

**Proceedings in
Scientific Conference**

SCIECONF 2014

9. – 13. June 2014



ScieConf
SCIENTIFIC CONFERENCE

The 2nd year of international virtual Scientific Conference

Published by: EDIS - Publishing Institution of the University of Zilina

 Univerzitna 1
01026 Zilina
Slovak Republic

Editors: Ing. Michal Mokrys; Ing. Stefan Badura, Ph.D.; Ing. Anton Lieskovsky, Ph.D.

ISBN: 978-80-554-0891-0

ISSN: 1339-3561

Pages: 566

Printed in: 170 copies

Publication year: 2014

- All published papers undergone single blind peer review.
- All published papers are in English language only. Each paper had assigned 2 reviewers and each paper went through two-tier approval process.

Open Access Online archive is available at: <http://www.scieconf.com/archive>
(proceedings will be available online one month after the publication release).

In case of any questions, notes or complaints, please contact us at: info@scieconf.com.

 **Warning:**

All rights reserved. Reproduction or publication of this material, even partial, is allowed only with the editor's permission. Unauthorized duplication is a violation of applicable laws.

International Scientific Committee and Reviewers Committee

Bulent Acma

Anadolu University, Department of Economics Unit of
Southeastern Anatolia Project (GAP), Turkey

Ameenulla J Ali

Queen's University of Belfast, United Kingdom

Hadi Attaran, Iran**Stefan Badura**

University of Žilina, Slovakia

Arindam Basu

University of Canterbury, New Zealand

André Bazzoni

IHPST - Department of Philosophy, University of Paris, France

Maria del Carmen Bellido Márquez

University of Granada, Spain

Dustin Besette

National Graduate School of Quality Management, USA

Pawan Kumar Bharti

Antarctica Laboratory, R & D Division, Shriram Institute for
Industrial Research, India

Francesco Bifulco

Università degli Studi di Napoli "Federico II", Italy

Carlos Pampulim Caldeira

University of Evora, Portugal

António Caleiro

Universidade de Évora, Portugal

Manuel Caravaca Garratón

Centro Universitario de la Defensa, Murcia

Carmen Costea

Spiru Haret University, Romania

Martina Černá

College of Polytechnics, Czech Republic

Maria DOLORES SANCHEZ-FERNANDEZ

UNIVERSITY OF A CORUÑA, Spain

Michael Dossis

TEI of Western Macedonia, Greece

Krzysztof Drachal

Warsaw University of Technology, Poland

Sonia Duse Carmen

Lucian Blaga University, Romania

Rajesh Duvvuru

National Institute Of Technology, Jamshedpur, Jharkhand,
India., India

Francisco Javier Blanco Encomienda

Quantitative Methods for Economics and Business, University
of Granada, Spain

Dagmar Faktorová

University of Žilina, Slovakia

JAVIER Fernandez-Rio

University of Oviedo, Spain

Sandra Ferreira

University of Beira Interior, Portugal

Jacek Gad

University of Lodz, Poland

José Nazaereno Gonçalves Ferreira

Sergipe Federal Institute of Education, Science and
Technology, Brazil

ANTONIO JOSÉ GONZÁLEZ JIMÉNEZ

Universidad de Almería, Spain

Nicoletta González-Cancelas

UNIVERSIDAD POLITÉCNICA DE MADRID, Technical
University of Madrid, Spain"

Iwona Gorzeń-Mitka

Czestochowa University of Technology, Poland

Francisco J. Güemez Ricalde

Universidad de Quintana Roo, Mexico

Marija Hiljadnikova-Bajro

University SS Cyril and Methodius, Macedonia

Mu-Song Chen

Da-Yeh University, Changhua., Taiwan

Hemant Chimanlal Parikh

Govt Medical College, India

Mariana Iancu

BIOTERRA University of Bucharest, Romania

Mylona Ifigeneia

Tei of Western Makodonia, Greece

Vladut Ione Iftode

Technical University Gheorghe Asachi, Romania

Manuela Ingaldi

Czestochowa University of Technology, Poland

Olteanu Ioana

Technical University Gheorghe Asachi from Iasi, Romania

Róbert Jäger

University of Matej Bel in Banská Bystrica, Slovakia

Nicholas Jewczyn

Ashford University, San Diego, CA 92123

KONSTANTINOS KALEMIS

NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS,
Greece

Michail Kalogiannakis

University of Crete, Greece

Sabina Kołodziej

Kozminski University, Poland

Marcin Komańda

University of Economics in Katowice, Poland

Izabela Konieczna

The Jan Kochanowski University, Poland

Balázs Kotosz

University of Szeged, Hungary

Nikolaos Koutras, Greece**Gurudatt Kulkarni**

Marathwada Mitra Mandal's Polytechnic, Pune, India

Binod Kumar

JSPM Jayavant Technical Campus, Pune, India

Vinay Kumar Gupta

Indian Institute of Management, India"

Sukanya Kundu
Alliance University, India
Maciej Laskowski
*Lublin University of Technology, Institute of Computer Science,
POLAND*
Jolanta Latosińska
Kielce University of Technology, Poland
Wenjing Li
University of Missouri-Kansas City
Anton Lieskovský
University of Žilina, Slovakia
Jorge Lima de Magalhães
FIOCRUZ - Oswaldo cruz Foundation, Brazil
Jorge Luís Casas Novas
University of Évora, Portugal
Dulce Magalhaes
Work Educação Integral, Brazil
Noelia Malla García
Complutense University of Madrid, Spain
Mousumi Mani Biswas
Western Digital Corp. USA
Eliana Mariela Werbin
National University of Cordoba, Argentina
Ivan Marović
University of Rijeka, Croatia
Farhad Mirzaei
*National Dairy Research Institute (N.D.R.I.) Deemed
University, India"*
Anuranjan Misra
Bhagwant Institute of Technology, Ghaziabad, India
Daniel Moise
*THE BUCHAREST UNIVERSITY OF ECONOMIC STUDIES,
Romania*
Angelo R. N. Molson
Ministry of Interior Affairs, Civil Engineering, Greece
Sónia Morgado
*Instituto Superior de Ciências Policiais e Segurança Interna,
Portugal*
Yaqoob Muhammad Mateen
*COMSATS Institute of Information Technology, Islamabad,
Pakistan*
EDWARD MUNTEAN
*University of Agricultural Sciences and Veterinary Medicine,
Romania*
Janusz Nesterak
Cracow University of Economics, Poland
Fakhriddin M. Nuraliev
Tashkent University of Information Technologies, Uzbekistan
Bernard OKELO NYAARE
*JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE
AND TECHNOLOGY, Kenya*
Malgorzata Okręglicka
Czestochowa University of Technology, Poland
Artur Gomes de Oliveira
*Sergipe Federal Institute of Education, Science and technology,
Brazil*
Fernando Osuna Pérez
University of Granada Urbanism and Planning, Spain
Adina Pacala
Department of Research and New Technologies, Romania
Daniela Pani
Government of Sardinia (RAS), Italy
Denisa - Elena Parpandel
*Faculty of Management Marketing in Economic Affairs Rannicu
Valcea, Romania*
Rafal Parvi
Opole School of Banking, Poland
João Carlos Pereira Mira Leitão
Instituto Politécnico da Guarda, Portugal
Krzysztof Piasecki
Poznań University of Economics, Poland
Johannes M. Postema
Medizinische Hochschule Hannover, Germany
Benedykt Puczkowski
University of Warmia and Mazury, Poland
Larry R. Masterson
Hamline University, USA
Catalin Radu
Carol I National Defence University, Romania
Siyuan Rao
BeiHang University, China
Michel Roddy LOLLCHUND
University of Mauritius, Mauritius
Angela Roman
UNIVERSITY OF IASI, Romania
Hynek Roubik
Czech University of Life Sciences Prague, Czech Republic
Teodor Rusu
*University of Agricultural Sciences and Veterinary Medicine Cluj-
Napoca, Romania*
Oana Rusu
Alexandru Ioan Cuza University of Iasi, Romania
Agnieszka Rzepka
Institute D&R, Poland
MERITA SHALA
AAB UNIVERSITY, Kosovo
Sunanda Sharma
University of Veterinary & Animal Sciences, India
Narendra Kumar Sharma
*District Mobile Veterinary Surgery and Infertility Unit, Bikaner,
India*
Mohd Fairuz Shiratuddin
Murdoch University, Australia
Dhanesh Shri Muni Singh
K.G. Arts & Science College, Raigarh, India
Alessandra Simonelli
Padova University, Italy
Monika Sipa
CZESTOCHOWA UNIVERSITY OF TECHNOLOGY, Poland
Aneta Sokół
Uniwersytet Szczeciński, Poland
Estefanía Solari
Universidad Nacional de La Plata, Argentina
Cosma Sorin Cosmin
Technical University of Cluj-Napoca, Romania

MARCO SORRENTINO*Pegaso Telematic University, Italy***B. Sreedevi***Rajendranagar, Hyderabad - 500030, India***Radu D. Stanciu***University "Politehnica" of Bucharest, Romania***Renata Stasiak-Betlejewska***Czestochowa University of Technology, Poland***Elena STAVROVA VELKOVA***Union of Scientist - Blagoevgrad, Bulgaria***Elżbieta Szafranko***University of Warmia and Mazury in Olsztyn, Poland***Andrea Székely***University of Szeged, Hungary***Mirosława Szewczyk***Opole University of Technology, Poland***Daniela Štaffenová, Slovakia****Gina Lucia Taha***Experientia, Italy***Pedro Taveras N.***PUCMM - Pontificia Universidad Catolica Madre y Maestra,
Dominican Republic***Agnieszka Tluczak***Opole University, Poland***Cezarina Adina TOFAN***"Spiru Haret" University, Romania***Piotr Tomski***Czestochowa University of Technology, Poland***Nuria TORRADO***University of Coimbra, Portugal***Marco Tregua***Università degli Studi di Napoli "Federico II", Italy***Ciocan TUDOR COSMIN, Romania****Suyogkumar Vijay Taralkar***MIT Academy of Engineering, India***Zdenka Volkánová***Brno University of Technology, Czech Republic***Ewa Wanda Maruszczyńska***University of Economics in Katowice, Poland***Krzysztof Wolk***Polish-Japanese Institute of Information Technology, Poland***Paweł Wyrzębowski***Warsaw School of Economics, Poland***Maria Teresa Zanola***Università Cattolica del Sacro Cuore, Italy***Šárka Zapletalová***Silesian University in Opava, Czech Republic***Engjellushe Zenelaj***Universiteti Ismail Qemali Vlore, Albania***Rong Zhang***Nishinippon Institute of Technology, Japan***Aleksandra Zygmunt***Opole University of Technology, Poland***Justyna Zygmunt***Opole University of Technology, Poland***Kamil Żyła***Instytut Informatyki, WEiI Politechnika Lubelska, Poland***Marta Žambochová***Univerzity J. E. Purkyně v Ústí nad Labem, Czech Republic*

Preface

The SCIECONF aims at creating a forum for further and deeper discussion in a variety of research fields. It is a well established Virtual opportunity for contacting people, which are not only from single scientific area. The effective cooperation of researchers combining different fields can move advances in research forward.

The 2nd International Virtual Conference on advanced scientific results (SCIECONF 2014) took Virtual place at www.scieconf.com during dates June 9. - 13., 2014.

More than 130 registered authors submitted their works in the SCIECONF 2014. Finally, 103 original research papers were accepted and presented during the conference. All accepted papers went through the double tier reviewing process.

The credit for the success of the conference is to be shared with many colleagues, partners, students, etc. First and foremost our thank belong to the International Reviewers and the Scientific Committee, whose members gave precious inputs and were always side by side with the Organizers.

Congratulations to all Authors and we are looking forward to see you in SCIECONF 2015.

Conference Editorial Board

June, 2014

Table of Contents

Business Management

The future of mobility in automotive industry	14
<i>Simona ALBULESCU, Ovidiu DASCALU</i>	
The Role of Maturity in the Internationalisation Process for Company's Innovative Activity.....	20
<i>Adam Dymitrowski</i>	
Control charts for variables and the use of imputation methods	26
<i>E. Hontoria, F. Campuzano-Bolarin, E. Álvarez-Verdejo, J.F. Muñoz</i>	
HUMAN CAPITAL RISK ASSESSMENT IN ALBANIAN SMALL AND MEDIUM ENTERPRISES (SME)	30
<i>Lorenc Koçiu, Eduina Guga</i>	
Perception of the Activities of Cooperatives in the Area of Distribution. The evidence from conducted research in Poland and Ukraine	34
<i>Izabela Konieczna, Petro Garasym</i>	
Small and medium-sized enterprises and their investments in real estate in Poland	38
<i>Małgorzata Okręglicka</i>	
Future trends of Process Innovations	44
<i>Jana Ondreášová</i>	

Economy and Business Economics

Stock option plans and the risk of expropriation.	49
<i>Claudia Arena, Simona Catuogno, Alessandro Cirillo, Donata Mussolino, Ingrid Pulcinelli, Sara Saggese, Fabrizia Sarto</i>	
The Evolution of Urban Competitiveness in Italy form 1995 to 2013	54
<i>R. Papa, C. Gargiulo, S. Franco, L. Russo</i>	
Changes in currency exchange rates and their impact on credit risk in commercial banks.....	59
<i>Rafal Parvi</i>	
Contribution of Facility Management to Sustainability and Corporate Social Responsibility	65
<i>Alexander Redlein, Michael Zobl</i>	
Correlation between the population and public deficit per capita in the EU countries	68
<i>Anna Rutkowska-Ziarko, Małgorzata Grzywińska-Rapca</i>	
Current state of the Business Administration in Georgia and his role in Global Economy.....	79
<i>Agnieszka Rzepka, Ioseb Masurashvili</i>	
Venture capital investment factors: new institutionalist approach	85
<i>Gintare Skaiste</i>	
Sectoral and Regional Distribution of 'Success'	91
<i>Viktorija Šipilova</i>	
Assessment and Management of Tax risk in Tax Administration.....	97
<i>Konstantin Vorobjev, Irina Voronova, Zoja Sundukova</i>	
The Effect of Market Concentration on Total Welfare and its Distribution in a Supply Chain Case.....	103
<i>M. Weber, T. Tavor, U. Spiegel</i>	

Public service, Law

FROM THE HUMAN RIGHTS TO PACIENT'S RIGHTS	112
<i>Anda Veronica Nedelcu-Ienei</i>	

Financing and Accounting

SMEs and the main methods of their evaluating.....	117
<i>Antoneta Polo, Enkela CACA, Ilirjana ZYBERI</i>	
The use and the abuse of accrual accounting in the public sector	121
<i>Marco Sorrentino</i>	

Contribution of Facility Management to Sustainability and Corporate Social Responsibility

Alexander Redlein
 Vienna University of Technology, IFM
 Vienna, Austria
 alexander.redlein@tuwien.ac.at

Michael Zobl
 Vienna University of Technology, IFM
 Vienna, Austria
 michael.zobl@ifm.tuwien.ac.at

Abstract - Facility Management (FM) is the management of a company's infrastructure. Defining the company's demands, sourcing, the controlling of the service provision and the constant adaptation of all these steps to the continuous change of the company. FM focuses on how facilities can be managed to add value to the core business of a company. The focus on sustainability and corporate social responsibility (CSR) are other trends that, drives FM towards a focus on added value. This article describes the benefits which companies can generate through the use of FM.

Keywords -Facility Management, Sustainability, Corporate Social Responsibility

I. INTRODUCTION

In consequence of the economic crisis it has become extremely important for each company to save costs in every area. At the same time one of the main goals of a company should be reducing its energy consumption and increasing working (environmentally) sustainability. Connecting and fulfilling all of the above is the duty – beside many other tasks – of Facility Management (FM). The significance of FM has grown rapidly over the last years. This management strategy originally stems from America and has taken root in Europe via Great Britain and the Netherlands. In the USA the investment aspect of FM is more emphasized, whereas in Europe Facility Managers rather concentrate on operative processes. Therefore a wide variety of definitions of FM can be found in literature [1]. By a common definition FM is the “integrated management of the workplace to enhance the performance of the organization” [2]. FM is the support function coordinating physical resources and workplace, and support services to user and process of works to support the core business of the organization. The central issues of FM practice consist of place or facility, people or user of the building, and process or activities of the facility [3]. The most common definition of FM is the European Norm EN 15221. The main tasks according to this Norm are: FM is the management of a company's infrastructure. Defining the company's demands, sourcing (deciding if the services needed for FM should be outsourced or done internally and the selection of the supplier), the controlling of the service provision and the constant adaptation of all these steps to the continuous change of the company [4]. Facility Managers must be prepared to turn their hands to an increasingly wide range of areas to allow the core functions of a company to function effectively. Facility Managers are being viewed as strategic managers of the organization they represent. They have always been seen as

key members of the company's team, but they are now being seen as having the ability to affect the bottom line in the company, rather than as a resource-sapping function. The strategic management of an organization's assets during times of austerity in particular brings confidence to an organization, allowing the organization to concentrate on core activities rather than worry about peripheral (FM) functions. This can reduce risk to the organization while adding positive value to the organization. Also the role of sustainability manager is sitting within the facilities function. Social responsibility in the form of proactive sustainability can provide an added competitive edge to the organization [5]. Improvement of sustainability of an organization by implementing a life cycle analysis for the facilities is one of the main benefits of FM approaches according to the EN 15221-1 [4]. The main focus of FM has for a long time been on cost reductions, but in the recent years there is a change towards the need for FM to create added value [6]. The value adding by FM is seen as an optimization process, rather than only cost cutting [7]. Besides adding value for the core business of organizations it is becoming increasingly important for FM to add value for society, for instance in terms of sustainability and corporate social responsibility [8]. The value added through the use of FM is not only about monetary effects (cost savings, increase in productivity etc.). It is also about non-monetary effects related to sustainability and corporate social responsibility (CSR). This paper describes the benefits which companies can generate through the use of FM.

II. SUSTAINABILITY AND CORPORATE SOCIAL RESPONSIBILITY

Sustainability is becoming an integral part of FM and most Sustainability Managers are now found in the FM or resources department. The concept of sustainability has become increasingly important in the last years as all try to reduce the resource intensity of the day-to-day lives. Improving the sustainability of the organization could inter alia bring the following benefits (to the company respectively to the FM department): reduce the carbon footprint, raise the profile of the FM department, save money (waste is cash intensive), reduce the long-term reliance on fossil fuels [5]. Sustainability means different things to different people. It can be defined as a goal that allows for the continuing improvement of standards of living without irreversible damage to resources needed for mankind to survive. It is also referred to as being “green” [9]. The World Commission on Environment and Development (1987) defines Sustainability as: “... meeting the needs of the

present without compromising the ability of future generations to meet their own needs” [10]. An alternative definition of sustainability is: “Improving quality of life consistent with the capacity of supporting infrastructure” [11]. These conservation efforts were first known as recycling, but they have grown in scope over time. More public and private organizations are now taking the responsibility to be kinder to the environment. This is often measured by carbon foot-printing, which is a measure of the amount of carbon dioxide emitted through fossil fuel combustion. It is often expressed as tons of carbon emitted on an annual basis [9]. Sustainability has grown in significance across many public and private organizations. Organizations are concerned with the impact of their business activities on environmental, social and economic sustainability, as well as the impact of sustainability issues on their business. The perception of sustainability has changed over the years as organizations actively incorporate sustainability principles into their core business strategies. Organizations are now integrating sustainability issues into their corporate reports. They do this for several reasons such as complying with regulatory changes or improving their environmental, social and economic reputation. With increasing utility and maintenance/repair costs, coupled with legislative and regulatory requirements on energy use and carbon reduction, many organizations have developed sustainability policies as a part of their Corporate Social Responsibility (CSR) [10].

CSR covers a wide range of issues such as plant closures, employee relations, human rights, corporate ethics, community relations and the environment. The World Business Council for Sustainable Development defines CSR as: “... the ethical behavior of a company towards society ... management acting responsibly in its relationships with other stakeholders who have a legitimate interest in the business. CSR is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large” [12]. In October 2011 the European Commission published a new policy on CSR. The commission defines CSR as “the responsibility of enterprises for their impact on society”. To fully meet their CSR, companies should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders. CSR concerns actions by companies over and above their legal obligations towards society and the environment. It enables companies to better anticipate and take advantage of fast changing societal expectations and operating conditions. It can therefore drive the development of new markets and create opportunities for growth. Through CSR, enterprises can contribute to the European Union’s treaty objectives of sustainable development and a highly competitive social market economy. CSR offers a set of values on which to build a more cohesive society and a sustainable economic system [13]. Margolis and Walsh (2003) described that an estimated number of 122 published studies empirically examined the relationships between CSR with financial performance during the period 1971-2001. The positive results revealed that corporate managers should routinely take CSR management into account in business decision making. Researchers have identified the reasons why

organizations develop CSR strategies, such as reputation improvement, government regulations, competitive advantage, stakeholder pressure, critical events, and top management pressures. CSR strategies include investment in innovative activities regarding products and management, investments in human and ecological capability, policies with integration of economic, natural, and social capital. The reason most companies take CSR actions is either for the purpose of complying with (government) regulations or as a response to external constraints. Also competitiveness plays a critical role that leads companies to sustainability. To be competitive, companies also have to demonstrate the CSR management of business [14].

III. FACILITY MANAGEMENT AND SUSTAINABILITY/CORPORATE SOCIAL RESPONSIBILITY

Buildings contribute as much as one third of total global greenhouse gas emissions and the building sector has the most potential for delivering significant and cost-effective greenhouse gas emissions reductions in western economies. Over 80% of greenhouse gas emissions take place during the operational phase of buildings and is (or should be) under the control of FM. Sarajosa and Aaltonen (2012) studied environmental sustainability from the occupier organization perspective and identified in a case study the ways to create added value through greener FM processes. The study showed, that improving the environmental performance of facilities and (facility) services does not only decrease the energy consumption and greenhouse gas emissions, but also contributes to the organization in other ways. Greener FM services have a potential to affect employee/human wellbeing and productivity, improve image of the occupier organization, and last but not least decrease costs at the same time. With new technologies, the energy consumption in new and existing buildings can be cut by an estimated 30-80% with potential net profit during the building life-span [8]. Elmualim et al. (2010) and Shah (2007) emphasize that FM activities have a significant influence on how buildings and facilities are used and therefore are tasked to promote and implement the sustainability policies. Elmualim et al. (2010) highlighted in a study of the barriers and commitment of FM profession to the sustainability agenda that FM professionals, tasked with implementing and managing sustainability as a core business strategy, face many responsibilities as well as challenges. They also have the best chance to add value to their organizations and customers through efficient and effective management of sustainability issues and practices. The efficient management of facilities and (facility) services do have a significant influence in determining profitability, productivity, energy management, waste management, employee wellbeing and public perception of an organization. The IFMA report (2007) based on a research examining the future demands on Facility Managers noted that sustainability was a key issue where Facility Managers had to develop their competencies to face the demands, challenges and opportunities of sustainable development and practices. The report stated that Facility Managers had to develop and implement programs to reduce, reuse and recycle waste, and work closely with end users to anticipate changes and conserve energy. The responsibilities include reviewing or monitoring amount of energy used by the

facilities, adopting energy efficiency measures like switching to efficient lighting equipment, matching heating and cooling ventilation equipment to facility loads to reduce energy consumption. Elmualim et al. (2012) conducted a questionnaire survey of Facility Managers in the UK to identify drivers and issues that influence and support good sustainable practices. A total of 268 Facility Managers responded. The results indicate that legislation is the most important driver for the implementation of sustainable practices. Demand for efficient monitoring, management and reporting on environmental impact was not highly rated even though the top three issues of sustainability managed by Facility Managers are energy management, waste and recycling management and carbon footprint. Facility Managers are expected to take ownership of activities assigned to the reduction of carbon emission. FM will take a vital role in delivering a comprehensive sustainability policy due to the rising legislation, public scrutiny, as well as the needed business case for genuinely embracing sustainability. Facility Managers have a great role in advancing the sustainability agenda in the built environment through the practice of sustainable FM [10].

CSR is another area which is essential for FM to create value in the future. A growing number of companies disclose social and economical information. SMEs often communicate such information informally and on a voluntary basis. CorporateRegister.com estimates that about 2.500 European companies publish CSR or sustainability reports. In the German-speaking countries (Austria, Germany, Switzerland) the number of published CSR reports has doubled in the last years. These reports include the strategic goals of an organization in terms of sustainability. Also the operational implementation and the results of the various measures are presented. According to a MBA study of Fuke (2012) at the Vienna University of Technology about 97% of the CSR goals count to a Facility Manager's field of functions (e.g. environment, energy efficiency, transport, waste, cleaning, green building), but in only 12% of all these reports FM is mentioned [15]. This means that Facility Managers need to start taking on the role of a manager more strongly and the communication between FM department and the chairman should improve. According to the study of the IFM (Vienna University of Technology) in the year 2012 only about 13% of the surveyed companies (N=82) have notes or cross-references to FM in their CSR reports. The topics carbon dioxide and energy efficiency are the main goals of more than 90% of the analyzed companies. These are core functions of FM according to the EN 15221-4 and the GEFMA 100. Also the reduction of water and paper consumption is key objective in both the CSR and in the area of FM. In the last years cost reduction in the FM area was in the foreground. Actual results of the IFM (real estate and facility management) show that the goals/strategies sustainability, quality assurance and environmental protection are becoming increasingly important. There is thus a higher sensitivity to CSR and sustainability. Through methods and

measures such as reduction of greenhouse gas emissions, waste management, sustainable use of resources, FM can directly influence CSR and contributes to social responsibility. Simultaneously FM achieves high sustainability effects.

IV. CONCLUSION

In most of the companies the topics sustainability, environmental protection and CSR are becoming increasingly important. This is also reflected by the increasing number of published CSR reports. Though, many of the topics fall within the competence of FM are not associated with FM. So there is still a need for action. Besides adding value to the core business of organizations, FM can also add value to society, in terms of sustainability, environmental protection and CSR.

REFERENCES

- [1] A. Redlein, "Facility Management: Business Process Integration", Diplomica GmbH, Hamburg, 2004.
- [2] S. Chotipanich, "Positioning facility management", *Facilities*, Vol. 22, No. 13/14, pp. 364-372, 2004.
- [3] P. A. Jensen, T. van der Voordt, C. Coenen, "The added value of Facilities Management: Concepts, Findings and Perspectives", Polyteknisk Forlag, Lyngby, 2012.
- [4] ÖNORM EN 15221-1, "Facility Management Teil 1: Begriffe", <https://www.astandis.at/shopV5/Preview.action;jsessionid=1443B492897CCCD1959626AE04B2E4A1?preview=&dokkey=232990&selectedLocale=en>, 2007 (accessed 24 April 2014).
- [5] I. Barker, "A practical guide to Facilities Management", Whittles Publishing, Dunbeath, 2013.
- [6] P. A. Jensen, "The Facilities Management Value Map: a conceptual framework", *Facilities*, Vol. 28, No. 3/4, pp. 175-188, 2010.
- [7] T. Mudrak, A. Wagenberg, E. Wubben, "Assessing the innovative ability of FM teams: a review", *Facilities*, Vol. 22, No. 11/12, pp. 290-295, 2004.
- [8] P. A. Jensen, A. L. Sarasoja, T. van der Voordt, C. Coenen, "How can Facilities Management add value to organizations as well as to society?", Conference Paper, Brisbane, Australia: CIB World Building Congress, 5-9 May, 2013.
- [9] J. L. Campbell, "Facility and Property Management Guidebook", Campbell Consulting Group, Utah, 2011.
- [10] A. Elmualim, R. Valle, W. Kwawu, "Discerning policy and drivers for sustainable facilities management practice", *International Journal of Sustainable Built Environment*, Vol. 1, pp. 16-25, 2012.
- [11] B. Wood, "The role of existing buildings in the sustainability agenda", *Facilities*, Vol. 24, No. 1/2, pp. 61-67, 2006.
- [12] L. Moir, "What do we mean by Corporate Social Responsibility?", *Corporate Governance*, Vol. 1, No. 2, pp. 16-22, 2001.
- [13] European Commission, "A renewed EU strategy 2011-14 for Corporate Social Responsibility", <http://ec.europa.eu/social/BlobServlet?docId=9470&langId=en> (accessed 30 April 2014).
- [14] C. H. Chen, "The major components of corporate social responsibility", *Journal of Global Responsibility*, Vol. 2, No. 1, pp. 85-99, 2011.
- [15] F. Fuke, "Corporate Social Responsibility & Sustainability und Facility Management: Facility Management als nachhaltige Einflußgröße im CSR", Master Thesis, TU Wien, 2012.

We hereby certify that
Alexander Redlein
has presented a Paper entitled

Contribution of Facility Management to Sustainability and Corporate Social Responsibility

in the 2nd year of international virtual Scientific Conference 2014 (SCIECONF)
held at www.scieconf.com during 9th - 13th June 2014.



Ing. Toni Soklevski PhDc

Senior lecturer of Operations and Project Management
Director of Business Academy Smilevski