

Hellenic Society for Systemic Studies (HSSS)

Full member of IFSR

8th National & International Conference

Systems Approach to Strategic Management

5-7 JULY 2012 Thessaloniki, Greece Mediterranean Palace Hotel

PROGRAM & ABSTRACTS

In collaboration with

University of Macedonia Dep. of Applied Informatics



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Laszlo Alexander



Welcome Message

On behalf of the Hellenic Society for Systemic Studies (HSSS) we would like to invite you to the 2012 HSSS 8th. National & International Conference, organized in collaboration with the Department of Applied Informatics of the University of Macedonia, which will take place in Thessaloniki, Greece.

The HSSS's annual National and International Conference is held alternately in different cities of Greece in collaboration with a local University or Department of a local University or with a contribution of a relevant international or Greek organization. The main theme of the Conference, is to present the dynamic scientific area of Systems Approach to Strategic Management with applications in organizations and enterprises across a wide spectrum of both service and production industry sectors.

Given the dynamic nature of this challenging area, Systems Approach will bridge the gap between theory and practice and will promote the use of effective Methodologies and Multi-Methodologies in managing today's organizational complexity for Strategic Management.

Our interdisciplinary international community has the scientific systemic tools and powerful specialized software to tackle up-to-date multi-dimensional strategic complex problems and to manage their complexity in different applied areas of practice.

The prominent national and international invited speakers in the scientific program, the exciting professional panels, the professional round table, and the professional workshop, will attract the attention of a large number of our colleagues. Further, the participation of the International Federation for Systems Research (IFSR) members, the International Academy of Systems and Cybernetic Sciences (IASCYS) members, the Haines Centre for Strategic Management members, the Association for Strategic Planning (ASP) members (a professional association for those engaged in strategic thinking, planning and action), together with renowned consultancy firms of national and international stature, will make this Conference a very successful and memorable one in the history of HSSS Conferences.

Who should attend?

- * Academics: Communicate your research results with colleagues around the world.
- * Consultants: Present the power of systems thinking, modeling and simulation in your applied, client-oriented work.
- * Practitioners: Show modeling and simulation at work in your organizations.
- *Graduate students: Share your developing research in a constructive environment.
- * Undrgraduate students: Have a good experience within a challenging and professional environment.

Thessaloniki is renown through the ages as the city of byzantine history, christianity, culture and wisdom.

Thessaloniki is an ideal place for bringing together colleagues from all over the world to promote and exchange ideas, knowledge and experience for the benefit of both organizations and enterprises in effectively meeting the needs of a challenging international community.

Chair of the Organizing Committee

Professor Vicky Fragopoulou Manthou University of Macedonia

Vice-Chair

Professor Nikolaos Georgopoulos University of Piraeus

Chair of the Scientific Committee

Professor Maro Vlachopoulou University of Macedonia

HSSS President

Professor Nikitas Assimakopoulos University of Piraeus



Acknowledgements

The Board of Directors of the
Hellenic Society for Systemic Studies
&
the Organizing Committee of the
8th National & International Conference
would like to thank
all those who have contributed to
ensure the conference come to success;
reviewers, presenters, authors, sponsors,
support team and other conference assistants.

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Brief Program

Thursday 5th. July, 2012

09:30 - 18:00	Registrations Open
10:30 - 12:30	Opening Ceremony with Keynote Addresses
12:30 - 14:00	Welcome Reception
14:00 - 15:30	Workshop 02 & Parallel Sessions
15:30 - 16:00	Coffee Break
16:00 - 17:30	Workshop 03 & Parallel Sessions
17:30 - 18:00	Coffee Break with light snacks

18:00 - 19:30 Professional Panel & Parallel Sessions

Friday 6th. July, 2012

09:30 - 18:00	Registrations Open
10:30 - 12:00	Workshop 01 (Part A) & Parallel Sessions
12:00 - 12:30	Coffee Break
12:30 - 14:00	Keynote Addresses
14:00 - 15:00	Light snacks with soft drinks
15:00 - 16:30	Workshop 01 (Part B) & Parallel Sessions
16:30 - 17:00	Coffee Break with light snacks
17:00 - 18:30	Professional Round Table
18:30 - 19:00	Closing of the Conference
20:30 - 02:30	Gala Conference Dinner with dance

Saturday 7th. July, 2012

11:30 - 13:30 Sight seeing tour
Byzantine Museum & White Tower



Program Timetable

Thursday 5th. July, 2012

09:30 - 18:00	Registrations Open
10:30 - 12:30	•
10:30 - 12:30	Opening Ceremony Hall: DIAS Opening by the Bishop of Thessaloniki Salutation by the President of the HSSS, Professor N. Assimakopoulos Salutation by the Chair of the Organising Committee, Professor Vicky Fragopoulou Manthou Salutation by the Chair of the Scientific Committee, Professor Maro Vlachopoulou HSSS Awards CSAP Certification Projects: Distinction
	Best Student Paper Award Keynote Addresses Chair: Varsos D.
<u>KN-01</u>	Reinventing Strategic Planning [™] into Strategic Management The Systems Thinking Approach® Requirement for 21st Century Success Stephen Haines
<u>KN-02</u>	"Why & How We the People Ought to Connect the Dots" Strategic Thinking and Interactive Systemic Practicing Alexander Christakis & Maria Kakoulaki
12:30 - 14:00	Welcome Reception
14:00 - 15:30	Workshop 02 & Parallel Sessions
14:00 - 15:30 WS-02	Hall: DIAS Workshop 02 New technologies for Professional Systemics Ioannis Theocharopoulos
14:00 - 15:30 EA-01	
EA-01.01	Resilience during the economic crisis: The behaviour of Business Leaders and the adapatability of SME Szamosi L., Psychogios A., Vorley T., Williams N.
EA-01.02	Exploring Complex Systems' Aspects in Organisational Resizing: Lessons from Downsizing Process in a MNC Gheorghita V., Psychogios A.
EA-01.03	Managing Workplace Tobacco Control Policies: A Systemic Approach Lazuras L.
EA-01.04	The implementation of project management systems as corporate strategy component in contemporary Hellenic construction industry Paschalidis P., Missopoulos F.



<u>EA-01.05</u>	Innovation Resilience by Engineering Emergence Eleftherakis G., Rousis K., Ketikidis P.
14:00 - 15:30 <i>EA-02</i>	Hall: POSEIDON B Logistics Chair: Vlachopoulou M., Manthou V.
<u>EA-02.01</u>	Reverse Logistics of Electric and Electronic Equipment in Greece Panousopoulou P., Manthou V.
<u>EA-02.02</u>	Intelligent Transport Systems review and classification Medentzidou P., Vlachopoulou M.
<u>EA-02.03</u>	Improvement of Maintenance Procedures for Logistic Warehouse Center's Facilities **Karampatos G.**
<u>EA-02.04</u>	Systemic survey in a shipping company concerning the management of cargo ships transferring dry cargo <i>Tzamou T.</i>
14:00 - 15:30 EA-03	
EA-03.01	A Value Co-Creation Framework for Business Continuity <i>Kutsikos K., Kontos G.</i>
<u>EA-03.02</u>	Facilitators and Inhibitors of e-Business Adoption Chatzoglou P., Psaras T., Chatzoudes D.
<u>EA-03.03</u>	Systemic approach in a small e-business company Zeimpekis G.
EA-03.04	Systemic Approaches for Electronic Invoicing of a Virtual Enterprise Beliokas N.
15:30 - 16:00	Coffee Break
16:00 - 17:30	Workshop 02 & Parallel Sessions
16:00 − 17:30 ₩S-03	Hall: DIAS Workshop 03 Systems Approach to Strategy: Eastern Wisdom, Global Success Zhichang Zhu
16:00 − 17:30 <i>EA-O4</i>	
<u>EA-04.01</u>	A Systemic Approach to Aligning the Organization's Strategic Priorities to its Operational Configuration: A Practical Application Varsos D.
<u>EA-04.02</u>	The energy management in aviation sector: A Systemic Approach Kouloura T.
EA-04.03	Use of Systemic Methodologies for the Design, Implementation and Viability of Renewable Energy Sources and Photovoltaic Systems in Greece Vlassis P.



<u>EA-04.04</u>	Identifying Systemic Factors in the Strategic Process Leading to Ineffective Use of EU Structural Funds from Greek Local Government Organizations **Davvetas G., Lolos D., Davvetas V.**
<u>EA-04.05</u>	Applying Professional Systemics in a Small Agriculture Production Unit <i>Kastani S.</i>
16:00 - 17:30 EA-05	
<u>EA-05.01</u>	Systemic Approaches to Strategic Management of Intra-Family Violence within a Legal Framework <i>Konstantopoulou M.</i>
<u>EA-05.02</u>	A systemic approach to the operations of the Education Department of large organizations Papaioannou P.
<u>EA-05.03</u>	Team-building and Decision-Making using Structured Dialogic Design Chatzopoulos P.
EA-05.04	Voting Model in Structured Dialogue Design Chatzopoulos P.
<u>EA-05.05</u>	DCSYM Systemic Methodology and Dynamic Simulation for Crisis Management: the case of a Brewing Company Dareios P., Lengos P.
16:00 − 17:30 EA-06	
EA-06.01	
	Systems Theory Approach Katsanakis I.
<u>EA-06.02</u>	, , , ,
	Katsanakis I. Evaluating Information Systems: Core Concepts, Approaches and Models
	Katsanakis I. Evaluating Information Systems: Core Concepts, Approaches and Models Katsanakis I., Chimos K., Sfakianakis M. Adopting an Information Security Management System in a Co-opetition Strategy Context Kossyva D., Galanis K., Sarri K., Georgopoulos N.
EA-06.03	Evaluating Information Systems: Core Concepts, Approaches and Models Katsanakis I., Chimos K., Sfakianakis M. Adopting an Information Security Management System in a Co-opetition Strategy Context Kossyva D., Galanis K., Sarri K., Georgopoulos N. Strategic Management & Systematic Methodologies: Operational Planning of Business Brewery (Athens)
EA-06.03 EA-06.04 17:30 - 18:00 18:00 - 19:30	Evaluating Information Systems: Core Concepts, Approaches and Models Katsanakis I., Chimos K., Sfakianakis M. Adopting an Information Security Management System in a Co-opetition Strategy Context Kossyva D., Galanis K., Sarri K., Georgopoulos N. Strategic Management & Systematic Methodologies: Operational Planning of Business Brewery (Athens) Gardikiotis D.
EA-06.03 EA-06.04	Evaluating Information Systems: Core Concepts, Approaches and Models Katsanakis I., Chimos K., Sfakianakis M. Adopting an Information Security Management System in a Co-opetition Strategy Context Kossyva D., Galanis K., Sarri K., Georgopoulos N. Strategic Management & Systematic Methodologies: Operational Planning of Business Brewery (Athens) Gardikiotis D. Coffee Break with light snacks Professional Panel & Parallel Sessions Hall: DIAS Agile Project Management
EA-06.03 EA-06.04 17:30 - 18:00 18:00 - 19:30 18:00 - 19:30	Evaluating Information Systems: Core Concepts, Approaches and Models Katsanakis I., Chimos K., Sfakianakis M. Adopting an Information Security Management System in a Co-opetition Strategy Context Kossyva D., Galanis K., Sarri K., Georgopoulos N. Strategic Management & Systematic Methodologies: Operational Planning of Business Brewery (Athens) Gardikiotis D. Coffee Break with light snacks Professional Panel & Parallel Sessions Hall: DIAS Agile Project Management Chair: Giotis T. Agile Project Management: to be or not to be?
EA-06.03 EA-06.04 17:30 - 18:00 18:00 - 19:30 18:00 - 19:30 PP	Katsanakis I. Evaluating Information Systems: Core Concepts, Approaches and Models Katsanakis I., Chimos K., Sfakianakis M. Adopting an Information Security Management System in a Co-opetition Strategy Context Kossyva D., Galanis K., Sarri K., Georgopoulos N. Strategic Management & Systematic Methodologies: Operational Planning of Business Brewery (Athens) Gardikiotis D. Coffee Break with light snacks Professional Panel & Parallel Sessions Hall: DIAS Agile Project Management Chair: Giotis T. Agile Project Management: to be or not to be? Giotis T.



	Hall: PODEIDON A Education & Learning Chair: Pange J.
<u>EA-07.01</u>	SDD and DCSYM Methodologies as Tools of Determination of the Professional Systemic Analyst's Requirements: Development of CSAP Library Stathatos N.
<u>EA-07.02</u>	Mashing up Unibook: Architecture and Implementation of a mashup service for the promotion of eLearning web 2 platform <i>Chimos K., Karvounidis T., Douligeris C., Kostis G., Basios M., Katsanakis I.</i>
<u>EA-07.03</u>	A Systemic Approach for Entrepreunership Education Lekka A., Tsolakoudis A., Stefanidis A., Pange J.
<u>EA-07.04</u>	Assessment and evaluation tools for entrepreneurship education Geka P., Lekka A., Toki E., Pange J.
<u>EA-07.05</u>	E-learning Quality Factors in Academic and Business Settings <i>Pange A., Toki E., Lekka A.</i>
18:00 − 19:30 <i>EA-08</i>	Hall: POSEIDON B Social & Public Impact (I) Chair: Manthou V.
EA-08.01	Defining the Driving Forces on the Academic Research Activities for an Innovation Strategy Implementation Besta C., Manthou V.
EA-08.02	A Dynamic Algorithm for the Multiple Capacitated Facility Location Problem Papathanasiou J., Ploskas N., Samaras N.
<u>EA-08.03</u>	A Cultural Algorithm for Solving Project Scheduling Problems Kotsikas L., Papadimitrakos I., Anagnostopoulos K. P.
EA-08.04	The Main Employees Characteristics That Facilitate a CRM Approach to Build a Sustainable Competitive Advantage <i>Aikaterina Economou</i>
EA-08.05	The major responsibilities of Leadership in the New Globalized Business Environment Pekka-Economou V., Stavrianakou P.
18:00 - 19:30 EA-09	Hall: NAYSIKA Entrepreneurship Chair: Kainadas A.
EA-09.01	Evaluating New Business Projects by using Professional Systemic Methodologies **Kainadas A.**
EA-09.02	Business from scratch: Online shop with hand and homemade products Drosou E.
EA-09.03	Chain of Greek Traditional and Organic Groceries <i>Koukofikis A.</i>
EA-09.04	Business from scratch: The transformation of a simple idea into a viable enterprise <i>Kokkalas N.</i>



Friday 6th. July, 2012

09:30 - 18:00	Registrations Open
10:30 - 12:00	Workshop 01 (Part A) & Parallel Sessions
10:30 - 12:00 WS-01	Hall: DIAS Workshop 01 (Part A) Systems coaching as an approach to executive and leadership development-workshop Yoram Gordon
10:30 − 12:00 <i>EA-10</i>	Hall: POSEIDON A Healthcare Management Chair: Kanariou M.
<u>EA-10.01</u>	Systemic Strategy in Program Management: Registry of Patients with Primary Immunodeficiencies (PID) in Greece <i>Kassari P.</i>
<u>EA-10.02</u>	Professional Systemics: A Case Study for the Optimization of the Processes in the Greek Healthcare System regarding Patients suffering from Multiple Sclerosis (MS) **Triantafyllakis A.**
EA-10.03	Viable Systemic Approach to a National Health Service Organization (Ε.Ο.Π.Υ.Υ.) Process <i>Miaris A.</i>
<u>EA-10.04</u>	A Systemic approach to Good Manufacturing Practice (GMP) Inspections: Accessing the Competence of Personnel in the Production of Pharmaceutical Products Giannakou S., Varsos D.
<u>EA-10.05</u>	External Quality Control at Blood Transfusion Services: A systemic approach using DCSYM <i>Kolokitha A.</i>
10:30 − 12:00 <i>EA-11</i>	
<u>EA-11.01</u>	The Distance Marketing of Consumer financial services (Directive 2002/65/EC, art. 4a law 2251/1994 about consumers' protection) Sinanioti A.
<u>EA-11.02</u>	Personalized Advertising in Web Mitropoulos S., Fragkou V., Douligeris C.
EA-11.03	A Marketing Plan for Lesvos's Toursim Papageorgiou A.
<u>EA-11.04</u>	Assessment of ICT and E-Marketing Adoption in Sustainable Rural Tourism in Greece Tsekouropoulos G., Andreopoulou Z., Koliouska C., Kogios – Karagiannopoulos L., Koutroumanidis T., Vlachopoulou M.
<u>EA-11.05</u>	Systemic Methodologies Applied in Advertising Company. Benefits and Results Sklavounis K.
<u>EA-11.06</u>	Social Media and their Significant Impact on the Tourism Sector <i>Gonianakis I.</i>



10:30 - 12:00 Hall: NAYSIKA EA-12 Banking Chair: Chatzoglou P. <u>EA-12.01</u> Retail Banking and Customer Satisfaction Chatzoglou P., Triantafyllou D., Diamantidis A., Polychrou E. Managing the Complexity and Modelling the Effects which EA-12.02 Various Events May Have on a Department's Operations: Applied Systemic Methodologies in a Bank Antoniadis R. EA-12.03 Systemic analysis of debit and credit card's fraud activities and how this evolving Alexiou I. EA-12.04 Analyzing the External Environment for e-Business - A Systemic Approach on Business Strategy for the Companies that operate in the m-payments space Bitros A. EA-12.05 Computer Anxiety and Adoption of New Technologies: Empirical Investigation in Bank Employees in Greece Gkika E., Tsamis A. 12:00 - 12:30 **Coffee Break** 12:30 - 14:00 **Keynote Addresses** Hall: DIAS Chair: Theocharopoulos I., Varsos D. **KN-03** Democracy in [R]evolution: Why & How We the People Ought to Connect our Minds Stakeholders' Strategic Perspective with Systemic Tools **Yiannis Laouris KN-04** Systemic crises? Why strategic thinking needs critical systems Martin Reynolds 14:00 - 15:00 Light snacks with soft drinks **15:00 - 16:30** Workshop 01 (Part B) & Parallel Sessions **15:00 - 16:30** Hall: DIAS **WS-01** Workshop 01 (Part B) Systems coaching as an approach to executive and leadership development-workshop Yoram Gordon 15:00 - 16:30 Hall: POSEIDON A EA-13 Procedural Systems ₽ Chair: Pekka-Economou V. EA-13.01 Improved Efficiency as a Potential Driver of Enhanced Merger Activity Pekka-Economou V. EA-13.02 Athens 2004 Olympic Games: The Accreditation Project Giotis T. EA-13.03 Applying System Safety Engineering to Safety Standards of **Domestic Robots** Mouroutsos S., Mitka E.



	EA-13.04	or obstacle? Polemis M.
15:00 <u>≔</u>	- 16:30 <i>EA-14</i>	Hall: POSEIDON B Social & Public Impact (II) Chair: Alexandris C.
	EA-14.01	User Categories as a Factor in Designing Multilingual Human-Computer Interaction Systems for the General Public <i>Alexandris C.</i>
	EA-14.02	Social Media Governance: A Guide to Managing Social Media <i>Hanialidis A.</i>
	<u>EA-14.03</u>	Minority education of Thrace "Muslim children: problems and confrontation of them" <i>Bitsi M.</i>
	<u>EA-14.04</u>	New Public Management: The Role of HR and ICTs. The case of Greece Dede S., Katsanakis I., Sfakianakis M.
	<u>EA-14.05</u>	New Public Management: The Role of HR and ICTs. The case of Greece <i>Katsanakis I., Varelas S., Chimos K., Georgopoulos N.</i>
15:00 ≣		Hall: NAYSIKA Business Process Modelling Chair: Papaioannou P.
	EA-15.01	Applying DCSYM to Evolutionary types of SMEs <i>Fasoulas S.</i>
	EA-15.02	Systemic Approach and use of Systemic Methodologies in a work site of a Motorway <i>Martini V.</i>
	EA-15.03	Systems Approach And Simulation to a Limited Liability Company's Fleet Management Process <i>Mavrou M.E.</i>
	EA-15.04	Systemic approach for increasing direct deliveries of products of a manufacturing company Delis T.
	EA-15.05	Interoperability between the stakeholders during the implementation of a new product – terminal – in the system of Company SK <i>Karamatsoukis S.</i>
	EA-15.06	Strategic Organization and Systemic Approach in a Bank <i>Marinos C.</i>
	EA-15.07	Diagnostic Review of Business Organization and Facilities <i>Karaiskaki A.M.</i>
16:30	- 17:00	Coffee Break with light snacks
17:00	- 18:30	Professional Round Table Hall: DIAS
	PRT	Systemic Approaches to Strategic Management Chair: Tassos Athanassopoulos



<u>PRT-01</u>	Strategy Turns Human: Innovative Entrepreneurship <i>Athanassopoulos T.</i>		
<u>PRT-02</u>	Business Process Re-engineering and the Role of Information Systems: A Strategic Systemic Overview <i>Kanellopoulos V.</i>		
<u>PRT-03</u>	A Systemic Approach to Change Management <i>Varsos D.</i>		
<u>PRT-04</u>	Systems Thinking as a Language for Complexity and Sustainability <i>Kambiz Maani</i>		

18:30 - 19:00	Closing of the Conference
10100	closing of the conference
	Chair: Prof. Assimakopoulos N.

20:30 - 02:30 Gala Conference Dinner with dance

Saturday 7th. July, 2012

11:30 - 13:30 Sight seeing tour





Scientific Events



Reinventing Strategic Planning™ into Strategic Management The Systems Thinking Approach® Requirement for 21st Century Success

Stephen Haines

CEO - Entrepreneur - Global Strategist Master Facilitator - Systems Thinker - Prolific Author USA

Email: stephen@hainescentre.com

Keynote Purposes:

- 1. To understand the core, simple ABCs technology of the Systems Thinking Approach® of Reinventing Strategic Planning into Strategic Management (Planning, People, Leadership, and Change), based on "best practices" research in the field of Strategic Management.
- 2. To understand strategic management, its three goals and three main premises with their relationship to strategic planning and strategic change.
- 3. To discuss the many unique qualities of the "Strategic Management Model" and how it is different from other models.
- 4. To understand the Strategic Management Model, along with examples of its application to actual organizations and countries, and the various ways to uniquely tailor and apply strategic management to your organization,
- 5. To appreciate the value and importance of actively engaging your key stakeholders throughout the development of the plan.
- 6. To experience each ABCs Phase in the Strategic Management Model to your own back home organization and personal case situation—to enhance your learnings and provide a framework for action back home.



Democracy in [R]evolution: Why & How We the People Ought to Connect our Minds Stakeholders' Strategic Perspective with Systemic Tools

Alexander N. Christakis

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Maria Kakoulaki Journalist, Crete

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"Well, my dear Adeimantus, what is the nature of tyranny? It's obvious, I suppose, that it arises out of democracy" (Plato, the Republic)

Haven't we all spent hours of time trying to discover the best possible solutions for wicked questions, often with no any obvious answers? Haven't we all be thinking for years, what does democracy really mean, whether freedom of expression is applicable, or whether our politicians, act upon according to an ethical vision or according to their private interests? Have we all felt, at certain occasions, deceived by those who are in power or distracted by media owners and propaganda techniques on what reality looks like? Haven't we felt concerned or scared to raise our voices against what is being decided for us, without us? Is currently our "democratic consciousness" defined, simply, by voting every four years? Where are we standing at, as citizens of this world if we have succeeded in producing intelligent means of communication, but we haven't developed the ability to discover who we are and where we want to go, through constructive democratic dialogue aiming in the revealing of a truth that will exclude no one? "Why & How We the People Ought to Connect the Dots..." will present to the conference participants the reasons WHY democracy should be reinvented as a bottom-up process, with the citizens for the benefit of the citizens. And HOW is that possible to be realized by engaging people from all walks of life in a structured democratic dialogue employing the methodology of inductive, deductive, and retroductive logics. By "connecting of the dots..." we mean the consensual "connection" of people's mental models, i.e., opinions, knowledge, understandings, wisdom and vision for the future, versus the current domination

by political, financial, and academic elites.



Democracy in [R]evolution: Why & How We the People Ought to Connect our Minds Stakeholders' Strategic Perspective with Systemic Tools

Yiannis Laouris

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The recent eruption of the global economic crisis is both a threat and a challenge for the current model of "democratic" governance irrespective of whether we talk about States or about enterprises. Given the dynamic nature of the global changes, only applied systems approaches can come to rescue because of their inherent capability to bridge the gaps between theory and practice. Not only governments, enterprises and other organizations, but the world at large are in desperate need of effective methodologies and multi-methodologies in order to manage today's organizational complexities and implement efficient strategic Our interdisciplinary international group is developing new concepts, scientific systemic tools and powerful social-media-based software capable of tackling contemporary multi-dimensional strategic complex problems. "Democracy in [R]evolution: Why & How We the People Ought to Connect our Minds" will challenge participants to appreciate the complexity of contemporary wicket problems and recognize the need for engaging people from all walks of life in democratic participatory dialogues scientifically grounded in the work of Christakis et al Group. "Connecting our minds..." will require new tools, which will enable the definition of shared problématique-, as well as solution spaces through exploration and processing of diverse contributions and opinions regarding importance or influence relationships between statements. The new tools aim to support stakeholders exploit their collective wisdom and reach consensus even when they are in large numbers. Our success to reinvent democracy in the digital realm will heavily depend on the availability of tools capable of supporting groups to reach consensual agreements, which can feed effective strategic management. The discussion of the system will be grounded on contemporary challenges taking place in Cyprus.



Systemic crises? Why strategic thinking needs critical systems practice

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The term systemic failure is one used with increasing frequency particularly by journalists and politicians to account for things going wrong in an increasingly complex and uncertain world. But what does it actually mean? Moreover, how might effective strategic thinking in management practice reduce incidences of systemic failure? This paper uses Systems thinking to explore the origins of systemic crises. It simultaneously offers a framework for systems thinking in practice to support strategic management.

From a systems thinking in practice perspective three interwoven traps contribute to systemic failure. Using the example of systemic failure of academic economics in averting the global financial crisis – as expressed by prominent economists themselves - each of the three traps is explored. For Trap 1 – reductionism – the example suggests something about there being a collapse in the way things are supposed to link up or interrelate. In a world where we increasingly appreciate that everything connects, and failure is commonly regarded in terms of disabled connections, the antidote to systemic failure is holistic thinking; often regarded in terms of 'joined up thinking' or 'seeing the forest through the trees'. So having a wider holistic viewpoint involves looking beyond, say, the 'rational representative agent', and embracing more the interplay between micro and macro levels of economic activity. Systems thinking is here characterised in terms of modelling wholes rather than parts. But crucially, wholes or systems are not pre-given. The example hints towards a second failure in not appreciating particular perspectives on modelling.

Trap 2 – dogmatism - prompts a reminder that wholes are selected by someone for a purpose. Someone usually selects the whole with the purpose of making an intervention that they think will improve matters. Hence there are always different perspectives to appreciate. Other stakeholders may have different purposes associated with modelling financial realities, and hence produce different financial 'systems'. Such systems may be complementary and helpful, or they may be disruptive. In either case, the underpinning systems models need to be appreciated to avoid systemic failure. Traps 1 and 2 signal the importance of Systems thinking for dealing with the bigger picture and multiple perspectives respectively. The example of systemic failure of academic economics signals an overriding third flaw often underpinning the modelling process in any discipline. This signals the need for a *critical* systems practice.

Trap 3 – managerialism – prompts the reminder that all systems are partial – or selective – in the dual sense of (i) representing only a section rather than the whole of the total universe of considerations, and (ii) serving some parties – or



interests – better than others. The two dimensions of partiality respond to being more *holistic*, and being more *pluralistic*. However, given the partiality of any systems thinking a third critical dimension is required where systems boundaries need to be made and questioned on the inevitable limitations of being holistic and pluralistic. In short, economists need to practice modesty in claims of inclusiveness, humility in levels of certitude, and responsibility to wider stakeholders. Where limitations are not acknowledged, the *un*questioned boundary judgements on being holistic or pluralistic might be regarded as constituting *holism* and *pluralism* respectively- 'here is the definitive big picture!' or 'here is my unbiased compilation of viewpoints'! – both constituents of managerialism.

Drawing on a framework for systems thinking in practice recently developed by the author for postgraduate teaching at the Open University, some practical tools from systems approaches are introduced to counter the three traps of systemic failure – narrow-minded *reductionism*, single-minded *dogmatism*, and absent-minded *managerialism*.

Keywords: Critical systems practice, reductionism, dogmatism, managerialism, systemic failure



WS-01

Systems coaching as an approach to executive and leadership development-workshop

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Change is constant. So, too, is the search for better ways to create and sustain change. Coaching is an effective mean for change and growth.Linking coaching with existing knowledge of science is an important step to a broader and deeper understanding of human education and growth. "The aim of coaching is sustained cognitive, emotional and behavioral changes that facilitate goal attainment and performance enhancement either in career one's work or in one's personal life" (Douglas& McCauley, 1999)

"Systems are made up of a set of components that work together for the overall objective of the whole (output). Systems' thinking is a way of thinking more effectively about any system: its purposes; its environment; its components. Systems thinking are a framework and way to make sense out of life's complexities' since all living things are systems". (Stephen G. Haines, 2000) SYSTEMS Coaching model is based on the systems thinking theory. The personal journey of every human being in his way toward change is based on his dominant's strengths and is moving through four main system stages:

- 1. Creating desired future- Output
- 2. Well defining success measurements including breakthrough goal-Feedback loop.
 - 3. Well defined long term action plan- Inputs into actions.
 - 4. Navigation and successful implementation-Throughput/actions

Workshop Goal: To introduce Systems Coaching (SC) model as an effective approach to executive and leadership growth and development.

Method:

The workshop will be divided to:

- 1. Short introduction of the SC model based on systems thinking theory.
- 2. Demonstration of a coaching session based on the SC model.
- 3. Experimental learning of SC model.
- 4. Closer: Questions and discussion.

Practice and empirical evidence:

SC model based on Systems Thinking approach, Positive Psychology theories and research, and on thousands hours of coaching experience with executives and leaders in variety of organizations.

Expected take-away:

- a) An excellent frame of reference for dealing with Executive and Leadership development.
- B) Applied approach to facilitating a change process in organizations.
- *Special Systems Coaching tool navigation to desire future- will be introduced and practice in the workshop.



WS-02

New technologies for Professional Systemics

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Cybernetics and computational engines

In the first part of the workshop we will present Wolfram|Alpha Pro computational engine with hands on creation of interactive computational documents CDF and Wolfram|Alpha widgets. We will have a brief presentation of cellular automata and NKS and its implications in real life complexity.

Interactive System Dynamics web platforms: Forio and Insight Maker Modeling Platforms

In the second part of the workshop we will use a combination of Vensim as a primary modeler and Forio and InsightMaker as corresponding web platforms for the creation of stand alone web based interactive collaborative simulations.



WS-03

Systems Approach to Strategy: Eastern Wisdom, Global Success

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Around the world, managers and policy makers apply systems approach to strategy in diverse, innovative, culturally and historically situated ways. In a new research book Pragmatic Strategy: Eastern Wisdom, Global Success (Cambridge University Press, 2012), Ikujiro Nonaka and Zhichang Zhu tell a Confucian, East-Asian story. Confucian pragmatism is an indigenous form of systems approach as it promotes practical, processual, creative, holistic, ethical and communal spirits. In such spirits, strategy is about getting the fundamentals right, envisioning a valued future and realising common goodness in a timely balanced manner. It is an enduring wisdom that guards against reductionist 'strategies' while nurtures business success. Amid deepened globalisation and the economic-political powershift toward 'the East', Nonaka and Zhu's story deserves careful listening. The good news is that pragmatism is a shared treasure of the whole of mankind and that people with different histories, cultures and institutions can all learn to strategise innovatively, ethically, effectively.



PP-01

Agile Project Management: to be or not to be?

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The Agile approach to Project Management seems to be in contrast to traditional project management methods (waterfall and spiral). What really happens? What are the differences and what are the similarities? What exactly represents the Agile Manifesto? How we do Project Integration Management? How we do Project Scope and Time Management? How do we communicate? What about Project Risk Management and Project HR Management? Can we mix the waterfall approach with the agile approach? Eventually, is Agile a blessing or a curse?



PP-02

The Agile Concept and the Greek Public Sector

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During the presentation it will be analyzed the approach of the public sector towards the IT projects. In order to clarify things we will divide the projects in two big phase. These are the pre-start and the post-start phases. The results of the current approach will be pinpointed and we will try to investigate under which circumstances, can agile concept be adopted.

AGENDA

- A new Idea Comes to light The process before it Becomes a Project
- The Process during the Project
- The results of the current approach
- Can Agile Concept be adopted?
- Conclusions
- Questions



PP-03

Scrum: the most famous framework for agile project management

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Scrum is an agile approach. Rather than a full process or methodology, it is a framework. The organization sets the priorities and teams are created to fulfill the goals. It relies on a self-organizing, cross-functional team, so that everyone necessary to take a feature from idea to implementation is involved. Scrum projects make progress in a series of sprints, which are timeboxed iterations no more than a month long. At the start of a sprint, team members commit to delivering some number of features that were listed on the project's scrum product backlog. At the end of the sprint, these features are done (they are coded, tested, and integrated into the evolving product or system) and a sprint review is conducted during which the team demonstrates the new functionality to the product owner and other interested stakeholders who provide feedback that could influence the next sprint.



Strategy Turns Human: Innovative Entrepreneurship

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Strategic thinking has distinguished humans from the animal kingdom, endorsing human dominance over nature. Strategy, when viewed upon as the art of optimally answering any how question, has been tackling outcome optimization within any given set of circumstances, problems, and available resources, finding alongside a key ally in the face of innovation. Entrepreneurship per se has been reckoned as an innovation in the process of human societies' development, and the latter has traditionally been heralded as the cornerstone of any entrepreneurial growth. As such, it has constantly sought to nurture the principle business concerns of effectiveness and efficiency virtually on its own. While it traditionally aimed at improving the deliverables through new production and marketing schemes (effectiveness), it later focused almost entirely upon logistics and supply chain management issues (efficiency). Recently though, the emphasis has shifted towards a more human-centered approach, seeking to build upon the key human ingredients of the entrepreneurial civilization: culture and knowledge. In this new battleground, innovative strategic thinking pursues huge synergistic effects in any potential interaction that can be triggered along the interconnections of all humanistic variables within a system. Human entity and behavior is the epicenter, change is the fuel, and strategic innovation dictates: it can always be done much better!



Business Process Re-engineering and the role of Information Systems : A Strategic Systemic Overview

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Business process re-engineering is the analysis and design of workflows and processes within an organization. A business process is a set of logically related tasks performed to achieve a defined business outcome. Re-engineering is the basis for many recent developments in management. Business process reengineering is also known as business process redesign, business transformation, or business process change management. Business Process Re-engineering (BPR) is basically rethinking and radically redesigning an organization's existing resources. BPR, however, is more than just business improvising; it is an approach for redesigning the way work is done to better support the organization's mission and reduce costs. Reengineering starts with a high-level assessment of the organization's mission, strategic goals, and customer needs. Within the framework of this basic assessment of mission and goals, reengineering focuses on the organization's business processes—the steps and procedures that govern how resources are used to create products and services that meet the needs of particular customers or markets. Information technology (IT) has historically played an important role in the reengineering concept. It is considered by some as a major enabler for new forms of working and collaborating within an organization and across organizational borders. Many recent management information systems developments aim to integrate a wide number of business functions. Enterprise resource planning, supply chain management, knowledge management systems, groupware and collaborative systems, Human Resource Management Systems and customer relationship management.



A Systemic Approach to Change Management

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Systems thinking is the process of understanding how various elements affect one another within a defined unified whole. A systems approach focuses on the understanding of the interactions of the constituent elements of a system that produce a behavior rather that the segregated parts of the system, studied in isolation. A systems approach allows the organization to successfully apply systemic methodologies and/or multi methodologies for the purpose of achieving a level of effective operation through fact-based decision making, which in turn gives the organization awareness of the long term consequences of its actions (actions taken or avoided).

The modern organization or business can apply a systems approach to its management paradigm for the purpose of maintaining the cohesion of the various organizational units of which it is comprised, without compromising the required autonomy which enables them to effectively respond to the diverse conditions emerging from the political, economic, social and technological (PEST) influences in their operating environment. This is accomplished by identifying the interrelated and interdependent elements interacting as the structured functional whole (system) in which the organization is operating and determining the flows between these elements and their systemic relationships; defining the role of the organization in this (larger) system, recognizing recurring patterns of behavior over time; aligning the organization's strategic priorities and tactical planning to its operational capabilities by applying systems thinking methodologies and/or multi methodologies to the organization's Data, Information, Knowledge, Understanding, and Wisdom Hierarchy; and finally, developing and implementing a monitoring and measurement scheme which provides feedback relative to the organization's performance.



Systems Thinking as a Language for Complexity and Sustainability

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Knowledge is about the past, learning is about the future

This talk will present the theory and practice of collective learning(the Learning Lab) and demonstrates its applications through case studies of organisational learning and sustainability in Australia, New Zealand, South East Asia and China. This pioneering work has taken Systems Thinking to new frontiers of theory and application where it is now used at the highest levels of national strategic planning and policy making in these countries.

Complexity is the catchword of our time. It characterises the world and all human affairs – in business, government, social, natural, scientific and political spheres. Complex global and local problems and challenges such as sustainability, climate change, energy, food and financial crises, poverty and security can no longer be viewed and solved with narrow, single dimensional mindsets and tools. Systems thinking providesa powerful 'language' for understanding complexity and multistakeholder planning and strategic thinking.

Sustainability is impacted by numerous stakeholders and has multiple drivers and interconnected dimensions: social, economic, environmental, behavioural, governance and leadership. These challenges require systemic and collaborative multi-stakeholder responses. Traditional linear, single-dimension, expert-driven solutions are insufficient to deliver sustainable outcomes. To create resilience, systemic, integrated and collaborative approaches are required.

Our research and international projects within multi-national organisations and government agencies provides compelling evidence that systems thinking combined with a posture of collective learningcan provide a powerful and effective tool for dealing with ever-increasing complexity and conflict in the world and human affairs. Systems thinking enablesworking collectively and collaboratively towards common goals and shared futures.



Extended Abstracts



EA-01.01

Resilience during the economic crisis: The behaviour of Business Leaders and the adapatability of SME

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EXTENDED ABSTRACT

The overarching lesson that the present economic crisis has brought to the forefront is that resilience and adaptability are critical keys to survival (e.g., Monastiriotis, 2011; Vlachos et al., 2012). This can be both a positive and a negative. For example, one could argue that the systemic resilience of the Greek political system led to its ultimate downfall. At the same time, it is the resilience and adaptability of its people that will, eventually turn it around.

Resilience and adaptability are two principles of management and organization that are paramount in working through the complexity of change (e.g., Holling and Gunderson, 2002; Karatzoglou and Spilanis, 2010). When allayed within, for example, a structural crisis, like that symbolizing Greece today, guidance on how to work through such a situation is paramount not only for survival today but to 'ensure' that when the next crisis eventually appears the resilience of the system will help mitigate potential consequences.

Based on a wide ranging, yet targeted, analysis of the literature related to entrepreneurship, this paper seeks to provide a constructive framework through which SME's, the predominating business entity, in Greece can build in a measure of resiliency and adaptability for the future. Some of the findings include:

- Adaptable or flexible organizational structures.
- A more relaxed coordination of functions within the organization themselves.
- Frequently, but clear, job transitions (e.g., explicit job rotation).
- Strong, yet focused and targeted formal and informal channels of communication.



- Strengthen and encourage the responsible participation of employees in all processes.

Furthermore, the behavior of leaders and entrepreneurs themselves are also critical to infusing resilience and adaptability. Some of these have been found to include:

- Tolerance which fosters instability and continuing uncertainty in the system.
- Self-motivation associated with the ability to set goals and strive to achieve them.
- Persistence achieving the objectives as they are challenging.
- Optimism seeing opportunities and positive potential within the context of the crisis.
- A clear vision for survival and success of the company.
- Flexible leadership behavior that allows and recognizes the initiative, also poses the same time, the general limits to move "freely" human behavior and creativity.

Keywords: Resilience, Entreprneurship, Change, Complexity, Adaptation



EA-01.02

Exploring Complex Systems' Aspects in Organisational Resizing: Lessons from Downsizing Process in a MNC

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EXTENDED ABSTRACT

According to Ariely (2009) the economic crisis has challenged dramatically two main aspects of economic theory. The first is the rationality of decisions made by humans and the second is the invisible hand of the economy that can correct imbalances into the system. Therefore, it is an urgent need to adopt a more behavioural based approach in order to understand deeper the way that people and organisations operate. In this respect, the idea for this study is related to the frequency of the downturn and downsizing in the organizations especially in the last period of time due to systemic crisis in a lot of economies and financial markets. The current literature of downsizing although attempts to explore and analyse consequences of downsizing, tools of managing downsizing, as well as negative and positive forces of downsizing, it seems to neglect complexity theory and its application in that process. Therefore, there is a need to remove the blinkers and link complex systems' aspects with organisations in downturn.

The link between the causes and effects to the downsizing on companies with complex system's theories is more than ever valid. In this respect, the aim of this study was to explore downsizing process followed by organisations from a complexity theory point of view. The main research concern of the study was to explore human behaviour in a downsizing process: how do people decide; how do they implement; how fast should they be; how complex is a process of downsizing in changing the existing rules, procedures, "paths" and good practices; are some of the key research questions adopted. The research questions above can be summarised in the three-fold purpose of the study:

- 1. To explore complex systems' features within the process of downsizing
- 2. To investigate the role of key agents in the process of downsizing.



3. To explore the potential application of KPI's to measure the success and progress of an implemented downsizing process taking into consideration complexity factors.

The study adopted an exploratory mode. The nature of the issue investigated as well as the theoretical framework used led to the adoption of a qualitative approach. In particular, this research was focused on a single case-study: a UK-based Multinational manufacturing and its subsidiaries in South Eastern Europe. Data collected through semi-structured in-depth interviews with top, middle and line mangers and key-participants (mainly HR experts) in the downsizing process. 35 interviews were contacted. Data transcribed and analysed following content analysis.

The Key findings can be summarised below:

- The organisation proved to be even more complex and unpredictable system under the downsizing process.
- The recognition of the complexity issues by managers and key-actors of the case-study proved to be substantial in order a flexible strategy to be developed that will enable organizational adaptation, learning and to self-organization.
- All managerial positions involved (top, middle and line managers) who were the ones taking decisions and actions towards downsizing, proved to be major keyagents of the system. Their positions and roles defined the process as well as the non-linear interactions that emerged, which positively or negatively determined the process.

Keywords: Complexity Theory, Complex Systems' Approach, Oranizational Resizing, Downsizing, MNC



EA-01.03

Managing Workplace Tobacco Control Policies: A Systemic Approach

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EXTENDED ABSTRACT

Tobacco use is a leading cause of preventable disease and mortality in developed and developing countries. Numerous studies have also shown that passive smoking (involuntary exposure to other people's smoke) accounts for a range of cardiovascular and pulmonary diseases. In order to reduce the burden of tobacco use the World Health Organization introduced the Framework Convention on Tobacco Control (FCTC), which has been signed and ratified by more than 150 countries. The FCTC provides comprehensive guidelines for the reduction of tobacco use and exposure to passive smoking in the workplace. From large corporations to SMEs, tobacco control policies have been widely accepted and implemented effectively, gradually leading to reduced rates of smoker employees and significantly reducing passive smoking exposure. Nevertheless, in countries where pro-smoking norms proliferate and tobacco control policies are still weakly enforced, workplace smoking remains a challenge for HR and Health & Safety Managers. Part of the reason why such policies are not enforced lies in smokers' unwillingness to respect smoking restrictions, but a larger part is shaped by managerial practices, effective communication of the policies, provision of support and information about the dangers of smoking and the benefits of quitting, as well as non-smoker employee reactions to a smoky workplace. This paper will discuss how tobacco control policies in the workplace can be effectively implemented by using a systemic approach that taps the aforementioned issues. Specifically, the role of non-smoker employee assertiveness (i.e., defending the right for smoke-free air), managerial support of tobacco control policies and efforts (e.g., 'walking the talk', monitoring of tobacco policy implementation), and interventions to promote smoking cessation among employees define the basic features of a systemic approach to effective tobacco control in the workplace.

Keywords: Smoke-free policies; workplace; non-smoker assertiveness; smoking cessation



EA-01.04

The implementation of project management systems as corporate strategy component in contemporary Hellenic construction industry

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EXTENDED ABSTRACT

The present paper concerns the practice of project management (PM) and the implementation of the project management systems (PMS) in the Hellenic construction industry. Also, a primary preoccupation is to highlight the strategic management aspects emerging, due to successful implementation and support of the project management systems.

Through the literature review it is expected to investigate and define the current status and future prospects concerning the addressed topics. It is within the authors' intention to apply a deductive approach; this will be managed by adopting a model in which the domestic industry is regarded to be a sub-set of the overall (global) construction-industry system. Hence, practices that seem to work efficiently in the worldwide construction industry are most likely to work accordingly into a sub-set of the overall system.

Both, qualitative (interviews, etc) and quantitative (questionnaires) methods were utilized for the collection of the data. "SPSS" for Windows was acknowledged as most appropriate means for data entry and analysis.

Based on the research, it is suggested that small implementation rate of the project management systems occur. There is certain level of awareness created primarily by the presence of the PMI Greece, but overall low level of training and specialisation in PM is identified. A small minority of pioneering construction companies of significant size is making efficient use of PMS. It is a primary concern of this paper to investigate and pinpoint the main advantages, as well as to report on the basic obstacles and limitations, of project management systems. Apart from obvious benefits in terms of budget, scope and time other indirect advantages are emerging in areas of communication, total quality management and customer relationship management. As major obstacles, the cost component, lack of relevant training, lack of project manager's autonomy and human



resistance to change are reported. Certain findings of the study indicate respect of the potential of PM and certain will (of professionals) to explore and support the principles and practices of PM. Nevertheless PM seems to be in infant stage in our country and much support along with a timely curing process is necessary for a mature model of PM practice in the contemporary Hellenic industry.

Finally, a systemic-holistic approach of the project management principles and practices is proposed. Thereby, efficient implementation and support of the project management systems can prove a valuable asset in terms of corporate strategy as well. The study suggests that effective enterprise project portfolio management (EPPM), based on healthy foundations as mentioned previously, can provide a competitive advantage and reinforce strategic management practice, while aligning bottom-up execution and enterprise objectives.

Keywords: Project management (PM), Construction Industry, Strategic management, Enterprise Project Portfolio Management (EPPM), Project Management Institute (PMI), systemic-holistic.



EA-01.05

Innovation Resilience by Engineering Emergence

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EXTENDED ABSTRACT

Innovation has been identified as a key success factor for organizations of any type and size. Managing innovation though remains a great challenge. Innovation emerges as a global (macroscopic) property from the specific characteristics of individuals (microscopic) and the interactions among them. Although there is a general agreement that innovation should be treated as a systemic property, lack of a clear understanding of which are the microscopic behaviors and how these affect innovation within an organization, typically leads to ad-hoc solutions whereby individuals attempt to manage innovation at a microscopic level. Moreover, there is a certain difficulty associated with predicting the outcome of certain policies before actually implementing and evaluating them.

This work proposes a disciplined approach based on the general scientific method that could enable the study of the microscopic characteristics and the interaction among entities at the micro-level which lead to the appearance of innovation as a global property of an organization. Moreover, it offers a systematic, iterative, and continuous process of managing innovation in order to encourage organization resilience in the face of constant changes due to internal or external forces.

Making innovation emerge at the global level requires a thorough insight and understanding of processes and events which take place during an organization's operation. Although such an insight could be obtained through experimental analysis of the organizational operations, its cost and impracticality is prohibitive. In a first phase, the proposed framework can be used as a tool to study and gain insight into an organization by identifying the specific characteristics of the individual and the way these affect innovation overall. This becomes practical with the use of a toolset based on the agent-oriented simulation paradigm.

Upon acquiring such knowledge, which could be valuable by itself, the proposed process suggests the formation of hypotheses that could potentially result to the appearance of innovation. Such hypotheses speculate into how innovation can emerge within an organization. The suggested approach utilizes computational models in order to offer the possibility of simulating organizational behaviours



and test the validity of formed hypotheses in practical way. This allows for an ongoing quest for achieving innovation in an organization since there will always be room for improvement. Furthermore, this can potentially contribute to the organization's resilience in the sense that it will provide and maintain an acceptable level of innovation, organization-wide, in nowadays ever changing business environments.

Keywords: innovation, emergence, agent-based modelling, simulation, resilience.



EA-02.01

Reverse Logistics of Electric and Electronic Equipment in Greece

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EXTENDED ABSTRACT

Nowadays, a new situation in consumers' demands has been created. People have the desire to acquire Electric and Electronic Equipment (EEE) of latest technology in order to fulfill their needs. So they try to replace their previous models of electric and electronic equipment with newest ones (Jae-chun Lee et al, 2007). The rapid development of technology has contributed significantly in this new reality. Thus, it is clear that the new situation has created an augmentation in the sales of new advanced models of EEE worldwide (LaCoursiere, 2005).

Experts support that electronic waste, is one of the most significant problems that face all the developed countries in the world. Specialists on issues that associated with the environmental protection, have proved that electronic waste can be characterized as the main responsible factor for the environmental pollution (Kang and Schoenung, 2005; Clean Japan Center, 2002, Bertram et al., 2002) US and EU nations in order to face the impacts of electronic waste use procedures that rely on incineration. Furthermore, firms have increased several environmental policies in order to face electrical and electronic equipment waste.

Reverse logistics comprehends both the return flow of products, as well as, recovery and recycling activities, the keys to which lie in the generation of profits for the producers (Meade et al., 2007). Reverse logistics also include other alternatives with this same goal: repair, renovation and reprocessing. One of the most important dimensions in the area of reverse logistics is recycling. (Tibben et al, 2002). The aim of the environmental strategic viewpoint of reverse logistics is to revalue products once the end consumer has thrown them away, thus closing/extending, their life cycle. Diverse alternatives exist to do so: reutilization, repair, renovation, reprocessing, cannibalization or recycling (Thierry, Salomon, van Nunen, & Van Wassenhove, 2005). Therefore, it is a very useful strategy in the management of waste equipment and it should be adopted from all the entities. (Steinhilper and Hieber, 1998; Xanthopoulos, 2007). The management of electrical waste has a high level of complexity, but it is not technically unfeasible.



Although most developed countries faced the issue before the directive regarding electronic waste in Europe in 2004, (2004/35/EK) Greece started taking action afterwards. (Ch Achillas et al, 2011) There are a lot of difficulties that are strongly correlated to reverse logistics in the electronic industry in Greece. The absence of rules and directions in national level discourages manufacturers. In addition, the Greek government does not provide financial support, as well as tax exemptions to manufacturers. Furthermore, companies are slow in developing reverse logistics. Regardless of the above barriers a network named the 'Hellenic Comprehensive Approach to Recycling of Electrics' (HELCARE) to inform consumers and aid companies manage electrical waste in Greece, was founded in 2002 (http://aix.meng.auth.gr/helcare). Moreover, there is an official collective system, called Appliances Recycling S.A and its main role is to organize, control and coordinate all the stages of the WEEE management, which includes collection, transport, temporary storage and processing of WEEE. The company functions on a non-investment and not-profit basis. To cover the recycling cost, producers of WEEE pay the legally required contribution to Appliances Recycling S.A. (http://www.electrocycle.gr/gb/)

This paper describes the present status of the most developed reverse logistics activities of collecting and recycling in Greece for the waste of electronic and electrical equipment, such as refrigerators, washing machines, small house devices, TVs, air conditioners, personal computers and mobile phones in Greece. Furthermore, the recycling centre for waste of white devices is described, and reverse logistics policies adapted by companies selling electrical devices are discussed.

Keywords: reverse logistics, recycling, WEEE, environment.



EA-02.02

Intelligent Transport Systems review and classification

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EXTENDED ABSTRACT

Nowadays, due to the increasing need for smart, green and integrated logistics and transportation management, Intelligent Transport Systems (ITS) have gained popularity among cutting edge technologies. The main objective is to improve real time decision making of traffic management centres and other users, thereby improving the functionality of the logistics / transportation network as system. The specific activities aim at safety improvement, capacity and operational efficiency of the transportation system, and at reducing environmental impacts and energy waste. ITS is a generic term for the integrated application of communications, control and information processing technologies to the transportation system, covering several modes and considering different aspects of an integrated system: the vehicle, the infrastructure, the driver and the user, interacting together dynamically.

The aim of this paper is to map out and categorize existing literature, research and applications of ITS in both, practical and theoretical level. The birth of ITS began in the U.S. in order to control the vehicle rather than manage traffic congestion using information theory. In 1987 the U.S. Department of Transportation set out a program called "Mobility 2000", in order to make highway systems more efficient. Today, ITS applications have expanded into many directions. There is a wide range of implementations and good practices among different cities in all over the world, as well as theoretical approaches of imminent implementations in air, sea, railway and road transportation fields. Due to the wide range of applications, this paper limits the research to road transportation. The research pointed out 68 different applications, which are selected to be examined via content analysis methodology. The classification proposed in this article is based on previous categorization approaches, including new aspects taking into consideration innovative applications and good practices among cities in all over the world. Remarkable classification trials are those of 'Mobility 2000' (today ITS America) in 1988 (Wootton, García-Ortiz and Amin, 1995). Furthermore, Panou and Bekiaris published in 2004 another ITS clustering and terminology concept, suggesting the following four main categories related to ITS applications: for Private Vehicles, for Public Transport, for Commercial Vehicles and for Infrastructure. However, the scarce academic literature, dealing



with ITS applications and their categorization dimensions, leaves room for further research.

The suggested classification schema resulted from the research consists of the following four main categories: information systems for commercial vehicle operations, public transport systems, advanced driver assistance systems, and information systems for road network and infrastructure management. The first category, the information systems for commercial vehicle operations, includes subsystems related to fleet management, driver control and assistance, freight processes. administrative Public management, and transport subcategories are passenger support systems, infrastructure and administration information systems. Advanced driver assistance systems include driver assistance through infrastructure, and driver assistance through smart vehicle. The fourth category is information systems for road network and infrastructure management, which consists of data collection, traffic management, incident management, traveller information and electronic toll collection. The resulting plan enables direct comparisons between different countries and contents, support researchers to examine the degree of extension of ITS and locate fields that need improvement, in order to achieve a viable transportation system. Moreover, based on the proposed classification, we can ease the conduct of case studies and comparative analyses. Finally, industrial and services sector can create more targeted products, better organized services, and effective business plans, according to the special needs resulting of the clustering of ITS.

Keywords: intelligent transport systems; logistics, transportation management, classification; ITS applications



EA-02.03

Improvement of Maintenance Procedures for Logistic Warehouse Center's Facilities

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EXTENDED ABSTRACT

Efficient management is essential in the Facility Service department for a Logistic organization. The Warehouse building often include complex systems, increased technological demands, budgetary constraints and a continuously changing workforce.

The scope of this dissertation is to analyze the current situation of Maintenance Procedures for Warehouse Facilities in a multinational company using the Design and Control Systemic Methodology (DCSYM) as well as as well as the Viable System Model (VSM).

The success of the maintenance procedures depends on how well somebody maintain his facilities, how quickly he responds to unexpected challenges to communications problems, utility problems, safety issues as well as personnel problems. Delays in problem solving causes financial collapse of the warehouse's organization and more seriously, life-threatening situations. Computer capability and continuous electrical power is critical for the function of the warehouse. Security and Fire protection systems take on and even greater importance. Using the DCSYM and the VSM tools we will analyze the current situation of the maintenance department in the Warehouse, we will show the communication flow between the maintenance department and the other departments in the Warehouse. Moreover, it will be designed the communication channel between the maintenance department and external suppliers, sub-contractors as well as external partners. It will be shown the weak points of the communication of the departments. After the updated design with control it is recommended to improve the communication between the departments and the external supplier and partners. Following the results of the DCSYM Methodology help us to improve the maintenance techniques and the diagnostic processes.

On the other hand with the Viable System Model of Stafford Beer we will design a model which will help us to understand the organization of the maintenance department and find processes for problem solving solutions and decisions.

During the plan and decision phase of the maintenance processes we will describe the complex system, collect the parameters which influence the processes, control the system relevance with the criteria matrix, built the influence matrix,



define the role in the system and investigate the network connection of the system. Moreover, we will analyze the stategic thinking and decision of a Facility Manager in complex situations.

The facility manager is the responsible individual in the warehouse to whom management looks to coordinate and control the efforts of all employees enganged in engineering and design of modifications to warehouse's facilities, engineering and design in support of maintenance and repair functions, construction of facilities and installation of equipments and machines and evaluation of proposals for replacement of facilities and equipment which are based in whole in a part on maintenance, energy, or utilities savings.

To sum up, in oder to adapt the maintenance department in a dynamic environment the plan process has to be carried out fast. The strategic plan process has to be based on Real-Time Information. The structure of the process has to be design in such a way that it will be not influenced by a problem. This means that the process has a start and an end every time we try to run through it. It has to be guaranteed that every step of the process can be used flexible indepented of a problem.

Keywords: Facility Warehouse Operations, Maintenance Plans, Equipment and Systems Operations, TPM, DCSYM, Viable System Model (VSM), Real-Time Control



EA-02.04

Systemic survey in a shipping company concerning the management of cargo ships transferring dry cargo

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EXTENDED ABSTRACT

In this certification project I am going to present a Systemic - Cybernetic approach of Shipping Company concerning the management of cargo ships transferring dry cargo.

This is about a real company and therefore all the data that will be used in the methodologies presented can be applied by all the companies carrying out the same activity as well as by all interested parties.

To start with, there is going to be a display of the existing situation where apart from the shipping company, which includes the Management and the ships (in this case only one ship so that the communications are clear), all interested parties (that is its external environment), will be displayed.

The display of this situation will be done with the use of DCSYM Systemic-Cybernetic methodology since it is the most adequate methodology to identify the complex and sophisticated relations of all interested parties of any system that is subject to study.

Subsequently, a viability control of the shipping company was conducted placing emphasis on the ship(s) environment which consists of two parts, the Bridge and the Engine. The model used for this cause is Stafford Beer's model VSM (Viable System Model) that can be applied to any viable system which has the ability to adapt to changes.

Finally, an ERP analysis of certain processes is carried out such as that of the adequate selection of suppliers for any hardware shortage on board, the selection mode of adequate crew as well as the process of inspections by classification societies. The analysis of these processes was done with the use of JOGET WORKFLOW program.

The certification project is structured as follows:

- Description of the shipping company
- Display of communications via DCSYM
- Viability control via Beer's VSM
- Processes analysis using JOGET WORKFLOW program
- Problem identification and problem solving
- Utility of Systemic Study

Keywords: Systemic Methodologies, DCSYM, VSM BEER, JOGET WORKFLOW



EA-03.01

A Value Co-Creation Framework for Business Continuity

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EXTENDED ABSTRACT

As escalating business demands push beyond the technology limits and towards leveraging the business value of enterprise collaboration, strategic usage and provision of business continuity solutions is no longer a matter for providing a fixed set of proprietary software applications. At the same time, however, the question for many service providers is how much value is there, beyond the conceptual benefits; in particular, how can value co-creation contribute to companies' competitiveness, in what areas and how. This challenge motivated our research in which we explore the development of a practical framework that helps organizations: a) assess their maturity level for engaging in value co-creation opportunities, and b) select the right equilibrium state for business continuity. The logic is based on a novel definition of "Business Continuity State" leading to a set of different value co-creation strategies, which form the basis on which a collaboration network can decide about its preferred next equilibrium state. The significance of this work is three-fold. First, it combines strategic management theories (i.e. Resource Based Theory and Property Rights Theory) in order to offer a theoretically grounded framework. Second, it provides a practical framework for meticulously unfolding management and/or organizational challenges in the early phases of a service lifecycle for risk mitigation. Third, it is a first version of a design artifact that will be applied in a real-world context to evaluate its utility in further research. Towards this direction, and as a running example, we used a realistic scenario from the B2B IT outsourcing domain, depicted with the e3 ontology tool.

Keywords: value co-creation, service systems, business continuity, service framework



EA-03.02

Facilitators and Inhibitors of e-Business Adaption

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EXTENDED ABSTRACT

The technological evolution of the past 20 years has changed the way business is done. e-Business is becoming a powerful tool that helps businesses create better relationships with vendors, suppliers and customers, lower transaction costs, improved information management etc., and gain a competitive advantage. Although the bandwagon effect has probably played the most important role in the adoption of e-business, it is clear that not every enterprise can undertake such a risk. Literature suggests that e-business adoption from SMEs mainly depends on the idiosyncrasy and the social context within each firm as well as the nature of the business performed by each firm.

This study aims to shed some fresh light on the factors that affect e-business adoption decision. The proposed model is based on the TOE (Technology-Organization-Environment) framework introduced by Tornatzky and Fleiscer (1990). According to this framework, a company's decision to introduce a new technology is affected by technological, organizational and environmental factors. Considering also the work of Kuan and Chau (2000), Zhu et al. (2003), Wu et al. (2003), Jeon et al. (2006), and Chang (2009), the proposed model includes seven factors (technological readiness, firm size, firm scope, CEO's knowledge, adoption cost, willingness and capabilities of supply chain partners, and the competitive pressure) that are classified as technological, organizational and environmental. These factors are either facilitators (having a positive influence to the e-business adoption decision), or inhibitors (having a negative influence).

The model has been empirically tested using primary data collected through a structured questionnaire that has been distributed (by email or in person) to the CEOs of six hundred companies (randomly selected using data from the chambers of commerce and industry) located in the region of East Macedonia and Thrace. Only one hundred and sixty one valid questionnaires were returned (26,84% return rate) from 74 e-business adopters and 87 from non-adopters.

The results show that Greek SMEs seem to miss the train of the technological evolution due to a number of reasons. In times of financial recession, they are struggling to generate the necessary capital that would help them invest on new technologies. Secondly, SMEs are usually run by people of average education who hesitate to take such a big investment risk since they are not able to understand the indirect benefits of e-business. Further, another key reason is the lack of



technological expertise by both managers and employees. This could be explained by the relatively small Internet penetration in the area and by the fact that highly expertise employees tend to work for larger companies. Finally, the support provided by the government is poor.

Confirmatory factor analysis and the logit linear regression methods were used to test the hypotheses. The proposed model explains 70 per cent of the variance of e-business adoption. It is found that firm size, firm scope, governmental support, consumer readiness, IT infrastructure and internet skills are the most important e-business adoption drivers (with firm size being the most significant). On the other hand, willingness and capabilities of supply chain partners, CEOs knowledge, adoption cost, and competitive pressure do not seem to play an important role in the e-business adoption decision (with adoption cost being an inhibitor with a relatively small significance).

Keywords: e-Business adoption, Technological readiness, Organisational readiness, Environmental readiness



EA-03.03

Systemic approach in a small e-business company

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EXTENDED ABSTRACT

The systemic approach for the administration, planning and expansion of both small and medium scale enterprises has become more and more a necessity, owed to the significant complexity inherent to their inner and outer environment. Especially in the e-business domain, the complexity is rather high due to the involvement of new and emerging technologies. Given the enhanced competition and need for constant improvement of quality and productivity, the utilization of new technologies is of utmost importance; nevertheless, this leads to an inevitable increase of complexity. With the systemic approach you can realize the interconnection between subsystems in the company; furthermore, with system dynamics you are able to conjecture both qualitatively and quantitatively the effect of a specific intervention applied to the company. In this work, we perform a systemic approach upon a small-scale company i.e thesweb. The system under consideration is thesweb which is a small company with core business web development but also active involvement in the fields of Web marketing, Graphic Design, IT services and Sales. We are dealing with the complexity of organizing and extending the company. A series of methodologies and relevant tools will serve as a means for identifying the problems of the company and subsequently pinpoint potential solutions. The purpose of this work is twofold: i) the reformation and constant improvement of the company and ii) the accumulation of experience and technical know-how, leading to the expansion of the company in order to accommodate complete e-business solutions besides web design. Specifically, we have employed the model of Organisational Cybernetics VSM (Viable System Model) beer, and the modeling has been performed using the vsmod software. Thus, we have defined the diversity amplifier and the attenuator of the subsystems with the environment and the management, denoting the deficiencies of the company. Based on the modelling performed using the VSM, we diagnose the problems in the company and we use it in order to build a strong foundation for the future expansion design. Using the DCSYM (Design and Control Systemic Methodology) methodology we have recorded the current running condition of the company, in order to identify potentially problematic structures and default communication channels. Furthermore, the DCSYM methodology has facilitated the identification of potential solutions as well as the projection of their effect upon the company functioning. The system dynamics approach has also been utilized in order to understand the behaviour of complex systems, in order to successfully complete a project on time and under budget. In this paper we



use the software vensim for the dynamic simulation modelling of the company's project management. In order to evaluate and assess both qualitatively and quantitatively the results of the proposed approach, the following metrics have been employed: number of new customers, profit per customer, time taken for successful project completion, profit per project coupled with the time of completion and assessment of customer satisfaction.

Keywords: Systemic approach, dcsym, vsm, e-business, system dynamics, vensim



EA-03.04

Systemic Approaches for Electronic Invoicing of a Virtual Enterprise

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EXTENDED ABSTRACT

As the Internet is developed over the years, a continually increasing number of businesses and organizations are using it, in order to offer their services through different kinds of web applications. The customers of these organizations might be individuals, but most commonly other businesses. The transactions between businesses are performed through the Internet for saving time and money.

These businesses transactions are occurring with the usage of so called Interorganizational Systems. The systems are informative systems based on computers, which facilitate the electronic interchange of information using telecommunications between different information systems. These systems refer to computer applications of businesses linked in a network, such as office processes automation, electronic mail, intranets and extranets, and document interchanges.

One of the most important and common document interchanges, which occurred between businesses, is the electronic invoice interchange. The electronic invoice is exactly the same as the traditional invoice, namely the proof of a transaction. It differs from the traditional invoice to its form, which is electronic and helps the organizations due to its expeditious and cheap management.

In the particular project is developed I system, via whoever electronic invoice interchange is being occurred. This system is in general a virtual service company, which plays an intermediary role in the businesses partnerships. Systemic methods are applied, in order to clarify the system's function. At the same time, through these methods are come along all the vulnerable points of the virtual service company, in order to be mended.

First of all, the systemic method DCSYM is applied, which makes the business complexion and its structure well-defined. With the usage of DCSYM, all the processes referred to e-invoice interchange are showed up, not only from the retailer scope but also the customer's. After that, the systemic method Vensim is applied to the company's financial data, in order to be achieved a dynamic modeling and to be clear the way of the enterprise improvement..

Keywords: Electronic invoice, Virtual Service Company, DCSYM, Vensim



EA-04.01

A Systemic Approach to Aligning the Organization's Strategic Priorities to its Operational Configuration: A Practical Application

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EXTENDED ABSTRACT

The vast majority of organizations today are designed and managed through analytical methods in the context of a reductionist approach: reducing the whole into its constituent elements, understanding each element separately and aggregating understanding of the elements into an understanding of the whole. Given the dynamic complexity of the organization's business environment, application of the reductionist method typically results in the loss of the essential properties of both the system managed as well as its constituent elements (parts). Hence, business decisions lack cohesion, and management, the ability to consistently align activities to effectively achieve the organization's long-term strategic objectives.

Systems thinking is the process of understanding how various elements affect one another within a defined unified whole. A systems approach focuses on the understanding of the interactions of the constituent elements of a system that produce a behavior rather that the segregated parts of the system, studied in isolation. A systems approach allows the organization to successfully apply systemic methodologies and/or multimethodologies for the purpose of achieving a level of effective operation through fact-based decision making, which in turn gives the organization awareness of the long term consequences of its actions (actions taken or avoided).

The various methodologies derived from General Systems Theory frequently emphasize the structural, the behavioral and the hierarchical aspects of systems. Structural aspects refer to the principle that system elements are interdependent: they exist in a state of continuous interaction with each other and with other elements. This interdependency is reflected in two organizational constants: (1) the system as a whole may exhibit properties which are different than the properties of the isolated elements of which it is comprised, and (2) the system is not the sum of its parts but the product of their interaction. The behavioral aspect refers to the identification of variables and their functional relationships. Finally, the hierarchical aspect refers to the recursive nature of systems: systems contain and are contained in other systems. This means that each system element may



itself be regarded as a self-organizing and self-regulating system (called a sub-system). The sub-systems maintain their autonomy while contributing to the autonomy of the larger system of which they are an intricate part, even if they are functionally differentiated. Each sub-system may be identified and described in terms of its structure and behavior.

This work will address the manner in which the modern organization or business can apply a systems approach to its management paradigm for the purpose of maintaining the cohesion of the various organizational units of which it is comprised, without compromising the required autonomy which enables them to effectively respond to the diverse conditions emerging from the political, economic, social and technological (PEST) influences in their operating environment. This will be accomplished by identifying the interrelated and interdependent elements interacting as the structured functional whole (system) in which the organization is operating and determining the flows between these elements and their systemic relationships; defining the role of the organization in this (larger) system, recognizing recurring patterns of behavior over time; aligning the organization's strategic priorities and tactical planning to its operational capabilities by applying systems thinking methodologies and/or multimethodologies to the organization's Data, Information, Knowledge, Understanding, and Wisdom Hierarchy; and finally, developing and implementing a monitoring and measurement scheme which provides feedback relative to the organization's performance.

Adapting a systems approach and applying systemic methodologies and/or multimethodologies enables management to embrace a fact-based approach to decision making. The organization's processes, assets, culture and politics, employee required and emergent systems, existing and potential customers' needs, suppliers' capacities, competitors' capabilities, and governmental agencies' requirements are all essential elements of a unified system. The product of the interaction of these interdependent elements needs to be approached and understood as a unified whole. Understanding the fundamental systemic relationships which affect the behavior of the system over time augments the organization's capacity to manage the system's complexity.

Keywords: General Systems Theory; Systems Thinking; Systems Approach; Strategic Management; Management System



EA-04.02

The energy management in aviation sector: A Systemic Approach

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EXTENDED ABSTRACT

The goal of sustainable energy management has not yet been achieved in most countries. One of the causes of the inability to implement satisfactorily sustainable energy management is the failure of policy makers to recognize the socio-technical characteristics of the energy system.

The objectives of this paper are:

- i. To recognize the energy situation in the 21st century for the transportation sector (using quantitative data), and the approaches and policies of the different countries for energy management as well as to determine the differences
- ii. To analyze the already known 'tools' for energy management in transportation sector and to identify their weaknesses
- iii. To create a new methodological framework based on the systems theory in order to assist the end users and the decision makers of transportation agencies to move towards sustainable energy management and finally
- iv. To create innovative tools for the managers of transportation agencies or the end users to the decision-making in energy management.

The main axes of the new approach and the innovative tools are:

- The determination of procedures/relations/organizational structures which are necessary for a complex system (transportation sector) in order to achieve energy management consistent with the principles of sustainable Development
- The creation of an innovative system of indicators for the sustainable energy management in the transportation sector
- The determination of methods for monitoring the performance of the system
- The identification of procedures for the transition of the system from the existing situation to the desired one and
- The application of the above to a transportation agency (case study).

Concluding, the research focuses on the removal of the difference in energy management (existing situation versus situation according to the principles of sustainability) of large energy consumers and particularly of the transportation sector. The research is carried out in the light of the systems approach, through concepts and methodologies of systemic science, which is an innovation since it is, used for first time in this sector and all the influences acting on the problem



are, studied simultaneously (not only technical problems, but also organizational ones).

Over in above, new prototype and appropriate tools are built in order to take advantage of the new approach. Introducing the new innovative tools arising in connection with the methodological framework, the gaps in the existing situation of energy management of large-scale consumers are highlighted, the methods with which the gaps could be filled are determined and the new situation (in case the methods will be applied) are estimated. Finally, an estimation of how the initial problem could be affected if the proposed innovative measures are implemented is presented and in particular how much the gap that has been recognized as the original problem for examination will be reduced. The overall methodology is built in the form of a model for sustainable energy management in the transportation sector.

Keywords: energy management, systemic approach, aviation



EA-04.03

Use of Systemic Methodologies for the Design, Implementation and Viability of Renewable Energy Sources and Photovoltaic Systems in Greece

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EXTENDED ABSTRACT

In this project is presented a Systemic approach of the viability in investing in renewable energy sources and specifically in photovoltaic systems across the country. It is today needs that make energy a major factor of Greece future. Besides standard forms of energy - that a lot of discussions have been made nowadays - renewable energy sources in Greece are a significant advantage that has been ignored. The use of sun energy, water power, or wind energy has not been evaluated efficiently enough. Scientific researches show the dynamics of use of these sources. Today technology is adequate and cheap enough to use it and provide electrical power for use in the mainland and export much of it.

The approach could be expanded to other fields of the renewable sources just to have a general idea and a global view of the whole picture so it will be easy to position the utility of the photovoltaic systems. This approach might seem apparently simple, however it hides facts about problems of all kinds that all stakeholders face and which are noticeable since they can prove to be detrimental in the end. This project was based on true facts from the real world along with the scientific facts that are approachable at this time.

The whole picture has being traced with the use of the DCSYM platform, which is a systemic methodology with powerful mathematical and semantic infrastructure, sufficient for the effective guidance of dialectical processes of designing (multi agent) which concern structures, processes and interferences. After that, the sustainability of the system was monitored using Beer's Viability Systems Model (VSM). Finally the system will be depicted with Vensim systemic dynamic simulation software of Ventana Systems Inc. (Harvard, Massachusetts), a software aiming at finding the best possible solution in cases needing analysis, and wherever needed, at finding all the possible scenarios for future decisions and applications.

The project is structured in the following way:

- Presentation of the system under analysis
- Modeling in DCSYM, Vensim and Anylogic
- Monitoring sustainability using Beer's method
- Use of DCSYM as a problem solving tool
- Suggested improvements Design of suggested improvements with DCSYM
- Benefits of study

Keywords: Systemic Methodologies, VSM Beer, DCSYM, Vensim, Anylogic, Joget, Renewable energy sources, Photovoltaic systems



EA-04.04

Identifying Systemic Factors in the Strategic Process Leading to Ineffective Use of EU Structural Funds from Greek Local Government Organizations

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EXTENDED ABSTRACT

Amid the economic crisis that Europe faces, Greece implements a tough fiscal reform program (Law 3986, 2011) to deal with an unprecedented public debt, which leads to further recession generating a reinforcing "death spiral". There is consensus among economists (Caporale & Reviglio, 2010) that the immediate adoption of development initiatives could lead to a faster exit from the crisis. The financing of development initiatives can be achieved through the utilization of EU Structural Funds (EUSF) which are allocated through the formulation of a national level Strategic Plan, the National Strategic Reference Framework (NSRF). Given the significant restriction of Public Investments due to the above-mentioned policies, the utilization of EUSF is more essential than ever before. According to the official report of the Greek Ministry of Development, Competitiveness & Shipping (2012), the absorbance rates of the EUSF resources is about 30%.

Motivated by the above-mentioned situation, in this study we decided to investigate the inherent causes which lead to low absorbency rates. Since the EUSF direct in both Public and Private Sector (NSRF, 2007), this study focuses on the Local Government Organizations (LGOs). LGOs are one of the key recipients of the NSRF (NSRF, 2007), moreover, after the recent Managerial Reform "Kallikratis", the responsibilities of the LGOs have been significantly expanded (Law 3852, 2010), leading to the expansion of the financing opportunity range from the NSRF.

To this end, the authors of this study followed a qualitative research methodology. Interviews with key persons (executives from the Management



Authorities responsible for the NSRF resources allocation) were conducted using a semi-structured questionnaire.

Our findings indicate that the low absorbency rates from the LGOs are caused, among other factors, by a set of systemic obstacles. More specifically, LGOs Role Conflict was identified as one of the major factors leading to low absorption rates of EUSF. LGOs are the entities responsible for the implementation of the National Strategy as presented through the NSRF and formed at a higher level and simultaneously they operate as entities responsible for Strategy formulation in a local level. These two strategies are not aligned though. Furthermore, the asymmetric information between the authorities which are responsible for the achievement of absorbency goals and the LGOs is another key factor. Finally, the authorities which are responsible for the achievement of the absorbency goals monitor only the progress of the absorbency of the NSRF resources (Lead Indicator) and not the implementation of an Action Plan which can eventually lead to the achievement of the absorbency goals (Lag Indicators).

To conclude, this study comes up with a range of improvement suggestions. According to the outcomes of this research, the design of an incumbent Action Plan at intervention level for the implementation of the National Strategic Plan from the LGOs and the development of an integrated MIS which can ensure the direct flow of all the required information from the LGOs could overcome the above mentioned obstacles. However, further research is required in order to determine additional or alternative improvement suggestions.

Keywords: Public Management, Strategic Management



EA-04.05

Applying Professional Systemics in a Small Agriculture Production Unit

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EXTENDED ABSTRACT

This specific project refers to a small agriculture company named "Green Vegetables" which sales vegetables both to wholesalers and retail clients. The company is situated in a small town near Athens, Megara. It is consisted of four basic family members and other employees. Two of them are the proprietors. It has been founded since 1950 and is inherited from father to son. The purpose of the company is to keep its' competitive advantage and its' viability throughout time.

Hence the title of this thesis is "Applying Professional Systemics in a Small Agriculture Production Unit". In this project the company is the main system and is illustrated at DCSYM systemic tool which shows exactly how the company interacts with its' external environment. This means that DCSYM shows how the company works, how is organised, what are its' defects, who is the key person, how some changes can make it viable in the future. In the main domain of this project systemics' tools as Viable System Model of Beer and Vensim are used. Studying and on parallel applying Viable system model the need "let's make something so traditional as agriculture, contemporary" emerges. In order to meet this demand a website is (www.greenvegetables.gr). The main purpose of the website is that includes all the processes that are responsible for the products' quality. Quality is the key factor which differentiates "green vegetables" from competitors.

This paper is unique at using systemic tools in the domain of small, agriculture enterprises.

Both the project and the website will be presented.

Keywords: Dcsym, Viable System Model, Vensim



Systemic Approaches to Strategic Management of Intra-Family Violence within a Legal Framework

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EXTENDED ABSTRACT

Intra-family violence is a multifaceted and complex social phenomenon, with roots existing even in ancient societies and/or social structures. However, this phenomenon is a modern social plague that spreads continuously and finds fertile ground not only in underdeveloped societies but also in contemporary developing and developed countries.

The term intra-family violence is widely understood as the phenomenon of the attack and circumvention of the legal interests of the victim by the offender as part of family coexistence and living.

Intra-family violence is driven by the offender in any member of the family is certainly not focused only on the man towards woman, although most cases follow this route.

Various previous studies conducted in regard to a specific time and place demonstrate, that in the developing and developed countries, intra-family violence constitutes a phenomenon of high complexity and with the feature of peculiarity in respect to the morphology of its manifestation.

It is evident that domestic violence constitutes a complex multi-factorial problem, constituted by numerous interacting factors.

Looking gradually and from a social aspect at the phenomenon of intra-family violence at an international or/and at a national level, it is observed that the phenomenon tends to rise continuously, along with the features of peculiarity in respect to the morphology of its manifestation. It is evident, that what is considered to constitute a primarily social phenomenon requires an interdisciplinary scientific approach for its resolution.

In regard to the evaluation of the multi-formity and the complexity of the occurring forms of intra-family violence, it is observed that, while they superficially demonstrate an independent existence, they are actually substantially interrelated and interacting. In general, intra-family violence occurs in the forms of psychological violence and/or abuse, verbal, economic, sexual, actions through various criminal act, such as the accomplished actions and abuse by the offender to the victim, victim's rape by the offender.



Intra-family violence as a morbid form of relations in family life has profound pathology, requires further investigation within the lattice formulation of social affairs in respect to a specific place and time.

In the present paper, we study the pathology of the phenomenon of intra-family violence, its spread in modern society, social stratification perpetrators and victims, and especially contemporary interdisciplinary legal address, legal approaches, to solve the problem in the management strategy to deal with the use of systemic methodologies. We use the systemic methodology of Soft Systems Methodology (SSM) and the use its CATWOE (Clients, Actors, Transformation, WorldView, Owner, Environmental constraints) statement within the SSM methodology for creating the root definitions required for this methodology.

We also make reference to the institution of criminal mediation, the achievements and weaknesses, and finally attempt to examine the phenomenon of intra-family violence within the context of modern European legislation and the municipal law 3500/2006.

Keywords: Intra-family Violence, Law 3500/2006, Decision of the Human Rights of 1994, the Beijing Declaration, Decision 58/147 of 02.19.2004 UN Resolution EC of 02/02/2006, Criminal mediation, SSM, Systemic Multi-methodology



A systemic approach to the operations of the Education Department of large organizations

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EXTENDED ABSTRACT

Introduction

The purpose of this study is to present a series of systemic methodologies that can be used to design effective training programs in medium to large scale organizations. The study had been initiated as an intervention in the Education Department of a medium sized company but afterwards it was generalized as a general case covering the education and training issue in any organization.

Methods and tools used

A "causal loop diagram" is used to show the way in which personnel transfer and leave as well as the business growth lead to training needs. It is implemented using the Vensim software and depicts the role and the necessity of the education in an organization.

A "stock and flow diagram" implemented using the Vensim software as well is used to formulate a dynamic model aimed to predict the personnel training needs. Personnel are categorized to four levels from simple employees to executives. The model incorporates variables for business growth, personnel transfers, resignations and retirements for the purpose of calculating training days for each personnel category. Quantitative training requirements are also included as variables. Training needs are defined as two types: for employees in a new position and for employees in the same position for the purpose of maintaining and developing existing knowledge.

The DCSYM systemic methodology is used to depict the corporate education as a system showing its subsystems, the individual roles and the communications between them all.

Practices derived from Soft Systems Methodology, Total Systems Intervention and Structured Dialogic Design are used to resolve specific issues related to training programs selection and evaluation and stakeholders management.



Results

The conclusions derived from the above methodologies are used to design an intervention in the operations of the Education Department of the target organization. This intervention consists of a series of tools and techniques aimed to improve the overall education and training activity of the organization.

First deliverable is the dynamic model implemented with Vensim software enhanced with a friendly user interface in order to be a tool to forecast future training needs.

The second deliverable is a set of well defined processes that can be used to identify the training needs and to plan the training activity. Each process is defined specifying its inputs and outputs and the methods and tools that can be used in order for this to be accomplished.

The third deliverable is a typical project which includes all the tasks that must be carried out in order to plan an effective training plan for the target organization as well as the relevant schedule. Systemic practices are used in specific project management areas like project scope management and stakeholders management.

Keywords: Training, Systemic methodologies, Process, Project Management



Team-building and Decision-Making using Structured Dialogic Design

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EXTENDED ABSTRACT

Team working is an essential part of every organization. It is also crucial for a profitable and sustainable growth; both factors that determine the continuity and existence of a firm. A framework; a more effective, more democratic business tool for better decision, is the systemic methodology of Structured Dialogue Design. This methodology works as a decision making system and it uses facilitation technology.

Usually, teams are small. Team builders avoid large teams; they prefer7-10 participants. But that means a smaller/lower level of consensus and commitment. The Structured Dialogue Design Process can solve that kind of problems. Especially, with the Structured Dialogue Design Process a team avoid or internalize elements with high cost impact such as groupthink, spread think. As decision making referred in the area of effective soluctions space, according to the area of optimal control, that it is a factor which firms must pass to their systematic enterprising risk. The efective solutions space determine that they aren't optima but feasible, elastic and they give to plans advantages such as flexible and adaptable.

Using systemic tools and methodologies, as DCSYM and SYSTEM DYNAMICS SIMULATION (Vensim), a display of processes shows the possible patterns of team participant's behavior.

Finally using (applying) Structured Dialogue Design a firm would increasing the effectiveness of decision making as secures a high level of consensus through dialogue approach and a better team building as dialogue behaves as a empowerment factor, avoid / minimize the conflict and the opportunity cost of ineffective group building.

Keywords: team building, decisions taking, systemic thinking, Structured Dialogue Design Process, DCSYM



Voting Model in Structured Dialogue Design

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EXTENDED ABSTRACT

A social change requires high level of consensus and commitment (to actions.) Surge and godsend solutions face unexpected reactions from society (sub) groups based in complex interests and personal view of social benefit. The complexity, divided in individual complexity and group complexity, is a factor that reflects to behavior and decisions.

The effect, agreed actions, of Structured Dialogue Design Process characterize from high consensus and committed. Action planning includes long term interventions based on large scale decision thinking.

Structured Dialogue Design applies a voting procedure which express it answers to the questions: "how close to social wisdom (harness), how much of social wisdom collects a laboratory on a specific issue? Is it crucial? Is common on different segmentation of a society?" The voting secures, at maximum point, that decisions from a laboratory are consensual and feasible.

Using systemic tools, as DSCYM and SYSTEM DYNAMICS SIMULATION (Vensim), a display of process shows the possible patterns of behavior. The laboratories that the process applied are an example for a premature estimation of the model.

The main impact of this process is to change an organization that based on operationally processes to more empowering processes. More organic and evolutionary perspective is the new components of organizational culture.

Keywords: Structured Dialogue Design Process, consensus, social choice, voting, DSCYM



DCSYM Systemic Methodology and Dynamic Simulation for Crisis Management: the case of a Brewing Company

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EXTENDED ABSTRACT

In our paper we aim to illustrate the importance of the control procedures that take place in an organization, and their positive influence in the science of Crisis Management, in the extend of reliable forecasts of a likely crisis.

The organization for which we will analyze the above issue is a worldwide brewing company, and specifically the enterprise resource planning (ERP) and business application "SAP", which is the basic tool of the organization and management of the whole company around the world.

More specifically, our project will include all the kinds of communications, workflows and control procedures among different subsystems that take place in the modules of the SAP application (FI, PP, MM, CO, RBQ, PM, SD, HR). We are mainly pointing to present immediate and effective solution procedures that have to be implemented in the current system and how these procedures can avoid the appearance of the negative outputs.

Analyzing workflows, implemented in SAP through the DCSYM (Design and Control Systemic Methodology) we will produce systemic analysis with simulation through the Vensim software, in order to highlight the elements of crisis management and control procedures that are critical to the viability of our company.

We would like to mention that we will also examine the possibility of producing a hybrid analysis to the Anylogic software – if it is timely feasible – so that our research becomes deeper, more efficient and comprehensible.

Keywords: Control procedures, Crisis Management, Systemic Analysis, DCSYM, Dynamic Simulation, ERP-SAP



EA-06.01

Strategic Information Systems: A Strategic Management and Systems Theory Approach

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EXTENDED ABSTRACT

The highly competitive business environment, in which firms operate, has impelled many organizations to find new ways and tools to ensure their long-term survival and success. The use of Information and Communication Technology (ICT), in terms of Information Systems (IS) and Information Technology (IT), can be an important strategic tool for every firm, since it enables them to create or sustain competitive advantages. This type of information system is called Strategic Information System.

This study examines the concept of Strategic Information Systems (SIS) and how firms can create value with the use of Information Systems and Information Technology under the prisms of Strategic Management and Systems Theory.

Firstly, three strategic management approaches for the development of SIS are presented. The first approach focuses on IS/IT strategy and strategic planning. It examines the relationship between an organization's information, business, IS and IT strategies. It also focuses on the concept of an organization's IS/IT capability. This capability determines the degree to which a firm can meet the demands of its external environment, and the degree to which a firm can manage and review its internal business processes to meet these demands.

The second approach focuses on the use of a set of strategic analysis tools for the alignment of an organization's IS/IT strategy and business strategy. This includes tools such as Porter & Millar's Five Forces Model, Nolan's Stage Model, McFarlan's Strategic Grid, Ward & Peppard's Strategic Grid, Value Chain Analysis, and Critical Success Factors Analysis.

The third approach determines the relationship between an organization's IS/IT processes and resources, and the organization's information and organizational strategies and objectives. It aims to manage these relationships and to integrate best practices of planning, organizing, acquiring, implementing, delivering, supporting, monitoring and controlling the performance of information systems in order to ensure that the organization's Information Systems and Information Technology support its business objectives.

Finally, a systemic approach for the development of SIS is presented. Systemic methodologies, such as Viable System Methodology, Soft System Methodology, Design and Control Systemic Methodology and Systems Thinking Approach to Strategic Planning and Management, are examined in the context of Information Systems and the process of value creation, and therefore the creation of competitive advantages, is presented.

Keywords: Strategic Information Systems, Strategic Management, Systems Theory



EA-06.02

Evaluating Information Systems: Core Concepts, Approaches and Models

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EXTENDED ABSTRACT

In today's constantly changing and highly competitive business environment organizations try to harness all their assets in order to remain competitive and to survive. One of the most important assets an organization has is information, which, with the appropriate use, can contribute significantly to its long term survival and success. In order to maximize the outputs derived from the effective use of information, organizations spend great amounts of money for the development of Information Systems (IS) and Information and Communication Technology (ICT) infrastructure. Consequently, the need for the evaluation of Information Systems has emerged, and has become a critical issue within organizations.

Information Systems Evaluation is the process which allows organizations to appraise the impact of Information Systems on organizational performance. Therefore, appropriate methods and techniques are required for the appraisal and justification of Information Systems contribution at strategic, operational and tactical levels. In the past years, many approaches have been devised and developed in order to evaluate and measure IS efficiency and effectiveness in organizations.

This study examines the importance of the effective use of Information Systems and the need for Information Systems evaluation. Core concepts, such as Information Systems effectiveness, efficiency, performance, quality and success, are presented. Subsequently, the process of Information Systems Evaluation is examined, and basic approaches, methods and tools are presented, such as DeLone & McLean's Success Model, Capability Maturity Models (CMMs), CobiT framework, ITIL framework, and Balanced Scorecard.

Keywords: Evaluation, Information Systems, Strategic Management



EA-06.03

Adopting an Information Security Management System in a Co-opetition Strategy Context

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EXTENDED ABSTRACT

Today's organizations are called to face many different challenges due to the uncertain and constantly changing external business environment, fierce competition, increasing technological or R&D risks as well as limited resources and capabilities. In that case, they form partnerships with different kinds of stakeholders, even competitors (co-opetition strategy), with the use of Information and Communication Technology (ICT) in order to have access to diverse information and knowledge and therefore gain competitive advantages. The philosophy of co-opetition strategy is that the success of an organization does not necessarily mean the failure of others.

Competitors have market commonality, face common challenges and possess similar and complementary resources and capabilities, therefore co-opetition strategy could be an innovation stimulus which is expected to bring benefits to the firms involved in such a relationship, such as economies of scale and scope, creation of new or improved products, reduction of uncertainty, speed in product development and access to new markets. However, co-opetition strategy is not a panacea. When organizations decide to implement a co-opetition strategy should also take into consideration the potential costs, such as technological risks, management challenge, loss of control and opportunistic behavior.

One way to avoid these costs is the adoption of an Information Security Management System (ISMS) and more specifically ISO/IEC 27001, in order for organizations to build trusting and sustainable co-opetitive relationships.



Organizations should realize that information security is a critical business function as they are no longer able to protect and control their information technology environments. The ISO/IEC 27001 standard which is based on a business risk approach provides a model for "establishing, implementing, operating, monitoring, reviewing, maintaining and improving an organization's Information Security Management System (ISMS)". It offers confidence to internal and external stakeholders by protecting and facilitating the controlled sharing of information and managing the associated risks within and beyond organization.

This paper aims to present the ISO/IEC 27001 standard under the implementation of co-opetition strategy. Furthermore, Deming's "Plan-Do-Check-Act" (PDCA) model is applied to ISMS processes, in combination with co-opetition's "Value Net" so as to highlight the significance of protecting information assets and assuring integrity and safety in a co-opetitive environment is presented. Consequently, the purpose of this study is to discuss whether the adoption of ISO/IEC 27001 will improve intra- and inter-organizational communication and will contribute to the development of a more efficient knowledge management system within organizations. Finally, this study takes a strategic management approach rather than a technology-oriented one, since managerial and organizational problems are more complicated and more difficult to be solved than technological problems.

Keywords: Co-opetition Strategy, Information Security Management System, ISO/IEC 27001, Strategic Management



EA-06.04

Strategic Management & Systematic Methodologies: Operational Planning of Business Brewery (Athens)

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EXTENDED ABSTRACT

Goal of this paper is to study the strategical management and systematic methodology, as well as the business plan, of the A. Zythopia Industry by using the systematic methodologies. Specifically, the methodology of this work is based on the collection of primordial and secondary data. Secondary data was collected from books and articles in scientific magazines and contributed significantly to the writing of the project's theoretical part. The first chapter clarifies the notion "strategy", analyzes the classical and the systematic model of strategy, develops the concept of "competition" theoretically and finally analyzes the development strategies (market and product development, vertical and horizontal completion, differentiation of activities and alternative strategies).

The second chapter introduces the systemic methodologies and the business plan, by citing the term "business plan", its use and advantages and finally its structure. The third chapter presents the identity of the A. Zythopia's Industry and analyses the characteristics of its branch (structure, size, competition).

Last but not least, the fourth and last chapter of the project's theoretical part, analyzes Beer's VSM systemic methodology in terms of A. Zythopia's Industry. To be more specific, it refers to the model of the sustainable system, the flexibility, stability, effectiveness, constant re-adaption and strategic knowledge management of A. Zythopia's Industry, the sustainable approach in total and the strategy implementation to the industry.

Keywords: DCSYM, VSM, SYSTEMATIC, STRATEGIC MANAGEMENT, ZYTHOPIA



SDD and DCSYM Methodologies as Tools of Determination of the Professional Systemic Analyst's Requirements: Development of CSAP Library

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EXTENDED ABSTRACT

The Electronic Library of the Professional Systemic Analyst presented in this paper helps all Systemic Analysts of Greece have access to learning material concerning all systemic methodologies developed, in order that they are able to apply some of them to their daily work. This library is mostly known as the CSAP (Certified Systemic Analyst Professional) Electronic Library.

The aim of the CSAP Electronic Library is also to provide Professional Systemic Analysts with the appropriate software, such as Vensim, or Cogniscope II etc, that comes along with each Methodology, which will help them give optimized solutions to problems of organizations related to procedural shortcomings.

This paper is not only focusing on the construction of the Electronic Library based on the appropriate software but also on the use of Structured Dialogic Design (SDD) and Design and Control Systemic Methodology (DCSYM). The SDD Methodology highlights the necessity of existence of the CSAP Electronic Library, something that came as an answer to the triggering question: "What actions should be done in order that the institution of the Professional Systemic Analyst could be established in Greece?" Cogniscope II Software has its own contribution to this conclusion. The DCSYM Methodology spots the interactions among the subsystems which consist the whole system of the Electronic Library, and inquires the kind of communication, whether it is potential conflict, good communication, purposeful action, general interaction, distorted communication or distorted purposeful communication. Its purpose is to establish communications between the parties that are characterized by clarity and security and that are no mistakes in their execution. Communications and processes must additionally be easily identifiable, so that their operation is clear to someone that comes in contact with them for the first time. DCSYM is able of creating procedures of the Electronic Library, which will be best as possible without unnecessary intermediate steps.

A simulation of the system of the Electronic Library will be held using the Vensim Software. Vensim is a system dynamics' tool which helps companies find an optimal solution for various situations that require analysis and discovers where necessary all the possible outcomes of a future implementation or decision. It is used for the development, analysis and packaging of dynamic feedback models of high quality.



In this paper a first systemic approach of the new multi-methodology SIAPSA takes place. SIAPSA stands for Systemic Intervention Acting for the Professional Systemic Analyst. It contains TSI (Total System Intervention), SDD, and DCSYM Methodologies. Applying the three phases of TSI (creativity, choice and implementation) in the phase of choice is concluded that the SDD Methodology should be applied. The next step of TSI is the application of the DCSYM Methodology. The approach with SIAPSA multi-methodology provides quite accurate and viewable results through the properties and advantages of the Methodologies used.

Keywords: DCSYM, SDD, Cogniscope, VENSIM, TSI, SIAPSA



Mashing up Unibook: Architecture and Implementation of a mashup service for the promotion of eLearning web 2 platform

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EXTENDED ABSTRACT

This article presents an implementation of an integrated application type mashup. Web mashups are Web applications developed by using various contents and services available online. Our application implements as part of the promotion of the web 2 e-learning platform Unibook, within the framework of the experiments which have succefully been deployed in a department of the University of Piraeus. These experiments are being continued until today in various departments of the University of Piraeus with the future prospect of expansion to other universities and Technological institutes around the country. The Mashup is the evolution of modern web services. This article uncludes the analysis of the architecture of the implementaion at all levels, including innovations made to the code, outlining essentially this transformation in technical and technological level.

Keywords: Mashup, Web 2, Web 3, Unibook, API, web development



Systemic Approach for Entrepreneurship Education

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EXTENDED ABSTRACT

Last Century, John Dewey (1944) said that "if we teach today's students as we taught yesterday's we rob them of tomorrow". Obviously, education changes during the years and in recent years a new field of entrepreneurship in education has appeared. Entrepreneurship education means creativity, innovation, producing new ideas, planning, risk taking and tolerating the uncertainty. Ongoing research on this matter ensures that implementing entrepreneurial learning to undergraduate students promotes their employability. This new field of education differs in the way it is applied in many EEC countries. Moreover, many pedagogical solutions applied in all different environments, of entrepreneurship education (EE). The EE is mainly based on project work and on experiential learning.

This study shows the entrepreneurship undergraduate courses offered at the University of Ioannina for undergraduate students. We show how students in University Departments will develop life attitudes for business related skills, and other abilities for problem solving and critical thinking. The learning can take part at many work places like computer stores, statistics bureau, municipalities, banks and other places in the private sector.

In conclusion, we found that in order to have an integrated approach on entrepreneurship education a systemic analysis is needed where students, teachers, stakeholders, have to come together and produce tools and methods for research and application of entrepreneurial learning. They have to work together for a different way of teaching and learning. In these programs students discussed with their teachers how to develop new projects and how to take the initiative in their education.

Keywords: entrepreneurship, education, systemic analysis



Assessment and evaluation tools for entrepreneurship education

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EXTENDED ABSTRACT

The social and economic change nowadays, is the most important factor concerning the flexibility and the growth of an organization or a community. So, individuals either alone or in groups have to find opportunities how to run new businesses, learn new tasks, manage human recourses, and deal with creativity and risk taking.

Moreover, in order to improve learning, evaluation and assessment are essential. In the assessment process information on students' achievements is gathered in order to be evaluated and change the teaching and learning process and methods. These include student self-assessment, teacher appraisal, school evaluation and system evaluation. In other words we have a systemic approach to overall evaluation. In Entrepreneurship Education (EE) the critical point is not only the application procedure but also the assessment and the evaluation process. This process has to be done on a regular basis, either from the teachers or from the students themselves or from the stakeholders.

According to OECD, the components that have to be considered in an evaluation process are $\ensuremath{^{\prime\prime}}$

- Designing a systemic framework for evaluation and assessment
- Ensuring the effectiveness of evaluation and assessment procedures
- Developing competencies for evaluation and for using feedback
- Making the best use of evaluation results
- Implementing evaluation and assessment policies " (http://www.oecd.org/document/32/0,3746,en_2649_39263231_44567968_1_1 _1_1,00.html)

According to Lewis (2002), as stated in OECD report, (http://www.oecd.org/dataoecd/19/31/42890085.pdf) "all enterprise education



programmes have different characteristics and are delivered in a variety of different contexts (cultural and educational)" (Lewis, 2002, p 21)'. In many countries like Austria, Bulgaria, Finland, Greece, UK, Spain, Slovenia, USA, many different EE programs are addressed to a range of ages (8 up to 18 years) with different tasks each.

This study examines EE procedures and methods used in an evaluation process and we suggest that new skills, knowledge and the impact of the program in future development have to be evaluated. For the assessment procedure, interviews, surveys, qualitative and quantitative methods must be applied. For best results, this process has to be applied to all undergraduate and postgraduate EE programs.

Keywords: assessment, evaluation, entrepreneurship, education



E-learning Quality Factors in Academic and Business Settings

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The rapid Internet proliferation affected broadly almost every aspect of life in modern societies and particularly the way people work and learn. The instant access to resources present a huge amount of information that can become knowledge if it can be deciphered, analyzed and recomposed. E-learning is well established as the technological response to the new demands of learning and working. It is a complex and dynamic instructional model aiming to provide learning, training and up-to-date knowledge via the internet and lifelong learning. The implications of e-learning are significant in both academic and business settings. Initially, business industry adopted e-learning, in order to enhance productivity and reduce additional stuff training costs. Such e-learning programs aim to provide specialized knowledge and problem-solving strategies. Likewise, academic institutes, facing the new challenge, started to incorporate in the typical curriculum IT-facilitated practices in order to provide a wide range of knowledge and foster students with critical thinking and the ability to know how to learn. Even though, the approach of learning is different in academic and business settings, yet, the objective remains the same: learning via qualitative e-learning programs.

Evaluating the quality factors of e-learning programs is a multidimensional task. Over the years a number of evaluation models were proposed, highlighting the evaluation process in the four different axes: (a) the technology axis, where the technical characteristics and the functionality of the e-learning programs is assessed, (b) the reaction axis, where the learner's satisfaction is assessed by an interview, (c) the learning axis is assessed using an oral test, in aspects like the



degree of acquired knowledge, skills, and attitudes and the ability to assess by real life projects, and (d) the cost axis, assessed by the demand of the market. The aim of this study was to examine these assessment methods and compare techniques in e-learning programs.

The findings indicated that a) high technical characteristic and functionality, although there are some limitations concerning social media, (b) reaction is well over average (c) leaner satisfaction and learning outcomes depend on whether it's supplementary learning or basic learning and may vary in terms of formal, non-formal or informal learning and (d) cost varies according to the choice of tools (existence of expensive tools that provide plenty of facilities in contrast to free tools that may face limitations in communication and interaction issues). Finally, even though the e-learning aims and objectives may vary depending on the provider, the learner's satisfaction and the ability to apply the knowledge obtained in different situations are the major quality factors commonly assessed in both business and academic settings.

Keywords: E-learning, evaluation, academic and business training



Defining the Driving Forces on the Academic Research Activities for an Innovation Strategy Implementation

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EXTENDED ABSTRACT

Universities, especially the Greek ones, are under great pressures caused not only on the reform attempts on their governance model, but also on the recession that affects their funding. Thus, universities are faced with the strategic problem of managing their resources towards the creation of new possibilities for scientific and financial sustainability, for both the present and the future. European and National authorities propose Research and Innovation activities as development tools, providing at the same time financial support. However, for innovation to be implemented as a strategy, a deep understanding of its systemic nature is required, as well as, its relationship with the driving forces of research activities. The purpose of this paper is to establish a set of indicators capable of assessing the drivers of academic research activities which will facilitate the innovation strategy implementation. This paper does not aim on the bibliometrics indicators, which are usually used in the university rankings, but on proposing new ones. The proposed indicators are to offer new explanations about the nature, dynamics and obstacles of the academic research and innovation activities.

Understanding the relationships between innovation and academic research activities and not just research, comes to answer questions like: What are the effects which some critical factors have on innovation. These factors are the drivers of research activities, such as the funding environment, the partnership of the research teams, the interdisciplinarity and the internationalization of the research projects. The answers to these questions are based on the information offered by the indicators selected for this purpose. In the literature, a gap regarding the categorization of existing indicators for the academic research became evident, especially their nature and the field of their application. Furthermore, there is no evidence about the interconnection and impact between academic research drivers and innovation. In this paper a research methodology is presented for setting up the indicators. It is based on weighted variables in order to secure the validity and comparability of both metrics and results. An appropriate methodological tool called Indicator Technical Report is proposed, which includes accurate information for the selection and use of the data.



Furthermore, a case study is applied for a multidiscipline Greek University, in which the indicators are being tested. Measurement results are proved capable of supporting the functions of the assessment activities, as well as the evaluation and accountability of universities, while providing strategic information for decision making. Furthermore, findings in the case study, demonstrated that the drivers of research activities seem to be at a low to a medium level. These are totally affected by the funding environment and have a significant impact on innovation outputs.

Keywords: strategic management, academic research, innovation, indicators



A Dynamic Algorithm for the Multiple Capacitated Facility Location Problem

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EXTENDED ABSTRACT

The multiple capacitated facility location problem is of great importance for an enterprise in finding the most suitable location in a congested market environment and one of the classical operations research problems. The location of each of the new enterprises should offer competitive advantages for each one of them whether they are cooperating or not, in an area that other similar enterprises already exist. Furthermore, the enterprises must attain the highest profit in the selected location, while also satisfying the consumers' demands under time constraints imposed by the market.

More specifically, this paper examines the problem of seeking the optimal location by a number of cooperating enterprises, which produce the same product with the existing enterprises in the given area. The market in the existing situation covers its demands to the highest possible degree. The quantity of the product that the market needs is also determined by the market needs and must be available in a specific time-period. The new enterprises aim to enter the market and obtain the largest possible share of this market by avoiding any overlapping between the market segments that they will serve.

The facility location problem in a market environment has been studied extensively in the bibliography and a number of algorithms have appeared for the solution of this problem. This paper proposes a network model along with the exact algorithm that was implemented for its solution. The algorithm finds the exact solution for a given facility location problem so long as that exists. The algorithm is also completed in order to find approximation solutions to the given problem. The approximation algorithm decreases significantly the execution time of the algorithm and ensures small variation from the optimum solution that is computed by the exact algorithm.



Many issues of this problem belong to the NP-hard class of algorithms and therefore this paper presents a dynamic approximation algorithm. The approximation algorithm that is presented in this paper attains approximation solutions in a small time interval. In order to compare the approximation solution to the optimal one, the optimal solution is obtained also. Then, the variation of the objective function value is compared to the optimal one.

A computational study is also performed in order to show the speedup of the approximation algorithm. Computational studies are useful tools in order to gain an insight into the practical behavior of the proposed algorithms, examine its efficiency and compare its approximation solution to the optimal one by using the same problem sets. The computational study has been performed on an Intel Core i7 2670QM 2.2 GHz, with 6 Gb RAM running under Windows 7 64-bit Edition SP1. The algorithms have been implemented using MATLAB R2011b 64-bit edition.

Keywords: Facility Location Problem, Decision Support Systems, Operations Research, Allocation



A Cultural Algorithm for Solving Project Scheduling Problems

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EXTENDED ABSTRACT

Since most project scheduling problems are hard combinatorial problems, heuristic ap-proaches used to get an acceptable, but not necessarily optimal, solution. In particular, we solve the resource constrained project scheduling problem (RCPSP), one of the most important challenges facing construction project schedulers; and the resource leveling problem that aims to minimize the fluctuation from one time period to another in resource usage. We pro-pose a cultural algorithm for solving these two problems. The algorithm has been programmed within a commercial project management software system to improve its perform-ance. Illustrative examples and the computational analysis demonstrate that the algorithm produces reasonably good solutions.

Keywords: Cultural Algorithm, Project Management System, RCPSP, Resource Leveling



The Main Employees Characteristics That Facilitate a CRM Approach to Build a Sustainable Competitive Advantage

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EXTENDED ABSTRACT

Customer relation Management has been developed through the last years as a valuable approach for modern firms to create a sustainable competitive advantage. CRM in combination with specially designed human resource management can be accepted as an important factor for advanced customer value and as a consequence, superior shareholder value. In this article firstly is developed the conceptual framework as far as the customer relationship management is concerned, secondly are presented the human resource fundamental characteristics that should facilitate the successful implementation of CRM initiative and finally it is proposed that the limited commitment of employees to CRM is usually followed by relatively deteriorated adding value process.

Keywords: competitive advantage, customer relation management, human resource



The major responsibilities of Leadership in the New Globalized Business Environment

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EXTENDED ABSTRACT

A leader is "a person who influences a group of people towards the achievement of a goal". In this article is well analyzed his role and intervention for successful when firms and and sustainable global corporations; especially nowadays organizations are facing an intense pressure to survive. The core of leadership should be based on human resources and the development of effective strategies which meet the emotional needs of employees and the profit goals of business. Moreover, the Intellectual Capital and the internalization of knowledge give advantages of cost and quality differentiation which combined with the hidden human talents and skills, global corporations can bring creative and fascinating results in achieving long-term effectiveness and efficacy. The role of the leader, so, is to reach a perfect synthesis of the human capital and the company parameters like its technology, its public relations and its marketing policies. Finally, it is also referred that before the success of a global corporation, a leader must be driven by a continuous need for self-actualization and a devotion to human values.

Keywords: Leader; Intellectual Capital; self-actualization; global corporations



EA-09.01

A systemic approach to strategic planning in a European Medicines Organization

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EXTENDED ABSTRACT

INTRODUCTION

New business startups in the mid of a recession with international effects and while basic national economic practices are being revised, is a challenge, especially in countries like Greece where the whole business environment is being contested for inconsistent entrepreneurial dealing for approximately the last 30 years. The use of Systemic Methodologies and tools for planning such projects is a research and verification procedure, intending to assist potential investors to clarify the prospects of such ventures.

CREATING A PARTNERSHIP

Beyond emotional and financial issues one of the most important stages in creating a new activity is selecting the appropriate business partner (-s). Systemics here may provide valuable insight in defining the common business intentions and the eventual scope. Considering each individual participating in the creation of a team as an independent "system" and defining the inevitable interactions between them, will bring to the foreground the critical points and team relations, which will define the next steps and functionality of the group. The results of such a procedure will define the "GO" or "NO GO" of a new business activity and eventually the management team too.

DEFINING BUSINESS IDEAS AND EVALUATING THEM

Overcoming enthusiasm and impulsiveness for the implementation of new business ideas is a main issue and process. Being realistic and choosing the appropriate timing and conjuncture for a start up can be critical for the future development. Here quick and short procedures for each potential business idea (to be project) are placed in the wider system they belong and interactions are evaluated as objectively as possible.

DEFINING A BUSINESS SCOPE

At this stage, any individual or a team must define the intentions, prospects and scope of any business research procedure, by setting a deadline for such a procedure; else it is very probable that business ideas which are being elaborated may turn into endless discussions without specific targets or knowledge of which direction to take.



BRAINSTORMING

Having completed the above stages as meticulously as possible and whether one works individually or in a team, the submission of an idea for a new business activity, needs realism, strong belief in it, sincerity and clarity. Possible rejection needs to be accepted, as well as avoidance of insistence if opinions expressed are negative towards the implementation of the proposed new business concept.

SELECTION OF A SPECIFIC IDEA FOR ENTREPRENEURIAL DEVELOPMENT

One or more concepts may be selected. Then through modeling and simulating, an extensive focused research may start for each new business idea, with a minimum of three phases:

- Processing a very concrete analysis of the proposed project(-s)
- Investigating parameters involved
- SELECTION of a project (-s) for eventual implementation.

DEFINING THE SYSTEM WITHIN WHICH THE PROJECT WILL DEVELOP

Systemic rules and tools can emphasize on many critical points and subjects in systems, mainly in the context and relations of sub systems that will be created. Having the broadest possible view of the system in which a new activity will develop, reduces the eventual investment risk.

SCHEDULING AND TIMING

Planning, scheduling and creating a time plan for each task and stage of new entrepreneurial activities is essential, especially when these ventures involve investments, production procedures and trained human resources.

BUSINESS PLAN AND SYSTEMIC ANALYSIS OF NEW BUSINESS CONCEPTS (USE OF SYSTEMIC TOOLS)

Setting up and composing a functional, true and dynamic Business plan is perhaps the most difficult point of new entrepreneurial ventures. Using recently conceived systemic tools like DCSYM and Vensim allow potential entrepreneurs to get a closer view of the intended venture and expected results.

The effectiveness and results of applied systemic methodologies will be tested in the following stages: PROJECT IMPLEMENTATION, CONTROL - ADJUSTMENTS – REVISIONS AND "RUNNING" THE NEW ACTIVITY. Redefinitions will be necessary during the investment's "life".

R & D - and Further DEVELOPEMENT

Research is a prerequisite in maintaining innovation of any entrepreneurial venture. In this process all systemic tools can be used and their results give the necessary feedback for updating any activity.

Keywords: New Business, Entrepreneurial Planning, Evaluation, Planning, Management



EA-09.02

Business from scratch: Online shop with hand and homemade products

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EXTENDED ABSTRACT

The main aim of this study is to create a general systemic method showing all the steps and processes required for the effective creation and run of an online store with handmade products from scratch (business from scratch).

The store will be supported by the OS-Commerce, an open source Content Management System (CMS), property of GNU General Public License. The OS-Commerce is an integrated and upgradable product that meets the needs of any online store. The system provides many tools that enable the rapid creation of websites and online shops as well as facilitate further development of applications that meet specific needs.

The work will show the full record and diagrammatic representation of the processes of organization and operation of the firm internalize environment using the platform DCSYM, which is a systemic methodology with strong mathematical infrastructure capable of effectively guiding dialectical process drawing on structures procedures and interference. The DCSYM helps in more accurate and colorful depiction of a business information system and the discovery of hidden relationships that might not be obvious at first.

Through this work, there is the hope of making a tool with one can study the operation of any online shop, focusing on preventing any problems that may occur during its run.

Keywords: online shop, DCSYM, OS-Commerce, systemic methods



EA-09.03

Chain of Greek Traditional and Organic Groceries

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EXTENDED ABSTRACT

Recently, some series of economic events changed the consumption habits of buyers they used to do so far. The main reason is clearly the economic situation (austerity) of Greece, which is going through difficult trails, with all this uncertainty of the final social impact, as our country for entering to the Eurozone, lost the tool of Financial - Monetary Policy.

Consumers - buyers will gradually turn to traditional and organic Greek food products, away from ones of machined mass production processing, usually responsible for food additives (E's). Therefore, a shift for buying purest foods it is expected. In addition, there are serious suspicions that multinational companies (Producers, Super Markets) are responsible for the manipulation of market prices, forcing the market into a high ceiling price, despite having high sales and achieve economies of scale.

The new economic conditions, will redefine a new trend in the food market, as a result of habits changing, since a large proportion of household income it is spending in the diet section.

The main objective of the essay is to examine the parameters that allow me to see, whether it can achieve such a business idea and under what circumstances, as to minimize the chances of failure.

It is important to decode the new market trends, in order to find safe conclusions for the development of a chain of a Greek Traditional and Greek Organic Groceries (Greek Traditional Food Market).

In order to do that, firstly I will examine the environment with the Five Forces Model (Porter). I want to understand the environment within the project will be developed and I will examine the existing competition, the threat of new competitors, threat of substitutes, the bargaining power of suppliers and finally, the Bargaining Power of Buyers.

Moreover, I will set the Strategic Direction of a chain of Greek Traditional Foods Market, taking into consideration the information on the legislative framework.

Furthermore, I will analyze consumer behavior and also the mechanism of the stereotypes and techniques that the main competitor is using.



Creation the above findings in DCSYM and identification of the interest points and trends that could predetermine decisions on this project.

Following by utilization of the DCSYM findings in conjunction with SWOT Analysis and PEST Analysis, I will conclude regarding the final Strategy Project.

Finally, an approximate assessment for the viability of investment over time is essential and I will try to find the breakeven point and imaging of various scenarios in VENSIM.

Keywords: PORTER, STEREOTYPES, DCSYM, SWOT, PEST, VENSIM



EA-09.04

Business from scratch. The transformation of a simple idea into a viable enterprise

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EXTENDED ABSTRACT

In the era of crisis, most people are seeking new promising ideas that can turn into profitable enterprises. Nevertheless, a significant percentage of those seemingly bright ideas, are not applicable and feasible due to lack of funding, innovation and especially poor business planning. In the framework of this presentation, we depict how a simple marketing idea can be transformed into a viable enterprise, using several Systemic Methodologies. Initially, a market research was conducted in order to comprehend the costumers' and society's needs and requirements. Having noticed the continuously growing trend of marketing and social networks, we created the SCREEN project. To implement this project, a LCD screen is placed in a central city's point, presenting both news and all kinds of commercials (advertisements, events, political campaigns, etc). At the same time, the SCREEN is connected with a website, where all the people can easily log in, watch live content and make real time comments for all the news being presented. These comments, after a necessary filtering, are displayed on the SCREEN, triggering social interaction and resulting in news' content enrichment. Throughout this process, the local community is not only wide range informed, but is also given the change of participation leading to socialization increasement. All these, are harmoniously combined in a mutually beneficial relationship, where target marketing is achieved and in turn leads to great profits for both the advertisers and the SCREEN project. Additionally, after creating a DCSYM schema, to empower our idea we strengthen our business plan with a robust simulation model. This model is used as a decision support system, facilitating the designing phase and discovering the critical implementation parameters. Specifically, we designed several simulation scenarios, that predict the financial revenues ripples and the fluctuations of the news' social impact, thought the amount of sent comments. Multiple system characteristics, like the number of advertisers, the advertising cost, the amount of monthly expenses, and the importance of the presented news, are used throughout the simulation process, to ensure that all the possible run cases are taken into account. In conclusion, the main purpose of this paper is basically to encourage people to create business from scratch (start-up), while emphasizing that the most important success factor is the combination of a rational systemic approach and a well developed business plan.

Keywords: innovating ideas, social networks, advertising, business from scratch (start-up), project, simulation



Systemic Strategy in Program Management: Registry of Patients with Primary Immunodeficiencies (PID) in Greece

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EXTENDED ABSTRACT

INTRODUCTION

The need for the Registry of PID-patients derives from the rarity of these diseases and not enough knowledge for their existence, their biomedical importance in relation to other diseases, the development of new therapeutic approaches and the great impact in the lifes of the patients, their families and the community. The aim of the study was to deploy systemic approaches and program & project management processes in order to improve the Strategic Planning & Operations for the Management of the Registry of Patients with Primary Immunodeficiencies in Greece. The study took place in the Department of Immunology-Histocompatibility, "Aghia Sophia" Children's Hospital, Athens, Greece, which is a Specific Center & Referral Center for Primary Immunodeficiencies – Paediatric Immunology.

METHODOLOGY

Strategic Planning

It included strategy development (who we are, where we want to be, how to get there) and strategy implementation (specific actions and results).

Program Management

It involved the management of several related projects. Due to the fact that the study dealt with an known unknown subject matter, the fundamental concept followed was agile-oriented, although in the many cases/projects, the traditional project management philosophy was employed. A Program Charter and a Work Breakdown Structure is presented. Analysis is made regarding time, cost, human resource, quality, communication, risk, procurement, financial and stakeholders management, as well as program governance and lessons learned were gathered.

Systems Approach

Among the many systemic methodologies, the methodology of the Viable System Model (VSM) and that of the Design and Control Systemic Methodology (DCSYM) were chosen. A VSM is composed of five interacting subsystems which may be mapped onto aspects of organizational structure. Systems 1–3, are concerned with the organization's operations, System 4 is concerned with the strategical responses to the effects of external, environmental and future demands on the organization. System 5 is concerned with providing policy directives which



maintain the organization as a viable entity. DCSYM is a systemic methodology with a robust mathematical and semantic understructure capable of effectively guiding multi-agent dialectic design processes concerning boundary critiques, structures, procedures and interventions.

The central concept in the application of these methodologies was the identification of the problems incurring in the operation of the Center that obstacle the improvement of the Registry of PID patients.

Workflows processes

Moreover, in an attempt to develop workflows and Business Process Management applications we used the Joget Workflow, which is an open source web-based workflow software that offers full-fledged agile development capabilities (consisting of processes, forms, lists, etc).

RESULTS

- 1. Better understanding of the Centre in relation both to its internal and external environment (the main hospital, other hospitals, paediatricians, partners, collaborating organizations and societies and others)
- 2. Identification of inconsistencies and needs regarding procurement (equipment, materials, reagents) and personnel issues
- 3. Indication of ways for improving marketing processes and plans to inform and aware doctors all over Greece for the great need in participating in registering patients with Primary Immunodeficiencies
- 4. Detection of communication issues that either delay or obstacle the reference of patients for immunological consultation and investigation
- 5. Remarkable increase of the collected ESID Consent Forms
- 6. More efficient operation of the subsystems of the Centre
- 7. Better work-time management

DISCUSSION

For resolving the conflicting issues and improving the operations within the Center the beneath actions are suggested:

- 1. Employ human resources
- 2. Follow-up of Laboratory investigation (by Vensim)
- 3. Follow-up of the workflow of the outpatient clinic (by AnyLogic)
- 4. Follow-up of the workflow of the process for the collection of the ESID Consent Form (by JoGet v.3)
- 5. Work teams creation Focus on human relationships (by Strategic Assumption, Surfacing and Testing SAST)
- 6. Implementation of a Quality Management System
- 7. Stakeholders Consensus (by Structured Dialogic Design SDD)
- 8. <u>Sy</u>stemic <u>Multi-Me</u>thodology for the <u>Ma</u>nagement of the <u>Registry of Patients with Primary Immunodeficiencies SYMME-MARPPID</u>

Consequently the management of the Registry of patients will become more effective, the medical perspectives will be constantly updated and hence will contribute significantly to the enhancement of the quality of life of the patients and their families.

Keywords: Agile Program Management, Primary Immunodeficiencies (PID) Patient Registry, Professional Systemics, Workflow-Joget, Systemic Multi-Methodology for the Management of the Registry of Patients with Primary Immunodeficiencies (SYMME-MARPPID)



Professional Systemics: A Case Study for the Optimization of the Processes in the Greek Healthcare System regarding Patients suffering from Multiple Sclerosis (MS)

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EXTENDED ABSTRACT

In today's difficult period of European economic crisis, Greece is facing a radical reconstruction and reform in the Public Sector. During this transitional period the Greek citizens are subject to social discomfort and degradation in their daily life. As expected, the unstable and uncertain environment also applies to the healthcare sector. The situation is getting even worse for patients suffering from Chronic Diseases such as Multiple Sclerosis (MS).

MS patients, who are under chronic medical treatment, have to deal with the major changes regarding Public Insurance Funds. The bureaucracy found in the Public Healthcare system (State hospitals and Public Insurance Funds) is usually detrimental to patients suffering from Chronic Diseases like MS. Instead, those patients should be treated well and the State must supply those in need with their medicines. The patients must take their medicines on time otherwise they will face the consequences. If the public healthcare system due to bureaucracy and inadequate funds, cannot supply the patients with their medicines then they will have to pay for themselves. Unfortunately it is difficult or even impossible for them to afford those medicines because of the extremely high cost.

This project shows the current situation of the public healthcare sector with the aid of DCSYM systemic tool. DCSYM visualizes all the processes, the communication links, the role of shareholders and the key-role factor of the system. In addition, Beer's Viable System Model (VSM) and Vensim were used. The main purpose of these systemic approaches is to find a patient-centralized procedure that will treat them with respect. This can apply to the whole public healthcare sector and not only patients with MS. In conclusion, this project can have a major impact in the healthcare sector from a social responsibility and awareness point of view.

Keywords: Healthcare, DCSYM, Viable System Model (VSM), Vensim, Social Responsibility



Viable Systemic Approach to a National Health Service Organization (E.O.Π.Υ.Υ.) Process

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EXTENDED ABSTRACT

Changes in information and communication technology (ICT) require continuous modifications in con-temporary organizations and in corresponding work processes. Although technologies are a means and not an end, should be chosen considering legal frameworks, organizational issues, social and territorial peculiarities and economic sustainability.

The goals of EOPYY are the new Agency to become gateway to the health system and driver support and service to the insured in it as well as to achieve the economic rationalization of primary health care that at the end of the course not have to borrow new capitals.

This paper focuses on improving a process within Greece's National Health Service Organization using Systemic Methodologies and especially the Viable System Model. The methodologies' target is to correctly analyze and form the model and in parallel to improve it. The systemic methodologies concentrate on the human factor that is evolving in those systems and they constitute a very valuable tool helping us to understand and define the system functions. Thus the model's usability and agility is improved, having a reduced abstraction level and giving the business high and realizable functionality.

Keywords: National Health Service Organization, E.O.Π.Y.Y., Systemic approach, process modeling, Viable System Model



A Systemic approach to Good Manufacturing Practice (GMP) Inspections: Accessing the Competence of Personnel in the Production of Pharmaceutical Products

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EXTENDED ABSTRACT

The pharmaceutical industry of the European Union maintains high standards of Quality Management in the development, manufacture and control of medicinal products. A system of marketing authorizations ensures that all medicinal products are assessed by a competent authority to ensure compliance with contemporary requirements of safety, quality and efficacy. A system of manufacturing authorizations ensures that all products authorized on the European market are manufactured/ imported only by authorized manufacturers, whose activities are regularly inspected by the competent authorities, using Quality Risk Management principles. Manufacturing authorizations are required by all pharmaceutical Manufacturers in the European Union whether the products are sold within or outside of the Union.

European Commission has adopted Directives laying down principles and guidelines of Good Manufacturing Practice (GMP) for medicinal products. Detailed guidelines in accordance with those principles are published in the Guide to Good Manufacturing Practice, which will be used in assessing applications for manufacturing authorizations and as a basis for inspection of manufacturers of medicinal products.

GMP is the part of Quality Assurance aimed at ensuring that products are consistently manufactured to a quality appropriate to their intended use. GMP covers all aspects of production; from the starting materials, premises and equipment to the training and personal hygiene of staff. Detailed, written procedures are essential for each process that could affect the quality of the finished product. There must be systems to provide documented proof that



correct procedures are consistently followed at each step in the manufacturing process - every time a product is made.

In the present study, the GMP audits - performed by Competent European Authorities to ensure GMP compliance in the manufacturing of pharmaceutical products - are viewed from a systems perspective.

A system is a design of integrated components that can measure the performance of the whole and can predictably and consistently detect and correct deficiencies. Systems' thinking is the framework used for seeing interrelationships rather than things, for seeing patterns of change rather than static snapshots, when a GMP inspection is performed.

Product Quality Systems are approached and analyzed as series of interrelated processes or activities representing an integrated approach to the philosophy and practices contributing to drug substance and drug product safety, identity, strength, purity and quality.

Personnel's education and training are addressed as one component of the GMP system, which exchange information, energy, or matter with the other dependent components of the system to produce a result.

Finally, the importance of the personnel competence for the system performance, focusing on the feed-back relationships between this studied component and the other parts of the system, it is shown. In this view, a systemic GMP Compliance Audit would allow to avoid delays in bringing product to market due to not passing a GMP audit, whilst the cost and time associated with regulatory reaudits, if an audit outcome is not satisfactory would also be avoided or minimized.

Keywords: Good Manufacturing Practice (GMP); Systems Thinking; Systems Approach; Personnel's education and training



External quality control at blood transfusion services A systemic approach using DCSYM

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EXTENDED ABSTRACT

The purpose of this study is to present the systems and methods used to assure the quality of services in blood transfusion departments from the systemic point of view as an application of the DCSYM methodology.

In order to control the level of quality of services three methods are applied:

- Quality management system
- Internal quality control
- External quality control

In the beginning, DCSYM methodology is employed to depict the system which consists of the above three methods and the way the above independent methods contribute to the quality assurance.

After that we focus on the external quality control and how it helps the health service departments to maintain a high level of quality equal to each other. The external quality control is particularly important to assure the quality of laboratory test results and it is conducted by organizations independent of the inspected laboratories. These organizations check test results of the participating laboratories to make sure that all are of a similar standard.

The case study refers to the external quality control systems NEQAS and EDQM-BPTS. A DCSYM representation of the whole external quality control network including all the participating laboratories depicts the way it works as a system and how findings or problems in one of them may affect every part of that system.

The conclusion is that the quality control is a complete system and the DCSYM methodology is a perfect tool to describe it. DCSYM is used to form a clear documentation of the problem and to represent the knowledge about it.

Keywords: Quality control, Blood transfusion, Systemic, DCSYM



EA-11.01

The Distance Marketing of Consumer financial services (Directive 2002/65/EC, art. 4a law 2251/1994 about consumers' protection)

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EXTENDED ABSTRACT

The Directive 2002/65/EC regulates the marketing of financial services by means of distance communication. "Financial service" means any service of a banking, credit, insurance, personal pension, investment or payment nature. "Means of distance communication" is defined as any method of communication where the parties are not simultaneously present e.g. telephone, fax, traditional mail, proprietary computer networks and the internet. The main features of the Directive are:

A prohibition of "inertia selling"

Inertia selling is the marketing practice of supplying financial services to a consumer without a prior request on his/her part and including a request for immediate or deferred payment. Under the Directive a failure of a consumer to respond after receiving such unsolicited financial services cannot be taken to be consent.

Regulation of direct marketing (including cold calling and spamming)

It is an opt-in system (prior consent of the recipient is required) in relation to sending unsolicited faxes or using automated calling systems for direct marketing of financial services. Member States have been given the option to choose between opt-out (prior consent of the recipient is not required) and opt-in in relation to all other forms of direct marketing e.g. email and mobile phone text messaging. However to be consistent with the new Privacy and Electronic Communications Directive, direct marketing of financial services by email, fax, mobile phone text messaging and non-automated telephone calls will need to be opt-in unless it is an email or text message to an existing customer.

Whether an opt-in or opt-out system is used by the Member States there must be no cost to the consumer.

An obligation to provide consumers with comprehensive information

In general before a contract is concluded a consumer must receive in a durable medium all of the information specified in Article 3 relating to the supplier, the financial service, the distance contract and means of redress as well as any other prior information required by Community or domestic legislation. "Durable medium" means any instrument that enables the consumer to store information



and access it in the future e.g. floppy discs, CDROMs, DVDs and the hard drive of the consumer's computer on which the electronic mail is stored. It does not include Internet websites unless they fulfill the criteria contained in the definition of a durable medium.

Keywords: Directive 2002/65/EC, art. 4a law 2251/1994, prohibition of "inertia selling", Regulation of direct marketing



EA-11.02

Personalized Advertising in Web

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EXTENDED ABSTRACT

Nowadays, Web Advertising becomes more and more important for modern enterprises and organizations. The penetration of internet via the various tablets and mobile devices in the daily life of individuals and households gives the opportunity to promote further product and services. By the term Web Advertising, we mean the ways of product promotion and marketing via Web. By the term Personalized Advertising, we mean that the promotion messages that take into account the user(s) profile. Web advertising uses various media and techniques, such as simple text, movies, banners, pop-up's, pop-under, maps, emails, while contextual techniques based on keywords, links over keywords or content are also applied. Furthermore, analysis of the internet user activities by logging his visits to various sites, along with the semantic analysis, is widely used. The charging for web advertising includes among others per click, per display, per IP, per order, per questionnaire, per download, etc. There are three main advertising models: the advertiser model, the portal-based model and the broker model. The personalization of advertisements in web significantly increases their impact and effectiveness. On the other hand, personalisation increases the advertising costs due to more analysis required for grouping users for different treatment, the increased intelligence required by the systems, etc. Indeed, the relevant support systems need more information to be collected, regarding the user preferences and interests, his financial activities, his academic and cultural background, his profession, his friends and social networking, his social position and influence, etc.

Two distinguished examples of personalized advertising systems are Ad Rosa and Adnostic. Ad Rosa groups system data and extracts the centroid of each user group by creating a prototype vector from the various user sessions, the viewed advertisements, the basic concepts of a page that are extracted from natural language processing algorithms. These vectors correspond to the users' behaviour and are used in combination with other factors for the choice of the most appropriate advertisement. Adnostic exploits the browser usage. Specifically, it extracts the personal profile by processing browsers' local history. It uses url's, keywords, page description and title, and a directory with url's for conceptual classification and natural language processing. It classifies the user interests according to the number of site visits, the clicks or the visit time. It receives a list of N advertisements from the advertising network in order to



choose one of them for display. The viewed advertisement is sent encoded, while a third-trusted party decodes it at the charging time.

In this paper, we also propose a prototype system for personalized advertising. Main requirements include among others the automated advertisement selection based on user interests, the weight-based prioritization of advertisements, minimum intervals between advertisements, the ability to postpone an advertisement, the payment method, the advertisement selection algorithm and, a flexible administration system. We assume two navigation ways, the first simulates the user internet navigation and the second one simulates the navigation inside a portal. The advertiser that manages the advertisements and views the statistics, the user that navigates both in www and in internal system, and the system administrator are the main system roles. UML was adopted for the system design.

Keywords: Personalized Advertising, WWW, Behavioral Analysis, System Development



EA-11.03

A Marketing Plan for Lesvos's Tourism

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EXTENDED ABSTRACT

I. INTRODUCTION

The following analysis is carried out within the context of the Certification Project on the Postgraduate Programme "Professional Systemics – Project Management". The subject of the project is the design of a Marketing Plan by using the knowledge and tools acquired after attending the programme. Specifically, we are going to use DCSYM in order to illustrate the procedures followed, whereas VENSIM will help us create a dynamic model.

For the realization of this project, we chose a Greek island in North Aegean prefecture, the island of Lesvos. The Marketing Plan will refer to the growth of the island's touristic product.

The structure of the Marketing Plan includes: the analysis and diagnosis of touristic environment (internal and external), as well as the communication of the touristic product. Below you will find further information for each of the aforementioned parts.

II. MAIN BODY

Analysis and diagnosis of touristic environment

As mentioned above the Marketing Plan analysis will follow specific steps, having as its' first the analysis and diagnosis of the touristic environment. This first chapter is consisted of sub-sections, which are discussed below.

1. Greece and Tourism

Given that tourism is one of the dynamically improving sectors of the Greek Economy, this sub-section includes a Greek Touristic Product analysis, as well as the National Marketing Structure.

2. North Aegean Prefecture

This section includes information about North Aegean Prefecture's current situation in general terms, and more specifically a comparative analysis among the islands regarding the tourists' arrivals and nights spent in each of them.

3. Lesvos' touristic product

The specific part analyzes the touristic product demand (the clients' identity), as well as the offer (resources and sights, infrastructure, facilities - hotels, development of the area's touristic product), along with the historical



development of the island's tourism sector and the visitors' evaluation of the touristic product.

"SWOT Analysis" - Competitive position

This chapter presents an analysis of the island's strengths and weaknesses in conjunction with the opportunities and threats arising from the island's touristic operation in a highly unstable and volatile environment.

Use of the systemic tools

The systemic tools will help us significantly, as DCSYM will show us the procedures that are currently followed by the bodies involved in the tourism sector, whereas by using VENSIM we will create a dynamic model depicting any necessary actions for increasing the number of tourists that visit the island.

Communication of Lesvos' touristic product

In this chapter we analyze the strategic plan having as a goal the reinforcement of island's competitive advantage towards competition. Specifically, we describe in detail the design of actions in order to enhance the island's competitive advantage and at the same time "heal" any potential weaknesses.

Keywords: DCSYM, VENSIM, SWOT analysis, Lesvos, tourism, marketing plan



EA-11.04

Assessment of ICT and E-Marketing Adoption in Sustainable Rural Tourism in Greece

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This Information and Communication Technology (ICT) connectivity, PCs and Internet, is very widespread in all business sectors. The Internet is an exceptionally dynamic environment which continually evolves. Internet has been extremely important for the promotion and increase in sales of the enterprises because it provides a variety of advantages and benefits. Enterprises aim at their participation in the internet society since the benefits are high and electronic systems are ready to serve clients all over the world 24 hours per day 7 days a week when the cost keeps decreasing. Internet-use evolves, often beginning with an e-mail address, progressing to simple websites and then adding website features to integrate the enterprise with customers. Moreover, the internet has been proved to be most effective when used as an advertising and marketing tool. E-marketing can be defined as the use of Internet and related digital technologies to achieve marketing objectives and support the modern marketing concept. The goal is to provide attractive, interactive and integrated services through the website that meets the requirements and expectations of various user groups. This goal includes ensuring access to current information without delays and, further, controlling access to information and implementing a charging mechanism. E-marketing is the latest Internet-based marketing medium and it is now generally accepted by the tourism enterprises. Tourism industry has emerged as the world's largest industry and the long-term global growth projections are greater than for any other industry. Sustainable tourism refers to development in such a manner and at such a scale, that it remains viable over an indefinite period. It should neither degrade nor modify the existing environment



to such a degree that prohibits development and well-being of other activities. Sustainable tourism is developed and managed together with the principles of sustainable development. There is a special relationship between the concept of sustainable tourism and the rural tourism. This paper assesses ICT and emarketing adoption in rural Greek tourism enterprises. Rural tourism enterprises are analyzed and further ranked as to their e-marketing features and ICT functions accomplished. An integrated-dynamic framework is developed for ranking the enterprises based on the multicriteria method PROMETHEE II and the results are discussed. Finally, we identify and describe the optimum enterprises to be used as a model for designers of websites promoting e-marketing activities for rural sustainability.

Keywords: e-marketing, ICT, tourism, sustainable rural tourism, Internet, website.



EA-11.05

Systemic Methodologies Applied in Advertising Company: Results and Benefits

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EXTENDED ABSTRACT

Goal of this project is education, understanding and effectiveness of systemic methodologies and tools while applied in an advertising company. The choice of Agorainfo, the advertising company, offered the investigator actual results at work and points for improvement. It is also very important to follow the coexistence of two new and future tools, systems approach and advertising through the internet. In this project is depicted the degree of improvement of business following the implementation of innovative methodologies in advertising company.

The systemic methodologies concentrate on the human factor that is evolving in those systems and they constitute a very valuable tool helping us to understand and define the system functions. Thus the model's usability and agility is improved, having a reduced abstraction level and giving the business high and realizable functionality. The proposed approach combines well-known systemic methodologies (DCSYM & VSM), providing this way a scientific and productive tool in order to detect and solve organizational problems.

Nowadays, advertising business, either small or large, the use of World Wide Web is the most important source for display to the general public. Expected results from this project will help in better functioning Agorainfo and enduring systemic application of methodologies.

At first DCSYM will be used in order to describe communications between different inner Agorainfo subsystems, which will provide an image of the existing communications. Any issues will be resolved by the use of Viable System Methodology. While completing the systemic approach, Pest analysis as well as SWOT analysis will be used.

Keywords: Sales, Advertisement, DCSYM, VSM, Systemic Methodologies, Reorganize



EA-11.06

Social Media and their Significant Impact on the Tourism Sector

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EXTENDED ABSTRACT

The main objective of the project is to identify, through studies, research and authoritative sources of information the important consequences brought the increasing use of social media (facebook, twitter, pinterest, google +, You Tube etc.) In the sensitive and yet important tourism industry of our country which is experiencing its own crisis as well.

How much influence have social media about the information, choices, decisions, habits of potential customers and their future implications for the client and the company itself in the areas of Branding, Positioning, Marketing, Sales etc.

In our analysis we will use the example of Superb Travel, a travel agency that works exclusively with incoming tourism through internet.

Keywords: e-TRAVEL, TOURISM, SOCIAL MEDIA, E-MARKETING, INTERNET, TRAVEL AGENCY ON LINE



EA-12.01

Retail Banking and Customer Satisfaction

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Retail banking is a continuously developing industry all over the world. It has changed over the last few years mainly because of the globalization of the financial markets, the mergers and acquisitions that took place, the development of modern, innovative technologies and the introduction of new financial products and services in the retail banking market. As a result, banks have to compete hardly with each other in order to survive under these new conditions. A competitive advantage would be useful, or even necessary for every financial institution in order to survive and to present a strong image with increased profitability.

The value of customer satisfaction in retail banking is well appreciated as one of the key factors that determine and predict profitability. Nevertheless, and despite the fact that an enormous number of researches has been conducted on this issue, it is still not clear what factors affect customer satisfaction and how.

This study attempts to explore the way specific factors (found in literature) affect customer satisfaction in the Greek retail banking sector. More specifically, a new conceptual model is proposed where various issues, like service quality, transaction cost, convenience, problem handling processes, adoption of corporate social responsibility policies, and customers' experience with retail banking are incorporated.

To empirically test the validity of the proposed model, data from 407 respondents were collected using a structured electronic questionnaire that was distributed to bank customers via e-mail.

Overall, although the level of customers' satisfaction is found to be slightly above the average, they consider the quality of the services offered to them by the banks as not satisfactory. In addition, the level of problem handling and convenience is rather poor, while they consider that transaction cost is high, especially compared to the quality of the services provided. The main findings of this study indicate that the most significant determinants of customer satisfaction are service quality, cost of transaction, problem handling processes and the implementation of corporate social responsibility policies.

Keywords: Retail Banking, Customer Satisfaction, Service Quality, Transaction Cost, Problem Handling Process, Corporate Social Responsibility.



EA-12.02

Managing the Complexity and Modelling the Effects which Various Events May Have on a Department's Operations: Applied Systemic Methodologies in a Bank

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EXTENDED ABSTRACT

Technology continues to evolve at an exponential rate, along with the growth in human population. Organizations grow increasingly complex, along with the problems and opportunities they engender. Both their high complexity and their changing environment call for new Strategic Management approaches. This is imperative for an IT Department of the banking sector as the one under examination.

If an organization is to maintain viability within its environment, and management is to continue to steer the organization, then the Law of Requisite Variety suggests that the variety of responses displayed by the organization should at least equal that emerging from its environment, and the variety of responses of management should at least equal that of the organization. The ability of the system to absorb its environmental complexity is determined by its structure. There are structures that improve the manageability of the system and others that reduce it. Thus, identifying favourable or unfavourable structures and capable of performing at a required level, becomes a primary task.

The criteria of viability require that organizations are or become ultra stable, that are capable of adapting appropriately to their chosen environment, or that they adapt their environment to suit themselves.

Beer developed his Viable System Model (VSM) on the concept of variety.

The systems approach offers alternatives to conventional organizational structures and processes, and provides another perspective of organizational problems.

The Design and Control Systemic Methodology (DCSYM), as a systemic methodology with strong mathematical and semantic infrastructure, is proposed as a high-level design language capable of accurate and complete schematic mapping of complex problems using simple diagrams to illustrate the systems that make up the problem including communications between them and the interventions that may be proposed and is used for the depiction of the current state of our Department.

Viable systems are those that are able to maintain a separate existence. If they are to survive, they need not only the capacity to respond to familiar events, but the potential to respond to unexpected events as well as to the emergence of new social behaviours. By examining viability using principles of the Viplan Method, a few improvements are proposed.



The VSM models the structures of our Department and the relationships between them. The latter are best depicted with the assistance of VSMod software, which is then applied and is the most appropriate tool to capture problems with multiple recursive criteria.

The plain fact is that for today's organizations there is no room for mistakes and real life experimentation when it comes to making business decisions.

The recent advancement in information technology and the capability for cost effective computer business modelling and simulation, opens up new ways for experimenting with business decisions by testing a number of alternative plausible strategies in a controlled computer simulated environment.

The application of Systems Dynamics and the modelling of the effects which may have various events on our Department's operations are therefore considered necessary for a better monitoring and best decision making.

The modelling of one of our Department's functions using the software Vensim, which is expandable on each other function of our Department and the behavioural analysis of the model on selected scenarios, follows.

Both the in-depth application of Beer's VSM on the procedures of our Department and the modelling of various factors that may affect its operation can be considered as innovations introduced by this study, since they guarantee both the sustainability of the procedures and the easy monitoring and adjustment of significant factors that may affect the smooth operation of the Department.

Further analysis, the in-depth application of the Viplan software as well as the use of other modelling software are left as objects of action in subsequent studies.

Keywords: Effects, Modelling, Viplan, DCSYM, VSM, VENSIM



EA-12.03

Systemic analysis of debit and credit card's fraud activities and how this evolving

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EXTENDED ABSTRACT

It has been 45 years since the first ATM was installed in the world and gradually over the years the progress of technology has evolved so that it is now a part of the daily reality of bank transactions. The ATM (Automatic Teller Machine) was the solution to the problem of customers whose money was not available all day long but only during bank working hours. Unfortunately, like any object that has great monetary value, it has become an object of interest to attempt robbery in various ways. Furthermore, due to technological evolution more and more "intelligent" machines have been developed, thus the activities of organized crime feed, especially in times of economic crisis. So new techniques of fraud have been and are continuing to be developed in order to cheat customers using ATMs and steal their money.

The aim of this study is the analysis, with the usage of systemic methodologies, of the phenomenon of data theft of credit and debit cards owners from the ATMs and POS / EFT systems with the purpose of stealing from the accounts of the beneficiaries, and also how the banks in cooperation with manufacturers of ATMs and POS / EFT systems deal with this phenomenon. The purpose of this study is to draw reliable conclusions about the phenomenon of spyware, estimating the chances of early detection with the use of simulation software and to find possible measures that can be achieved both by banks and the users of the equipment to avoid such undesirable situations.

One of the systemic methodologies that will be used is the interactive design, or in other words the IP, which as a method of solving a problem requires the participation of all the stakeholders from the onset of the problem to the design and implementation of the solution.

Another polymethodology that will help visualize and expand the diagnosis of the problem is the Design and Control SYstemic Methodology (DCSYM).

During this study we will also see the application of the Deming cycle theory. The impressive point is that we will see the application of the theory being applied by all parties independently. Banks and manufacturers are on one side with common goals and spywares on the other.

Finally we will use the simulation software Anylogic which helps us to simulate the situation in order to see how it may evolve.

In taking advantage of systemic tools, we can visualize and simulate the environment in which the problem has been identified and as a result take the



appropriate measures and act effectively in order to eliminate or minimize the specific problem as much as possible.

Keywords: ATM, FRAUD, CARD SKIMMING, DCSYM, ANYLOGIC, DEMING



EA-12.04

Analyzing the External Environment for e-Business – A Systemic Approach on Business Strategy for the Companies that operate in the m-payments space

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EXTENDED ABSTRACT

This paper attempts, through the examination of a hypothetical market, to present the obstacles that ICT - related companies face, regarding the analysis of their macro and micro external environment. The overall attempt of this research is to examine the feasibility of a new framework for analyzing online companies' external environment, based on network theory and systems thinking.

There are currently three dominant methodologies for evaluating and analyzing the strategic external environment of an organization. These methodologies include PEST and its variations, which are used to assess key aspects (ranging from four to seven, depending on the variation) of an organization's macro external environment, Porter's 5 forces, which are used for evaluating the micro external environment and the Priority Matrix, which is used to identify and analyze the importance of developments in the external environment.

The aforementioned methodologies have been dominant throughout the years, but are still not well adapted to an online setting. Problems include their lack of responsiveness in changes through time, as well as their inability to describe complex relationships between different parties. Therefore, there are many examples of companies and organizations, which either belong to the ICT sector, or are closely related to the Internet (such as content creators etc.) that, despite their once dominant position, find themselves in a difficult strategic position.

A new approach is required, that does not, necessarily, contradicts fundamentally those currently in use, but which can enhance their effectiveness in mapping a complex, border-less and ever changing environment, such as the Internet and generally the ICT sector.

This paper is focused in the analysis of the introduction of the mobile payments technology in a hypothetical market. This example is selected because actors from two distinctive sectors, banking and mobile carriers respectively, interfere in a common territory.

CLDs and SNFs are used in order to better display the dynamics of this hypothetical market and the driving factors between each type of actor. Multiple scenarios are used, in an attempt to spot the most influencing factors, and to estimate the outcome for each scenario.

Keywords: strategy, mobile payments, Internet Ecosystem, framework.



EA-12.05

Computer Anxiety and Adoptio of New Technologies: Empirical Investigation in Bank Employees in Greece

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EXTENDED ABSTRACT

Our empirical study examines the influence of external variables on factors affecting the adoption of a new technological system. The context of the framework is based on Technology Acceptance Model (TAM) and incorporated extra variables as computer anxiety. Survey was conducted in a sample of 897 bank employees, in Greece. We test the attitude of the employees, and the effect of demographic characteristics on the perception of ease of use, usefulness, self efficacy, and anxiety on adopting a new technological system.

The findings suggest that demographics such age, experience and position of responsibility are indicators of the perception of employees' self efficacy. Moreover, the level of anxiety depends on the employees' negative attitudes toward the adoption of a new technology.

Keywords: Technology Acceptance, TAM, Self efficacy, Ease of use, Usefulness, Individual Characteristics, Anxiety, Banking.



Improved Efficiency as a Potential Driver of Enhanced Merger Activity

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EXTENDED ABSTRACT

During the last century 'waves" of mergers appeared in UK and US economies. In this paper we try to evaluate social gains created by merger activity in terms of enhanced efficiency levels. We study the existence of any relationship between merger activity, concentration levels and enlarged monopoly power on profitability. In addition, we examine the consequences of merger activity on efficiency based on profitability measure and on k-measure as an alternative efficiency measure. Also based on the available empirical evidence we present the influence of mergers on efficiency. Additionally we focus on considering the restrictions in association with the proposed alternative measures. In conclusion we examine the policy implications by summarising the results of merger activity on different aspects such as efficiency, welfare losses, concentration level, technical progress, labour and product variety.

Keywords: merger activity, efficiency measures, K measure.



Athens 2004 Olympic Games: The Accreditation Project

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EXTENDED ABSTRACT

The accreditation process for any Olympic Games organization is a complex, sophisticated and time consuming process. More that 500,000 people from more than 2,000 organizations all over the world are accredited for every Olympic game. Until the Athens 2004 Olympic Games, this process was paper-based. Hundreds of different paper forms were printed and send to all these 2,000 different organizations. Different rules applied to each category of participants that determines their quota their access and specific zone entitlements.

These organizations were categorized as following: International Federation, International Olympic Committee, National Olympic Committee, National Olympic Committee - Athletes only, Broadcasters, ATHENS 2004 OC, Media, Workforce and Sponsors. Then these paper forms were distributed to individuals, filled in and returned to the Company organizing the games(ATHENS 2004 OC). A number of manual checks do apply to make sure that the applicants comply the rules and regulations. Finally these hundreds of thousands of paper forms were typed in a database. The error rates in the process were up to 20% meaning that thousands of people were not accredited correctly.

In Athens 2004 this paper based process was redesigned in order to be semi-automated. All the checks were integrated in the web application. This project created a 3-tier application in order to give the opportunity to all 2,000 organizations to send the accreditation data in a semi-automated way. This was done with the creation and use of a fully customizable Excel file that was different for each type of organization. The data where entered offline into Excel file and then this file was upload to the web server of the Athens 2004 organizing committee, saved in an RDBMS database and automatically validated for errors. In a similar process digital photographs were uploaded in an FTP server.

This project was unique in the history of Olympic Games. The requirements of the project were massive. The checks for errors were millions. The stakeholders were hundreds' of thousands using different operating systems, different versions of Excel, different language code sets, etc. Finally more that 200,000 individuals were accredited by this system for first time ever in the Olympic Games history.

Keywords: Olympic, Games, Athens, Accreditation, 3-tier, RDBMS



Applying System Safety Engineering to Safety Standards of Domestic Robots

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EXTENDED ABSTRACT

Standards represent essential means in determining how adequate safety system's potential behavior could be espoused by a system, especially with respect to its interaction with other systems or socio-technical structures. Standards could depict the design and development activities that offer enough confidence that these guidelines are actually contented in any specific level of the system. Safety standards describes a compromise as to what comprises best practice in achieving safety in these systems, and what comprises best practice in the attitude of the design stage. Household robot is a mechatronic system used in a domestic environment. Domestic robots are far beyond a group of technical artifacts: they are a set of hierarchical structure; engineering management of procedures, process models that involve the culture of the manufacturer that produce them. They reflect the society where they will execute their task and the coexistence with residents, infants, handicapped, guests and pets at home. They complete a wide variety of tasks such as vacuum cleaning, fetch and carry tasks, ironing clothes, window cleaning etc. The term "domestic" indicates the use domain that is the household environment. Domestic robots could be considered as socio-technical systems since they are capable of taking over chores in the house, which is inhabited, by groups of people, and human-robot interactions constitute basic functions of any of these devices. Safety standards for this emerging sector of products involve different beings that coexist in the house with these devices across various constraints. Family members play a significant role in the safety of these products that are provided to them.

In systemic theory, domestic robots could be viewed as complex socio-technical systems where each stage implements constraints on the lower hierarchical subsystem. Since specific safety standards for domestic robots are not available, we propose that their safety standards should be carried out on the base of system safety engineering that is discussed here. System safety engineering accomplishes the whole range of management of a system. It goes far beyond covering only the hardware and the related process models of safer systems. It includes designing and production stage, management of a socio-technical system such as the coexistence human - robot at home, management of the relation between manufacturer, user and government that derives from safety standards with respective safety requirements, interface from industrial safety to domestic



safety, and effect of the use of safety standards on accident analysis. All the above non-technical features of this system could not be disregarded. According to systemic theory, safety could be considered as an emergent property and not an element property that derives from the interaction and the behavior among the subsystems, and shall be controlled at system stage not at stage of interrelated components. Safety turns out to be a control issue where the objective of the control is to put into practice the safety precautions and is defined as the lack of accidents. Accidents are a consequence from ineffective control or implementation of safety requirements on the design and operational level of the system. With the aim to sustain the ultimate objective of this study, i.e. putting forward an innovative, systematic and complete method that combines worldwide well-tried, existing principles applied at industrial robots with a new concept concerning specific socio-technical system's issues.

Keywords: system safety engineering, safety standards, domestic robots, sociotechnical system, human-robot interaction.



Electricity regulation and foreign direct investments: Incentive or obstacle?

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EXTENDED ABSTRACT

Regulation of electricity sector plays a crucial role in the political and economic agenda for both industrial and developing countries. The regulatory efforts of more developing countries in order to attract foreign direct investments (FDI) and enhance the level of effective competition in the industry are hindered by the absence of a sound legal framework, the weak level of regulation, and the extended state interventionism. The main aim of this study is to examine the regulatory process in the electricity sector within the OECD countries and determine the extent to which it has affected the level of foreign direct investments. For this purpose, we use an updated data set for thirty OECD countries covering the period 1975-2010 and panel data econometric techniques. Our analysis reveals that there is a strong and positive relationship between effective regulation and investment.

Keywords: Investment; Regulation; effective competition; electricity sector; panel data



EA-14.01

User Categories as a Factor in Designing Multilingual Human-Computer Interaction Systems for the General Public

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EXTENDED ABSTRACT

In multilingual Human Computer Interaction Systems, designed for services intended for the General Public, a crucial factor to be taken into account is the general social and cultural context in which the interaction between Users and Systems takes place. Users demonstrate differences both in respect to their expectations from the System as well as in regard to their behavior to the System (Wiegers, 2005, Constantie and Lockwood, 1996). In multilingual applications, these differences are not limited in the typical differences observed concerning age, gender, professional and personal interests and general lifestyle: the relationship between Users and Systems reflects not only the degree of familiarity of the society with computers, but the overall relationship of society to the concept of electronic devices and gadgets. In respect to these features and in respect to the design of multilingual applications for the General Public, it may be observed that the Users can be divided into three categories.

The first category may be classified as "Experienced Users" and involves Users in communities, where the General Public has a remarkable familiarity and a traditional relationship with computers and, in general, most types of electronic devices in any form. Furthermore, it should be noted that Experienced Users are also aware of a System's limitations and are more inclined to oversee minor flaws or to retry in case of a failed interaction.

In contrast to the first User category, another User category, "Inexperienced Users", concerns Users belonging to communities where the relationship between electronic devices and computers is relatively recent and any substantial experience with them is restricted to only a minority of Users. For Inexperienced Users, the interaction with the computer should be easy, without too many additional impressive yet remarkably complex features which may tire and discourage the User or, worst case scenario, are simply not easily understood. The interaction with simple expressions, without unnecessary use of technical terminology is consistent with the needs of this User category. Additionally, strategies such as verification questions are used and explanatory elements should be present or directly available for a successful interaction. This is especially important in modeling concerning the Utterance Level and the Functional Level (Moeller, 2005) in the System's dialogue structure.



As a third category of Users may be considered to be Users in communities where there is a majority has an experience with electronic devices computers and Human Computer Interaction (HCI) Systems, but they not generally constitute an element of culture and lifestyle. Users may know how to use a System, however, will easily resort to traditional ways of being served and will rather use an HCI System if the incentives or motives are attractive enough. For these "Distantiated Users", User Satisfaction is of major importance, since the User is less likely to oversee minor flaws or to retry using the System in case of a failed attempt. For Distantiated Users, the use of too simplistic terms and too much explanatory information, but also excessive complexity, are recommended to be avoided. Strategies such as "safety nets" (Lewis, 2009), within an efficient design, should also be readily activated.

Keywords: Human-Computer Interaction, multilingual systems, User categories, dialogue structure Words



EA-14.02

Social Media Governance: A Guide to Managing Social Media

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EXTENDED ABSTRACT

Social media have been usually used as a promotional tool of brands, products or services. Today businesses start using social media as a powerful mean of an interactive communication with costumers. Social media present an opportunity for businesses to perform their customer service activities online, allowing companies to form personal and public relationships with their consumers. On the other hand, the immediacy of social media exposes businesses to negative feedback.

Information spreads in a matter of seconds and the speed and reach of social media is undisputable. The incredibly fluid nature of social conversations requires brands being on a constant state of readiness in order to respond quickly and in an appropriate manner to questions or comments.

This paper is the result of a project implementation that was designed to determine specific processes, within a large company, for the management of its social media channels. It will constitute a guide that will provide the means for big organizations on how they can adapt a systemic thinking approach in order to create the necessary procedures for the management of social media channels. It will specify the essential information needed for an organization to define the stakeholders and create a process flowchart for the management of comments. Furthermore the paper includes a flowchart, which indicates the ways a company should handle negative comments and help create rules of engagement for social media channels.

During the implementation of the project the need of a new role became apparent: the role of the community manager who will be responsible for the brand strategy across social networks. The community manager will use social networks to be the voice of the company to the community and vice versa. He will also monitor the social media channels as well as create engagement. The addition of a dedicated person is often unlikely during the first steps of social media discovery period and initial learning phase. So the tasks a community manager would handle are often performed by a combination of an outside agency and by people within the company.

A company that incorporates social media into its digital strategy and marketing plans should take a series of decisions. The most important among them is to define who, how, and when will manage and monitor social media channels. Furthermore the company should determine whether or not to respond to negative or potentially negative posts and in which way. Systemic methodologies can prove valuable in the achievement of this objective and for the bluntness of difficulties in communications within big organizations.

Keywords: Social Media Management, Handling Comments, Flowcharts, Community Manager



EA-14.03

Minority education of Thrace "Muslim children: problems and confrontation of them"

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EXTENDED ABSTRACT

In my research is presented the upgrade of quality of education in Muslim children. The strategy of this program it happens to the fact that the best of them, and for the local and amplitude of society, is to be incorporated and assimilated in the Greek society and the change of local society in to intercultural. The elements at the research are really, they are given from the coordinating office of the minority school and from the teachers who worked at these schools in the last five years.

The whole approximation, because of the realism which is discerned, we think it might be developed from the ministry of education and adopted from our educational system which I must prove to you with this systemic approximation. My approximation hides truths for the problems face every day the staff of

minority school, as well as the students of these schools. Improving the quality of the minority education we will come to the desirable result which is the right education and the incorporation of these populations in the Greek society, getting of the harmonious coexistence of two difference

religions and languages so as the smallest cost function of minority schools. I began with a full record and diagrammatic representation of a minority school in primary education (specially triple which are in the majority of them) in DCSYM platform, which is a systemic methodology with powerful mathematical and semantic infrastructure, able for the effective leadership dialectical processes design multi agent which concerns structures, processes and interpolations.

To continue, I checked the viability of the system of the triple minority school of primary education with the famous model of viability system of Beer. With the usage of this model is discerned the government isomorphism, as he used to say for the model structure.

Also, I represented the system of the triple minority school of primary education with the simulation software of vensim of verdana systems Inc (Harvard, Massachusetts,) software which has as a target to find the best solution for cases that needs analysis and wherever it is necessary the finding of all possible results for the future applications and decisions.

Further, I used the model for flow management operations joget workflow. This model has the specificity to allow the creation of complete applications with the best visual support for the management of data files and the process automation, if the processes which are involved and simple or complex.



In the end, some solutions are prefixed and improvements also, that the Greek government must take seriously in mind to strengthen the Greek – Muslims.

The research is structured with the following way:

- Presentation of the analyzed school.
- Modeling in DCSYM, Vensim and Joget.
- Check the viability of the method of Beer.
- Usage of DCSYM as a problem solving tools.
- Proposed improvements design the proposed improvements with the DCSYM.
- Benefits study

Keywords: Systemic methodologies, Beer, DCSYM, Vensim, Joget.



EA-14.04

V New Public Management: The Role of HR and ICTs. The case of Greece

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EXTENDED ABSTRACT

New Public Management is an umbrella term for re-organizing, re-designing and re-configuring the public services provided in order to improve the quality, increase the cost efficiency and enhance the effectiveness of the services to the end citizens. Around the world, new public management practices have been implemented under the effort to modernize and make more competent the public service provision. Within the agenda of the new public management the core element is the transformation of the public sector through a number of reforms that are critical and important in constituting the sector as competitive as the private sector struggles to be. A basic assumption in the new public management theoretical perspective is that citizens should be served as customers and that the public service organizations should operate and function in such a way that they become accountable, responsible, oriented towards quality service provision and driven by the purpose of achieving customer – citizen satisfaction.

In the light of the increasing emphasis on the need to reform the public sector, many studies have focused on exploring and investigating particular transformations or attempts towards modernizing the public services in different countries. The paper that is going to be prepared by the author will focus on investigating the reforms made in Greece. It is generally argued that the Greek public sector is highly ineffective, with increased bureaucracies, permanent personnel, which gives little emphasis to accountability and service quality, poor practices of performance management and human resource applications, inadequate planning and control of functions and operations and generally inefficient processes. Added to this, the technological penetration which is considered to be a vital issue in the new public management is reported to be insufficiently developed or even missing in the case of the Greek public sector. While it has been established that the information and communication technologies are very critical for the reforms under the new public management, Greece appears to be lagging still behind in that respect.

The paper will deal particularly with two issues: the human resource management approach in the case of the Greek public sector and the use of information and communication technologies in the public service provision. First the theoretical basis for both HR issues and ICT issues are going to be discussed (with regards to their contribution to the new public management) and then based on the



theories, the author will review different aspects, developments or reforms made in the Greek public sector in terms of these two issues. The purpose is to synthesize a review of literature on HR and ICTs and then examine the practical implications on the Greek public organizations.

Keywords: Public management, Human Resources, Information and Communication Technologies (ICTs)



EA-14.05

Social Networks & Leadership: Towards Leadership 2.0

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EXTENDED ABSTRACT

Today millions of internet users interact with each other using social networks such as Facebook and Twitter. This interaction enables some users to hold much more influence than others. Moreover, these users appear to act as leaders within the social networks, guiding other users towards the realization of goals or tasks. This kind of leadership, which is developed within the context of web-based social networks, is called Leadership 2.0.

This study aims to examine how leadership can be developed within the context of web-based social networks. Firstly, the development of internet, internet technologies and social networks is examined. Additionally, technologies which support and facilitate the development of social networks, such as Web 2.0 technologies, are cited. Subsequently, basic leadership theories and attributes are presented. Afterwards, the concept and basic elements of Leadership 2.0 are examined. Moreover, examples of the application of Leadership 2.0 are presented. Finally, traditional leadership (Leadership 1.0) and Leadership 2.0 are compared, and the impact of Leadership 2.0 and social networks in organizations and the society is discussed.

Keywords: Web 2.0, Leadership, Social Networks



Applying DCSYM to Evolutionary Types of SMEs

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EXTENDED ABSTRACT

The purpose of the present essay is to discover and highlight the problems that cause healthy businesses to fail in sustaining themselves, even those that are concealed, through the use of DSCM. The use of DSCM constitutes an auditing "linguistic" methodology which applies contemporary models (cognitive, mathematical, discourse theory) in order to identify and analyze the problem's structure.

The need for a systemic way of thinking is unavoidable if the contemporary environment is taken into account, given that the ability of each business to deal with challenges depends on their timely diagnosis, that in turn is a correlation between the methodology and the tools being utilized, namely the software.

The company

The company-object of the essay is into the trade of products, goods and material for military and police use. Its strategic targets are to develop and innovate in security materials, achieve high quality standards, promote Greek products, develop a competitive advantage not only in the inland but also abroad, and to create a vertical unit of product manufacturing that reinvests in buildings, machinery and human resources. Its more direct goals are the enterprising ones, namely to establish an hierarchy between its departments and accurately determine their responsibilities, define and uphold processes, design and develop new products, systematically check and certify its commodities, upgrade its products and employees in order to make the most of the networking between its participants and, finally, to reduce expenses.

Into account are taken further data regarding the intracompany background, for example its effort to acquire a larger workspace so as to better fulfill its future obligations, as well as the external environment, including local and international antagonism and its potential for international growth. The company's effort to enhance its brand name by participating in international exhibitions, maintain its high standards and secure internationalized certificates while being oriented at the international markets is discussed after.



The interested parts that will be called to achieve the targets of the project are the firm's executives. The general manager will be the one in charge, assisted by the financial manager and the sales manager.

The structure of the essay

The present essay is based on a structure that is in turn based on the DCSYM methodology that allows the structure and functions of the firm to be imprinted, helps to spot and simplify problematic situations in the system has the advantage of allowing the system to be allotted into sub-systems. Files from the SAST philosophy, which adds objectivity, are applied afterwards, before being completed by the STIMEVIS philosophy, which takes the imponderable yet crucial human factor into account.

The firm's sustainability is tested with the use of Beer's System Sustainability Model in order to evaluate the system's ability to achieve its targets and adapt to a constantly changing environment. Ideas on the improvement of the system, which is described through DCSYM, are then suggested. Finally, the system's new structure is simulated through the Vensim software by Ventana Systems Inc.

The paper is organized as follows:

- 1. Presentation of the structure and activities of the company.
- 2. Illustration using DCSYM methodology.
- 3. Check viability with Viable Model System of Beer.
- 4. Using DCSYM as a tool to solve problems.
- 5. Proposed improvements Design of Proposed Improvements into DCSYM.
- 6. Benefits study.
- 7. Simulation of company's operations in Vensim and results analysis.

Keywords: Systemic Methodologies, Stimevis, SAST, Viable System Model Beer, DCSYM, Vensim.



Systemic Approach and use of Systemic Methodologies in a work site of a Motorway

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EXTENDED ABSTRACT

The purpose of this paper is to present a system of a large-scale work site in the construction field by using Systemic Methodologies and tools. The function of a work site has lot of complexity because a lot of factors are involved. By the Systemic approach, the processes are managed easier and the complexity is controlled. This approach is going to be presented by using Systemic Methodologies and a specific strategic planning tool. Two Systemic Methodologies and one Strategic Planning tool will show how a system can improve its features and examine all the interactions in one of its part. Every work site is a part of a Construction Company. As result, it would be essential to use the SWOT Analysis as a strategic planning tool for the Construction Company who has undertaken the project. The Systemic Methodologies will be used are the follow: Design and Control Systemic Methodology (DCSYM), VenSim (Ventana Systems UK). Briefly, as a result of the implementation of SWOT Analysis will be the complete picture of the company's internal and external environment. We will identify the strong and weak points, which are the company's internal environment as well as opportunities and threats that have to be the external environment. The Design and Control Systemic Methodology (DCSYM) will present the exact structure of the company through a schematic representation. This will help to illustrate the difficulty of communications through the departments and will be able to place the control parameter into the system, which is especially important. Finally there will be the comparison of the problematic situation and improved. The Vensim will be presented with a simple example in the function of the warehouse where it will become dynamic modeling and simulation system. Through simulation, as done to identify and distinguish all the variables involved, we will notice all the existed interactions within the system from the time of ordering materials (in this case spare parts) by the time they will be placed in the machine which is necessary for the project. Final step is to add math to the model and simulate it. This will be done by defining the functions in each variable of the model and by identifying its measuring units. This simulation will give us a clear picture and graphs to be exported, would lead us to safe conclusions by making the model realistic. Finally, this combination will convince us that in a time of recession in an industry sensitive to environmental changes we need new approaches and new practices. The human factor is the main responsible for the smooth functioning of each organization. We need good planning and organization in business operations to



get a good result. The systems approach is a new way of thinking that gives reliable solutions to complex problems viability and drives to this direction.

Keywords: Systemic methodologies, construction site, interactions, simulation



Systems Approach And Simulation to a Limited Liability Company's Fleet Management Process

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EXTENDED ABSTRACT

Hereby, a Systemic - Cybernetic approach applied to a limited liability company in order to highlight the problematic points in the vehicles' scheduling and its optimal management is presented.

Fleet management coexists as procedure within the operations of several companies. The way of monitoring and designing are tasks directly related to the design of the path with which the minimization of the cost is achieved, usually expressed in kilometers. Nowadays, saving money and time is a critical need in many segments of everyday life resulting fleet management as an essential factor in financial planning of most companies like the one will be analyzed. A well designed strategy is required to manage the operations and data in order to achieve this goal and hereby a simple but effective one is presented.

For this analysis, the full depiction and diagrammatic presentation of the communications among company's departments is taking place in order to obtain a better comprehension of its operations, highlighting the connections related to the procedure perused using DCSYM platform, a systemic methodology that proposes a high-level design language, which enables effective synchronous and asynchronous multi-agent conversations. The outputs of DCSYM methodology are highly conceivable and comprehensive semantic diagrams with a consistent mathematical description that can be easily manipulated with the use of appropriate software.

Then, the viability of the whole company is checked with the use of Beer's Viable System Model (VSM) and Jose Perez Rios' innovative software VSMod, to make growth limiting factors transparent. Thereupon, Beer's VSM is applied on the process of fleet management aiming its viability inspection within the company. VSMod is a software created to facilitate the application of the Organizational Cybernetics and more specifically the Viable System Model to the design or diagnosis of organizations from the point of view of their viability.

In addition, the method of Linear Programming is used part of Operations Research which deals with the optimization of a system's performance. The outcome is very interesting and what is shocking is the use of this method combined with the well-known MS Excel for better and faster results.

Ending, the procedure of fleet management is simulated by using Ventana Systems Inc.'s Vensim systemic dynamics simulation software. Tools like Vensim are used to illustrate the current situation, its effectiveness and influence throughout the company as well.



From the implementation of the above systemic methodologies in the particular system, arose some proposed improvements one of which was applied actually in the company and it is addressed in the present study showing the efficacy in better management of company's vehicles, savings and better customer service.

The paper is structured as follows:

- Presentation of the limited liability company presented
- Modeling in DCSYM and Vensim platforms
- Viability control by using Beer's Viable System Model and VSMod software
- Proposed improvements
- Conclusions

Keywords: Fleet Management, Systemic Methodologies, VSMod, DCSYM, Vensim, Linear Programming



Systemic approach for increasing direct deliveries of products of a manufacturing company

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EXTENDED ABSTRACT

The process that is generally followed for the sale of manufactured products of a company, includes creation of safety stock to a prearranged level along with storage of the product at company's facilities till the time of shipment to the customer. In that way, a constant market coverage and high customer service is assured. Taking into consideration the change in global economy though, reduction of production and sales' cost for companies, with a view to increasing their competitiveness and market share, has become more than a necessity. As keeping high levels of safety stock is translated to large amounts of money for the balance sheet of a company, this project deals with the implementation of a new way of production and disposal of manufactured goods which involves direct sales skipping stock "building" at its facilities. In order for the results of the project to get visible, its suggested procedure requires a total restructuring of the in-study system, not a partial change of one or more of its components. Firstly we examine the whole procedure that is currently followed; then we intervene as systemic analysts suggesting the changes that must be applied to the currently followed actions of the parts of the system in order for them to stop trying to achieve their own partial goals, but to endorse them a systemic behavior and make them think of the goal of the entire system that they are parts of; production of goods for direct delivery. In this study, behaviors that follow systemic archetypes are also identified and examined in order to help participants deal with their negative consequences and avoid these types of behavior after implementation of new way of working. The biggest challenge of the project, which is included in the goals of this study is that the suggested way of production and disposal of goods will be achieved without risking any loss of market share of the company due to an -even temporary - supply failure. The result of this study is a redesign of the entire workflow with a new division of the actions of the parties involved.

Keywords: systemic archetypes, Systemic approach



Interoperability between the stakeholders during the implementation of a new product – terminal – in the system of Company SK

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EXTENDED ABSTRACT

In recent years, the Information Technology field is changing constantly. It is necessary to have a systemic approach in order to cope with these exponential changes. The basic approach will be on how to improve stakeholders' work when a new product is entered into the system. The scope is to find the methods that will make the process and the delivery in the market smoother.

Important role in the understanding of the issue plays the analysis carried out using DCSYM toolkit. Stakeholders are the outsourcing software development team, the Operation department which is responsible for the in-house procedures, the Quality and Assurance Department which is in charge of verifying that everything works properly regarding the terminal, the Logistics of the Company SK and the merchants that will use the terminal in order to make sales.

The interoperability between the stakeholders is improved with the activation of an employee as a liason and the implementation of three information systems: ERP, Ticketing and Wiki.

Keywords: interoperability, systemic approach, ERP, Wiki, Ticketing



Strategic Organization and Systemic Approach in a Bank

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EXTENDED ABSTRACT

The organizational models are becoming useful nowadays due to the increasing complexity of the external environment in which banks function.

The goal of this project is to handle efficiently and thus decrease bank's bad debts. Thereafter, the procedures should be simplified, the involvement of different departments reduced and satisfied customers should be the goal of each enterprise.

Banks' strategy should focus on the customers' difficulties in managing their loans. "Strategic organization" and "systemic think" simplify many procedures and improve customer service. The systemic approach and the application of other various methodologies such as the DSCYM, can efficiently detect and solve functional problems.

In this project, many strategic methods and innovative methodologies (especially concentrated on the human factor) will be analyzed. The communication difficulties arising between the related departments of the system can be improved substantially despite the complexity of the interrelationship of the bank's departments.

DSCYM is an alternative model of the classic internal business chart of each bank. VENSIM simulation software, is also another efficient tool which will be analyzed.

Keywords: STRATEGIC MANAGEMENT, BALANCED SCORECARD, DSCYM, EFFICIENT CUSTOMER SERVICE, SIMPLIFIED PROCEDURES, SYSTEMIC APPROACH



Diagnostic Review of Business Organization and Facilities

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EXTENDED ABSTRACT

The focus of this study is to show how a self-control system could organize the improvement of a company and particularly a food industry. The expected results of the implementation of a food safety management system in accordance with the relative ISO Standard, are to guide a company to an upgraded organizational structure, increase of its efficiency, increase of the safety of the offered products, adequate business infrastructure for immediate adaptation to changing business conditions and finally to obtain an enduring competitive advantage. Furthermore, this study indicates the points for improvement regarding a company's facilities in relation to the requirements of the Legislation. Additionally, proposed actions for the implementation of these improvements are included analytically. The study is also supported and supplemented through the use of Systemic methodologies and Systemic modeling tools such as DCSYM and VSM.

Keywords: Keywords: business organizational structure, infrastructure, safety of products, documented procedures, ISO self-control system







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