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KPA Background

KPA Ltd. is a management consulting firm specializing in industrial statistics and management methodologies, including change management, risk management, quality systems, six sigma projects and design of experiments. **KPA** integrates expertise in quantitative tools with management methods to plan and deploy organizational changes. **KPA's** customers are mainly in Israel and Europe including ECI, Intel, Comverse, Amdocs, Motorola, Cellcom, AVX, the Israel Electricity Corporation, the Dead Sea Bromide Group, Indigo and the Israel Aircraft Industry. Professor Ron Kenett founded **KPA** in 1990 in order to improve the competitive position of its customers by promoting the implementation of advanced management methodologies.

Professor Ron S. Kenett, is Chairman and CEO of **KPA Ltd.**, International Research Professor at the Center for Research in Risk Engineering, NYU-Poly, New York, USA and Research Professor at the University of Torino, Torino, Italy . He has over 25 years of experience in restructuring and improving the competitive position of organizations by integrating statistical methods, process analysis, supporting technologies and modern human resource management systems. As a Professor of Management at the State University of New York, he was awarded the General Electric Quality Management Fellowship. For nine years he served as Director of Statistical Methods for Tadiran Telecommunications Corporation and, previously, as researcher at Bell Laboratories in New Jersey. His 160 publications are on topics in industrial statistics, performance appraisal systems and quality management. A partial list of companies he has consulted for includes: Intel, AT&T, AVX, EMC, National Semiconductors, Motorola, Dun & Bradstreet, Tadiran, Applied Materials, Israel Aircraft Industries, Amdocs and ECI. He is Chairman of the Board of Takeoff, an organization whose mission is to help start-up companies develop business and marketing plans and establish strategic partnerships. Ron is Editor in Chief of the Wiley [Encyclopedia of Statistics in Quality and Reliability](#), Editor in Chief for Europe of Quality Technology and Quantitative Management and Associate Editor of JRSS(A). Professor Kenett is a Fellow of the Royal Statistical Society, Senior Member of the American Society for Quality, Past Member of the Board of the Israeli Statistical Association and Past President of ENBIS, [The European Network for Business and Industrial Statistics](#).

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KPA has gained reputation as a centre of competence in the conversion of academic and theoretical models into practical tools for business. A Table summarizing **KPA's** role in these projects followed by a description if the projects is presented below:

Project acronym	Project focus	KPA's role	Project Budget
ISPIN	Improvement of software development processes	Coordinating the Software Process Improvement Experiments in Israel	90,000 euros
ELEKTRA	Development of an Enterprise Knowledge Development (EKD) methodology for the Electricity Industry	Development of a methodology for the statistical evaluation of alternative scenarios	3,330,000 euros
TITOSIM	Time to market reduction using simulation platforms	Develop case studies and support simulations in SMEs.	3,740,000 euros
PRONACOM	A study of properties of nanocomposite materials	Provide statistical expertise in designing experiments	3,730,000 euros
BEST	Develop a methodology for better implementation of Enterprise Systems such as CRM, ERP,...	Provide case studies and develop a set of improvement tools combining organizational behavior and statistical methodologies	3,890,000 euros
Pro-ENBIS	A thematic network to promote evidence based science and business practices	Coordinate the activities of ENBIS in Israel	800,000 euros
MUSING	An IP aimed at developing a new generation of Business Intelligence (BI) tools and modules based on semantic-based knowledge and content systems	Coordinate the IT Operational Risks Vertical Stream and provide overall contributions	9,000,000 euros

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TITOSIM (Time to market reduction via statistical information, Growth Project No. GRD1 – 2000 - 25724) with CRF (Italy), INTRASOFT (Greece), University of WARWICK (UK), POLITO - The Politecnico of Turin (Italy), CNRS (France), BLUE Engineering (Italy), EASi Engineering (Germany) SNECMA (France) and IAI-TAMAM (Israel)

The basic idea of TITOSIM is to simultaneously find a design solution for both the product and the related processes which is optimized, fast and robust. Optimization is attained via an intelligent exploration of the set of possible solutions, fastness via the substitution of the physical (or simulated) systems with consistent meta-models, robustness through the consideration of all possible sources of variability along the product development process. The key methodologies for such an objective are statistics and simulation.

In the context of TITOSIM, **KPA** acts both as a Specifier and as a Validator. **KPA** is expert at implementing statistical methods in industry. It has trained over 50 six sigma Black Belts and implemented designed experiments in a large variety of applications including: plastics, electronic systems, mechanical parts, special materials, avionic systems, telecommunications, home appliances, batteries, chemical processes etc' ... The textbook MODERN INDUSTRIAL STATISTICS: DESIGN OF QUALITY AND RELIABILITY by Kenett and Zacks is reflecting this experience and includes modern computer intensive methods to be further developed in TITOSIM. This background is used to provide inputs from **KPA** to the specification of the TITOSIM components and validate the implementation from the point of view of users.

Link: <http://www.crfproject-eu.org/sites/titosimfolder/home.html>

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PRONACOM (A fundamental study of the Processing – structure – properties of Nanocomposites for industrial applications, Growth Project No. GRD1-2001-40359)

with UNIVERSITY OF PERUGIA (Italy), CENTRO RICERCHE FIAT (Italy), UNIVERSITY OF LULEA (Sweden), INASMET (Spain), INAUXA (Spain), FOUNDATION OF RESEARCH AND TECHNOLOGY HELLAS (Greece), NET COMPOSITES (UK), SHEFFIELD HALLAM UNIVERSITY (UK), LONZA (Italy) NANOPOWDER INDUSTRIES (Israel), ICECHIM (Romania), TRIESA (Spain)

PRONACOM is mainly structured in three parts. The first will be dedicated to the basic research and analysis of the fundamental properties of the studied materials and will consider the effects of the intercalation of inorganic fillers on the material structure, rheological properties and thermo physical properties of nanocomposites. The second part is devoted to the analysis of the technologies required to process nanocomposites for the production of industrial parts and considers the possibility to adopt the same technologies already available for traditional composite production. The third part of the project is devoted to the development of tools for the design of representative automotive components of simple geometry taking in account the typical properties of the automotive industrial sector, in terms of mechanical properties, dimensional stability, fire and environmental resistance, surface quality. The methodology developed in the project will be evaluated through a proper experimental program that includes processing and testing of simple geometry parts. A necessary scaling up will also be performed in order to verify the correspondence between samples and parts with dimensions characteristics of industrial parts. Finally the recyclability and the environmental impact of these materials will be evaluated. At this respect, the research will be focused to typical thermoplastic matrices already used in the industry (PP, polyamide for thermoplastics; polyester and epoxies for thermosets). However, in order to avoid the environmental concerns linked to the use of traditional unsaturated polyester systems, the use of new styrene free resins will be analyzed as potential candidates for nanocomposite matrices.

Link: <http://www.pronacom.net/>

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BEST (Better Enterprise SysTem implementation) IST Project No. IST-2001-35385

with ADEPA (France), CEC (Italy), CeTIM, Center for Technology and Innovation Management (Germany), Cranfield University (UK), Technical University of Denmark (Denmark), Fundecyt: Fundacion Para El Desarrollo De La Ciencia Y La Tecnologia En Extremadura (Spain), Gedas (UK), **KPA Ltd** (Israel), Qualitech (Israel), SINTEF, Stiftelsen for Industriell og Teknisk Forskning ved Norges Tekniske Hoegskole (Norway), UT, University of Twente (Netherlands), XPert (Switzerland)

The BEST project is a people centred research project to investigate the alignment between organisation, human and IT systems The BEST consortium includes:

- system end user
- consultancies ----specialised in system implementation
- SMEs
- multidisciplinary research centres

The consortium is backed by an industrial interest group of major system vendors, end users and supporting businesses; it provides a valuable data source for performing case studies research which can also be supplemented by published cases, interviews and survey questionnaires. Validation is done by access to the users and the SMEs through the representative enterprises. A combination of case study research and quantitative methods are to be used in different stages of the project.

The BEST project aims at developing a set of organisational methods and human relation skills to prepare enterprises for implementing wide IT systems. Today e-commerce is mainly concerned with on-line information and purchase and only very few European enterprises have implemented enterprise systems because of the costs. This situation is a barrier to SME's participation in the e-Economy. The consortium brings together vendors, implementers and users to design and provide a business service beneficial to the European industry.

Link: <http://www.best-project.com>

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Israel ESPINODE (European Software Process Improvement Node, ESSI Project No. 27340)

The Israel ESPINODE, managed by **KPA Ltd.**, carries out the following activities -
Regional workshops designed to exploit methodologies implemented in Process
Improvement Experiments and respective lessons learned

Professional services in selected areas: quality management, technical support in the
preparation of reports, cost statements, annexes and proposals, metrics and data repositories

Expertise in statistical methods applied to requirements definition, workload
characterization, project planning, project tracking and oversight, software reliability
estimation and control, testing, product evaluation and project management

Electronic catalogue of resources in several dimensions such as tools, workflows, expertise
and training packages, bulletins and Web Site in Hebrew.

*The impact of this activity has been significantly better awareness of Software Process
Improvement in Israel and of the opportunities offered by ESSI in assisting organizations.*

Link: <http://www.kpa.co.il/espinode>

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ELEKTRA (ELectrical Enterprise Knowledge for TRansforming Applications, ESPRIT Project No. 22927) with Universite de Paris I, UMIST in Manchester, KTH in Stockholm, SINGULAR and PPC in Greece and Vatenfall in Sweden.

The dynamic character of the Electricity Supply Industry (ESI) transformation from a fully monopolized and integrated industry under fairly tight government control to a more decentralized “unbundled” industry, subject to competitive forces and market discipline, is challenging. Transformation efforts so far, have been carried out in ad hoc uncoordinated ways, based on intuition rather than method. It is becoming increasingly evident that efficient restructuring of ESI companies cannot be achieved unless the changes can be predicted as to the outcome they will produce, in other words, it requires tools and methods for change management. In order to manage change ESI companies need a structured approach that will provide rational ways to:

- define the current state of the business processes
- define the objectives for change
- determine alternative scenarios for change
- provide a rational, evaluative way for choosing from alternatives

The main objective of the ELEKTRA project has been to develop a systematic approach to managing change of the ESI sector. The project has produced a methodology, supporting IT tools such as a Consultancy Toolkit, and dissemination actions.

The ELEKTRA project has been a culmination of an in-depth analysis of current change management problems and needs of the two participating electric supply companies, the Public Power Corporation (PPC) of Greece and Vattenfall AB of Sweden an examination of these problems in the wider context of the Electricity Supply Industry (ESI) sector in Europe and an evaluation of the applicability of the knowledge management method to the above two concerns.

Links:	http://www.dsv.su.se/~js/elektra.html
	http://panoramix.univ-paris1.fr/CRINFO/PROJETS/elektra.html
	http://www.singular.gr/elektra

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MUSING (Multi-industry, Semantic-based next generation business INtelliGence

Project No. FP6-027097 with Metaware S.p.A., CI Consultancy Ltd., Verband der Vereine Creditreform, Deutsches Forschungszentrum für Künstliche Intelligenz, European Business Register, MPSnet, Numerica, University of Innsbruck, University of Limerick, University of Pavia, University of Pisa, Tadiran Telecom Communication Services and University of Sheffield.

MUSING aims at developing a new generation of Business Intelligence (BI) tools and modules based on semantic-based knowledge and content systems. MUSING will integrate Semantic Web and Human Language technologies and combine declarative rule-based methods and statistical approaches for enhancing the technological foundations of knowledge acquisition and reasoning in BI applications. The breakthrough impact of MUSING on semantic-based BI, and its paradigm of multi-industry potentiality will be measured as the result of user-driven RTD developments in three vertical domains:

- **Finance**, through development and validation of next generation (Basel II and beyond) semantic-based BI solutions, with particular reference to **Credit Risk Management**;
- **Internationalization**, (i.e., the process that allows an enterprise to evolve its business from a local to an international dimension, hereby expressly focusing on the information acquisition work concerning international partnerships, contracts, investments) through development and validation of next-generation semantic-based internationalization platforms;
- **Operational Risk Management**, through development and validation of semantic-driven knowledge systems for measurement and mitigation tools, with particular reference to operational risks faced by IT-intensive organizations

The main objectives of the MUSING project are:

1. Development of an innovative, self-adapting BI system that integrates and specializes high-level semantic technologies for supporting next level of effectiveness in operations in different industries;
2. Combined use of declarative rule-based approaches and statistical methods in semantic technology;
3. Modeling and recognizing evolving knowledge accounting for temporal logic;
4. Validation of RTD results in three high-impact vertical domains;
5. Support to development of innovative technologies that enable enterprise's self-assessment

Links: <http://www.musing.eu>