Scientific Events

KN

Multi-Stakeholder Decision Making – a Systems Approach

Kambiz Maani
Massey University Business School
Private Bag 11 222, 4442 Massey, New Zealand
E-mail: *K.Maani@massey.ac.nz*

EXTENDED ABSTRACT

Today, local problems and global challenges cannot be viewed and solved with narrow, reductionist mindsets and tools. Leaders and decision makers need to understand complexity and how to deal with it in the multi-stakeholder multi-agency scenarios that predominate today. In this connected and dynamic world, complex decision making involves engaging with multiple stakeholders, operating in different domains, with competing interests, differing perspectives, and conflicting agendas under uncertain and often adversarial conditions. Worse, systemic delays and feedback cycles inherent in complex systems exacerbate decisions and their anticipated outcomes, causing adverse unintended consequences. In the words of the Australian Public Service Commissioner: "Tackling wicked problems requires thinking that is capable of grasping the big picture, including the interrelationships among the full range of causal factors underlying them. They often require broader, more collaborative, and innovative approaches." Yet, despite sophisticated technology and seasoned manager, business and government decisions are fraught with failures and unintended consequences. These decisions have impacted our economy, environment, society, and communities - locally and globally (e.g., Global Financial Crisis, BP oil spill in the Gulf of Mexico, etc.). These failures point to a stark absence of scientifically-based tools for decision making in complex scenarios. In this talk Professor Maani introduces new approaches to multi-stakeholder decision making, drawing from over two decades of experience in leading systems thinking projects around the world and shares lessons and insights gained from these complex projects.

Keywords: Complexity, Systemic delays

KN

Reflections on experiences with stakeholders using system dynamics in public sector organisations in New Zealand

Bob Cavana
Victoria University of Wellington
000 112 sd, 12345 Wellington, New Zealand
E-mail: *Bob.Cavana@vuw.ac.nz*

EXTENDED ABSTRACT

In this presentation I will discuss my experiences with stakeholder participation and engagemen in various systems thinking and system dynamics projects I have been involved with in public sector organisations in New Zealand. These include quality management tobacco policy projects with Ministry of Health, human resource management issues with electronic technicians in th NZ Army, scenario analysis in NZ schools with the Ministry of Education, implications of the emissions trading scheme with the NZ Forestry Institute and environmental systems mapping with Ministry for the Environment. I will reflect on the various strengths and weaknesses of the stakeholder engagement in these systems projects, and attempt to draw some conclusions about the limitations and successes based on these relationships and systems projects.

Keywords: Stakeholder, participation, involvement

KN-01

The Era of Corporate Governance: Management and Philosophy

John Thanopoulos
University of Piraeus
80 Karaoli & Dimitriou Str, 18645 Piraeus, Greece
E-mail: *thanioa@otenet.gr*

EXTENDED ABSTRACT

The era of Pharaohs, Emperors, Kings, Men-in-power and of traditional state governing is over! Ability to produce needed products and individual happiness during the after World War II years has moved management towards a methodically organized corporate governance driven model of social sensitivity and ethics. It is a systemic proposition never seen before, engaging not only stockholders, but all types of stakeholders! Observe that "reach your full potential" has become the recruiting motto of even government agencies promoting a global peaceful reality and allowing talents to move where new opportunities emerge, where inner happiness of self creates quality means for the masses and forces promising identities to emerge. It is this belief that drives this presentation which aims towards three specific objectives:

1. Outline global educational trends and relate them to systemic realities,

2. Present the corporate governance model and its main elements, and,

3. Expand on the relationship between Management and Philosophy and the need to offer an appropriate teaching methodology.

Moreover, it is the item #3 that is the focus of this presentation, especially at the undergraduate and graduate levels of business education, since before that and at a global level, one is educationally "shaped" by the local cultural realities and pressures. All the stakeholders should assume educational responsibilities that will combine cutting-edge managerial knowledge with the individual philosophical understanding of self, self-actualization potential, inner happiness and social betterment.

Keywords: stakeholder management

KN-02

Not engaging the stakeholders leads to inferior solutions. But the challenge is how to engage them authentically.

Yiannis Laouris
Cyprus Neuroscience and Technology Institute
5 Promitheos, 1065 Lefkosia, Cyprus
E-mail: *laouris@futureworldscenter.org*

EXTENDED ABSTRACT

Stakeholder engagement is the process by which an organisation engages the people who may be affected by the decisions it makes or can influence the implementation of those decisions. The authors have previously proposed the Law of Requisite Action, which asserts that the lack of authentic participation of the stakeholders is not only unethical but also that any plans for change are bound to fail. The keynote will focus on the term "authentically". In accordance with the Tree of Action the first six Laws of the Science of Dialogic Design are necessary, sufficient and ethical requirements for satisfying the Law of Requisite Action. The discussion will go beyond the 'Whom should I invite to participate in a dialogue to discuss, decide and solve a difficult problem' to "How can I engage stakeholders authentically in dialogues exploiting what the digital era has to offer." We will show how Collective Awareness Platforms facilitate the formation of collective consciousness, a sort of an invisible field that leads to collective action exploiting the collective wisdom of those contributing.

Keywords: Stakeholder engagement

KN-03

Trends in Business Education: Are Business Schools Still the Drivers for Innovation?

Timothy Mescon
AACSB International Global Office Locations
777 South Harbour Island Boulevard, 33602 Tampa, United States
E-mail: *tim.mescon@aacsb.edu*

EXTENDED ABSTRACT

The obsolescence of industries is a real and compelling phenomenon. Today, in this context, the global milieu of business education continues to morph dramatically. Competition has never been more keen and business schools and global business education is having to respond in real time to changing demands and expectations from all stakeholder sectors. This presentation will identify series of major global business education trends and assesses the response to markets by leading edge business school programs. Additionally, the session explores five compelling factors/issues that impact the historical models and programs of business education.

Likewise, one cannot review traditional credit driven models of business education delivery without exploring key trends in executive, non-credit educational programs. The creation of thousands of "corporate universities" has forever changed the competitive landscape and is compelling business schools to respond to market changes and challenges in real time.

The business education landscape is changing dramatically. New topics, programs and initiatives are constantly being developed, refined and launched. Markets today are more global and demanding different delivery modes and student access. For a century, AACSB International has focused on quality improvement and assurance in business education around the world. Today with over 1,500 members in 92 countries, AACSB International manages and maintains the largest, most robust business school and business education database in the world. These data provide rich and compelling insights on the current and future states of business education. Great business schools are leading the charge of innovation and creativity and this presentation explores a number of these impressive examples.

Keywords: Business, education

KN-04

Anthropocentric Technology & Stakeholders Engagement "by design" not "by default"

John Kalogerakis
JMK Ltd
39 Kallirois Str, 11743 Neos Kosmos, Greece
E-mail: *training@jmk.gr*

EXTENDED ABSTRACT

Technological Developments have not always been devoted to society or human benefit, but rather to monetary rewards which has become the "default" in most advanced professional projects. In most companies, stakeholders do not fully grasp the responsibility of their engagement in the various projects they are involved. And those who do, very frequently do not take the appropriate action to better society, just their bank account.

Even the Humane concept of "Corporate Social Responsibility", needs to be redesigned with a more realistic view.

EVERY single stakeholder is responsible for CSR and perhaps the "Personal Social Responsibility" element of it can yield more and far better long-term results, resulting in a much and so desperately needed 'Culture Change" for most professionals all over the world.

If all stakeholders get truly committed – not just involved, then Professional Systemics with Anthropocentric Stakeholder Engagement, can actually change the world we all live in, for the better.

Keywords: Technological developments, Human characteristics, stakeholder engagement

KN-05

Decoding the recursive dynamics of value cocreation through cybernetics and systems thinking

Gandolfo Dominici
University of Palermo
Piazza Marina, 61, 90133 Palermo, Italy
E-mail: *gandolfo.dominici@libero.it*

EXTENDED ABSTRACT

In marketing theory, the shift from the paradigm of value creation to value 'cocreation' calls for a deeper grasp of the interactions between providers and customers. Marketing studies have widely focused on the value cocreation concept, but so far, the mechanism through which customers and providers recursively create value has not been exhaustively investigated. I will talk about two researches I have been conducting this year to better investigate, by a systemic and cybernetic view, the abovementioned mechanism. One investigate value cocreation for new product development through second-order cybernetics and Viable Systems Model (VSM); the second one uses agency theory to investigate the interactions and negotiation between (and among) customers and providers also considering consumption tribes as relevant actors in the market arena. In both these studies the market is conceived as an arena where communications and negotiation of eigenvalue produce eigenbehaviors and eigenforms eigenforms as recursive communication loops generating shared symbolic values. By supplying a clearer portrait of the systemic relations involved in the value cocreation dynamics, these frameworks can be effective ways of understanding the nature of value cocreation and new starting points for strategies and decision making for managers involved in marketing.

Keywords: Marketing theory, paradigm, strategies, decision making

WS-01

An Employee-Centric, Multi-stakeholder Engagement to GSPR's* Operational Excellence

Aristomenis Kotsakis
Athens
Athens, Greece
E-mail: *a.kotsakis@icloud.com*

EXTENDED ABSTRACT

The main goal of GSPR OPEX ENGAGEMENT WORKSHOP is to present the Innovative Engagement Initiatives developed by Key-Employees in order to achieve the GSPR's OPEX Strategic Goals. Also, to collect "on-line" the feedback for GSPR's External Key Societal Stakeholders (from both the Private Sector & the Public sector), with regard the importance of GSPR's OPEX Strategy for achieving their own strategic goals and objectives.

GSPR OPEX Strategy is based on an Employee-Centric three-tier OPEX model approach, focusing on new capabilities development for GSPR Key-People and Key-Processes: Process Excellence Internal Effectiveness, Cultural Excellence (Engagement Culture), Accountability Excellence (360 Evaluation of Leadership commitments to Multi-Stakeholders).

GSPR OPEX Total Added Value Diagnosis is driven by Employee Satisfaction Surveys, Root Cause Analysis and Key-Employees Brainstorming & Implementation Workshops empowered by innovative Open-Source Software. Future activities are under development to increase both employees' engagement & citizens' participation in key improvement areas (Balanced Approach, based on US-IRS Balanced Performance Model).

WS-02

Total Leadership: Strategies & Stakeholders

Kostas Levetas
American College of Greece
6 Gravias Str, 15342 Athens, Greece
E-mail: k.a.levetas@gmail.com

EXTENDED ABSTRACT

Business research provides strong evidence to support that most performance problems in contemporary organizations are due to the existence of inflexible structures and rigid leadership systems that attempt to improve performance by adapting the problem to their inherent solution models rather than co-evolving along with it. The critical need for leadership to avoid this unwanted predicament by balancing the external performance with the internal strength and evolution of the system under examination is expressed by the term 'Total Leadership' and is presented in the form of a functional model of decision making and communication strategies under the name 'Orion'. The main characteristic of this new model is that it is not imposed on but it emerges naturally out of the dynamic reality of the system's current activity while simultaneously focusing on both the external and its internal environment activating the totality of the system's creative potential. The model was developed after a thorough analysis of all decision making and communication strategies within any organization and the corresponding roles played by all involved agents. Achieving and maintaining synergy among these strategies is proven crucial for organizational performance and has a synchronization effect on the system and its environment. Alternatively, unbalanced interaction of these strategies is deemed responsible for many contemporary organizational pathologies and reduced performance levels. The concept of 'Total Leadership' has major practical implications for leading and managing business systems. Furthermore, the potential of applying the principles and tools of Orion in private and public management is really proven unlimited.

WS-03

Stakeholders and Systemic Negotiations

Demosthenis Papakonstantinou
Lecturer
Athens, Greece
E-mail: pap.seminars@gmail.com

EXTENDED ABSTRACT

Stakeholders include the people on the table and other Interest groups. Stakeholders Analysis (SA) under Systemic Negotiations is a methodology used to facilitate better understanding the other side(s). Stakeholder Analysis helps identify the main and secondary parties in a negotiation. The more they stand to benefit or lose by it, the stronger their interest is likely to be. The more heavily involved they are the stronger their interest as well.

One way to characterize stakeholders is by their relationship to the negotiation in question.
• Primary stakeholders are the people or groups that stand to be directly affected, either positively or negatively, by the negotiation.
• Secondary stakeholders are people or groups that are indirectly affected, either positively or negatively, by the negotiation.
• Key stakeholders, who might belong to either or neither of the first two groups, are those who can have a positive or negative effect on the negotiation, or who are important within the parties involved in the negotiation.

Stakeholder analysis allows a savvy negotiation team to talk to the right party at the right time. It influences strategy, tactics, and communication The "Stakeholders Canvas" includes:

a) Profiling (passport, background, attitude)
b) Ideation (stance, power)
c) Interest mapping
d) Prioritize (communication plans)
e) Prototyping

SA is a significant analysis may be the basis for lasting agreement, especially in multi

WS-04

ERP with ISO and its Stakeholders: experience from SAP professional projects

Vangelis Kanellopoulos
Alexander Moore
280 Mesogeion Avenue, 15562 Chalandri, Greece
E-mail: *v.kanellopoulos@alexandermoore.com*

EXTENDED ABSTRACT

As businesses face new challenges new Business Technologies provide solutions who can help you take control of every aspect of your activities including its stakeholders. Big Data gives the opportunity to reimagine business processes and models by eliminating barriers. With the right solutions, you can dive into all that data and gain valuable insights that were previously unimaginable. As an example SAP Business One on HANA invent new possibilities with game-changing in-memory software. Smarter decisions based upon real-time insights accelerate key business processes with rapid analysis and reporting. Through pervasive analytics, it is possible to predict future outcomes with greater accuracy by harnessing the power of Big Data. Areas of great benefit are: management Systems e.g. ISO 9001/ISO 14000, CRM, Financial management, Project Management, Production Planning and Control and Mobility.

WS-05

Stakeholders and Requirements Elicitation: Including Maritime Applications

Dimitrios Lyras
Lyras Shipping/Paralos Maritime
23 Akti Miaouli Str, 18535 Piraeus, Greece
E-mail: *DLyras@ulysses-systems.com*

EXTENDED ABSTRACT

The workshop discusses practical experience in Requirements Elicitation and Stakeholder Agendas, two subjects with some very important common factors. Because stakeholders have varying agendas, knowing how to deal with them is important. We will start with two relevant illustrations of stakeholder motivation. Isaac Newton had to wait for his peers to die before his theories were accepted, unlike the inventor of a tiny medical algorithm detecting the first patient of an epidemic, a finding which was immediately accepted because it created much less career disruption. The lesson learnt is that when you sell your ideas and your solutions, including your software, you first need to ask yourselves how many careers may be disrupted. Requirements Elicitation is hard enough without worrying about stakeholders and their careers. It is a broken process because the language spoken by the developers and the domain experts is very different. The need for each to reach a deep understanding of parts of each other's domain is highly underestimated. Luckily negatively inclined stakeholders do not get involved with Requirements Elicitation. However, this does not mean you should not pay even more attention to their agenda and how it may disrupt the success of your product. We will discuss how to achieve even negative stakeholder buy in. Moreover, Requirements Elicitation is in need of commonly understood abstractions. In this workshop we will discuss their importance.

WS-06

Changing the Business Ecosystem: Cloud Apps

Stratos Zervas
Business Cloud
38 Michalacopoulou Avenue, 11528 Athens, Greece
E-mail: *info@businesscloud.gr*

EXTENDED ABSTRACT

Technology is evolving, disrupting one business model after the other. Just as the internet came and revolutionized the presence of every business, today a new revolution is in force leaving businesses around the world only one choice. Either to ride the cloud or ride home.

As it happened before when the internet era began, nowadays cloud computing is changing the business level playing field, giving 'unfair' advantages for early adapters to grow. So there are only three paths for any enterprise. Adapt early and benefit, adapt late and lose opportunities or drive yourself out of business. In order to understand the Cloud, it is important to understand what can exactly be called a Cloud. So join this workshop to talk about the drivers and challenges of the cloud and how could be adapted on your business.

WS-07.01

A Stakeholder Analysis in Sport Administration: A Systems Perspective

Athanasios Kriemadis
University of Peloponnese
28 Erythrou Stavrou & Kariotaki Str, 22100 Tripolis, Greece
E-mail: *thanosk@uop.gr*

EXTENDED ABSTRACT

Sport administration is entering into an era where the future will be essentially determined by its ability to wisely use knowledge, a precious global resource that is the embodiment of human intellectual capital and technology. Sport administration is facing unprecedented challenges as well as opportunities brought by the emerging knowledge economy and has started to adopt new management practices such as stakeholder analysis as part of the strategic planning process applied to both public and private sport organizations.

The purpose of the contemporary sport organization is to create value for all of its stakeholders. However, It should be noted that it is difficult to simultaneously satisfy multiple stakeholders with diverse and, sometimes, contradictory interests.

PURPOSE OF THE STUDY

The purpose of this study is to examine the nature of interest and the nature of power of market and nonmarket stakeholders in order to formulate an effective strategy for the sport organization.

Research Questions

1. What is the nature of interest of each stakeholder in sport administration?
2. What is the nature of power of each stakeholder in sport administration?

WS-07.02

Psychological dimensions of stakeholders in sport

Antonios Travlos
University of Peloponnese
28 Erythrou Stavrou & Kariotaki Str, 22100 Tripolis, Greece
E-mail:*atravlos@uop.gr*

EXTENDED ABSTRACT

The purpose of this study is to identify stakeholders in sports and to present the psychological dimensions that must be understood and addressed in order to improve the efficiency of management, marketing and promotion strategies. A sport stakeholder can be any individual or organization that can affect or be affected by success (or/and failure) of sporting activity, including sports teams, participants, spectators, federations, and communities. Beyond the knowledge provided by organizational behavior and organizational – work psychology, sports stakeholders need to possess multidisciplinary knowledge, most notably based on sport psychology and motor learning, and to adapt it for enhancing organizational performance. Moreover, it is well known that sports organizations have complex management systems that demand specialized knowledge on leadership, motivation, transfer of learning skills, and decision-making not only based on sports-related knowledge. Thus, the intent of this work is to provide a comprehensive synthesis of the related literature, to outline basic psychological, behavioral, and emotional factors that influence sport behavior, and then, based on this synthesis, to outline a preliminary conceptual model capturing how sport psychology and motor learning operate in sport management and sports stakeholders' expectations.

WS-07.03

Stakeholder engagement in the European football industry: Diverse demands and financial implications

Panagiotis Dimitropoulos
University of Peloponnese
28 Erythrou Stavrou & Kariotaki Str, 22100 Tripolis, Greece
E-mail: *pdimitrop@yahoo.com*

EXTENDED ABSTRACT

Stakeholder theory dictates that economic entities are examined from the perspective of managers who are concerned with strategies for continued corporate success. Managers' ability to prioritize and reconcile stakeholder needs and demands contributes significantly to corporate viability. In the case of the football industry, in order to understand how club management sets strategic priorities with regard to stakeholder demand, an analysis of its distinctiveness is necessary. Football club management develops strong relationships with supporters who substantially influence club management decisions. Also, club managers often utilize strong relationships with local communities in order to mobilize political support and secure privileged treatment from various organizations. Moreover, the regulatory body of European football, UEFA, emerged as a dominant stakeholder with coercive power whose primary aim is to protect the long-term sustainability of European football clubs. To achieve the aforementioned goal, UEFA has introduced a financial framework that has to be applied by clubs in order for them to be licensed to participate in prestigious European tournaments. In light of the stakeholder perspective, football club management must respond to the financially-conflicting demands exerted by the two major stakeholders: their supporters and UEFA. Given that the industry is historically marked by its strong relationships with supporters, managers have developed a rationale according to which supporter satisfaction is given priority over financial performance. At the same time, managers must attempt to accommodate the strict regulatory requirements to continue to have access to UEFA and other sources of massive funding. This study aims to determine whether UEFA's framework has an impact on clubs' management policies with regard to financial decisions. UEFA should take into consideration that, in a financially-distressed industry focused on achieving athletic success, the imposition of regulatory monitoring tied to financial data inevitably leads to a loss of organizational credibility and transparency. Hence, UEFA's intervention should be accompanied by the imposition of a corporate governance framework which would aim to rearrange club management priorities by facilitating a change in institutionalized mentalities.

WS-07.04

Responsible Training: Playing by the Rules and Winning

Marios Papaloukas
Dept. of Sport Management
Sparta, 23100 Sparta, Greece
E-mail: *mpapalouka@gmail.com*

EXTENDED ABSTRACT

Responsible Training: Playing by the Rules and Winning

Who is a greater athlete? Is it the one who smashes all records during an international event and then disappears in the sunset or is it an amateur never turning professional who remains fit, well trained, healthy and with a stable athletic performance from 15 up to 80 years old? What is most important, the duration and stability of a persons athletic performance or the world record? Responsible training is a new model of training and viewing sports. Its advantage is that it does really enhance a person's physical, mental, sentimental health as well as social life with the aim of gaining these profits on a long-term sustainable basis. It does really offer those benefits promised by the Olympic Idea.

Sponsors however seek role models to promote sports apparel. Would they want to invest in athletes following the responsible training model? So far they do not aim in sustainability of the role model's performance, instead they prefer interchangeability of role models which means they have to always come up with new role models, given the short term career of champions. This may work for sponsors with many resources. However sponsors with limited resources do not need to follow this expensive path. Fans would find it easier to relate to athletes following the responsible training model and this is also something that would increase fan loyalty. Perhaps it is more profitable for a sponsor to invest in an amateur athlete with a career span of 50 years than to invest in a professional athlete with a career span of 5 years.

Keywords: Responsible Training, sustainability.

WS-08

Health Tourism Stakeholder Engagement and Integration

Constantine Constantinides
International Health Tourism Convention
123456 Athens, Greece
E-mail: constantinides@healthcarecybernetics.com

EXTENDED ABSTRACT

Part 1 – The Concept and Practice of Health Tourism Stakeholder Engagement and Integration for Concerted Actions Health Tourism Stakeholder Engagement and Integration for Concerted Actions – with "…health in GREECE" as the exemplar
Constantine Constantinides, Director, healthCare cybernetics Secretary General, Global Healthcare Travel Council (30 minutes)
Part 2 – Case Studies in Stakeholder Engagement and Integration for Concerted Actions
Case Study 1 - "…health in the PELOPONNESE" - Establishing a Health Tourism Destination – a Macro Level Concerted Action Initiative
Ms Katerina Karniadaki, Director, Palladion Physical Medicine and Rehabilitation Center, President, "The Peloponnese Health Tourism Cluster" (20 minutes)
Case Study 2 - Creating the Athens Dental Tourism Cluster – an exercise in Stakeholder Engagement and Integration
Associate Professor Nikolaos Kouvelas, CEO, EURODENTICA Specialized Dental Care, President, "Athens Dental Tourism Cluster" (20 minutes)
Case Study 3 – Engaging and Integrating the Stakeholders to create "Athens Health Park" (the first Urban Health Resort in the Mediterranean)
Philippos Leandros, General Manager, Athens Health Park S.A. (20 minutes)

WS-09

A Co-Laboratory to introduce participants in Structured Dialogue methodologies of the digital era

Yiannis Laouris
Cyprus Neuroscience and Technology Institute
5 Promitheos, 1065 Lefkosia, Cyprus
E-mail: *laouris@futureworldscenter.org*

EXTENDED ABSTRACT

The Co-Laboratory is participatory and requires preparation. Participants should come with a Digital Device and download the IdeaPrism App and create an account before they join the workshop. The aim is to introduce participants in Structured Dialogue methodologies of the digital era using a bottom-up approach. They will be asked to respond to a Triggering Question by recording their contributions as one-sentence, a multi-paragraph and a 2min video clarification. The clustering of these factors is expected to support them discover the key laws of the science of dialogic design.

WS-10

Pharmacy Management and its Stakeholders

Antonios Sakaloglou
Charami S.A.
34 Alimou Avenue, 17455 Alimos, Greece
E-mail: *a.sakaloglou@pharmamanage.gr*

EXTENDED ABSTRACT

In today's Greek health market, turbulence is more constant than change. Within an unstable market environment, the pharmacist needs to manage change and prepare for the future both as scientist and small business owner. Representatives from key market stakeholders such as pharmacy, pharmaceutical companies, wholesalers and pharmacy unions will discuss and debate their perspectives for strategic engagements to support pharmacy's future as small business.

PP

Stakeholders are the major complexity enhancers in Project, Program and Portfolio Management: How can Systems Approach help Dealing with this Complexity?

Theofanis Giotis, Panos Chatzipanos
12PM Consulting
40 Agiou Konstantinou Str, 15124 Marousi, Greece
E-mail: *theofanis.giotis@12pm.gr*

EXTENDED ABSTRACT

Complex systems have always existed. Being unique, as vehicles of change devised by humans, projects, programs and portfolios are enveloped within complexity and thus have inherent elements of uncertainty and ambiguity. Further, projects, programs and portfolios require strategic processes, human and other resources, investments, social and political actions and are exposed to unpredictable changes that reflect power struggles and social resistance.

A Project portfolio is a system of interconnected components (projects, programs, portfolios) interacting with each other. Every component when altered, affects other components or subcomponents. A portfolio that is managed in a complex environment usually exhibits behaviours that are closely to a complex adaptive system (a system of systems). Stakeholders and human factors (individuals, organizations and groups), is the predominant complexity enhancer.

Project size, project duration, technology issues and human interaction and intervention enhance complexity. Complexity increases primarily by the number of active interconnected components, especially agents, which exhibit interconnectedness, recursiveness, uncertainty, and instability. According to PMI's latest publication on Complexity from a project/program perspective (PMI, 2014), three categories (groups of causes) of complexity may be encountered in projects and programs:

- Human Behaviour (Individual Behaviour, Group Behaviour [organizational/social/political], Communication & Control and Organizational Design & Development)

- System Behaviour (Connectedness, Dependency and System Dynamics)

- Ambiguity (Uncertainty and Emergence)

In such complex environments, can systems approach to Project, Program and Portfolio Management reduce complexity? Can we manage or navigate complexity?

PRT

Stakeholder Engagement – Developing an Effective Engagement Strategy

Dimitrios Varsos
University of Piraeus
80 Karaoli & Dimitriou Str, 18645 Piraeus, Greece
E-mail: *dv@msi.gr*

EXTENDED ABSTRACT

A key challenge of the modern organization is to continually align its processes, resources and capabilities to reflect the ever-increasing complexity of a globalized economy, while reinforcing its structures and functions so that they continue to support the organization's purpose. It has been argued that this complexity is (in part) the result of the pluralistic differences in people's perception of reality, the varied believes, attitudes, and values which drive their complex motivations, and issues associated with culture, politics, and power structures. Stakeholder engagement is an umbrella term encompassing a range of activities through which an organization involves persons or groups who may be directly or indirectly affected by the decisions it makes and/or influence the outcome of its decisions, either positively or negatively. Organizations that actively engage their stakeholders gain valuable insight into the various issues that motivate their behavior, and align their business practices with their stakeholders' needs and expectations, thus driving long-term equity and sustainability. As with any other business process, the process for engagement should be systemic, logical, and practical: (1) ensuring that the organization understands and responds appropriately to their needs, interests, and concerns; (2) augmenting their expectations in line with the organization's scope and business requirements; (3) making explicit their rights and responsibilities to facilitate change within their spheres of influence; and (4) establish consultative mechanisms to provide them with the opportunity to participate in designing, planning, and implementing change (as appropriate) so as to build share ownership of solutions. Stakeholder engagement is crucially different to stakeholder management: stakeholder engagement implies a willingness to listen; to discuss issues of interest; and, critically, to be prepared to consider change, as an essential condition for continuity and viability.

Extended Abstracts

EA-01.01

Scientific Areas: sustainability,

Sustainability and Social Dimension of Universities

Jenny Pange
University of Ioannina
Dourouti, 45110 Ioannina, Greece
E-mail: *jennypagge@yahoo.gr*

EXTENDED ABSTRACT

Universities, at the present time, increase their commitment to society and according to their uniqueness, they can contribute to sustainable development, improving the quality of life and promoting the well being.

Their impact on supporting science, culture and information transfer is enormous either via formal or non-formal education. Most Higher educational Institutes provide free online courses for formal education and life-long learning as their commitment to social development.

European legislation is one of the most important drivers for Universities social commitment. Many European projects aim to support universities to organize their life long learning courses. COMMIT project has been funded with support from European Commission and it has developed tools for universities to review their strategies on social dimension and specially on life-long learning procedures. This project intended to increase commitment to the social dimension of higher education and also proposed tools to support strategies for universities' sustainability.

The main findings of the COMMIT project revealed that the most important internal and external drivers for sustainability of university life-long learning (lll) procedures and Social Dimension are: the previous experience in lll, the desire to improve access to university, the desire to make people aware of these lll programs, the national economic support, the Structural clarity of lll, the budget availability and the university structure.

In conclusion, considering the liaison of University sustainability and its social dimension, it is well established that sustainability is based on economical and social development without compromising the future generations. So, the sustainable and socially responsible universities turn out to be the major requirement of our society. These universities will offer a constructive communication between students and stakeholders with a tendency to develop the quality of life in general. So, the universities nowadays have to reconsider their priorities, towards free online life-long learning courses, social responsibility, creativity, culture, technology and education in general.

Keywords: sustainability, social-dimension, universities, life-long-learning

EA-01.02

Scientific Areas: Social Approaches,

Systemic ethical dilemmas

Nikolaos Papazoglou
University of Piraeus
80, Karaoli & Dimitriou Str., 18534 Piraeus, Greece
E-mail: *papazoglounick@hotmail.com*

EXTENDED ABSTRACT

Nowadays, we are in the brink of the third wave of Information Technology competition with key characteristic the improvement of the product itself. The internet of things continuously develops and the cloud data is stored and analyzed to improve product functionality and performance. An example of a System of Systems concerning vehicles will clarify the third wave's characteristics.

On the contrary, the safety of this new technology is questionable. The greatest benefits and drawbacks from Big Data will be on a population that has not yet been born. Nobody will be able to feel safe because internet accounts are accessible by people with high computing knowledge and the New Deal on data is the rebalancing of data in favor of each individual person. Hence, imagine another System of Systems in which each and every person will be the "product", a world of fool people and the distance we have to cover, to live in such a world.

Keywords: System of systems, information technology, ethics, internet of things, big data

EA-01.03

Scientific Areas: Social Approaches, Urban Systems

Urban systems and social space. Indicating the antithesis between a refugee settlement and a camp.

Kanelia Koutsandrea
independent researcher
Trapezoundos 34, 16451 Athens, Greece
E-mail: *n.koutsandrea@gmail.com*

EXTENDED ABSTRACT

The urban system is mainly comprised of infrastructure, built environment, administration and human services. It occurs in a specific location, somewhere in the infinite, geometrical space, however its form and the interrelationship between its elements are shaped by the social group hosted within its boundaries. Situated in the interface between social needs and historical circumstances the urban system constitutes a complex sociocentric entity in a continuous process of becoming, rather than a finished, concrete object.

Within this framework every point of the system is related to the human presence and the dynamics of movement and creation. Right and left, front and rear, inside and outside are enriched by gestures, traces and marks. That being so the two-dimensional, homogeneous space is transformed into a dynamic, four-dimensional entity whose identity is determined by the attributes of the social group involved. Thus space becomes place and acquires the qualities of topos; the possibility of occurrence, the potentiality of experience and the opportunity of evolution, adaptability and variation. Thereafter the social group can dwell space in the way that Heidegger defined dwelling, as the primary means of being in the world, of being emplaced and thus able to perceive, conceive and experience space.

An open and dynamic urban system renders the role of its social group considerably important. Even in rather adverse conditions when its structural components are defective, the bottom-up initiative may enable a system's dynamic equilibrium and the creation of topos. On the contrary, when the system is established as an isolated model driven only by a bottom up organizational process, it can only become a secluded colony whose space cannot get detached from its notional deficiency.

Seeking for concrete case studies that justify the above mentioned theoretical antithesis one may refer to the refugee settlement of Nea Kokkinia, established in Piraeus in 1922 and the refugee camp in Eleonas, operating in Athens since August 2015. In the first case Greek refugees from Anatolia were sent in a deprived space but they were allowed to settle there, to root. From that point onwards they were able to reclaim their rights as integrated social and political entities. The urban environment along with the architectural forms- although

substandard and insufficient- became spaces of social production and products of social experience; a condition and a product of emplacement at once.

On the contrary, the camp of Eleonas, which currently provides temporary shelter to refugees arriving in Greece from war zones- particularly Syria- operates as a remote, marginal urban model rendering the social group involved, lasting pariahs. Since they are not allowed to root there, refugees occupy space but they cannot relate themselves to space and therefore they cannot actively participate in the ongoing process of creating space. Thus they become socially secluded and the urban system remains in a state of pathological stagnation.

The relation between the urban system and its social group is a bidirectional process. If allowed, the social group may imprint its aspirations and experiences in space and thus transform it into place, an entity with substance and meaning. At the same time place constitutes the prerequisite for the group's potentiality to dwell, to wit bridge the vacuum between space, sociality and identity.

Keywords: urban systems, space,topos,refugee settlements

EA-01.04

Scientific Areas: Politics, Law & Bargaining,

Theoretical systemic approaches in E.U. gambling market – The European Casino Association (ECA) case

Anastasios Vasios, Alexandros Lamprakis
-
17 Acharnon Str, 10438 Athens, Greece
E-mail: tasosvasios@gmail.com, lamprakisalex@yahoo.gr

EXTENDED ABSTRACT

The research to map the market of gambling in the EU, brought forth interest groups which are organized and operate under the guise of Unions (Associations), beyond the borders of the member states, mainly in the heart of the EU, the Brussels. The Lowery rightly notes that the interest groups in our time are not groups actually, but institutions-companies and as such work. The large size of the market and of the sector of gambling, as a result, have a long list of interested parties (stakeholders) that in case of seeking to satisfy their interests.

The gaming industry is divided into five distinct markets for legal reasons and more specifically, regulatory and supervisory. Because of the way the market structure and constant overlapping areas between them, among the leaders there is a fierce competition in the EU. In addition, competition intensifies because of the ever-expanding list stakes that simultaneously enriched the technological development of the industry. Interest groups, with different motives and interests emerged within this market separation and staged their action in subtle apparently limits.

The present study followed the systemic approach to market lobbying gambling and especially the basic relationship problems, structural problems and interdependencies. Focused on the causality of relationships, properties, and emerging properties that characterize the structure and operation of the system. In the systems approach used holistic methodology wherein the composition prior to analysis.

Keywords: European Casino Association, gambling market

EA-02.01

Scientific Areas: Education & Learning, Knowledge Management

Design and Management of a Course Unit: its stakeholders, Methods and techniques

Evangelia Mitsika
University of Piraeus, Piraeus, Greece.
E-mail: *eva_mitsika@yahoo.gr*

EXTENDED ABSTRACT

The main purpose of this paper highlights a planning and organizing method of teaching computer science courses.

According to the proposed method, the tutor or academic personnel is enabled to use tools and techniques linked both with his/her teaching material and goals and the needs of the students respectively.

The tutor has the opportunity to evaluate the available and appropriate teaching techniques to integrate within his/her classroom. In this manner the tutor plans and simultaneously organizes more effectively his / her teaching in terms of content and resources.

This paper engulfs analytically and holistically the teaching programming, with extensive references on the needs, the goals, the content planning of the course and necessary techniques that must be used.

Moreover, a teaching plan is of grave importance both for the tutor and the students. Within this plan lays the weekly timetable, which is linked with each chapter and with extensive references on the subject of the daily teaching and projects assigned to each one of the students as homework for the duration of the course.

In order for the teacher to achieve in the planning of the content and executing the chosen methodology for the course, he/she must define the important elements such as:

I. Teaching strategies
II. Learning exercises and activities
III. Time management
IV. Teaching and monitoring techniques
V. Evaluation methods regarding the students progress and learning achievements

Additionally, identifying and defining the academic and learning needs of the

students, highlighting the course's goals, selecting the appropriate strategies and tactics of implementing the daily teaching, monitoring and evaluating processes, are the most vital elements of programming.

The visualization of a written form of teaching methodology plan, enabling simultaneously any amendments and alterations (so as to avoid a less flexible and archetypal teaching framework), assists the tutor to act in accordance with the individual and special needs of both the material and his/her students. The teaching goals are directly linked with the learning results and can be defined by the tutor in cooperation with his/her students.

From the following teaching methods the tutor is called to select one of the following:

I. Lecture
II. discussion or dialogue
III. Questions and Answers
IV. Avalanche
V. Brainstorming
VI. Demonstration
VII. Workshop
VIII. Work groups
IX. Role Playing
X. case study
XI. concept mapping & concept map

The evaluation processes refer to the corresponding actions taken by the academic personnel in order to guide the final student's grading both in oral and written manner.

The results deriving from the above evaluation assist in the identification of potential amendments towards the teaching plan so as to meet any potential deficiencies reflected in student performance.

Keywords: Teaching, design, organization, Programming, methods, techniques.

EA-02.02

Scientific Areas: Education & Learning,

Online games for learning statistics

Jenny Pange, Aspa Lekka
University of Ioannina
Dourouti, 45110 IOANNINA, Greece
E-mail: JENNYPAGGE@YAHOO.GR, lekka.aspa@gmail.com

EXTENDED ABSTRACT

Nowadays Internet is broadly used for teaching and learning. Traditional classroom teaching has moved to online teaching and traditional content-centered lectures implementing teacher-centered learning have changed to active participation of students. It is well documented that learning process includes critical thinking development, collaboration, social perspective, life-long learning and development of new skills. According to Reid (1994, as stated in YU W.T. (2009), learning is more effective if students participate actively, so online games give a new perspective in learning statistics.

The major advantage of online learning using digital games is their capability to commit users, focused to a specific purpose, to participate strongly into these games. Furthermore to this great potential, there are also some other issues that justify the importance of online learning, using games. The most significant, is the relationship between stages of the game and visible results (Salen and Zimmerman 2004). According to these stages, players realize whether or not they achieved, the expected objectives.

Students in Educational Departments, face a lot of problems in understanding and applying statistical concepts. Using digital games, as extra curriculum experience, learning occurs within the educational context where the digital game becomes "game sense". The "game sense" is a condition that according to Derryberry (2007), is directly related to learning.

The aim of this study is to show the effects of using games for teaching basic statistics to students without robust prior knowledge in mathematics. In this study we applied the Kolb (1984) experiential learning model, where students start with a concrete experience, then they proceed with observation and reflection, they form abstract concepts and finally, they test the new environment.

For the purpose of this study, ten postgraduate students from the School of Education, were randomly selected and we assigned them a simple statistical task, especially how to calculate permutations and combinations of n objects.

The whole process lasted two weeks with 3 hours course per week. Students started playing an online game (http://www.transum.org/software/SW/ice_cream/icecream.asp) with n objects

and they asked to make all combinations and permutations online. In this game they had to put n different balls of ice cream in a cone (permutations/ordering) according to game rules.

For better communication and interaction, students, were divided into two groups, namely, beginners and intermediate users of online games. Then we mixed beginners with intermediate students, and we formed two group of 5 students each. During this online game for permutations, all students became active learners.
At the end of the course, it was found that these pedagogical attitudes enabled students to recognize the meaning of mathematics in statistical concepts. Additionally, playing with this game all students recognized the differences of permutations and combinations of n objects.

Keywords: online games, statistics, combinations, permutations, learning

EA-02.03

Scientific Areas: Business Continuity, Large Enterprises

Improvement of the role of the Internal Audit system and its contribution to a more effective operation of the organization.

Paraskevi Lytsaki
csap
33, Larissis & Iteas, 11523 Athens Athens, Greece
E-mail: *eviplits@gmail.com*

EXTENDED ABSTRACT

Contemporary emerging issues in organizations are defined as being complex and difficult to understand or describe, products of interaction of parts, the result of previous unsuccessful attempts, short-term solutions, of concern to a great number of participants with opposing interests and different aspects.

Such issues are expected to be dealt with collaboration of the stakeholders through communication channels. In fact, this is rarely the case. People tend to follow traditional methods which nowadays are not only obsolete but also ineffective. This is where professional systemic studies substantially contribute offering their tools. Systemic Methodologies are tools for handling the variety in cases of high complexity due to the ever changing external environment, having an impact on the organization.

In this paper, on the one hand the Design and Control Systemic Methodology (DCSYM) is being used in an attempt to present the current situation of the Internal Audit Department in a private law entity of public interest. Suggestions are made for its improvement so as to contribute to the efficiency of the company as a whole. On the other hand, the Viable System Model (VSM) is being used in order to visualize and analyze the need of introducing a "systemic approach" team, dealing with future planning, projections, forecasting, contributing and supporting the viable plan of the organization. It involves human resources coming from the restructured internal audit system, people appropriately qualified and specialized in particular fields who will work together with those of the general management systems.

The originality of this contribution is based on the role of the internal auditors per se. Some fundamental factors in order for them to perform their role and provide effective services are, knowledge of the department and the functional procedures of the organization they operate in, integrity in the performance of their work, professional ethics, independence along with objectivity, knowledge, skills and competencies, team spirit together with systemic thinking and analysis ability. This attribute mixture could be of priceless value to a viable organization.

This paper consists of three parts. The first part, gives a theoretical background, mentioning and briefly explaining relevant to the topic terms and systemic

methodologies. The second part, is the actual case study referring to the reasons of choosing the specific subject, shortly describing the company, the operation of the internal audit system, the present structure and communications of the company as well as proposed improvements of the current situation in order to adjust to its dynamic environment. Finally, there is the conclusion and corresponding recommendations. A review of the bibliography follows.

Keywords: complexity, stakeholders, systemic approach, variety, DCSYM, VSM

EA-02.04

Scientific Areas: Business Continuity, Hospitality Management & Event Planning

The use of DCSYM Systemic Methodology in the Athens Ledra Hotel: designs of current, improved situation and comparison among designs.

Foteini Ioannou
University of Piraeus
Tritonos 103, Palaio Faliro, 17562 Palaio Faliro, Athens, Greece
E-mail: *fwtiwan@hotmail.com*

EXTENDED ABSTRACT

In this paper we present a systemic study on Athens Ledra Hotel. We examine the quality interactions between the organization's entities, such as the communication channel and introduce the concept of control. The implementation will be done through the use of DCSYM Case Tool, an analytical design tool of modeling organizations. The implementation will be done through introduction of systems and subsystems within and outside the organization.

We present the symbols of DCSYM Systemic Methodology and display the structure of the systems and communication channels, introducing the control between the systems. Furthermore, we illustrate the Current Situation (CS), using the DCSYM Case Tool, which allows us to recognize the key-points needed, so as to improve the structure and operation of the system's CS.

In the end, we have the opportunity to make Ameliorative Suggestions (AS). As a result, we are able to compare the CS with the AS and redefine the system's communication channels so as to make it responsive to the real needs.

Keywords: DCSYM, Athens Ledra Hotel, system

EA-02.05

Scientific Areas: Entrepreneurship, Strategic Management

System Dynamics Simulation for a Pharmaceutical Company with the use of Business Model Canvas, Systemic Methodologies and their relevant software: DCSym, Vensim, Forio

Nikitas-Belmar Mahmudi , Nikitas Assimakopoulos
Department of Informatics
80, Karaoli & Dimitriou Street, GR-185 34 Piraeus, Greece
E-mail: *nikitasmhs@gmail.com*, *assinik@unipi.gr*

EXTENDED ABSTRACT

In the market economy, the entrepreneurial activity, either current or as investment is dynamic. Namely found at a constant change and it is not happening in an environment which has full knowledge after presuming the more or less continuous change of the activation conditions of different stakeholders and/or their business pursuits. For this reason, the existence of a business plan is crucial for the future of the business. Business plan is a description of the future of a business. It describes the purpose, the procedures and the structure of a business. Therefore a greater emphasis will be given to the content of the business plan and the way it is formulated. We modeled the plan in a dynamic system. Business Model Canvas is a tool which allows describing, designing, creating, inventing and reviewing the business model. For the science of system analysis, described by Peter Checkland, it enrolls to a Soft System Methodology (SSM). Main purpose of this analysis, is to avoid taking rush decisions and implementation of non-detailed solutions from the key decision making people. The application of Soft System Methodology began with the assessment of the business environment and detection of the current situation of the enterprise. This is an attempt which undertakes to conceptually place the data so to be modeled in order to bring about "order" in "disorder". This modeling is achieved through DCSYM Case Tool which is an analytical modeling organization tool. The purpose of this simulation is to describe, to observe, predict and influence the decisions about which elements of the business model and how much it affects sales of Power Health Hellas products, business costs and net profits. The main approach on this issue, can be answered, through our model, through the following question: what is the ideal level of values that should be given to the customer relationships, the values put forward by the company and the "channels" of reaching the customers to succeed and anticipate to the required demand for our products with the least possible cost for one year period. The simulation was achieved by the use of Vensim software. It is a simulation software in order to improve performance of real systems. After modeling the business environment we can observe that during the execution of the simulation, all the variables are influenced when some of system parameters are altered. In addition, we used Forio software, a web-based simulation platform, to achieve a better model visualization, easier navigation and to provide compatibility and access from any device of the new era. Our main goal is to create a systemic business tool, to help us go business operations one step further.

Keywords: SSM, DCSYM, Business Model Canvas, Forio

EA-03.01

Scientific Areas: Business Process Modelling, Project Management

Lean Six Sigma and Stakeholder Engagement "A structured approach investigating their inseparable correlation in Projects"

Aggeliki Papailiou
SEV-IVEPE
Nefelis 28A, GR11853 Athens, Greece
E-mail: *papailiou_aggeliki@yahoo.com*

EXTENDED ABSTRACT

Within the literature and practitioners' empirical findings, it is clearly identified that the majority of large organizations implementing Lean Six Sigma (LSS) projects fail due to poor stakeholder engagement. For this reason, the main purpose of this presentation is to prompt a re-thinking on the criticality of effective stakeholder management.

First of all an effort will be made to define Lean Six Sigma framework, that has achieved remarkable results in all business fields the last decades, and is an integrated framework comprised of Six Sigma and Lean. Six Sigma was initially developed in Motorola in the 1980s, as a response to low quality in order to produce defect free output, while Lean has its roots in Toyota Production Systems and is a systemic approach to identify and eliminate the 8 different types of waste through continuous process improvement. Hence Lean Six Sigma as a holistic and structured methodology builds an innovative quality mindset and contributes drastically in accelerating change in problematic business areas, by putting the whole problem solving process into a very structured format. As a result, it leads organizations in winning more money by improving customer value and operational efficiency, reduces time-to-market, raises productivity, lowers costs and has multiple benefits going straight from the top to the bottom line. But in contradiction to the above, almost 80 percent of the companies fail to drive the anticipated positive outcome of LSS because they don't implement it the right way. LSS is not just a sterilized statistical method used by the upper management to control variances from the baseline, but a philosophy that should be imbibed throughout all organizational levels of different stakeholders in order to achieve its intended purpose. This is why conducting a robust and ongoing stakeholder management plays significant role in success. LSS can only achieve long lasting and continuous improvement, by setting into question consolidated obsolete organizational culture, which exists within the firm, and often contains hidden and repeatedly wrong practices. As Peter Drucker states "there is nothing quite so useless, as doing with great efficiency, something that should not be done at all". So challenging the status quo is definitely not an easy thing and in order to be accomplished it is important not only to "learn to forget", but also to promote strategic thinking throughout everyone and to create opportunities for even those lower down the organization to initiate change and feel free to externalize their valuable tacit business wisdom. To conclude, LSS follows the DMAIC roadmap of Define – Measure – Analyze –

Improve – Control, and throughout its phases all different categories of stakeholders should ceaselessly be informed, involved, influenced, engaged, satisfied and motivated in the appropriate way by a variety of techniques, in order to prevent Lack of co-operation and commitment, low morale, resistance to change, poor communication, buy-in and understanding.

Keywords: LeanSixSigma, Process Excellence, change, organizational culture

EA-03.02

Scientific Areas: Business Process Modelling, E-business Solutions

CRM in the IoT era

Alexandros Miariw, Nikitas Asimakopoulos
University of Piraeus
80 Karaoli & Dimitriou Str, 18645 Piraeus, Greece
E-mail: *amiaris@unipi.gr*, *assinik@unipi.gr*

EXTENDED ABSTRACT

As the market is approaching towards the new era of Internet of Things (IoT), customer relationship management (CRM) is trending to a new direction. The advanced CRM solution takes customer service to the next level and provide better customer support. Since more and more devices are connected to the internet, they will enable new paradigm of services which was previously difficult to imagine. That is why the customer support scenario has changed dramatically the way organizations market, sell, and provide support for products.

CRM will be at the heart of digital initiatives in coming years. This is one technology area that will definitely get funding as digital business is crucial to remaining competitive. Modern Companies look for continues data capture, improvement to their systems performance, automation, insights and up-to-date reporting. All these features are provided through a CRM system under the prism of Internet-of-Things (IoT).

Keywords: CRM, Business Process Modelling, IoT

EA-03.03

Scientific Areas: Business Process Modelling, Organizational Development & Performance Managemen

Systemic Business Re-Modelling for a Wellness and Fitness Club: use of a STIMEVIS Multi-Methodology and its related software

Ioannis Vamvakas
Wellness & Fitness Club Operator
Areos 18, 17562 Palaio Faliro, Greece
E-mail: *vamvakas@livestrongthegym.gr*

EXTENDED ABSTRACT

Global Fitness is growing. That is a fact. There are numerous reviews, reports and surveys that agree to these data.

In Greece fitness services are delivered by a number of facilities which run on 3 business models, plus numerous individual practitioners who operate in various locations and in many cases in co-operation with these businesses. Low Budget Gyms, Mid-Market Gyms & Personal Training Studios are the trending business models.
Along with Fitness services other services and professions flourish too. Beauticians, Nutritionists, Masseurs and Physiotherapists are the most common professions that are affiliated to the Fitness Industry and can take part as key elements of the Health, Wellness and Fitness eco-system.

All three business models share amongst other, two significant problems. Fitness Facilities experience Revenue shortage mostly due to low Customer Retention Rates and low Customer Lifetime Value.

Even though exercising has a great impact on longevity, people tend to find gym memberships expensive. People do not really understand that what they are really buying is life span expectancy extension. On the other hand and in order to be economically viable, many Fitness Club Operators have adopted the low budget business model mentality which in order to be efficient has a very low membership fee, attracts many people but has no customer service included besides front desk information services and some group classes. So there is an easy entry for the customer but for extra services people have to pay more. No stakeholder engagement is ensured here.

With pros and cons the large scale-customer based-low budget business model is trending now days.

In order to address these problems we have been assigned to intervene into a large scale Wellness & Fitness Club that doesn't run on an economy of scale model but wishes to be organized in a viable way so that it will effectively deliver to its members, services with quality.

We decided to use as a roadmap tool to guide as through the improvement process, the Multi-Methodology STIMEVIS. The Design and Control SYstem Methodology, DCSYM software tool, was first used to design the current problematic situation and to identify both stakeholders and problems in communication. DCSYM along with Total Intervention System Methodology, TSI, helped us find the true problems that tackled the business operations. Having assessed staff and customer opinion we designed with VENSIM software a dynamic simulation that described the system situation while the intervention took place. By using the right system metaphors and then by designing the business organization and operation processes with the Viable System Model, VSM Beer, we achieved both an effective organizational design and the processes wanted by the administration of the Wellness and Fitness Club that ensured the META control which as the Administration believed was so critical to their operation.

Keywords: STIMEVIS, TSI, DCSYM, VSM, META, VENSIM

EA-03.04

Scientific Areas: Business Process Modelling,

The use of AnyLogic for Dynamic Simulation of a supermarket's operations

Konstantinos Psallas
Information Systems and Services
80 , Karaoli & Dimitriou Street , 18534 Athens, Greece
E-mail: konpsal@gmail.com

EXTENDED ABSTRACT

This paper aims to deal with the use of Anylogic software in the process of a supermarket's dynamic simulation.

System simulation describes the structure and behavior of a complicated real system through the representation of the system's objects, their activities and the interaction between them. The main advantage of this procedure is the use of mathematics and analytical models which aim to solve problems and make decisions for critical issues.

The use of AnyLogic software is important in our project. The interactive factor, that supplies, and the ability of import graphical shapes and controls can clearly represent the environment of the under-research system and produce an evolutionary and hierarchical structure.

Thus, the concurrent observation of any factor of the problem, based on specific indicators, can co-exists with detailed representations of specific and specialized individual operations of this activity.

Finally, the simulation of our system's operation with the use of AnyLogic software makes possible the thorough research of the system as long as its improvement after experimenting with inside interventions and rating the results of such interventions.

Keywords: Dynamic Simulation, AnyLogic, Supermarket operations

EA-03.05

Scientific Areas: Business Process Modelling, Organizational Development & Performance Managemen

The usefulness of the dynamic simulation of the finance department and the purchasing department of Cisco Hellas

Ilia Gouma
Student at department of Informatics
80,M.Karaoli&A.Dimitriou St., 18534 Athens, Greece
E-mail: *ilia.gouma@hotmail.com*

EXTENDED ABSTRACT

This paper has as main theme one of the most modern and rapidly evolving disciplines of modern Computer Science , the "Dynamic Simulation ". In recent years more and more organizations resort to ' simulation ' of the various functions in order to discover the factors that will lead in the future to increase the efficiency and profit.

In this paper, describes the company that will be analyzed and used as a ground for the various applications, the Cisco Hellas, a company which is a leading supplier of integrated telecommunication solutions for businesses of all types and sizes, for example for Cosmote. Specifically, the Cisco Systems, Inc. It is a multinational company based in San Jose California, which designs and markets electronic products, computer and telecommunications goods and services. It has more than 70.000 employee's worldwide and annual revenues of $ 40 billion in 2010. The share was listed on the Dow Jones on June 8, 2009.

Its stock was listed on the Dow Jones index on June 8 2009.Cisco Hellas is the subsidiary of Cisco Systems in Greece.

Our work deals with the part of the dynamic simulation of the operation of the Economics Department and the Department of Company Supplies. The software used is Vensim program, an excellent implementation of the VIS, very good and easy to use interface.

Originally, we described in detail the structure and the model in Vensim, and then simulated some hypothetical situations - scenarios that could occur in reality, and discussed the results which would be produced in accordance with the simulation.

Keywords: vensim, dynamic simulation model, cisco, electronic products, simulation

EA-03.06

Scientific Areas: Business Process Modelling, Organizational Development & Performance Managemen

The utility of the dynamic simulation via VENSIM for an antibiotic pill

Leandros Papadomanolakis
Student at Department of Informatics
80, M. Karaoli& A. Dimitriou St., 18534 Athens, Greece
E-mail: *leandros.papadom@hotmail.com*

EXTENDED ABSTRACT

The development of technology has helped entrepreneurs to do marketing studies and appropriate adjustments to the way in which their business operates. This paper deals with the simulation of the process followed to reach an antibiotic pill from abroad to the company's customers with model created using Vensim software.

In this paper we initially pay attention to the description in the problem. It analyzes the necessary to use Vensim software to approach the problem, and finally a mathematical modelling is designed of the model, the dynamic simulation via the Vensim tool, and the presentation of its conclusions.

With Vensim software we simulated the procedure of an antibiotic drug from the receipt from outside the company, and then send it to customers. It proved through various scenarios that this program that it could be a powerful tool for the management of the company, so that there has been proper preparation for any change in the company's environmental parameters. It could also be useful for any similar analysis and investigation of shortages or to reduce operating costs and to increase the company's profit, which would not be possible without the use of simulation program.

Keywords: vensim, dynamic, simulation, model, environment, modeling

EA-04.01

Scientific Areas: Business Process Modelling, Systems Modeling

DCSYM Extensions For Systems Modeling With Cybernetic Orientation

Rallis Antoniadis, Panagiotis Papaioannou, Nikitas Assimakopoulos
HSSS, University of Piraeus
80, Karaoli & Dimitriou Str., 185 34 Piraeus, Greece
E-mail: rallisantoniadis@gmail.com, takispap@hol.gr, assinik@unipi.gr

EXTENDED ABSTRACT

Technology continues to evolve at an exponential rate following the population growth. Modern organizations, consisting of people and machines, in order to meet the growing demands of a modern society in which they operate, are characterized by the ever increasing complexity and also by the problems and the opportunities they incorporate.

This growing complexity of the organizations and the volatility of the environment in which these operate require new management approaches. The emergence and the development of the so-called Sociotechnical Systems (STS) in organizational development became mandatory.

Systems approach provides alternatives to conventional organizational structures and processes providing another perspective of organizational problems while Modeling has always been a problem-solving method, which appear in the real world and it has always been an essential tool for both Organizational Design and for Development Information Systems.

A well-designed model is characterized by an effective communication between stakeholders, constitutes an excellent complexity attenuator and therefore a graphical modeling methodology constitutes an essential tool in the toolbox of any serious analyst, which will be particularly useful in developing techniques both when communicating with users and with developers.

The Design and Control Systemic Methodology (DCSYM) is a systemic methodology based on simple rules and diagrams with semantically consistent mathematical description having the capability of providing a structuring and modelling environment with flexible boundary positioning and process formulation.

However, the various methods of thinking and defining a system and the properties thereof, arising from systemic theory, require ways of naming and depicting of the systemic components (systems, subsystems, people), communications as well as of discovering a method of determining the boundary,

which separates the system-in-focus from its environment and of finding ways of naming and depicting of the environment itself as a systemic element.

Going further, Cybernetics requires that a necessary prerequisite for an organization to maintain its viability within its environment but also for the administration to be able to guide the organization, is both the organization to be able to absorb the variety which emerges from its environment and secondly management to be able to administer the variety which emerges from the organization (Law of Requisite Variety).

Variety engineering between systems with different variety levels may be achieved by using the homeostatic loop of Beer and by designing of the so called variety amplifiers and attenuators diversity and the appropriate transducers. For our involvement in the variety engineering, the modeling method should also provide an expression for variety amplifiers and attenuators as well as for the transducers.
In this study, DCSYM extensions are introduced and a New Modeling Approach is proposed, which introduces the features and advantages of DCSYM in the area of Organizational Planning.

The New Modeling Approach is supported by the appropriate software (DCSYM Case Tool), which is user-friendly, provides statistics and is constantly supported and developing.

A new design of Beer's Viable System Model (VSM) and a Case Study applied in an SME demonstrate the capabilities of the New Modeling Approach with the aid of the mentioned software.

Keywords: Systems, Modeling, DCSYM, Cybernetic, Systemic, Methodology

EA-04.02

Scientific Areas: Business Process Modelling, Project Management

Systemic & Business approach to Startups: Improvements to Business Model & Function through Systemic and Agile Project Management Methodologies

Petros Lengos
Consultant
Hydras 27, 19003 Porto Rafti, Greece
E-mail: *peter.lengos@gmail.com*

EXTENDED ABSTRACT

Our era is characterized by rapid evolution in technologies and business objectives. As a result, more and more new organizations are being created or existing organizations are being transformed and they try to acquire part of the continuously growing market. We could easily describe it as a transitional era where, also, more and more new approaches and methodologies are being developed and all these organizations, startups and non, are struggling to adopt without, sometimes, knowing which one suites their needs.

In the research, we are focusing to the case where a big software consulting organization spends most of its time and resources into creating a new innovative software. In other words, it changes its structure and production line into a startup. It follows business and project management methodologies that are not corresponding to its needs, a continuously changing environment.

Initially, we are using Pareto Analysis in order to identify the root problems of the organization and we are improving the its structure and communications by using DCSYM (Design and Control Systemic Methodology). We are, also, correlating the Business Model Canvas (BMC) with Beer's Viable System Model (VSM) in order to ensure business model's viability. After recreating its business model, the organization's processes are being improved in order to follow SCRUM's standards and give the organization the necessary agility in a fast pacing environment. After analyzing and improving the workflows, we developed a simulation through the FORIO software, in order to highlight the significant difference in time and resources spent, between the as-is state of the organization and improved state.

The majority of the startups that are failing, have significant issues in order to choose the right methodologies for their business development. They are struggling to identify their needs and usually are using models that do not suit them. As a result, they spend valuable resources and time to wrong techniques, leading them to failure.

Keywords: Startup, DCSYM, BMC, VSM, SCRUM

EA-04.03

Scientific Areas: Business Process Modelling, Public Sector

Systemic Analysis through the use of Business Model Canvas: A case study in the Greek General State Account Office

Georgios Germanakos
Department of Informatics, University of Piraeus
80, Karaoli & Dimitriou Str., 18534 Athens, Greece
E-mail: giorgos.germanakos@gmail.com

EXTENDED ABSTRACT

Organizational Complexity and Sociotechnical Systems
Modern organizations, consisting of the people and machines, are characterized by the ever increasing complexity and also by the problems and the opportunities they incorporate.

This growing complexity require new management approaches. As an immediate consequence was the emergence and the development of the so-called Sociotechnical Systems (STS) in organizational development, which form a complex approach to organizational work design that recognizes the interaction between people and technology in workplaces. It is about Organizational systems with automated but also manual processes and components that evolve to meet the objectives or requirements of the organization.

The systems approach provides alternatives to conventional organizational structures and processes providing another perspective of organizational problems.
The Business Model Canvas is a strategic management and lean startup template for developing new or documenting existing business models. It is a visual chart with elements describing a firm's or product's value proposition, infrastructure, customers, and finances. It assists firms in aligning their activities by illustrating potential trade-offs.

The Business Model Canvas was initially proposed by Alexander Osterwalder in 2008.
The importance of modeling and graphical modeling methodologies.
Modeling is a problem-solving method, which appear in the real world and it has always been an essential tool for both Organizational Design and for Development Information Systems.

An essential tool in the toolbox of any serious analyst is a graphical modeling methodology.

Formal descriptions of the business become the building blocks for its activities. The Business Model Canvas can be printed out on a large surface so groups of people can jointly start sketching and discussing business model elements with post-it notes or board markers. It is a hands-on tool that fosters understanding, discussion, creativity, and analysis.

Modeling with Business Model Canvas and Business Process Modelling Tools
Business process modeling (BPM) in systems engineering is the activity of representing processes of an enterprise, so that the current process may be analyzed or improved. BPM is typically performed by business analysts. Alternatively, the process model can be derived directly from events' logs using process mining tools.

The business objective is often to increase process speed or reduce cycle time; to increase quality; or to reduce costs. In practice, a management decision to invest in business process modeling is often motivated by the need to document requirements for an information technology project.

Change management programs are typically involved to put any improved business processes into practice.

BPM with the use of Business Model Canvas has emerged as a holistic approach for modeling business processes, as it provides a highly flexible solution to capture operational specifications of business processes. It particularly focuses on describing the data of business processes by characterizing business-relevant data objects, their lifecycles, and related services. The artifact-centric process modelling approach fosters the automation of the business operations and supports the flexibility of the workflow enactment and evolution.

In this study, one can see the organizational structure of the Greek General State Account Office. All in and out coming flows along with any inner and outside part of communication possibilities. With the use of BPM we study the whole processes of the office and using the Business Model Canvas we are enabled to change the way things usually work and recreate and fine-tune all possible flows and communications.

Keywords: Complexity, System, Business, Canvas, Processes, Tools

EA-04.04

Scientific Areas: Business Continuity, Business Process Modelling

DCSYM and Process Simulation as Tools of Process Recording in a fictional Driving School An Attempt to improve existing Business Processes

Nikolaos Stathatos
CSAP Professional
22 Liossion st, 10438 Athens, Greece
E-mail: *nstath01@yahoo.gr*

EXTENDED ABSTRACT

A process recording of a fictional driving school is presented.

The aim is to improve the operations of the driving school by reducing all unnecessary complexity and restructuring some (or even all) problematic business processes. This has not only to do with the driving school's processes themselves, but also with processes that have been designed and carried out on behalf of the Ministry of Transport as well. This requires compliance with the redesigned processes as far as possible and some software will be probably necessary, that must be developed according to the school's requirements.

This paper is focusing on the existing hierarchical structure and examines the way this fictional driving school operates. This operation reveals every difficulty that causes increased complexity and systemic pathology.

The representation of the existing operation status is done using Design and Control Systemic Methodology (DCSYM). This has become even easier because of the DCSYM Case Tool, a software application that can carry out each communication, marked by various communication types at the current state of the driving school. The DCSYM Methodology spots the interaction among the subsystems which constitute the total system of the driving school, 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 for the driving school, which will be best as possible without unnecessary intermediate steps. The systemic improvement will take place via DCSYM Methodology as well.

A simulation of a subsystem of the fictional driving school will be held using the ADONIS Software. ADONIS is a business process modeling tool that helps companies describe the way that various corporate processes have to operate, so

that an optimal solution could take place. ADONIS Software encourages the modeling of processes as well and improves knowledge sharing.

Both DCSYM methodology and the tool described above will provide all information needed, so that the driving school will be able to make significant progress by reducing most of its disadvantages and empower its existing strengths, which will produce new corporate knowledge and wisdom in the end.

Keywords: DCSYM, ADONIS

EA-04.05

Scientific Areas: Business Process Modelling, Hospitality Management & Event Planning

The use of DCSYM Systemic Methodology in the "Dromokaitio" Hospital: designs of current, improved situation and comparison among designs

Stefanos Apostolakopoulos
University of Piraeus
Aneksartisia 25, 12351 Athens, Greece
E-mail: *stefosssssssss@yahoo.gr*

EXTENDED ABSTRACT

This paper discusses the modeling of the psychiatric hospital "Dromokaitio". The implementation will be done through the use of DCSYM Case Tool, an analytical design tool of modeling organizations. The implementation will be done through introduction of systems and subsystems within and outside the organization. Then, we shall be introducing the human element to the appropriate systems and the design will be completed with the interactions among individuals and subsystems that participating in the operating process. We shall understand the problems in communication among the different parts that compose the psychiatric hospital and we shall provide conclusions which they might helpful for improving the hole management of the hospital and its resources.

Keywords: DCSYM, DCSYM Case Tool, Psychiatric Hospital

EA-04.06

Scientific Areas: Banking, Business Process Modelling

The use of Business Model Canvas and systemic methodologies in appliance on a branch of Piraeus Bank

Leonidas Goniotakis
Undergraduate Student
80, M. Karaoli & A. Dimitriou St., 18120 KORIDALLOS, Greece
E-mail: *leongoniotakis@gmail.com*

EXTENDED ABSTRACT

This paper's main point is the introduction to Business Model Canvas and its components as a tool in business world, as well as the implementation on a branch of Piraeus Bank. BMC is a strategic management tool that helps enterprises to create or upgrade business models and it consists of 9 very important business areas. At first a historic recursion takes place in order to give the reader some significant knowledge about the evolution of the Greek banking system as well as the evolution of marketing through the years and their focal points until they got the figure they got today. A fully detailed analysis using questions to be answered by the equivalent staff of the enterprise that is willing to use BMC is being provided, specifying which way it could be used for maximum development and to highlight the simplicity of the tool and then an appliance of BMC on the branch of Piraeus Bank takes place that fully demonstrates the features that BMC has to show. Then the use of DCSYM methodology is used to represent the branch of Piraeus Bank and its systems as part of the catholic banking system as the inside and outside environments are represented too and also the way that these systems interact the one with another. Last but not least is the use of the software Vensim that offers the ability to successfully simulate processes regarding the branch itself in daily basis activities and also in medium or long term situations in link with the BMC that helps to extract very useful and distinct conclusions relevant to the enterprises future situation.

Keywords: Business, Banking, Processes,Models,Marketing

EA-05.01

Scientific Areas: Project Management, Systems Safety

Safety Specifications for the Hellenic Civil Unmanned Airial Vehicle: Applying a Systems Theretic Approach

Ioannis Dokas, Kyros Yakinthos, Antonios Gasteratos
Civil Engineering Department, DUTH
Vas. Sofias 12, 67100 Xanthi, Greece
E-mail: *idokas@civil.duth.gr*, *kyak@auth.gr*, *agaster@pme.duth.gr*

EXTENDED ABSTRACT

The drone and Unmanned Aerial Vehicles UAV's market is expected to grow exponentially the upcoming years according to a number of recent market research reports. This growth, brings into fore a number of emergent problems, such as the management and control of possible hazards, which may be generated from UAVs interactions with everyday human activates, existing socio-technical systems and the environment. Under this context, this paper is focused on the UAVs safety requirements definition process. Firstly, it presents the results of a Systems Theoretic Hazard Analysis Approach to the Hellenic Civil Unmanned Air Vehicle (HCUAV). It then compares the results of the approach against the safety requirements identified by the HCUAV developers. Finally, it presents whether or not the Systems Theoretic Hazard Analysis Approach identified new safety requirements and what aspects of the HCUAV these new requirements could enhance.

Keywords: Safety, Hazard Analysis, STPA, UAV

EA-05.02

Scientific Areas: Project Management, Document management-digitization

Digital Library Project

Elias Sakellaris
Employee
Aspropyrgos, 19300 Athens, Greece
E-mail: eliassakel@gmail.com

EXTENDED ABSTRACT

This paper deals with the digitization project of the Library of Economics in a Greek University, with the use of the systemic tools DCSYM and VENSIM. Initially, the project presents the key points, as well as the general and the specific parties of the organizational structure, analyzes their role, presents the SIPOC diagram and models the Process using VENCIM.

Subsequently, the structural problems of the project are examined and designed by using the DCSYM tool.

Then, thoughts for the use of the tool are given as well as suggestions for improvements using the DCSYM tool. The paper concludes with general and specific conclusions.

Keywords: Digitization, Library, DCSYM, VENSIM, Project Management, Document Management

EA-05.03

Scientific Areas: Marketing, Creativity & Innovation

The use of AnyLogic for the Dynamic Simulation of a promotional event

Markos Tziotis
University of Piraeus
80 , Karaoli & Dimitriou Street , 18534 Piraeus, Greece
E-mail: markos.tziotis@outlook.com

EXTENDED ABSTRACT

This study discusses the depiction a promotional event in an outdoor music venue. Responsible for this promotion strategy is a marketing and event management company. The model depicts four promotion points around the concert area.

A system simulation imitates the operations of various real-world tasks and processes. The simulation is implemented with the help of a software and aims to represent a system's objects and activities as well as the interactions between them. This technique acts like a decision making tool for the stakeholders mainly because of the mathematical analysis it provides.

The software used for this simulation is Anylogic. This software supports agent based simulation which helps us depict the event's environment as realistic as possible. The agent movement simulation and the factors that can change at will show the importance this software has in achieving the goals of this project. The fact that the parameters can change real-time affecting the whole process helps us observe the consumer behavior and the promotion response. Depending of the accuracy of the factors, a simulation like this will partially forecast the outcome of a promotional event like this.

Finally, Anylogic is a tool that lets us observe our system's behavior through it's simulation. The analysis and the real-time interventions make it possible for us to improve our strategy and thus make the whole event more profitable for all the stakeholders.

Keywords: System_Simulation, System_Dynamics, Anylogic, Promotional Event

EA-05.04

Scientific Areas: Marketing, Human Resource Management

The use of DCSYM Systemic Methodology in the "Aluminium of Greece"

Chrysanthi Stavropoulou
Student
Karaoli & Dimitriou St. 80, 18534 Piraeus, Greece
E-mail: *xrusast_95@hotmail.com*

EXTENDED ABSTRACT

Our study refers to the company Aluminium of Greece, which aims to exploit the rich bauxite deposits in Central Greece and in alumina and aluminum production. The implementation will be done through the use of DCSYM Case Tool, a developed software application which aims to facilitate systems and models design. The implementation will be done through introduction of systems and subsystems within and outside the organization. Then, we shall be introducing the symbols of DCSYM Case Tool and display the structure of the systems, we will present the communication and control channels between them. We shall understand the problems in communication among the different parts that compose the departments of the company and we shall provide solutions that can be useful for improving the communication within and outside the company, and will be helpful with its progress.

Keywords: DCSYM Case Tool, Aluminium-of-Greece, study, systems

EA-05.05

Scientific Areas: Marketing, Business Process Modelling

The use of AnyLogic for the Dynamic Simulation of the cash desks in a shopping mall

Olga Tsilimigkra
Department of Informatics
Karaoli & Dimitriou 80, 18534 Piraeus, Greece
E-mail: *olgate_175@live.com*

EXTENDED ABSTRACT

This study discusses the simulation of the operating system of the cash desks in a shopping mall. In order to achieve the simulation, we use the AnyLogic PLE program. The overall operation of the store includes the customer flow inside the store, the movement of the customer service in the cash desks and the facade of the shopping mall, which is focused on the input and output spots as well as the system that depicts the existence of the cash desks.

The dynamic simulation of the system is a useful and appropriate technique of the management science for the analysis of most complicated problems. This technique allows the testing and assessment of the present, proposed and conceived systems, without the danger of frustration of the efficiency of the existed system or the need of experimentation in the real world.

The AnyLogic is a multi-simulation modeling tool developed by The AnyLogic Company. It supports agent-based methodologies, discrete models as well as dynamic system simulation. This tool is the only one that supports three methods of simulation models: dynamic systems, discrete facts and person-based model and allows the creation of multiple modeling methods including Hybrid Simulation.

The real time change of the parameters in the program can indisputably affect the overall process, while in the same time it can help us observe the consumer behavior so as to improve the functionality of the store.

Finally, through the operation of the AnyLogic program we are able to observe our system's behavior through its simulation. The analysis provided in coordination with the real time interventions allows us to improve the selected strategy and therefore, make our business more functional and profitable. In our case-study we manage to conceive consumer's behavior and make the operational system of cash desks more efficient.

Keywords: System simulation, dynamic systems, Anylogic, cash desk, shopping mall

EA-06.01

Scientific Areas: Operations Management, Small & Medium sized Enterprises

Legal support for effective administration in pharmaceutical units: a stakeholders' commitment

Mary Konstantopoulou
MK Law Office & Consultants
196, Praxitelous Street, GR-185 35 Piraeus, Greece
E-mail: *mk@mk-law.gr*

EXTENDED ABSTRACT

The aim of this presentation is to highlight the need for the legal support and the legal fortification of pharmaceutical units at all stages of their establishment and operation within the modern frame of their business and scientific activation under the prism of an interdisciplinary approach according to the modern requirements.

Concurrently, is examined cases for the legal fortification and the ways of legal support of persons which are involved in a specific pharmaceutical unit, in a systemic approach within a pharmaceutical unit and its external partners.

It is clarified that the term pharmaceutical unit extends from single-member (unit) of individuals' company-pharmacy to the multinational pharmaceutical industry, taking into account simultaneously the individuals' aspects of each unit within of a well-defined organization and operational problem.

Keywords: Legal support, DCSYM, Stakeholder, Pharmaceutical unit

EA-06.02

Scientific Areas: Operations Management , Small- & Medium-sized Enterprises

A fast-track systemic design and implementation of a production process, of a system limited on resources and information: use of systemic methodologies and related software.

Dimitris Chatzipanagiotidis
Peisistratou 68, 17675 Kallithea, Greece
E-mail: *dc@antaea.com*

EXTENDED ABSTRACT

The changes that take place on modern enterprises can be fast and rapid; urged to adapt on new data and changes of the environment and implement rapidly the new business plans. The global economic situation also leads to changes at the lowest possible cost, reuse and utilization of existing resources. In the current study a new production process developed for the expansion of activities, of a group of companies engaged in the clinical trial studies and the broader field of medicine, in the field of non-interventional medical aesthetics and wellness. The rapid determination of the study refers to the minimum time that was given for planning and implementation of the project. The resource constraint refers to the re-use of existing infrastructure for the support of the new business activity. The restriction of information refers on two factors. The first factor is the reduced information provided in relation to the whole entity of the business plan. The second factor is the field of aesthetic medicine as a new business activity; which although related with the Group's activities so far, it has one significant difference that needs also a different approach to consider. The new process is targeted to the consumer and not to enterprises.

The path for the project implementation requires several steps. Initially takes place the collection of data from the business plan and then their projection to the business model canvas. According to the data collected, the capture and analysis of the production processes are initiated. At this stage the DCSYM methodology captures the structure of systems, roles and communication channels of the processes. The systems described in DCSYM leads us then to the analysis of processes in the VSM model of Beer, in order to track the existence of required structural elements for a viable system.

In the next stage, the process is analyzed through SIPOC diagrams. SIPOC diagrams are presented to personnel requesting correction, extension and consensus on the processes using a small version of the Delphi method.

The following step is a detailed analysis of processes in workflow diagrams using BPMN 2.0. All processes are supported by an information database system under Microsoft SharePoint platform.

For control and better forecasting, is chosen the creation and simulation of process behavior via discrete event modelling in the Anylogic software. The feedback from our model leads to correction and the final recording of processes in the operations manual of the company.

Keywords: dcsym, process, anylogic, simulation

EA-06.03

Scientific Areas: Operations Management , Small- & Medium-sized Enterprises

SYSTEMIC APPROACH OF PARADOX HELLAS SA

DIMITRIOS TSEVAS
EMPLOYEE
KORINTHOY 3 , 14451 METAMORFOSI, Greece
E-mail: *dimistsevas@gmail.com*

EXTENDED ABSTRACT

This thesis concerns the presentation of systemic approaches and methodologies, to the company Paradox Hellas SA and it's working environment as well as the production and disposal of its products.

It's a presentation of key issues and definitions of business, nowadays, using systemic methodologies. The definition of an organization or a company as a system helps us to attribute the right features and capabilities, because the systemic analysis effectively approaching the problems of the conventional analytic approaches.

At the same time because the systemic theory based on interdisciplinary, allows us if we develop and combine concepts and definitions from both the positive and the theoretical sciences.

This study presents such methodologies which allow the administrations of companies, namely the administration of Paradox Hellas SA to take the most appropriate decisions to the problems that exist in the company's structure and function, and better organization.

Keywords: Paradox, methodologies, company, systemic.decisions

EA-06.04

Scientific Areas: Organizational Behaviour, Healthcare Management

Problems in a medical institution and suggested solutions using the systemic method DCSYM

KONSTANTINOS MOSTRATOS
College Student (Department of Informatics)
University of Piraeus, 15127 Athens, Greece
E-mail: *mostratos1995@yahoo.gr*

EXTENDED ABSTRACT

The main and most important goal of a healthcare department is of course treating its patients. The organisation is often a secondary goal of a healthcare department because it may create conflict with its primary goal . As a result, problems in the communication between the workers may appear.

The system analyzed in this paper is a medical institution of a hospital which is consisted of doctors and nurses that work in shifts and must be always available for the patients. The working rhythms of such departments exhausts the workers and creates problems in the communication, the control and the organization of the department.

The system analyzed in this paper is depicted using the systemic method DCSYM (Design and Control Systemic Methodology) . This paper focuses on such malfunctions that occur in this medical institution and depicts them using the systemic method DCSYM. This paper also suggests of solutions for these problems that will lead to improve the function of this department by improving its communication and control methods.

Keywords: healthcare, communication, control, problems, solutions

EA-06.05

Scientific Areas: Organizational Behaviour, Strategic Management

The use of DCSYM Systemic Methodology in the "TOYOTA KIFISOS" authorized car dealer: Designs of current, Improved Situation and Comparison among designs.

George Terzakis
University of Piraeus
Karaoli & Dimitriou St. 80, 17123 Athens, Greece
E-mail: *giorgosterz94@gmail.com*

EXTENDED ABSTRACT

This paper discusses the modeling of TOYOTA KIFISOS, member of the group TOYOTA HELLAS which operates at the field of the car industry.

Initially the implementation will be done through introduction of systems and subsystems within the organization, by the use of DCSYM Case Tool, an analytical design tool of modeling organizations. Moreover, the structure and the operation of the company are analyzed, examining the communication and interaction between the company's systems, subsystems and individuals.

We shall understand the problems in communication among the different parts that compose the system and we shall provide comparisons between the current and the proposed improved in this paper and conclusions that will be helpful for improving the whole management of the organization and its resources.

Keywords: DCSYM, DCSYM Case Tool, TOYOTA KIFISOS

EA-07.01

Scientific Areas: Organizational Development & Performance Managemen, Systems and Complexity

Systemic approach to the Business-IT alignment issue

Nikitas Assimakopoulos, Panagiotis Papaioannou, Rallis Antoniadis
University of Piraeus, HSSS
80, Karaoli & Dimitriou Str., 18534 Piraeus, Greece
E-mail: assinik@unipi.gr, p.papaioannou@gmail.com, arisantoniadis@gmail.com

EXTENDED ABSTRACT

Business-IT alignment is a timeless issue that affects both the efficiency and the effectiveness of any small or large organization. A lot of methodologies from the software engineering field have been employed to deal with that issue as well as organizational approaches like COBIT and Capability Maturity Model. Nevertheless, the problem remains and it will always be a challenge.

In this work, we assume that complexity is a determinant factor for the Business-IT gap that, nowadays, most organizations experience. The complexity starts from the fact that software does not exist in isolation as a self-existent entity. Instead, it is made by people as a product of a collaboration effort, it is used in the context of the organization and may affect people outside the organization. The complexity arises from the number of factors that affect the software quality itself, the integration with the organization processes, as well as the adoption and interaction with the users. All these factors compose a not well defined situation, a wicked problem, in which systemic methodologies can be used to bring order out of the mess and to compromise different stakeholder expectations.

Systemic metaphors help in a wicked situation by offering more than one point of view. Having multiple different points of view gives an advantage over a single position and helps to create a holistic approach. It also helps to discover limitations as well as possibilities during the design of the intervention and allows the emerging of new kinds of solutions.

The most useful metaphor is the term "IT ecosystem" which refers to the coexistence of software systems within the boundaries of an organization. These systems evolve in parallel and co-exist in the same environment along with the processes they serve and the people who are affected. This "IT ecosystem", is a subsystem within the organization aiming to serve the purpose of the whole system.

A lot of other systemic methodologies can be applied to improve the understanding the relations and alignment between business processes and the supporting information systems.

System dynamics and systemic archetypes reveal the structure which underlies the observed behavior which in turn creates complex situations. They apply both

in the long-term strategic planning as well as in managing short-term projects.

The Viable System Model (VSM) helps to understand the role of IT systems in the organizational structure and complexity, as well as issues like co-ordination, centralization, decentralization, stability, viability etc.

Design and Control Systemic Methodology (DCSYM) is capable to model a wide range of systems, from software and business up to stakeholders and social groups. It introduces a high-level design language, which enables effective synchronous and asynchronous multi-agent conversations.

Systems thinking and complexity theory can influence managers to change the way they perceive the problems, to abandon mechanism and determinism, and to appreciate and cope with relationships, dynamism and unpredictability.

Keywords: Business-IT Alignment, Systems, Complexity

EA-07.02

Scientific Areas: Organizational Development & Performance Management, Procedural Systems

The use of DCSYM and Systems Dynamics Systemic Methodologies with its Relevant Software in Shipping Industry

SOTIRIOS MESSINIS
CSAP Professional Postgraduate Program
CHARILAOU TRIKOUPI 18-20, 16346 Athens, Greece
E-mail: *sotirismsn@gmail.com*

EXTENDED ABSTRACT

Shipping industry is generally characterized by high risk-high return investments. Based on this fact, shipping companies have to face great challenges regarding their potentials on the continuously changing market. In order to be achieved the best response to market demands an emerging stakeholders engagement need to be taken them into account. The complexity arising on this context makes the existent organizations seeking effective ways of managing it. In the sequel, making the organizational structures simpler will mainly contribute to the optimal decision-making on both operational and strategic level. On this presentation, we focus on dry bulk shipping with the case study of a company being activated on the worldwide market through chartering, purchase and operation of dry bulk cargo ships. Last years, dry bulk shipping contributed to more than one-third of all international seaborne trade confirming the fact that industry and global trade are highly depended on this. The structural improvement of such organizations will significantly decrease the emerging risks regarding investment decisions and will enhance their participation on the global market. For being achieved the structural analysis and systemic interpretation of the results obtained referring to our case study, DCSYM is used. DCSYM is a powerful indicative methodology which helps us understand the subsystems, individuals and also their interactions on the organization we study and to compare designs for improvement between current and proposed situations. Furthermore, using DCSYM, a graphical presentation is derived from the external and internal environment of our system. The final stage of our case study is the simulation of a specific core procedure, through Vensim PLE, which supplementary enabled us to recognize the problem and efficiently intervene on the ' system-on-focus'.

Keywords: stakeholders, complexity, system, decision-making, structure, DCSYM

EA-07.03

Scientific Areas: Finance, insurance

Procedure of request and issuing of an insurance policy

NICOLAS CHARALAMBOUS
EMPLOYEE
AGIOU KONSTANTINOU 61 B , 18532 MAROUSSI - ATHENS , Greece
E-mail: *nick_charal@hotmail.com*

EXTENDED ABSTRACT

Process: sent the agent's or customers request via online application, or hand writer request with all the necessary documents to the customers service mail

*) Customer service administrator checked for accuracy and then digitize the request and send it to the underwriters for the risk management and acceptance or not

*) underwriters send the request to the editorial department to register the application to the company's software, the covers that asked by customer and sent the payment mandate to the agents or customer's

*) agents or customers have 5 working days to pay the amount of policy and sent it back (the receipt) to the customer service mail to be the policy active

*) the problem that observed is to the identification of the payments from the collection department and the let the policy's active on time

Keywords: insurance aig policy procedure problem request

EA-07.04

Scientific Areas: Finance,

Re-organisations & connect & relationship between two Department of Ministry of Finance

ELENI KOUTROULI
PAVLOU MELA 6, 15343 ATHENS, Greece
E-mail: *elenkoutrouli@gmail.com*

EXTENDED ABSTRACT

The case study that will follow in my upcoming presentation relates a part of the Ministry of the Finance and specifically a section that belongs to the General Secretariat of the information Systems and Department Payroll. I note the responsibilities of this department, and I will show how to connect with the Department of Productive operation Support Applications (where is necessary the existence). The problems created due to lack of the quality system control. I will imprinted the problem will be imprinted with software DCSYM. With the help of the DCSYM software I found and presented some thoughts and intrusive improvements regarding this situation. So I will be able to compare the two situations in order to see the differences and whether the proposal tends. Finally using the software of Vensim will create a model of the proposed improvement according the above proposal and so we will have more realistic view as the results of path that will follow.

Keywords: Re-organisations relationship Department Payroll

EA-07.06

Scientific Areas: Large Enterprises,

Work on Systemic Analysis

Georgia Lamprou
University of Piraeus
Piraeus, 18543 Athens, Greece
E-mail: *Gina.lamprou@gmail.com*

EXTENDED ABSTRACT

This paper discusses the systemic study reported in department store Public specifically in the computer sales department. The implementation will be done through the use of DCSYM Case Tool, an analytical design tool of modeling organizations which is appropriate to use for studying systems that human factor take the lead. First of all we introduce the symbols of DCSYM systemic methodology then we analyze the structure and operation of the department and then we analyze the communication and interrelationships between the elements at the current situation (CS).So this methodology allows the recognition of the key-points needed, which intervention is required in order to improve the CS.As a result this gives us the ability to make Ameliorative Suggestions(AS).In conclusion, we are able to compare the CS with the AS and the redefine the system and to recognize the importance of the DCSYM methodology which have the ability to visualize the structure and the operation of a system .

Keywords: DCSYM, SYSTEMIC STUDY

EA-08.01

Scientific Areas: Healthcare Management,

Using Systemic Methodology for Improving Structures, Processes and Procedures at Zeus CRO

Vasilios Andritsos
HSSS
Peisistratou 68, Kallithea, Athens, Greece, 11741 Athens, Greece
E-mail: *vasilios.andritsos@gmail.com*

EXTENDED ABSTRACT

ZEUS CRO is the company that has been chosen to be presented, studied and improved in this paper by using Systemic methodology and appropriate software tools.

ZEUS CRO is a Greek company based in Athens and is part of the pharmaceuticals industry. The name ZEUS (the father of the Gods in the ancient Greek pantheon) has been chosen as the company name and the initials CRO (Contract Research Organization) state the purpose of the company.

A CRO is an organization that provides support to the pharmaceutical, biotechnology, and medical device industries in the form of research services outsourced on a contract basis. A CRO may provide such services as biopharmaceutical development, biologic assay development, commercialization, preclinical research, clinical research, clinical trials management, and pharmacovigilance. CROs also support foundations, research institutions, and universities, in addition to governmental organizations like the European Medicines Agency (EMA). [1]

Specifically pertaining to CROs providing clinical-trials services, the International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use (ICH-GCP) [2] defines a Contract Research Organization (CRO) as: "A person or an organization (commercial, academic, or other) contracted by the sponsor to perform one or more of a sponsor's trial-related duties and functions."

• (5.2.1) A sponsor may transfer any or all of the sponsor's trial-related duties and functions to a CRO, but the ultimate responsibility for the quality and integrity of the trial data always resides with the sponsor. The CRO should implement quality assurance and quality control.

• (5.2.2) Any trial-related duty and function that is transferred to and assumed by a CRO should be specified in writing.

• (5.2.3) Any trial-related duties and functions not specifically transferred to and assumed by a CRO are retained by the sponsor.

• (5.2.4) All references to a sponsor in this guideline also apply to a CRO to the extent that a CRO has assumed the trial-related duties and functions of a sponsor.

As already stated, ZEUS CRO is not an existing company but the Structures, Processes and Procedures are based on a real one, covering all the above services. The structure of the company will be presented in the first part of Chapter 1 of this paper by using the DCSYM methodology and DCSYMCASETOOL software to understand the existing model of communication and control between the departments. In the second part of this chapter after having carefully observed the above processes, use of the DCSYM methodology and DCSYMCASETOOL have again been enlisted in order to propose improvements in regards to:

• Departmental structure.

• Communication between the departments.

• Control of the departments.

Chapter 2 of this paper simulates, through the use of the Dynamic Systems methodology and VENSIMV6 software, the model of turnover that the company has been experiencing in regards to time. As training is perhaps the most important factor for someone working in clinical trials and keeping in mind how time consuming this process is, VENSIMV6 software is used to help visualize the amount of time that is required for a newly hired CRA to become an experienced one. It is worth mentioning that a trainee is not as productive as an experienced employee and all enterprises struggle to minimize the financial loss between an inexperienced member and an experienced one. During the simulation, the user has the ability to change the values of the variables and to monitor through the graphs and better understand how the system is affected.

Chapter 3 thoroughly presents the conclusions that are drawn from reviewing the previous chapters, while also providing some further clarifications and also issues that have been identified during the use of the DCSYMCASETOOL and VENSIMV6.

Keywords: CRO, clinical, trial, CRA

EA-08.02

Scientific Areas: Hospitality Management & Event Planning, Human Resource Management

A systemic approach to GloVo - Global Volunteers Platform: the use of DCSYM Systemic Methodology

Evgenia Tsimpoura
University of Piraeus
Koudouriotou 22, Pefki, 15121 Pefki, Athens, Greece
E-mail: *evilenia.tsimpoura@gmail.com*

EXTENDED ABSTRACT

In this paper we present a systemic study on GloVo – Global Volunteers Platform. We examine the quality interactions between the organization's entities, such as the communication channel and introduce the concept of control. This paper and procedure is made by utilizing the DCSYM Systemic Methodology, which is commonly used for studying systems in which the human factor takes the lead.

We introduce the symbols of DCSYM Systemic Methodology and display the structure of the systems, present the communication channels and the control between the systems. Following that, we include a summary in which we propound the systems we have designed, their subsystems and their human resources. Furthermore, we illustrate the Current Situation (CS), using the DCSYM, which allows the recognition of the key-points needed, so as to improve the structure and operation of the system's CS. As a result, we have the ability to make Ameliorative Suggestions (AS), represented by DCSYM. Consequently, we are able to compare the CS with the AS and redefine the systems use so as to make it responsive to the real needs.

Keywords: DCSYM, systemic study, GloVo, event management

EA-08.03

Scientific Areas: Logistics, Operations Management

Design and implementation of an intelligent battery changeover system in a Logistic Distribution Center

Georgios Karampatos
University of Piraeus, CSAP-Program
Ermou Str. 50, 18122 Korydallos, Greece
E-mail: *geoka2174@hotmail.com*

EXTENDED ABSTRACT

Effective and efficient Energy Management is essential in a Warehouse Distrubution Center (DC) due to limited resources, rising energy costs as well as increased enviromental requirements.

Operation cost reduction is the most important driver and motivator in an industrial enviroment.

In particular, battery-powered electrical vehicles used by industry in shift operation, must be re-supplied with power, quickly and reliably, on completion of their period of duty. This is usually done in several ways and may in certain circumstances take place several times a day. Either the vehicle is connected to a charger, so that it is out of use for charging during many hours, or else the heavy batteries have to be changed using a crane, a manual changeover truck or fully automatic powered battery changeover equipment.

As the sole energy source for electric-powered vehicles, the traction battery must always be fully charged to ensure that all forklifts are constantly available for work, over normal shifts, extended shifts, or even 24 hours a day.

It is very important to ensure that fleet operator, with numerous drivers who have more or less knowledge of batteries and work different shifts, will use the batteries in the charging station in a proper and correct way. Therefore, we need to have an intelligent system which will managed the charging process of the batteries of pallet trucks which has been taken fully charged and ready for use and not allowed to take batteries which are still under charge and not able to provide full capacity during the shift.

Using the DCSYM and the VSM tools we will analyze the current situation of the battery charging procedure in the Warehouse Center, we will show the communication flow between the users of pallet trucks and the other departments in the Warehouse. Moreover, it will be designed the communication channel between the Energy department and external suppliers, sub-contractors as well as external partners. Following the results of the DCSYM Methodology it will help us to design an intelligent and efficient battery changeover system.

Moreover, we will design, plan and install battery charging stations and battery changing systems. They always give consideration to supplying the most efficient use of available space, customers, requirements and safety.

During the structure phase of a process oriented Battery Changeover System it is necessary to describe all steps of processes (leading processes, core processes and support processes). Using the Viable System Model of Stafford Beer we will analyze the influence between all steps of this system. We will design an organization structure and a role model for tasks, competence and responsibility.

To conclude, in order to design and adapt an efficient battery changeover system in a dynamic environment it is necessary to analyze the various elements of this system as well as the interaction between them. 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 indepent of a problem.

Keywords: Warehouse DC, Battery Changeover System, DCSYM, Viable System Model (VSM), Real-Time Control.

EA-08.04

Scientific Areas: Logistics, E-business Solutions

Use of Systemic Methodologies and their relevant software for business operation with or without e-business activity

Pantelis Karathanasis
Employee
Isminis 8, 14122 Neo Irakleio, Greece
E-mail: *pantelis.karathanasis@gmail.com*

EXTENDED ABSTRACT

In the present study regarding the certification of the professional program CSAP, we present the operation of a Greek enterprise via the systemic analysis. Systemic analysis, as a way of operation of current enterprises and organization, seeks the improvement of their value by proposing the most suitable methodologies that will resolve problems in an optimal way and will achieve important profits for the enterprise. Initially, in this paper, the definition of the system, as well as its characteristics are presented, with an aim to clarify for the reader the definition of the word 'system' and its connection with the modern world of enterprises.

The third chapter deals with the analysis of the company through the Design and Control Systemic Methodology and with management in complex environments. The fourth chapter helps us make sense of the behavior of complex systems with the aid of Vensim model structure tools, while in the fifth chapter the daily operation of our company is depicted through the simulation tool Anylogic.

The next chapter is dedicated to the presentation of the basic concept of e – commerce. In the seventh chapter, our enterprise is portrayed as an enterprise of e-commerce and in the eighth chapter, different ways to deal with complexity through the use of marketing tools such as Pest Analysis, Porters 5 and Swot Analysis are presented. In the ninth and final chapter, we draw our conclusions on the subject and outline proposals for further improvement.

EA-09.01

Scientific Areas: Public Sector, Healthcare Management

A Systems Approach to "Risk-Based Thinking" for the Pharmaceutical Industry

Stergiani Giannakou
Hellenic Society for Systemic Studies (HSSS)
284 Mesogeion Avenue, 15562 Cholargos, Athens, Greece
E-mail: sgiannakou@eof.gr

EXTENDED ABSTRACT

Pharmaceutical products must be fit for their intended use. Moreover, they must mitigate unnecessary risk to the public due to inadequate quality, safety, efficacy, and access. To reliably achieve these objectives, organizations in the pharmaceutical industry must incorporate risk-based thinking to their governance paradigm. This also holds true for public organizations that regulate the various aspects of the pharmaceutical industry. Risk-based thinking enables the organization to take appropriate action to address risks and opportunities, in a manner that is proportional to the potential impact on stakeholder requirements.

The organization's risk management process should not be an independent system, but rather, a key component of a holistic organization-wide management effort that drives the organization's structures, strategies, and practices. This work will present the risk management process that has been designed for the purpose of mitigating the (actual and potential) risks that are associated with the activities of the Inspectorate Division of a Public Agency. The key elements of the risk management process may be adapted to the needs of any organization in the pharmaceutical (or any other) industry. They include: (1) framing risk, (2) assessing risk, (3) responding to risk, and (4) monitoring risk. Each is presented in brief below:

Framing risk refers to the activities that are carried out for the purpose of establishing the internal and external environment in which risk-based decisions are to be made. The purpose of this element is to produce a sound risk management strategy, which effectively addresses how the organization intends to assess, respond to, and monitor risk, making explicit the risk assumptions that are used in making both business and operational decisions. In short, the risk management strategy establishes the overall context for managing risk, and outlines the boundaries for risk-based decisions within the organization.

Assessing risk relates to how the organization assesses risk within the context of its risk frame. The purpose of this element is to: (a) determine the potential threats that are inherent to the organization, or to its stakeholders resulting from the organization's activities and/or products; (b) identify the vulnerabilities that are embedded in its processes; (c) define the harm (i.e., adverse events) that may occur when the potential threats materialize as a consequence of the identified vulnerabilities; and (d) quantify the likelihood that a potential harm will

occur. The product of the assessment process is a determination of risk (typically a function of the degree of harm and likelihood of harm occurring).

Responding to risk refers to the actions taken once a risk is determined based on the results of the risk assessment. The purpose of this element is to provide a proactive response to risk in the context of the organization's risk frame, by: (a) developing alternate courses of action for responding to risk; (b) evaluating the alternate courses of action; (c) selecting an appropriate course of action consistent with organization's risk tolerance; and (d) implementing appropriate risk mitigation responses based on the selected course of action.

Monitoring risk refers to how the organization monitors risk over time. The purpose of this element is to: (a) determine the ongoing effectiveness of risk responses; and (b) control the inter-organizational oscillatory type of reactions that result from feedback mechanisms that operate to achieve internal equilibrium, following changes that are implemented to mitigate risks.

Keywords: Risk-based thinking, risk assessment, quality management.

EA-09.02

Scientific Areas: Public Sector, E-Government

Applying systemic methodologies to design e-government policy in EYDAP S.A.

Panagiotis Papaioannou
University of Piraeus, HSSS, CSAP
Kairi 24, 17122 N. Σμύρνη, Greece
E-mail: *p.papaioannou@gmail.com*

EXTENDED ABSTRACT

E-government refers to the utilization of Information and Communication Technologies (ICT) in order to improve the efficiency and effectiveness of services provided by governmental organizations. These services can be from government to citizens, to partners and suppliers, to employees or to other governmental organizations. In fact, e-government is about transforming the business model and the processes of the governmental organization in order to be able to exploit the capabilities of the technology for the purpose of providing new ways for the citizens to carry out their transactions with the public sector, faster and easier.

The large number of stakeholders and the complexity of the functions, services and processes behind them make e-government initiatives a challenge and an ideal field to apply systemic approach.

This contribution is based on a work about establishing e-government policy and designing specific interventions in Athens Water and Sewage Company (EYDAP S.A.). This work was extended to a broader study and proposal for e-government initiatives and projects in this company as well as in similar organizations.

Designing e-government policy and related interventions involves processes, information systems, employees and specific services that must be provided to the customers. All these make up a complex, problematic situation, in other words a wicked problem. Soft Systems Methodology provides a roadmap to bring order out of the mess and it is the core methodology which helped us to carry out he above task.

Transforming the way the organization provides services, implies transformation of its business model. Business Model Canvas is a way to depict the business model of the organization, as well as to analyze and improve it. In this case it is used to redefine the business model of the organization in order to include e-government principles and trends and to discover e-government intervention opportunities.

The Structured Dialogic Design (SDD) is a way to gather the collective wisdom of a wide range of different stakeholders. It is a scientific methodology for collaborative design and it assists heterogeneous groups in collectively developing a common, consensus based, framework of thinking. It was used in a workshop in

University of Piraeus in order to find how the organization can change policy without changing its basic structure.

DCSYM methodology was the basic tool for modeling situations and designing interventions. It was used to create mental models of the designed interventions and as a tool for collaboration between stakeholders.

Finally, system dynamics was utilized to model the way a new e-government service is launched and spread between citizens. A related model implemented using the Vensim software and the results show how the e-service reaches the potential adopters.

As a conclusion, systemic methodologies can always help in wicked situations. SSM, DCSYM, and SDD acted as a means to overcome difficulties in collaborating and designing with consensus the future situation. System dynamics was a means to explore the dynamics of new service diffusion and the Business Model Canvas helped to reduce complexity when transforming the business model of the organization.

Keywords: E-government, Systemic Methodologies, Business Model Canvas

EA-09.03

Scientific Areas: Public Sector, Social Approaches

Stakeholder management in endogenous island development

Panayiotis Chatzopoulos
P. Chatzopoulos
Ag. Triada -Plakakia, GR18010 Aegina, Greece
E-mail: *businessystemic@yahoo.gr*

EXTENDED ABSTRACT

In the process of island development, emphasis is put on the dynamic participation of the population. Informal as well as formal groups (business, cultural associations and organizations) will cooperate with local authority through statutory decision-making bodies to formulate development strategy. Interventions aim at restoration of the observed disparities between the country's and the island's development level and the island and between the different areas of the island. Descriptions of the relationships between the Centre and the suburbs, income inequality, accessibility and communication are also points of comparison between small local communities.

The decision-making method is the most important factor in formulating strategy. Dilemmas with moral character, influential and less influential groups involved and higher priority is given on their interests. The methodology of the Structured Dialogue Design provides advantages for the avoidance of conflicts of interest between the groups. The level of consensus will be reflected on the participation's index of the population and of the required commitment to the chosen strategy. Stakeholder management is divided into two fields of application. Initially at the beginning of the interactive process which sets the parameters for participation. Using DCSYM and Stakeholder management matrix defines the problematique in terms of "interest and influence," according to the "size of the impact." In the second stage based on the results of the interactive process conflict level will be referred to "the impact of the conflict interest" in function from the "commitment to the strategy."

Keywords: Dcsym, Stakeholder management matrix, Structured Dialogue Design, island Development

EA-09.04

Scientific Areas: Public Sector, Human Resource Management

THE USE OF SYSTEMIC METHODOLOGIES FOR IMPROVEMENT OF STRUCTURES, PROCESSES AND PROCEDURES FOR A UNIT OF THE HELLENIC ARMY

DIMITRA LAGOUDAKI
UNIVERSITY OF PIREUS
SPETSWN 50, 11362 ATHENS, Greece
E-mail: *lagoudaki7@gmail.com*

EXTENDED ABSTRACT

In this study, an attempt was made to understand deeper and improve the structure and the function of a unit of the Hellenic Army by using the Systemic Methodologies. This unit is located in Athens and the main purpose of its function is to produce, manage and distribute unique geographic data in order to support the Hellenic Armed Forces and to serve the Public Sector and the citizens.

The first methodology which was applied was the "Design and Control Systemic Methodology" (DCSYM).It was important to detect the external environment and analyze all the departments and the interaction between them in the unit. Using the software DCSYMCASETOOL it was possible to depict all the information we had about the current situation. Through this process we comprehended the structure of the unit and we inferred conclusions. The most important problem that was detected had to do with the communication between the civilian and the military personnel, due to the different educational background. So, it was proposed the creation of a new department which would train properly the civilian personnel.
Simultaneously with the DCSYM methodology was used the "Viable System Model" (VSM) in order to study the role that every department plays inside the unit. The VSM helps the researcher to understand further the function of the unit, redesign its structure and manage in a better way the changes that occur inside or outside the system.

The conclusions arising from the use of the DCSYM methodology led to the creation of a dynamic model regarding the recruitment and the productivity of the civilian personnel. The model was based on one of the John Sterman's models and the main purpose was to inform us about the rookie hire rate so as to sustain productivity on a high level. The final model and the simulation was held using the software VENSIM PLE and it was noticed that the model appeared to correspond to the reality, but further research and improvements can be made.

Finally, it was used the software Joget V5, which main function is to design workflow processes, in order to study and improve two important processes for the unit. The first process has to do with the orders of the citizens for products that provide geographic information. The second one is related to credit requests that are set by the departments of the unit to the economic department and the

administration. All the steps of the processes was described and designed in a improved way by using the Joget V5.

Keywords: DCSYM, VSM, SYSTEMIC METHODOLOGIES

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