

Computer Aided Consulting for Information Technologies

A Disruptive Technology for IT (Information Technology) Consulting?

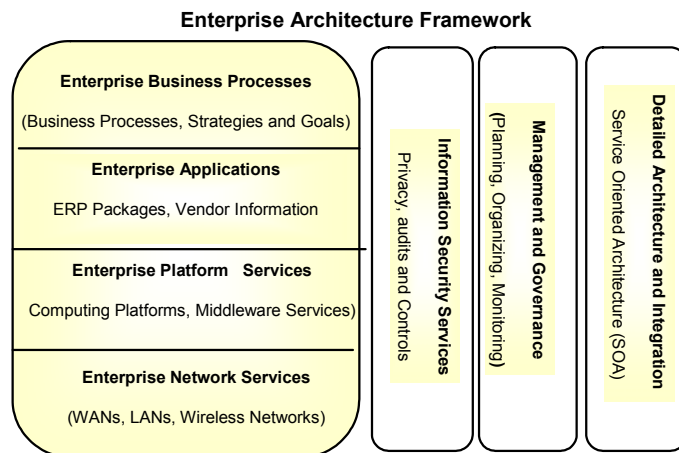
Executive Summary

A research project focusing on computer aided consulting for IT has produced an interesting service that can deliver high quality consultation at low costs to businesses located anywhere in the world, including developing countries. This service can also be used by consultants to remotely offer consultations to any customer anywhere in the world without leaving their desks. The basic ideas of this service and future plans are discussed in this short paper.

The Problem

Modern enterprises heavily rely on a complex array of services, as displayed in the enterprise architecture framework. This framework shows enterprise business processes, enterprise applications, platform services and network services as different horizontal layers. In addition, these horizontal layers represent highly interdependent building blocks that must be properly secured, integrated, and managed/governed (represented as vertical bars that cut across different horizontal layers of the framework). Specific challenges faced by the IT managers are:

- What business processes (BPs) should be automated and re-engineered to compete & succeed
- What type of IT infrastructure (application packages, computing platforms, and network services) are needed to support the BPs
- How to integrate new applications with the existing, including legacy, systems by using SOA
- How to secure the company assets to minimize risks and how to develop security audits & controls
- How to develop project plans for implementation and how to establish the most suitable IT governance policies, procedures and controls based on frameworks such as SOX and COBIT



These are difficult questions, especially for the SMBs (Small to Medium Businesses) because they lack in-house expertise and good quality consulting at affordable rates is not readily available to them. On the other hand, many consulting companies with appropriate expertise cannot reach remotely located businesses, especially SMBs in developing countries.

How Computer Aided Consulting Could Help – Our Research Objectives

- Develop a computer aided consulting *service* that could be used around the globe at low costs.
- Provide opportunities for consultants from anywhere to offer this service remotely to any customer
- Dramatically reduce the cost, time and energy (*green initiative*) wasted in consulting assignments.
- Instead of a few disconnected tools that address only parts of the enterprise architecture framework, develop an *Integrated Consulting Environment (ICE)* that captures the interrelationships and interdependencies between the horizontal layers and the vertical bars of the framework.

This ICE, even if partially feasible, could be a disruptive technology. Firms waste millions of dollars, spend years of human capital, and consume large energy resources flying their consulting staff around.

Results of Research So Far

Our research has produced the following two innovative products (see next page for details):

- **PISA:** An ICE that concentrates on IT planning, integration, security & administration processes
- **GEZA:** A comprehensive knowledge portal that adds business services on top of PISA.

How an ICE (Integrated Consulting Environment) Works

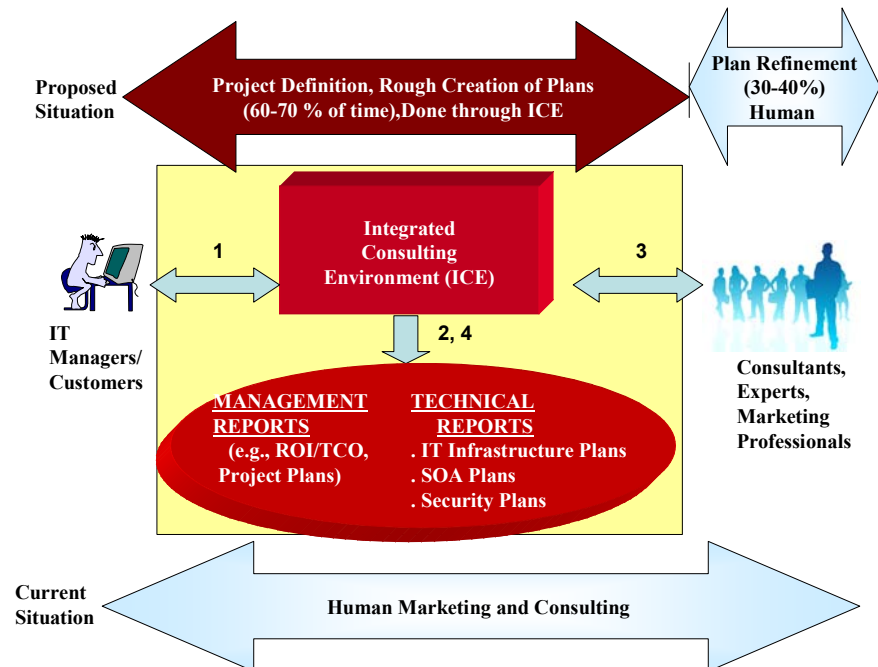
The following figure shows a conceptual ICE model. This model is based on ICE for IT Planning, Integration, Security and Administration (PISA). The PISA environment, described on the next page, provides integrated consulting support for enterprise architecture and SOA planning::

- ICE is envisioned as a service that is conducted collaboratively between consultants & customers.

- **Current Scenario:** IT consultants and marketing professionals spend a great deal of time and effort (60 to 70%) defining the project, documenting the present method of operation (PMO) and preparing rough plans for future method of operation (FMO), based on discussions with the customers.

- **Proposed Scenario:** the *user* (e.g., IT manager) defines the project (step 1) and quickly creates well documented PMO-FMO plans by using an ICE (step 2). The user then asks a consultant to review and refine the documents – this happens collaboratively between the consultants and IT managers (steps 3 and 4). A major advantage of this scenario is a dramatic decrease in time (about 60-70%) and cost.

- The proposed model can be used to deliver consulting services to remotely located customers. It can also be used by businesses to receive quality consulting services anywhere in the world.



Examples of How an ICE Can be Used (Based on 30 Assignments)

- Marketing professionals use ICE to illustrate, in real-time, how their products could be useful to a particular customer. An ICE tool goes beyond the typical Powerpoint presentations to a collaborative experimentation session between marketing professionals and potential customers.
- Potential customers develop their own future configurations by using ICE and examine how different products could fit into their future plans.
- An SOA consultant develops an SOA plan and SOA business case for a given business scenario (e.g., a company migrating to SOA gradually)
- An IS security consultant develops a security plan for a current or future configuration (e.g., how to secure the B2B operations or SOA services supported by an ESB)
- Given a business scenario (e.g., an existing company offering new services for B2B partners), a consultant quickly produces an IT infrastructure plan with needed hardware and software
- A customer quickly develops a sketch of an FMO plan and gives it to an IT expert who uses this document to develop a detailed simulation model by using a plug-in provided by ICE.
- Customers use 'Create Your Own Solution' option by using ICE and then submit the solution to a marketing rep to further refine the solution..

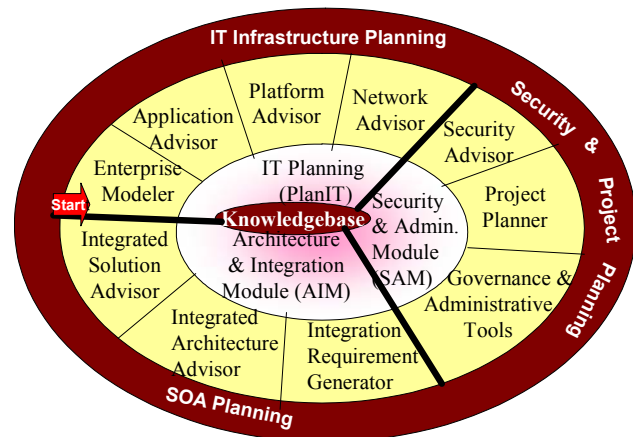
Details of Two ICE Products

PISA (Planning, Integration, Security, and Administration)

What is PISA: A family of automated consultants (“Advisors”) that collaborate with each other through a knowledgebase to help in planning, integration, security & administration of IT services for SMBs. Different PISA Advisors (see figure) cover different aspects of the IT framework shown earlier.

Main Features of PISA (see Figure):

- Enterprise modeling (business strategies)
- Enterprise application planning
- Computing platform planning
- Network planning (wired/wireless)
- Security planning (risks, audits)
- SOA planning (business case for SOA)
- SOA solutions for internal & B2B apps
- Evaluation of SOA solutions based on cost, security, and performance
- Project planning (WBS, Gantt charts)
- Completely documented IT plans
- Advanced modeling capabilities



Who can use PISA

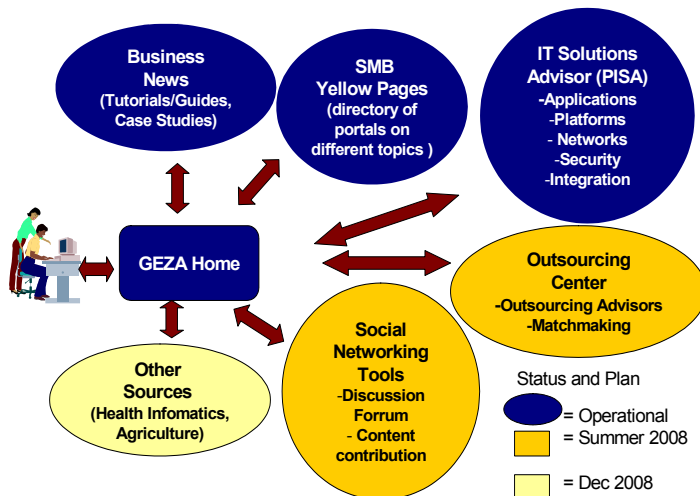
IT managers, IT consultants, IT sales reps, IT researchers and educators of SMBs or larger firms

GEZA (Global Enterprise Zone for All)

What is GEZA: A Comprehensive Portal to Support Entrepreneurship for SMBs

Main Features of GEZA: Provides the following set of services for SMBs of developing plus developed countries (see the Figure):

- **Knowledge Services:** business news, case studies, and guidelines on how to do business over the Internet, how to get funding, etc.
- **SMB Yellow Pages:** a comprehensive directory of SMB Portals that contain extensive information on starting, running and managing a business.
- **IT Solutions:** An innovative computer aided consulting tool for IT Planning, Integration, Security & Administration (PISA).
- **Outsourcing Center:** Allows SMBs to advertise their services, provides matchmaking and advice for buyers and sellers.
- **Social Networking:** Web 2.0 facilities for blogs, forums, and user provided content.



Who Can Use GEZA: SMBs around the globe to gain knowledge, develop IT plans, participate in outsourcing projects and B2B trade, and join a discussion forum on SMBs.

Additional Details: For research, please contact A. Umar, Ph.D. at umar@amjadumar.com (indicate ‘CACIT’ in subject heading). For PISA and GEZA products, please visit www.ngesolutions.com.