

2002

# The Development, Management and Support of "Smart" Strategic Alliances

Iain Bitran

*S3 International Ltd.*, [ibitran@s3inter.net](mailto:ibitran@s3inter.net)

Joseph Bitran

*S3 International Ltd.*, [jbitran@s3inter.net](mailto:jbitran@s3inter.net)

Steffen Conn

*Groupe Ecole Supérieure de Commerce de Rennes*, [steffen-james.conn@esc-rennes.fr](mailto:steffen-james.conn@esc-rennes.fr)

Arie P. Nigel

*Eindhoven University of Technology*, [a.p.nigel@tm.tue.nl](mailto:a.p.nigel@tm.tue.nl)

Harry Nicholls

*Parque Tecnológico Andalucía*, [nicholls15@blueyonder.co.uk](mailto:nicholls15@blueyonder.co.uk)

*See next page for additional authors*

Follow this and additional works at: <http://aisel.aisnet.org/ecis2002>

## Recommended Citation

Bitran, Iain; Bitran, Joseph; Conn, Steffen; Nigel, Arie P.; Nicholls, Harry; and Hall, Carolyn, "The Development, Management and Support of "Smart" Strategic Alliances" (2002). *ECIS 2002 Proceedings*. 28.

<http://aisel.aisnet.org/ecis2002/28>

This material is brought to you by the European Conference on Information Systems (ECIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in ECIS 2002 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

---

**Authors**

Iain Bitran, Joseph Bitran, Steffen Conn, Arie P. Nigel, Harry Nicholls, and Carolyn Hall

# THE DEVELOPMENT, MANAGEMENT & SUPPORT OF “SMART” STRATEGIC ALLIANCES

**Bitran, Iain,**

S3 International Ltd,  
PO Box 18, Worsley, Manchester M28 1XP, UK;  
Email: [ibitran@s3inter.net](mailto:ibitran@s3inter.net)

**Bitran, Joseph,**

S3 International LLC,  
14 Darby Road, East Brunswick, NJ 08816, USA;  
Email: [jbitran@s3inter.net](mailto:jbitran@s3inter.net)

**Conn, Steffen,**

Groupe Ecole Supérieure de Commerce de Rennes,  
2, rue Robert d'Arbrissel, 35065 Rennes Cedex, France;  
Email: [steffen-james.conn@esc-rennes.fr](mailto:steffen-james.conn@esc-rennes.fr)

**Nagel, Arie P.,**

Eindhoven University of Technology,  
Den Dolech 2, TEMA 0.31, PO Box 513,  
5600 MB Eindhoven, The Netherlands;  
Email: [a.p.nagel@tm.tue.nl](mailto:a.p.nagel@tm.tue.nl)

**Nicholls, Harry,**

International Association of Science Parks, Parque Tecnológico Andalucía,  
Sede Social C / Marie Curie S/No, Campanillas – Malaga 29590 , Spain;  
Email: [nicholls15@blueyonder.co.uk](mailto:nicholls15@blueyonder.co.uk)

**Hall, Carolyn,**

Chalice Projects Ltd,  
34 Fields Court, Warwick, CV34 5HP, UK;  
Email: [Carolyn@chalice-projects.com](mailto:Carolyn@chalice-projects.com)

## ABSTRACT

*Despite the increasing number of strategic alliances, how to ensure their success is poorly understood. Studies suggest that up to seventy-five percent of alliances fail to meet their initial objectives due to a multitude of cultural, political, technological and human factors. If such an eclectic set of competencies is required for success, alliance management is clearly a difficult task for today's manager.*

*Traditionally, managers wishing to develop strategic alliance competencies have relied on ad-hoc consultancy services and training. This has not, to date, resulted in a notable improvement in alliance success. The SMART project redresses this growing need by developing a knowledge-based software support system to help managers conceptualise, implement and manage strategic alliances.*

*First, this paper introduces the field of strategic alliances; then the foundations of knowledge-based support systems are discussed. Finally, how the SMART approach will create value for managers is relayed.*

## Key Words

Strategic, Alliances, Partnerships, Development, Management, Support, System, Software, Learning, Training

## INTRODUCTION

Whereas organisational cooperation was previously unusual, the extent to which organisations of differing kinds and status have started to cooperate has escalated over the past two decades (Lynch, R. 1993, Harbison, J. and Pekar, P. Jr. 1998). Growth in the number of cooperative arrangements has not been limited to certain sectors or industries. Collaboration is increasing in most areas: Airlines, banking, entertainment, IT, telecommunications etc. This trend has spawned several new terms for collaboration between organisations, such as organisational partnering, inter-firm linking and strategic alliance (SA). Of these, SA is the term of choice for this paper.

Consistent with this intensification in cooperative practice are the attempts by academics, journalists and management consultants to comprehend and improve inter-organisational collaboration (Parkhe, A. 1993, Faulkner, D. and De Rond, M. 2000). To date, most of this research has focused on the revelation or prescription of antecedent factors and parameters that are likely to induce successful alliances (Child, J. and Faulkner, D. 1998). These antecedents have often been developed from a rational and static viewpoint, with the messy and difficult agenda posed by the management of the evolving alliance being ignored (Parkhe, A. 1993). Most writers have stopped at proffering broad SA-management prescriptions (Kanter, R. M. 1989, Urban, S. and Vendemini, S. 1992) and have not provided specific imperatives (Child, J. and Faulkner, D. 1998).

“How do I optimise the operation of an SA?” is very complex, difficult and multifaceted question. Thus it is not surprising that flourishing alliances are a rarity. Practitioner-perceptions are confirmed by empirical enquiry, which indicates that alliances have a dissolution rate of approximately fifty-percent (Park, S. H. and Ungson, G. R. 1997). This accepted evidence provides the motivation for the SMART Project, and its goal to foster successful SA’s.

The SMART Consortium, nine commercial companies and HEIs from five EU countries, manages the Project - an R&D initiative, partly financed by the European Commission’s IST 2000. SMART will use tried and tested knowledge-based software and associated techniques to aid and train SME managers in the creation, management and further development of their strategic alliances.

SMART differs from existing approaches to strategic alliance training and support, often provided by management consultants on an ad-hoc, one-off basis. SMART focuses on the evolutionary nature of inter-organisational alliances and allows managers to reassess and learn on a cumulative ongoing basis throughout the lifecycle of the alliance, through interaction with the SMART knowledge-based system, assisted reflective practice.

## STRATEGIC ALLIANCES

### *Why Strategic Alliances?*

SAs are no longer expansionary options that organisations can choose to neglect. They have become imperatives that firms need to pursue to maintain their position, driven by a complex set of factors such as the liberalisation of national economies, homogenisation of consumer values and tastes, and growth in demand for integrated products and services. Firms have increasingly been required to access or develop a more diverse set of resources.

Instead of attempting to develop such competencies in-house, alliances have often been pursued as a better alternative. Using a flexible partnering approach, firms have been able to: Create products that are compatible with common technologies, provide one-stop tailored service solutions, access new

geographical or product markets and combat ever-decreasing product life cycles and technological change through joint R&D.

Alliances are formed for one or more of several reasons. Contractor, F., J., and Lorange, P. (1988) identified seven somewhat overlapping objectives that a SA might have as a core objective:

- 1 reduction of risk
- 2 attainment of economies of scale or scope
- 3 avoidance of legislative barriers
- 4 co-option or blockage of competition
- 5 facilitation of international expansion
- 6 exchange of technology
- 7 linking partners' different functions for an improved/extended value chain

The first two reasons are both generic and historically the most relevant motives for SA formation. Motives four and five have become more popular with the increase in trans-national trade. A classic illustration of this is the joint venture between a developed country partner and a local partner in a developing nation. The local partner provides location-specific knowledge, manpower and influence, whereas the developing country partner will usually provide capital and technology resources.

The final two motives have grown most rapidly within the last decade, driven by the convergence of technologies. In such situations the single firm often cannot develop the requisite resources or knowledge that an integrated solution requires; especially given the time pressures created by technological change and product lifecycles (Duysters G., Kok G. and Vaandrager M. 1999). The fastest and most efficient way to access such resources is through SAs that either link firms' different capabilities to produce a single product, or allow knowledge exchange for mutual benefit.

### ***Types or Forms of Alliance***

The diverse body of literature has typically used the term strategic alliance to mean any form of significant cooperative behaviour between two or more organisations. A strategic alliance no longer automatically implies a joint venture, but can refer to any of many forms including R&D cooperatives, virtual networks and the outsourced corporation (Duysters G., De Man A. and Wildeman L. 1999).

Our definition of an SA, "Any substantial long-term (in)formal agreement between two or more organisations, where each organisation remains independent". This definition excludes mergers and acquisitions and simple transactions.

### ***Alliance Success and Failure***

All alliances are not successful, failure being the result of a host of reasons. These are usually "soft" ones (Medcof, J. W. 1997) with barely 30% of failures due to "hard" reasons such as legal, technical or structural problems. Firms often spending more time optimising the hard issues that are typically easier to handle than the "soft" issues can explain this predominance of failures due to "soft" factors. "Soft" issues such as partner commitment, personal chemistry, subversive objectives or misunderstood national or organisational cultures are the core reasons for failure and are all notoriously difficult to manage.

How can the success rate of SAs be increased? One option is hoping that learning-by-doing leads to improvements. Or, a more methodical, critical and explicit examination of the factors that lead to success and failure can be applied. Such an approach is provided by the SMART project, the core of which is the SMART knowledge-based software system.

## KNOWLEDGE-BASED SYSTEMS

One result of the extensive research in the field of artificial intelligence has been the development of techniques that allow the modelling of information at higher levels of abstraction. These techniques are embodied in software languages, or tools, which allow programs to be developed, whose functioning and output resemble human logic. These programs, which emulate human expertise in well-defined problem domains, are called expert systems, also referred to as knowledge-based systems.

Generally, expert systems have been characterized as software applications that use human knowledge to solve problems that normally require human intelligence and perform tasks that require expert knowledge. The problem-solving capability of an expert system stems from its domain knowledge as well as the formalisms and reasoning strategies it uses.

The ITRI at Loyola College, Maryland, USA, commissioned in 1993 one of the most definitive studies on expert and knowledge-based systems (Feigenbaum, E. (Chair), Friedland, P. F., Johnson, B. B., Schorr, H., Shrobe, H. and Engelmores, R. S. (Ed.) 1993). The study offers the following definitions and distinctions. "Expert systems are programs that achieve expert-level competence in solving problems in task areas by bringing to bear a body of knowledge about specific tasks are called *knowledge-based* or *expert systems*. Often, the term expert systems is reserved for programs whose knowledge base contains the knowledge used by human experts, in contrast to knowledge gathered from textbooks or non-experts. More often than not, the two terms, expert systems (ES) and knowledge-based systems (KBS), are used synonymously. The area of human intellectual endeavour to be captured in an expert system is called the *task domain*. *Task* refers to some goal-oriented, problem-solving activity. *Domain* refers to the area within which the task is being performed. Typical tasks are diagnosis, planning, scheduling, configuration and design".

The study suggests that the benefits of expert systems to end-users can include:

- A speeding-up of work processes and employee or managerial activity.
- Major internal organizational cost-savings. For small systems, savings may be in the tens or hundreds of thousands of dollars; for large systems, in the tens of millions of dollars.
- Improved quality, accuracy and speed of decision-making.
- Preservation of scarce expertise, in organisations. Especially the ability to capture the expertise of individuals who are leaving. They have also enabled companies to offer new business systems and services, more efficient education and training, and supported faster adaptation to changing conditions.

The technical fundamentals underlying these systems are common to all knowledge-based systems and expert systems. Essentially, every such system includes and relies on key components such as: a knowledge acquisition subsystem, a knowledge base, an inference engine, a user interface for defining issues and for presenting and manipulating results, an explanation facility, and a knowledge refinement subsystem. Some knowledge-based systems and expert systems also rely on an "expert shell" which represents and applies data and environmental variables, such as market sector and industry-specific success factors and stakeholders in the case of SMART. Development of knowledge-based systems and expert systems most often relies on rule-based programming, one of the most commonly used techniques according to the 1993 ITRI study (Feigenbaum, E. (Chair), Friedland, P. F., Johnson, B. B., Schorr, H., Shrobe, H. and Engelmores, R. S. (Ed.) 1993). In this programming paradigm, rules are used to represent heuristics, or "rules of thumb," which specify a set of actions to be performed for a given situation. A rule is composed of an *if* portion and a *then* portion. The *if* portion of a rule is a series of patterns which specify the facts which cause the rule to be applicable. The process of matching facts to patterns is called pattern matching.

The expert system provides a mechanism, the inference engine, which automatically matches facts to patterns and determines which rules are applicable. The *if* portion of a rule can be thought of as the *whenever* portion of a rule since pattern matching always occurs whenever changes are made to facts. The *then* portion of a rule is the set of actions to be executed when the rule is applicable. The actions

of applicable rules are executed when the inference engine is instructed to begin execution. The inference engine selects a rule and then the actions of the selected rule are executed. The inference engine then selects another rule and executes its actions. This process continues until no applicable rules remain.

It has been explained that often, enterprises will use several expert system shells to develop production-rule-based expert system applications (Johnson, V. and Carlis, J. 1997). Each shell has its own unique rule base and inferencing capabilities, and is populated by knowledge engineers to support the enterprise's expert-system applications.

Expert system shells are called shells because they contain no specific expertise. Instead, they are simply hollow shells into which specific expertise can readily be placed; and in which that expertise can later be accessed and manipulated by a user. At the outset, the shell is not expert in any specific field whatsoever; moreover it is simply the means by which an expert system can be created.

In the past, expert-system shells have been difficult and demanding to use - requiring considerable expertise in computer science to understand how to embody the specific expertise. The advent of object oriented programming languages, such as C++ and Java, has enabled developers of expert systems to conceptualise and build shells to encapsulate and represent specific domains. These expert shells, when interacting with an inference engine, and the relevant user interface, become expert or knowledge-based systems.

## **THE SMART APPROACH**

SMART may be typified as a knowledge-based system of the consultation type, which provides support and expert advice to enterprise managers in all aspects of strategic alliance formation and management.

The goal of the SMART project is to develop a knowledge-based software support system that enables facilitators, both external and internal, as well as enterprise managers to design, assess and optimise all aspects of strategic alliances, thus contributing to the overall success, growth and sustainability of both the initiating enterprise and the planned strategic alliance.

SMART users will interact with an expert shell that represents the critical success factors and stakeholders that impact various types of strategic alliances. SMART will be integrated with, and interact with, Enterprizer - a Java-based software platform with an inbuilt assessment and optimisation engine developed by and proprietary to S3 International (S3i), the member of the SMART partnership with responsibility for the design and development of software. The Enterprizer platform has been utilised by S3i to produce a wide range of solutions in a variety of enterprises, countries and cultures since 1991.

When interacting with SMART and the Enterprizer engine (see figure 1), a user develops a conceptual model of the desired SA, populated with alliance-specific data; further interaction allows the potential success of the user-defined SA to be assessed and scored. Then various success factors that would most affect the overall score are presented.



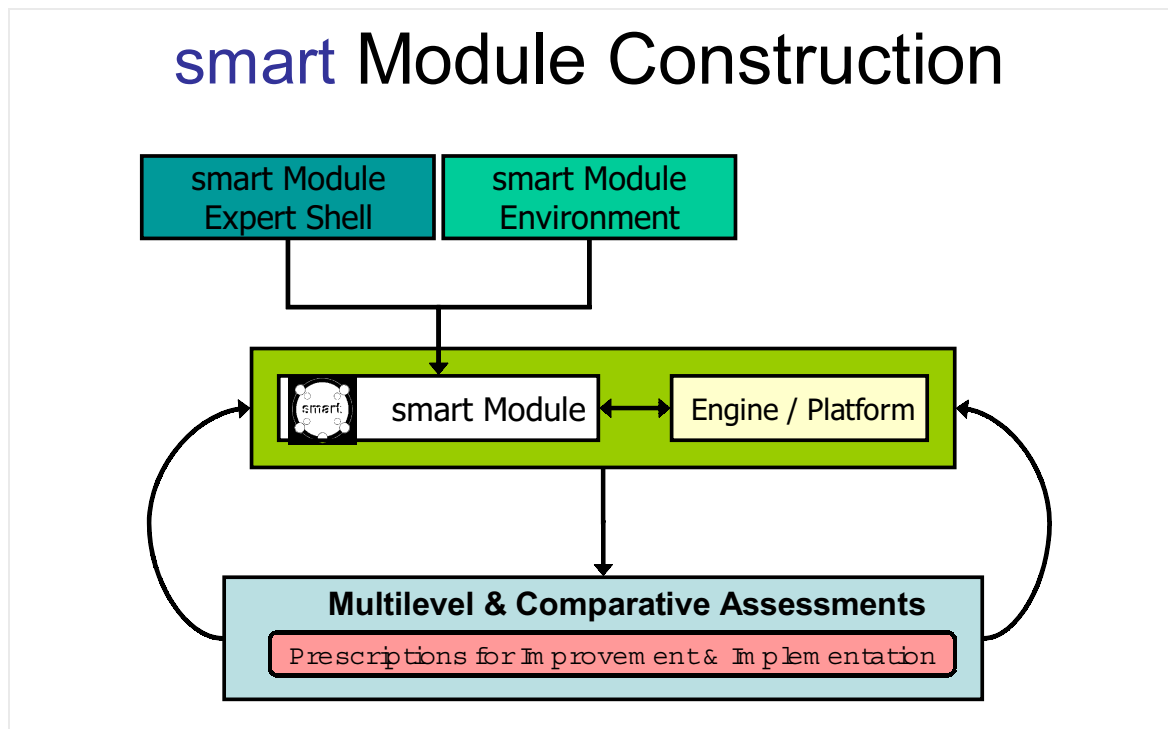


Figure 1: Enterprizer-Driven SMART Expert Applications

Goal-setting and “what-if” functionalities enable users to test how best to improve the likelihood of success of their SA. Subsequently, built-in improvement algorithms support the generation of optimised prescriptions for improving “success scores”. Then, SMART generates a Gantt chart to guide managers in the implementation of the improvement prescriptions. An optimised SA model can be re-used by enterprise managers throughout the lifecycle of the SA, and the success potential predicted at every milestone.

#### **Description of SMART**

Most large enterprises have partnerships with many SMEs whose growth and prosperity rely heavily on the success and longevity of their strategic partnerships with the larger enterprise, or with mutually dependent SME clusters. In many converging market sectors, such as information technology, knowledge management and telecommunications, SAs are critical for the overall success of all enterprises, with larger enterprises depending on smaller ones to provide the product/service or technology innovation necessary to enhance their competitive edge and market leadership. In addition, selecting the right partner has been stressed as one of the most crucial tasks in the establishment of a partnership (Varis, J. 2001).

The challenges facing all enterprise managers are to successfully form, develop, nurture and sustain “virtual strategic alliance enterprises” as a means for optimising performance and enhancing innovation, competitiveness and long term success of both SAs and the partner enterprises. The specific objectives of the SMART project are, therefore, to:

- Develop an advanced software system for profit and non-profit “smart organisations”, in English and French, enabling enterprises to successfully form, develop and sustain SAs
- Support European SMEs considering participation in global business networks.
- Support larger European enterprises in the competitive quest for globalisation.
- Research and demonstrate world best practices, and critical success factors for enhancing SAs.



- Develop and demonstrate world-best work and business practices, exploiting European strengths such as software for business process and enterprise modelling.
- Develop learning and support materials and a knowledge base of innovative “model-shells” that enhance SA success, and educate SME managers about the benefits of SAs.
- Enable SMEs to be more effective and efficient in their quest for successful teaming with strategic partners, and to successfully network with larger enterprises, thus enhancing SMEs chances of success and sustainable growth through business-led consensus
- Enable enterprise managers to better understand and manage SAs, thus helping them to successfully establish and manage new supplier/consumer relationships.

For SMEs or larger enterprises considering entering into or improving strategic alliances, SMART will have to provide answers to key user questions such as the following:

- I am seeking to enter into an alliance; which type would be best for me?
- I am already in an alliance; how do I improve its success and prevent its failure?
- I have many alliances – how do I manage them better?
- There are many alliances available to me but I am a small company and can only enter into one or few – which alliances would constitute my best option.

These critical questions will be addressed by SMART functionalities such as: alliance-type selection; alliance optimisation; alliance management; and alliance options prioritisation.

### ***The SMART Expert Shell and the Key Functionalities of SMART***

The SMART system will consist of three main software modules (see figure 2), the *Business Strategy Module*, which evaluates different strategic options to determine whether or not they would be better realised in a strategic alliance, the *Alliance Formation Module*, which supports qualification and selection of alliance partner and determination of the most suitable alliance type, and the *Alliance Management Module*, which supports the ongoing performance monitoring and optimisation of individual alliances and the enterprise’s entire alliance portfolio. Each module will provide comprehensive alliance design, assessment, optimisation and implementation- or improvement-support functionalities, and interact with its own expert-shell. Each expert-shell will consist of the various success factors, stakeholders, and relationships, as well as other metrics and performance benchmarks relating to the alliance’s lifecycle stage.

In the *Business Strategy Module* each strategic option will be defined via a series of questions to provide the necessary background rationale. It will then go through a rigorous assessment process to find out it’s suitable for an alliance and, if so, what category of alliance (resource exchange, resource creation or competitor strategic alliance (Perks, H. & Easton, G. 2000)). If the opportunity is suitable for an alliance then this is then fed into the *Alliance Formation Module*. The secondary aim is to increase knowledge and awareness within a company about strategic alliances. This module will be supported by a single expert-shell representing stakeholders, success factors, weightings and relationships.

The *Alliance Formation Module* will have a unique expert-shell that will represent all the success factors, stakeholders, relationships, and any metrics and performance benchmarks that impact partner selection and alliance type selection. Thus, for each potential partner or opportunity, the expert-shell will generate an overall score as well as a score for each of the alliance types possible or preferred by the prospective alliance partner [thus guarding against selecting the “right” partner but entering into the “wrong” relationship (i.e. alliance type)].

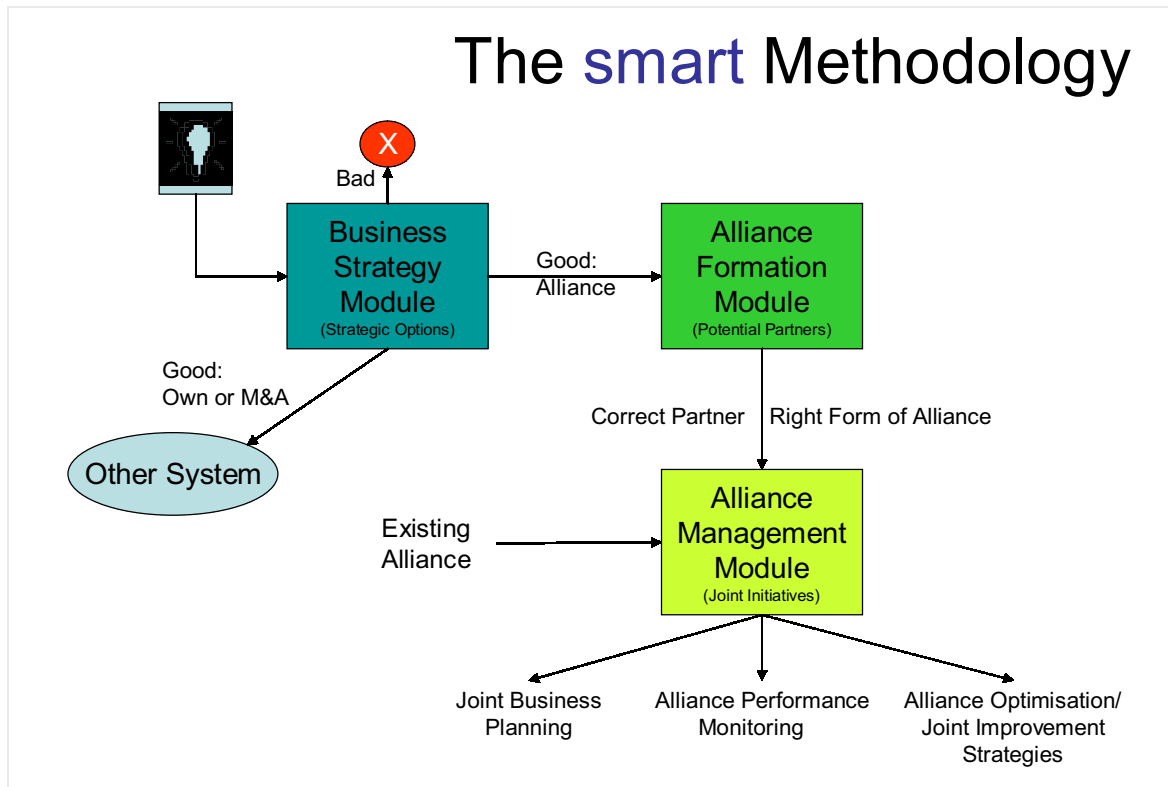


Figure 2: The SMART Software Modules

The *Alliance Management Module* will have a selection of three expert-shell, based on the reason behind entering into an alliance - resource exchange, resource creation or competitor strategic alliance (Perks, H. & Easton, G. 2000), that will represent all the success factors, stakeholders, relationships, and any metrics and performance benchmarks that impact the ongoing assessment, performance monitoring, and overall management of the alliance that the user has previously selected in the *Alliance Formation Module*. In addition, each expert-shell will be able to assess and optimise all initiatives, solution strategies or solution approaches that would support the ongoing management and sustainability of each alliance as well as the entire alliance portfolio.

SMART is being designed as a facilitated process for both external and internal facilitators. Facilitators will be able to define new and existing alliances, assess and optimise each, generating necessary improvement prescriptions. The alliances may be grouped by market, country, and/or alliance type, and SMART will effectively serve as an overall “alliance portfolio management system”. Thus, each client-adapted model can function as a strategic alliance support system that covers the complete life cycle of each alliance entered into. Context-specific training courseware and online help will be available and will help to provide in depth understanding of strategic alliance and guide the facilitators and users in utilising the SMART software’s various functionalities.

### ***Benefits and Contribution of SMART***

The underlying concept of the SMART project is to solve a European wide problem through a collaborative, pan-European approach. Markets are changing quickly and, through the emergence of information and communications technology (ICT), are becoming more transparent. European enterprises must have a strong and clear competitive advantage to be able to survive. They also need to be capable: of reacting to the fast changing environments, of creating dynamic and adaptive networks to assist response to change, and of optimising ICT solutions to deliver such adaptability.

In particular, the SMART project will deliver significant added value by harnessing global experiences in strategic alliances (SA) and embedding them into an efficient, knowledge-based software application that will support European enterprise managers, in both profit and non-profit organisations. SMART will consist of reusable SA "model-shells" which represent those experiences and encompass the diverse cultural and business environments throughout the EU. SMEs will directly and significantly benefit from the SMART project's deliverables.

More specifically, SMART will:

- Assist, guide and verify the implementation of the optimum prescription for the design, development, implementation and on-going operation of the SA
- Support SA implementation and SA partner communications
- Enable speedy solution-assessment and optimisation
- Become a strategic organiser of the shared knowledge-base

The key benefits for strategic alliances of the SMART approach are:

- Timely & valid resolution of priority issues
- Clear benchmarks for measuring success
- Consensus & team building
- Speed and reliability of results
- Environmental adaptability
- Optimal allocation of strategic resources
- Strategic realignment (Realignment of Strategic Factors/Influences)
- Consistency of process
- Performance optimisation

## **CONCLUSION**

This paper has discussed the vital role that strategic alliances are playing in the global economy. It has reviewed how alliances are proving difficult to manage; with a high failure rate indicating that a new approach to alliance-management training is required.

The SMART project seeks to fill this void, through the development of a software-based support system. In this way, managers can be trained to develop and manage alliances using a more methodical approach that deals with both the soft and hard sides of strategic alliances.

## **REFERENCES**

- Child, J. and Faulkner, D. (1998) *Strategies of Co-operation: Managing Alliances, Networks, and Joint Ventures* Oxford University Press, Oxford.
- Contractor, F., J., and Lorange, P. (1988). "Why Should Firms Cooperate? The Strategy and Economics Basis for Cooperative Ventures", in F. J. Contractor and P. Lorange eds, *Cooperative Strategies in International Business* New York: Lexington Books.
- Duysters G., De Man A. and Wildeman L. (1999). A Network Approach to Alliance Management, *European Management Journal* **17**, 2, 182-187.
- Duysters G., Kok G. and Vaandrager M. (1999). Crafting Successful Strategic Technology Partnerships, *R&D Management* **29**, 4, 343-351.
- Faulkner, D. and De Rond, M. (2000) *Perspectives on Cooperative Strategy*. In D. Faulkner and M. De Rond (Eds.), *Cooperative Strategy: Economic, Business, and Organizational Issues*. Oxford University Press, Oxford.
- Feigenbaum, E. (Chair), Friedland, P. F., Johnson, B. B., Schorr, H., Shrobe, H. and Engelmores, R. S. (Ed.) (1993). *ARPA and NSF Japanese Technology Evaluation Center, Knowledge-based systems in Japan*.

- Harbison, J. and Pekar, P. Jr (1998). *Smart Alliances: A Practical Guide to Repeatable Success*. Jossey Bass, San Francisco.
- Johnson, V. and Carlis, J. (1997). Building a Composite Syntax for Expert System Shells, *IEEE Expert/Intelligent Systems & Their Applications*. **12**(6).
- Kanter, R. M. (1989) *When Giants Learn to Dance*, Simon and Schuster, London.
- Lynch, R. (1993). *Business Alliances Guide: The Hidden Competitive Weapon*, Wiley. New York.
- Medcof, J. W. (1997). Why Too Many Alliances End in Divorce, *Long Range Planning*, Vol. 30, No. 5, pp. 718-732.
- Park, S. H. and Ungson, G. R. (1997). The Effect of National Culture, Organizational Complementarity, and Economic Motivation on Joint Venture Dissolution, *Academy of Management Journal* **40** 279-307.
- Parkhe, A. (1993). 'Messy' Research, Methodological Predispositions, and Theory Development in International Joint Ventures, *Academy of Management Review* **18** 227-268.
- Perks, H. & Easton, G. (2000), "Strategic Alliances: Partner as Customer", *Industrial Marketing Management*, vol 29, no 4, pp327-338.
- Urban, S. and Vendemini, S. (1992). *European Strategic Alliances*, Blackwell, Oxford.
- Varis, J. (2001). "Partner Selection Criteria in Different Contexts and their Suitability for Partner Selection in Infocom Sector", *Challenges of Innovation and Technology Management for the New Millennium*, ISPIM 2001 Conference Proceedings, p. 372.