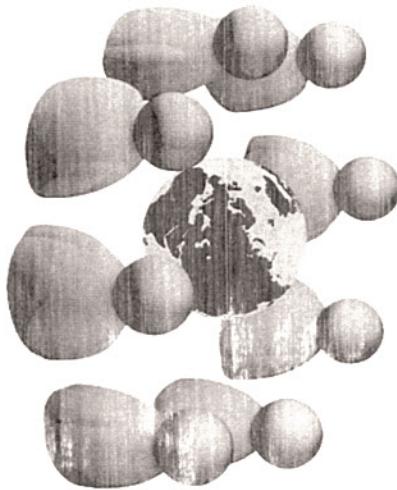




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Business Management

The effects of the expanding outskirts of Tshwane on its CBD and internal structure

Douw Gert Braad-Boschoff, Dommien Marais

Quantity Surveyors' career potential as construction project managers

*Michele Burger, *Role of Junkers**

The women's role in corporate reputation

M. Lubeth Flores-Acedo, Sandra Marm-Marrero, M. Concepcion Verner-Arias

Introduction of RETTs in South Africa

Douw Gert Braad-Boschoff, Eugene Bredell

Labor Activity Motivation in Oil and Gas Companies: The Case of Kazakhstan

Murat Kuzmanov, Galimzat Kurbashina, Marina Zim, Taglan Zhazhayev

SUSTAINABLE HUMAN SETTLEMENTS IN GOVERNMENT HOUSING PROGRAMS

Silvana Oberholzer, Michele Burger

SMEs in Argentina

Esterlina Sotiri

Insights into franchising in Poland: a review of empirical and theoretical perspectives

Anna Strmnicka

Competitive advantage and company's performance: exploring the differences and relationship

Anja Tadic, Jozica Ljajcovic

The Internationalization Process of Czech Companies

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Marketing

Cognitive Marketing Applied to the Territory

Franco C. Grossi

Assessment of selected offices with the use of a Mystery Shopping method

Katarzyna Hys

Economy and Business Economics

Solvency effects of taxation in the insurance sector

Szabolcs Borbála

Urban Housing Provision In Botswana

Douw Gert Braad-Boschoff, Simon Kachepa, Jacob Prentar

Purchase Power Party of Property

Douw Gert Braad-Boschoff, Thelma Jacobs

Retirement centres: investigating the supply and demand in South African towns

Michele Burger, Yoland Vergeen

Agricultural holdings efficient management drivers

N.O. Dolgorheva

RISK ASSESSMENT: STATISTICAL ASPECTS

T.O. Djukina

Current tendencies of foreign direct investments in the world and an overview of situation in Serbia

Andrea Jovanovic, Ivana Šeršić, Nataša Lovrić Afor, Lejla-Jovana Gornik

THE "FLEXICURITY" CONCEPT AND THE EMPLOYMENT PROTECTION LEGISLATION OF THE REPUBLIC OF MACEDONIA

Todor Kalomyan, Aleksandar Ristovski

Crime and socio-economic context: A framework approach

Sam M. A. Morgado



Macroeconomic functions of the Russian stock market.....	143
<i>Adam Morszki</i>	
Motives for Voluntary Environmental Investments.....	149
<i>Miroslawa Szweczk, Katarzyna Rudek, Rafał Purn</i>	
ERP Systems within Facility Management	153
<i>Alexander Reichen, Michael Zöbst</i>	
The Relationship between Unemployment and Entrepreneurship: A Case of Opolskie Voivodship	156
<i>Miroslawa Szweczk, Katarzyna Rudek, Rafał Purn</i>	
Determinants of Profitability of Manufacturers of Mushroom Compost in Poland	160
<i>Miroslawa Szweczk, Krzysztof Lachos</i>	
Aggregate Evidence for Job Polarization in Finland	166
<i>Jari Pämmälä</i>	
Economic Growth and External Sector	173
<i>Piotr Yarcho</i>	
 Public service, Law	
The procedure and the effects of placing under ban in light of the new Romanian legislation in the field.....	177
<i>Cristian Dumitru, Roxana Butor, Cornelia Flavia</i>	
Patronage vs. implementation of the Corporate Social Responsibility (CSR) concept in the public sector	181
<i>Lithuanian Hawkes</i>	
Creating and ensuring the level of local security and public order	188
<i>Rūta Kamprone</i>	
MEDIATION AND INTERNATIONAL INSTRUMENTS IN THE EUROPEAN UNION.....	192
<i>Andrea Niedel, Ute-Jens</i>	
INSTRUMENTS FOR COMPONENT WATER MANAGEMENT IN TRANSITION OF LAND OF NIEDERLÖN	196
<i>Juris Edvards, Igaķe Šamutāra</i>	
CRIMINAL PENALTIES POLICY REFORM IN LATVIA: DILEMMAS AND POSSIBLE SOLUTIONS	205
<i>Jānis Zīle, Pēteris Pūķe</i>	
 Financing and Accounting	
Role of Public Private Partnership in Infrastructure Development (Focus on Abenin)	209
<i>Irena Kriptiņa</i>	
Personal Income Tax Exemptions and Refunds in Poland and Selected European Union Member States	215
<i>Olgierda Polaczewska</i>	
Capital Structure Determinants in the Context of Family Firms	219
<i>Liljana S. Vrana</i>	
 Psychology, Sociology and Pedagogy, Social Science	
Quality Assurance in Technology Teaching	229
<i>Gabriel Balan, Daniela Lukáčová</i>	
Medical Professionals in the Role of an Adult Educator: Case of Latvia	235
<i>Gintaka Dantie</i>	
Environmental Modeling - Alternatives and Use in Interdisciplinary Education	240
<i>Meladna Festerova</i>	
Children of Muslim Migrants in Italian Schools and the Halal Meat Issue	244
<i>Roberto Giomme</i>	
THE HIDDEN CURRICULUM	250
<i>Józsema Komócska</i>	
Rebelliousness - the chance or the barrier? The functioning of today's youth in the face of chaos of values	253
<i>Józsema Komócska</i>	
 Linguistics	
Librarians facing "global threats": multilingual terminology and new cataloguing and information retrieval instruments.....	257
<i>Mario Čorvelić, Čarol Rola</i>	
Slogon Linguistics in Life Cycle Revival of Trademarks	261
<i>Zivile Nemciene</i>	
Cloze-test in ESP teaching for medical students	265
<i>Petra Žrnková</i>	
 Ecology	
Operational guidelines for effective management in National Parks: case study from locals and visitors in Evros, Greece	269
<i>Fernanda Andrade, Grigoris Iampapatos, Sifilias Tamvakis, Panayiotis Karayannidis</i>	
Art quality monitoring analysis during The heating seasons for The period of 2008-09 to 2011-13 in The Region of The Bijeljina Town, Bosnia & Herzegovina	273
<i>Nedjo Djurić, Mirna Rukavac</i>	



Exploring the positive and negative impacts of bicycling in the city of Orestiada, Greece 345
Silvianos Tampakis, Paraskevi Karimakola, Georgios Tsamopoulos, Vassiliki Andreou, Natacha-Meropi Antipa, Despina-Vassiliki Pitsani

Natural science – mathematics

TASKS AND ALGORITHMS IN DECISION MAKING FOR OPTIMISATION OF WORKING REGIMES FOR OIL PIPELINES IN A FUZZY ENVIRONMENT 351
B.B. Oraževskov, I.T. Kurnogozova

Fixed Point Theorems for Cyclic Contractions in Dislocated Metric Spaces 359
Kostantina Zizka, Huda Hasha, Abdeni Isufat

Natural science – chemistry

Phosphate sorption onto fly ash and lime adsorbents 364
Bongumisa Muzi Zama, Roman Jandlch

Natural science – biology

Calcifications study: the result of Biolithogenesis 368
F.A. Evdokimov, Yokohama O.A., Khayrullin M.S.

Natural science – physics

Application and interpretation of silica – colorimetry in bio-chemical synthesis 371
Milan Jevtić, Ljubica Jevtić, Vesna Ilić Blagojević, Jasminka Tomić

Chaos Involved by Dynamic Logistic Map 378
George Kaimuris

Electronics, Electrical Systems, Electrical Engineering

Combining Floating-point Design in High-level Synthesis 382
Michael Doskoz, Kostas Konfides

Possibilities of Scheduling Maintenance in the Distribution Grid at Voltage Level 110 kV 387
Radim Jíká, Marek Ošek

Influence of Charging Stations for Power Supply System 391
Marek Ošek, Radim Jíká

Energy

WIND HEATING SYSTEM 395
Ivana Beloglazov

Determinants of the Effectiveness of Tourist Destination Management 398
Małgorzata Kortelaw

Feasibility of Solar Power in South Africa and the existing barriers to its implementation 402
Nicholas Robbins, Michelle Burger

Industrial and Civil Engineering

Dynamic analysis of immersed tapered column carrying an eccentric mass at the free 412
N.M. Aneello

Evaluation of Ductility of Some Novel Metal Alloys 418
Altin Budak, Irakli Perma, Hektor Culibuf

The status of building image modelling in the South African construction industry 422
Derrick Bouwens, Heek Bouwman, Michelle Burger

Developing new materials and tool geometry for machining special aluminum alloys on automated turning centers 424
Tomaz Trzolic, Franc Čins

Monitoring of complex infrastructure objects by intelligent agent magnetic measurements 435
Anatoly G. Komareykin, Yury A. Gatchin

3D laser scanning in measurements of volume of earth masses 43
Józef A. Paniewicz

Application of the AHP method to optimization of the choice of roadside tree 44
Elizeta Šafraňko

Advancements in research for buildings recovery 45
Seema Virdi

Informatics

Semantically based customized search on local web site 46
Vladimir M. Cyrljeković, Marija Đokić, Branko Arsić

Methodology for rare events prediction 47
Francisco Soler-Jover, José Ángel Olivas, Vanesa

Information Technology

Lip reading using fuzzy logic networks – topology variation 48
Sébastien Kraemer, Alain Bruck, Christophe Stachnik, Jérôme Kahn

Enterprise interoperability 49
Lorenzo Di Stefano, Pasquale

Association rules' parameters impact study in statistical data analysis example 50
Peter Šimánek

Accuracy of determining spectral reflectance coefficients in a function of fire 51
P. Komissar, I. Walczak, M. Adachi

Preparation of the simulation model for optimization process 52
Marcin Iza, Józef Kozłowski, Adam Onyszkiewicz

Traffic sign and Vehicle frames classification using Monitoring camera 53
D.E. Ventzak, G. Soutis, G.K. Adam, K. Kokkinos

Transport and Logistics

A study the degree of concentration of the spanish banking 54
Juan Almazán-Cháñeiga, Modesta Giménez-Giménez, Francisco Soler-Jover, M. Carmen Palomino-Morales

Influence of transport development projects on property values in South Africa 55
Diane Gert Brand Boagoff

The European Union's approach to building transport infrastructure 56
Aleksa Kalajoska, Simona Karkova

Port security applied to Transfer Port of Marta 58
Mariela Muñoz Fárraga, Nicanor González-Gómez, Francisco Soler-Jover

II. METHODOLOGY

For ERP processes such as human resource management, maintenance/repair, asset management, tenant management and controlling. There is a need for process integration of ERP systems within FM [4]. This paper presents some results of the survey in the area of Facility Management performed by the Vienna University of Technology. It shows the use of an ERP system and the benefits of the use of an ERP system.

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

Affер salary and wages, expenditures for facilities represent the largest part of the operating expenses for the organization. Any improvement of cost effectiveness depends on the estate reorganization. After the large part of the operating expenses for the organization, overall cost savings. Over the past years the management system (FM). IT tools and methods allow companies to manage information effectively. FM processes and services. Within the goals of FM cannot be reached or can only insufficiently. IT functions as a catalyst in implementation of FM. The IT support becomes a success factor of the realization of FM [1].

1. INTRODUCTION

Abstract: Enterprise resource planning systems (ERP systems) are the standard technology on which many organizations are operating their business. The ERP system helps create re-organized organizations that are in a position to better serve customers, empower employees and drive greater business value. Most of these systems include functionality which supports the work of Facility Management (FM) Services or Controlling. Since 2005 the Vienna University of Technology (TU Wien) has performed surveys in the area of Facility Management on a yearly basis. This paper presents some results of the current survey, especially FM and IT Support (ERP). It shows the use of an ERP system within FM, the business processes covered with the ERP system and the benefits of the use of an ERP system. The survey, especially FM and IT Support (ERP), is based on the Mixed Model Research.

Alexander Rehlein
Vienna University of Technology, IFM
Vienna, Austria
alexander.rehlein@tuwien.ac.at

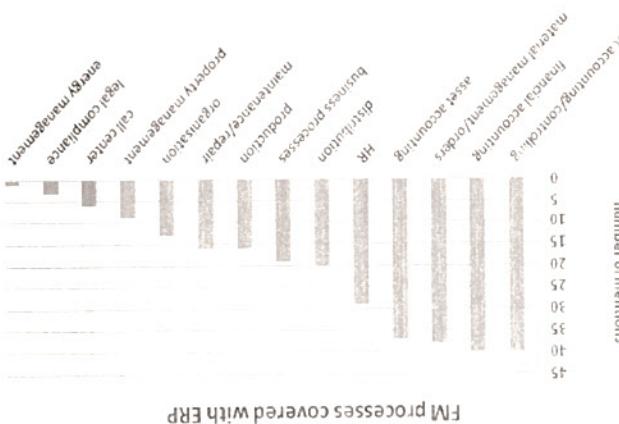
ERP Systems within Facility Management

The goal of the *Wilcoxon Test* is to verify if there is a difference between two populations on the basis of the random samples from these populations [12]. Most nonparametric samples / test are the *Wilcoxon Test* and the *Sign Test* [11].

Whitney U test. Two nonparametric equivalents of the related-alternative to the independent-samples / test is the *Mann-Whitney U test*. The value of the denominator of 1. A nonparametric inflate the are some highly deviant scores, or outliers, which can there are especially likely to occur when the data set is small and This is especially likely to occur when the data set is small and parametric test respectively a / test can give misleading results. distribution-free tests. There are circumstances in which a population distributions and are therefore also referred to as nonparametric tests, do not make specific assumptions about populations with the same variance. Other tests, the / test, is an example of a parametric test. That is, it is assumed that the data are samples from two normally distributed increases in productivity and the use of an ERP system and analyze the correlation between the use of an ERP system and an ERP system can lead to an increase in productivity. To maintainance of databases and reorganization of business processes [10]. Process optimization, integration of applications, easy integration and automation of business processes [10]. The implementation of real-time data shared across the organization in work, but also core processes within companies. They provide functional modules like financial accounting and bookkeeping, asset management, production planning, sales and distribution, and controlling, quality management, maintenance of applications, easy maintenance of databases and reorganization of business processes [10]. The implementation of real-time data shared across the organization in efficient ways. The benefits of ERP systems are seen as the As mentioned before, one reason for implementing an ERP

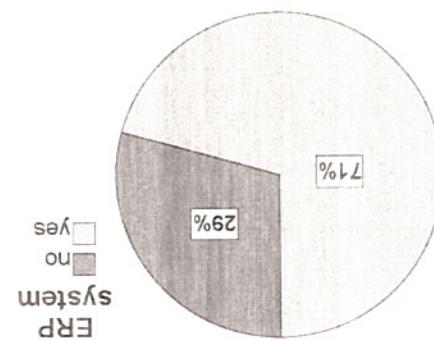
remain competitive. Therefore, ERP systems provide the means for managing business needs in more effective and respond to the increasing business needs [2]. The ERP system helps customers to better service costumers, re-energized organizations to better serve costumers, and empowers employees and drive greater business value [2]. The ERP system helps create processes to suit their needs [9]. The ERP system implements the costumer to modify the implemented business with a view towards enhancing productivity and in providing support for all variations of best business practices in productivity, cost savings. Overall, ERP systems are beneficial in modernization, facilitate handling, quick analysis, increase in by number of mentions): consistent documentation, The reasons for implementing an ERP system are (sorted

Figure 2. FM processes covered with the ERP system (2012)



Facility Manager or support parts of the FM processes. Figure 1 shows that in the evaluation of 2012 71% of the surveyed companies used an ERP system for the FM tasks. Only 29% of the surveyed companies do not use an ERP system for the FM tasks. ERPs deliver data which are the basis for the work of Facility Managers. From the listed phone, personal interviews and E-Mail. Tools for the survey were persons responsible for the FM tasks. Tools for the survey were interviewees were the Facility Managers themselves or the information [4].

Figure 1. ERP system (2012)



ERPs deliver data which are the basis for the work of Facility Managers or support parts of the FM processes. Figure 1 shows that in the evaluation of 2012 71% of the surveyed companies used an ERP system for the FM tasks. Only 29% of the surveyed companies do not use an ERP system for the FM tasks.

III. RESULTS/DATA

Interviewees were the Facility Managers themselves or the science, or in the business world. Any type of data analysis used in the social sciences, the natural sciences, SPSS is a tool that is capable of conducting just about models. SPSS is used to evaluate the data and to set up statistical models export into statistical programmes (IBM SPSS Predictive Analytics Software) and analyzed and evaluated. SPSS is used to evaluate the data and to set up statistical models export into statistical programmes (IBM SPSS Predictive Analytics Software) and analyzed and evaluated. SPSS was entered in a MS Access database and afterwards, the data were entered in a MS Access database and survey. The data were entered in a MS Access database and survey. From the 500 companies participated in the listed Austria's Top 500 companies, 82 companies were interviewed for the survey, personal interviews and E-Mail. Tools for the survey were phone, personal interviews and E-Mail. Tools for the survey were

SECTION

REFERENCES

Most of the ERP systems include functionality which supports the daily work of Facility Management Services. FM processes covered with an ERP system are, e.g., material management, distribution and maintenance/repair. Companies with ERP software tend toward a higher number of areas of productivity than companies without ERP software. When successful implementation, the potential benefits include depreciation through early, breakthrough reductions in working capital, process optimization, increase in productivity, real-time access to operating and financial data and cost savings. These benefits are all critical for the survival and growth of many companies.

IV. CONCLUSIONS

means that there is an effect (H_1). Companies which cover FM processes with an ERP system tend to have more areas of increased productivity than companies without a similarity software. That means companies which are using an ERP system tend to nominate more areas of productivity than companies without an ERP system. This result confirms that the use of an ERP system (possible) gains in increase of productivity. As can be seen in Tab. 1 companies with an ERP system nominated an average of 133 areas of productivity; companies without an ERP system only mentioned 67 areas of productivity.

Tab. II shows the significant results (p -value < 0.05) of the test. So there is a difference between the two mediators, which

Test Statistics

Test Statistics ^a			
ERP system	Mean	N	Std. Deviation
number of areas of productivity - ERF	1.418	45	1.11
yes	1.605	30	1.33
no	.816	15	.67
Total			1.11

TABLE II. WILCOXON TEST

Asymp. Sig. (2-tailed)		p-value	b
Z	-2.235 ^b	,02642	Wilcoxon Signed Ranks Test a Based on negative ranks
			b

TABLE I. NUMBER OF AREAS OF PRODUCTION

Using of an ERP system (yes/no)

Vulnerable Groups

Areas of Productivity (number of nominations), for example maintenance/repair, infrastructure, administration

Lester Variable:

similarly software.

H_1 = Companies with an ERP system tend to have more areas of increased productivity than companies without an

Without an End System

H_0 = Companies with an ERP system have the same number of areas of increased productivity as companies

The null hypothesis is:

The hypothesis is that a use of an ERP system will generate better data, process optimization and higher effectiveness and efficiency in operations and therefore effective will increase the productivity respectively will tend to more areas of increased productivity.

methods use statistics, such as the median, that are resistant to outliers and skewness. The null hypothesis (H_0) states that, in the population, the two means are equal, which means that there is "no effect". The alternative hypothesis (H_1) states that there is a difference between the two medians, which means that there is an "effect". A statistical test is said to show that there is a difference between the two medians, which means that here is an "effect". A statistical test is less than the significance level ($p<0.05$). Then the null hypothesis is rejected and the alternative hypothesis is supported [11].