



Domain	Key Factors of Success	Deliverables
<b>Marketing</b>  <b>Specifications</b> <b>Business Plans</b> <b>Auditing &amp; Risk Assessment</b>	Marketing sets the strategy, the goals and the constraints of a business. The associated products must be specified & realised in conformance with these goals and constraints.	First proposals, full documents, reviews and audit reports, project management, mentoring. The effort can be from a few days to long term.
<b>Globalisation</b>  <b>Multi-Cultural</b> <b>Conflicting Interests</b> <b>In-house Products &amp; Projects</b>	Globalisation of products and product development is the currently accepted business practice, however the successes have been few. Success depends on accepting the goals and constraints of the various organisations and their products.	Strategies Coordination Meetings Resolution of Conflicts Travelling Diplomacy
<b>Architecture</b>  <b>System Design</b> <b>Module Design</b> <b>Internet, Intranet</b> <b>Mobile Agents</b> <b>Work Flow</b>	System architecture provides the guidelines for the conception, design and realisation of systems. Successful system realisation must be planned to minimise the risk by due consideration of both the system architecture and the marketing priorities.	Concepts Technology and product reviews & risk assessment Working prototypes
<b>Technology</b>  <b>Languages - C, C++, Java, Fortran, Pascal</b> <b>HTML, XML, XSL</b> <b>Packages - MFC</b> <b>O-O, UML</b>	Technology provides the tools and the materials for the development of a system. The selection of an appropriate technology can be a key factor of success. The wrong decision can lead to major cost over-runs and delays.	Technology and product reviews Risk assessment Working prototypes
<b>Reverse &amp; Re-Engineering</b>  <b>Porting of Legacy Systems</b> <b>Documentation</b> <b>Design</b>	Although the image of an organisation is usually based on plans for new products, the cash-flow necessary to sustain the business mostly comes from legacy systems. Porting these systems to new platforms to gain access to state of the art technology can be achieved at a cost of 1-10% of a new system and with a minimum loss of compatibility or functionality	Architectural and Platform proposals Feasibility studies & Prototypes Full porting of products Reverse engineered design documentation
<b>Applications</b>  <b>Electric Utilities</b> <b>Access (Security)</b> <b>E-Business</b>	The System and Applications must match the infrastructure, the work-flow and the external environment of the client.	Architectural proposals Feasibility studies Project Management Full realisation of Modules

## **Goudie Consult - Services**

### **Software & Systems Audits, Risk Assessments and Risk Minimisation Planning:**

- will provide the Customer with a clear statement of the state of development, an assessment of the risks to the cost and schedule, and recommended actions; risk minimisation planning will provide a project plan which minimises the risk of a major delay in the project completion.
- if undertaken early in the project, will usually enable the realisation to maintain the original budget and schedule.
- these audits are particularly necessary with global or multi-organisational-unit developments
- will give an exceptional return on investment.

### **Requirements Specifications, Architecture and Data Models**

- will provide the Customer with a Specification which will give the best possible chance of the realised system, both meeting the marketing or customer's wishes, and having robust operational characteristics.
- the Architecture and Data Models provide a precise basis for the functionality defined in the Requirement's Specification.
- will give a direct return on investment of 10.

### **Prototypes**

- will provide the Customer with a *Proof of Concept* operational system, which can be used to establish the confidence/risk factors associated with a new development, the move to a new platform, or the use of new third party products.
- can save significant direct investment and/or customer dissatisfaction.
- can be expected to cost 5%, but will not necessarily delay the complete project

### **Legacy Systems Porting and Reverse Engineering**

- will provide the Customer with a useful extension of the life of a successful product, and reduce the urgency/pressure on a new development
- will result in significant End-Customer benefit and satisfaction
- will help to retain a significant number of current customers
- can be expected to cost 5% of the investment in the base product

### **Management of the Product Requirements and the Product Development Schedule in Global Organisations**

- experience shows that traditional Product Management and Product Development (R&D) structures and procedures do not translate successfully to modern global organisations, as they breakdown under the diverse and extreme conflicts between the requirements of a specific customer or country/region and the global aggregate of the requirements of all the customers.
- it is totally unreasonable to expect the interested parties to come to an acceptable solution by cooperation.
- perhaps the only solution is to assign the responsibility of continually formulating and negotiating the product definition and realisation schedule to a person who has the respect of, but is independent of, the numerous interested parties.

## **Goudie Consult - Software Audits**

It is well known that almost all software projects exceed budget by 100% and take twice as long as scheduled, and that in addition 50% of all projects are never completed.

However it is almost unknown that the reasons for these situations can almost always be identified by a project risk audit very early in the project life cycle, and if the management is so disposed, the problems can be quickly corrected.

The cost benefits of such identification are almost unbelievable - the savings in development costs can be expected to be almost 100 times the cost of the audit, and the subsequent additional sales revenue almost 20 times the development savings. That is sales revenue gain to audit cost is a factor of 2000.

What is the risk? There is only one risk associated with the audit, namely that the development personnel consider that their space is being invaded, and very few managers are prepared to take that risk. But do not forget that very few software managers survive the normal development failures!

I have been undertaking such audits for almost 20 years, with a very high success rate in identifying the risks, but with a very low success rate in convincing the managers to take the necessary corrective actions.

However with the market and shareholder pressure on you to succeed, I expect that you will be prepared to make the necessary decisions.

I can undertake these audits for you with a level of discretion that your managers will be open and co-operative.

Normally the risks fall into the three categories of:

1. inadequately defined scope
2. the planning does not adequately reflect the risk
3. using too many new technologies

It should be noted that the initial project estimates and schedules would normally be achievable if the above risks were identified and managed.

If these audits are to be successful, the audit report must be submitted to a management level at least one level above that associated with the day-to-day relationships with the senior developers; normally this is to the business unit manager.

The audit should be seen as comparable with a high level company financial audit.

Although the gains to be expected from such audits are very significant they are achieved by eliminating waste and not by anticipating any direct productivity gains by the individual developers.

Experience shows that the critical decisions which are identified in these audits, are almost never taken within the development departments.

# **Goudie Consult - Issues Management**

## **Infrastructure Systems:**

Infrastructure systems are

1. characterised by having a wide geographical coverage, real-time operation with high capacity, high availability (24/7) and high security, multiple user terminals, etc.
2. based on state of the art computer and network communications technology.
3. required to comply with many technical and commercial standards and to support multiple languages.
4. usually sold to government authorities, utilities, commissions and large companies via a 'public' tendering process.
5. mostly supplied by globally based companies with regionally structured sales organisations.

## **The Issues:**

1. In most companies, which supply infrastructure systems on a global basis, there continually exists an overwhelming number of problems relating to the detailed system functionality, and to conflicting resource requirements and delivery schedules for the various projects. Most of these problems end up with the development and installation departments being overwhelmed by demands, criticism, change requests, error reports, etc.
2. A particular symptom is senior management showing uncertainty about schedules and quarterly financial results, but expressing confidence in the staff and the strategy, even though there are frequent changes in organisational structure and senior personnel.

## **The Issues Manager:**

The Issues Manager must

1. be established in a manner similar to the company auditor - i.e. reporting to the CEO or equivalent.
2. have the authority to talk to anyone and have access to all relevant information.
3. not necessarily direct people, have power of veto, be always consulted, etc.
4. be seen to be part of the organisation - internal and external people must consider that the Issues Manager will be 'there next month' to follow through and continue to support the decisions.

5. have the personality to be seen as a confidant and facilitator, to take his share of the responsibility but only a minimum share of the credit.
6. be available whenever and wherever required to facilitate discussion between the responsible parties.
7. always be seen to be fair and to show respect for others.
8. accept the situation, not blame others and never say 'that is outside the scope of my responsibility'.

### **Activities:**

1. Basically, the Issues Manager has to discuss and investigate issues to the level of detail necessary to resolve the problem. This requires the person to have a broad outlook, a willingness to ask questions and to accept advice, and an ability to gain the confidence and respect of the concerned partners.
2. It is more a position of listening and hard work than of issuing directives.

### **Costs:**

1. Salary equivalent to a top second level executive such as a Human Resources Manager, Internal Auditor, etc.
2. Office infrastructure and significant travel.
3. If the company runs development and projects on the basis of 'Payment for Service', then there would be an additional cost equivalent to 'one person year' at the rate for a senior project manager.

### **Financial Benefits:**

1. Except for those few cases where there has been a significant misunderstanding of the requirements, Issues Management can be expected to keep costs to the original (internal) estimates. (In my experience, in most cases the costs originally estimated for a development or customer project are reasonable and can be achieved, providing problems can be efficiently resolved and the scope is not changed.)
2. Without Issues Management, internal costs - personnel, travel, re-working, multiple installations, etc. - can typically escalate to twice the initial estimates.