printed ancient book". Promoter: Liguori Editore (Italy. Years: 1998-2003. Found: Italian Ministry of University and Research. Programme: Parnaso. Aim: Creation of an innovative IT system to manage ancient printed book and of innovative networks between libraries and publishers. Value: 3 M€.

"WWW.FESTPOP.EDU - An Internet site about European folk festivals". Promoter: Technical Institute of Ribadeo (Spain) coordinator of a partnership from Spain, Italy, France. Years: 1999-2002. Found: EU. Programme: Socrates - Comenius Act. 1. Aim: Development, by pupils of high schools from four European countries, of a website about some popular festivals of the countries involved. Value: € 120,000.

"VIRTUAL GUIDANCE CENTER". Promoter: Industrial Technical Institute "F. Giordani" (Italy. Year: 1998-1999. Found: Regional. Programme: Regional Law n. 41. Aim: Development and management of a system of educational and multimedia school guidance for pupils of the secondary school. Value: € 25.000.

"VIRTUAL SOFTWARE FACTORY". Promoter: Multinational Corporation EDS (Italy. Years: 1997-1998. Found: UE. Programme: 4<sup>th</sup> Framework Programme. Aim: *Identification and experimentation of effective models of teleworking and cooperative work on the network for the realization of a virtual software factory.* Value: 1.5 M€.

"POLO EDITORI (PUBLISHER'S POLE)". Promoter: Consorzio Editoriale Fridericiana (Italy. Years: 1996-1998. Found: EU. Programme: POP. Aim: *Creation of an editorial pole aimed at multimedia production*. Value: 5 M€.

#### Honours and awards

#### Project "Telework and local development"

- "European Telework Awards 1999" of the European Commission For the category "Best PPublic initiative ".
- "European Telework Awards 2000" of the Commission For the category "Best Project to support inclusion".
- "Italian Telework Awards 2000" Of the Italian Telecommuting Association For the category "Best telecommuting experience or network work in the public sector".
- "Hundred projects at the service of Citizens award" of the Department of Public Service of Italian Government. III Edition 2000.
- "Label RESET 2000" of ForumPA (annual national convention of the public administration).

#### Project "TES - Telework Education System"

- "Reference experience for the Quality in training" European Commission 2003.
- Experience inserted in the "Catalogue of Italian good practices of the European Social Fund, Community programmes and initiatives 2000-2006"- Ministry of Labour and Social Policies 2006.

#### Project "HeLPS-High e-Learning Professional Skills"

- "Reference experience for the Quality in training" European Commission 2007.
- Italian Prize for training "Aldo Fabris" Aldo Fabris Foundation 2007.
- Experience identified as "Good Italian practice in the Leonardo da Vinci programme" Isfol 2007.
- Experience inserted in the "Catalogue of Italian good practices of the European Social Fund, Community programmes and initiatives 2000-2006"- Ministry of Labour and Social Policies 2006.

Conferences Seminars	In my long professional career I had participate to a lot of
ANNEXES	

## Curriculum Development of Master's Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry



#### **Evaluation Criteria Identification**

This form is for Quality Control and Monitor member (QCMM) to identify criteria for task evaluation.

**QCMM Name: Supapan Chaiprapat** 

WP No.: WP4
Task No.: 4.3

#### I. Objective(s) and Deliverable(s)

The main objective(s) of this task:

- 1. To select a team of auditors qualified to conduct the evaluation process of the project results, through an auditor selection process approved by QCMB.
- 2. To monitor the auditing process and ensure that it proceeds as according to the project requirements.
- 3. To ensure that reports as outputs of the auditing process comply with the EU regulations and the project requirements.

The deliverable(s) of this task:

- 1. A team of auditors who possess qualifications specified in the criteria of the auditor selection process\*.
- 2. Reports including evaluation on the followings
  - a) Teaching/learning materials
  - b) Implementation of the activities, outputs and outcomes, the planned workload
  - c) Assessment of the sustainability of the project results (curriculum, syllabuses, teaching materials, etc.)
- d) Intermediate and final verification and validation of the project teaching/learning materials and results in accordance with the QCMP

The reports (2 a) - 2 c) must be submitted at M18, and (2 b) - 2 d) at M36.

#### II. Process Monitoring & Assessment

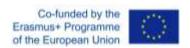
In your opinion, what should we look at in order to say that the task is done properly and met the objective?

1. Qualifications of the auditors

Possible criteria of auditor selection

- a) Education: a Bachelor degree (or equivalent), major in engineering is preferred, from an accredited university as a minimum
- b) Auditing professional experience: the auditor shall have a minimum of 3 related quality management system audits within a period of time not exceeding 3 years, prior to the date of qualification assessment. As a

## Curriculum Development of Master's Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry



lead auditor, a minimum of 5 quality management system audits, within a period of time not exceeding 3 years prior to the date of qualification, 2 audits of which shall be educational quality management audits.

- c) Regulatory knowledge: knowledgeable about educational quality management systems; ESG, EHEA or other related EU quality guidelines is preferred.
  - d) Accreditation/ Certification/ License: accredited or certified by a program recognized worldwide.
  - e) Auditing firm: well recognized in the related field.
  - f) Communication and interpersonal skills: Good communication and interpersonal skills are required.
  - g) The auditor must not be employed in any matter that would create a conflict of interest.
- 2. Reports must comply with EU regulations and project requirements.

Can we measure them and how do we measure them? If you can't measure it, please remove and find another one.

#### III. Deliverable Assessment

In your opinion, what should be the specifications of the deliverable(s)?

For the deliverable(1), we can assess its quality with respect to the qualifications aforementioned.

For the deliverable(2), we can assess its quality in different aspects as follows.

- a) Format: the deliverable can be assessed with respect to the rules of Document Control in this project.
- b) Content: the deliverable must be comprehensive enough to ensure an adequate coverage of the topics mentioned above
- c) Time: the reports must be submitted by the timeline mentioned above

Please identify similar deliverable(s) elsewhere.

The deliverables of Task 4.4 (\*compare with the deliverables within this project or somewhere else?)

Please rate those deliverables according to your specifications.

Not sure what it means.

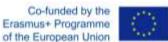
What are the criteria or scales that you have used to rate those deliverables?

1) Educa	Education	
Score	Education Level	
2*	Bachelor degree (or equivalent) from an accredited institution in the country of origin	



# **Curriculum Development of Master's Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry**

3*	Master degree (or equivalent) from an accredited institution in the country of origin	
	*extra 2 points if the degree is in engineering	
2) Work Experience		
Score	Experience	
0	Less than 2 years of experience	
2	2 or more years of experience have been in the industrial engineering or related fields	
2	2 or more years of experience have been in the quality assurance system	
3	2 or more years of experience have been in higher education quality assurance system	
4	2 or more years of experience have been in European higher education quality assurance system	
	*extra 1 point with every one additional full year of such experience (a maximum of 5 points)	
3) Auditing Experien	nces	
Score	Auditing Experience	
0	Less than 3 quality management system audits	
2	3 or more than 3 quality management system audits	
4	3 or more than 3 quality management system audits with at least one audited project involving higher education quality management system	
5	3 quality management system audits with at least one audited project being funded by EU	
	*extra 1 point with every one additional audit (a maximum of 5 points)	
4) Regulatory Know	rledge	
Score	Knowledge Level	
0	NOT knowledgeable of any education quality standards	
2	Knowledgeable of one or more education quality standards	
3	Knowledgeable of one or more higher education quality standards	
5	Knowledgeable of European higher education quality standard, e.g., ESG, EHEA	
5) Accreditation/Certification/License		
Score	Accreditation Level	



#### **Curriculum Development of Master's Degree Program in Industrial Engineering for Thailand Sustainable Smart Industry**

0	NOT accredited anywhere	
3	Local or national accreditation/certification/license	
5	International accreditation/certification/license	
6) Recognition of Auditing Firm		
Score	Recognition Level	
0	NOT well recognized in the field	
3	Well recognized locally or nationally	
5	Well recognized internationally	
7) Communication and Interpersonal Skills		
Score	Communication and Interpersonal Skill Level	
0	Unable to communicate	
3	Communication via planned use of interpreters	
4	Communication in good written and spoken English	
5	Communication in excellent written and spoken English	

According to your criteria, please set the target specifications for our deliverables to claim that the objective is met?

For the deliverable (1), the total score is 35 and to meet the objective the score should not be less than 22.

#### \* The auditor selection process

The process can be broken down into the following steps.

- 1) Establishing the auditor selection panel: The auditor selection process will be carried out by the auditor selection panel who in this project can be QCMB. The panel is responsible for the following tasks.
- 2) Setting up the criteria to select the auditors: The above criteria are tentatively imposed and needs revision.
- 3) Ranking the criteria: The criteria can be divided into factual criteria (educational background, experience, regulatory knowledge, for example) and soft-skill criteria (recognition and communication and interpersonal skill). The panel will have to assess which criteria are "of utmost importance", "importance", "nice to have", and "not applicable", and impose numeric scores accordingly.
- 4) Listing auditors who have qualifications that meet the criteria in 2)
- 5) Rating the auditors with respect to the rubric in 3)
- 6) Inviting the auditors with the highest score: if they are not available, the auditors with the next highest score will be considered.