

# Conditions of Success: a platform for international construction development

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'Conditions of Success' (COS) was organised to study the internationalisation of the construction industry in 1989. At that time few companies, and even fewer researchers, were interested in international construction endeavours. The purpose of the study was to collect information on activities of the 1980s in order to project who might be successful and under what conditions would they be successful in the next century. Extensive interviews were conducted with 60 participating firms from seven countries. While this group has now been reduced to about 20 via mergers and acquisitions they have demonstrated the value of several of the recommendations from the study. Critical to the study was an Executive Symposium held in Stockholm in 1991 where executives presented their view of the future and how best to prepare for it. Professor Ranko Bon, of Reading University, played a pivotal role in this special Symposium, as chair of the diverse interests and adviser to organising the results. Ten major recommendations are outlined in the paper. A critical distinction emerged from the study, which has grown in theoretical importance since 1991. It is between the North American, primarily Harvard-centric, strategic model for internationalisation and the relationship-building approach of Asia (initially Japanese and now Chinese). The Asian approach is closer to that of Europe and gaining in effectiveness and prominence over that of North America.

*Keywords:* Internationalisation, conditions, success, interdependence, value creation, construction activities, relationship building

## Introduction

The Conditions of Success project was based at the Institute of International Business (IIB), Stockholm School of Economics. In 1990 IIB was considered a leading international business research establishment. Founded by Gunnar Hedlund, and funded by the Wallenberg Group Foundation, the Institute examined internationalisation issues in novel ways that came to be seen as at the leading edge. Its studies of headquarters–subsidiary relations and experiments with alternative control systems remain as seminal, and proved to be helpful to the COS project. As was the case with many prestigious business research groups of the era, IIB did not 'do' construction industry research. Construction was seen as dangerous, dirty and demeaning, and too low tech to be at the leading edge of anything. One

important result of the COS project was a widespread change in this perception by involved organisations.

IIB had carried out extensive internationalisation studies of most economic sectors. Since all sectors are clients of the construction industry, the experiences of these sectors in globalisation were presumed to be a good basis for understanding the globalisation of construction. This thesis proved to be true. Professor Hedlund was critical to this thesis and provided a bridge from what had been learned elsewhere into the language of construction. The publications by Dr Hedlund (Hedlund and Rolander, 1990) and his students' PhD dissertations of the time (Roos, 1989; Ahlander, 1990; Zander, 1991) were helpful to the researchers.

The project began with the advice from executives of two major European firms and a construction management lecturer at a European executive management centre. Within the first six months researchers at four universities and an additional 58 firms joined the

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project. The companies came from seven nations and represented the major differences between American, European and Asian approaches to construction, as well as demonstrating the relative merits of different approaches to construction business. The average annual 1989 turnover of the 60 firms was \$3.9 billion. The turnover of the largest firm was \$26 billion. Eighteen of the world's 20 largest construction firms participated in the study, as did the world's largest private real estate developer and the largest building materials producer. Since 1991 these 60 organisations have, via mergers and acquisitions, become reformed into approximately 20 firms. Ranko Bon's role in orchestrating the industrial appreciation and human understanding that occurred between strong egos during the meeting, and which became part of the platform for this M&A activity, should not be underestimated.

The project was to identify different kinds of internationalisation challenges: those common to all firms in the construction industry and those unique to each firm, each part of the industry, and each nation. The logic for the study, as presented to those who would fund it, was that construction was perceived as less glamorous than other industries, in terms of its managerial, technological and financial innovations, but it was in fact responsible for producing the facilities on which the operations, and innovations, of all the others depended. As such it was an integral partner in processes widely acclaimed in the business press. It formed the linkage between ideas and actuality. Study participants came to think better of their industry and its role in the economic process. Professor Ranko Bon and his descriptions of the industry proved to be critical to this achievement. This was due to his wit and his intellect as seen in his writings (Bon, 1989).

Participating firms had been selected via a peer review process in each of the participating countries. Extensive information had been collected about the firms and then from each firm. Each was then asked to give an informational field trip to show what their approach meant in some tangible reality. At the centre of information collection were concerns as to: why and how to go international, whom to partner with, what resources would be required, what technologies and research would define the future, and what rewards could be expected from success. Information, as collected from all firms, on all of these topics was presented during the Symposium.

The Symposium was organised to improve relationships between different parts of the industry. Participants were asked to present their separate beliefs, about what they saw as main factors of success in the industry, along with a context for linking their beliefs to others. They were cautioned to check their egos at the

door in order to tap into the potentials of relationships. Professor Bon, via his manner, his extensive knowledge of the industry and his way of humorously avoiding the unimportant, proved to be critical to the relationship development success of the meeting.

Some surprising issues arose during the study and at the Symposium. While difficult to describe they generally related to profound changes facing the context of business as usual. The role of context was becoming ever more important, but in 1989 it was largely seen as avoidable confusion. Inclusion of a changing context is now generally accepted within major projects. At the time of the COS study context was not widely accepted as critical to the success of construction. The closest the participants came to accepting context was in their accepting a shift from traditional nation-based values of local construction to the value of international interdependencies in areas such as procurement and client demands.

Results of the study ended in a new perspective on why and how to internationalise. This came more from the questions of the industrial participants than the answers suggested by the researchers. The industry was more concerned in the interdependence they felt was emerging than were the researchers. Within the study the researchers had trouble coming up with clear management models for accommodating interdependence. The closest they came was in their agreement that relationships between the parts of the construction process were more important to success than determination of which parts were most important and then capitalising on them.

Relative to the best business form for construction internationalisation there was little agreement, but most could be divided into two camps: one concentrated on narrow aspects of the total construction value-adding chain, while others offered a loose cluster of competencies that attempt one-stop shopping. Most argued that there were limitations in the accepted metaphors of core competence and value chain analysis. They were seen as too mechanical and linear for the reality of the world. The difference between the two approaches was important, but the issue of how success in each depended on the conditions in which it was used, was a critical discovery for the participants. The second approach was generally felt to be better for dealing with the ambiguities of international construction work.

There was a considerable spread in attitudes between the participants, even within a country. One North American executive gave a very stirring presentation on why CEOs of construction firms should be more like professors where they take a sabbatical every few years and become a guest executive in another firm, to improve the quality and direction of the total industry.

His counterpart, from one of the most well known, and feared, international firms, presented a one-line statement, 'I have no damned idea about the future, nor do I care.' The first individual continues to be revered in the industry. His company went through a slight decline with his retirement. The second individual was soon spun off to be president of a small appendage to the larger engineering and construction business, even though he was the son of the founder. With his removal the firm once again became a world leader. Ranko managed to deal with the different intents of these individuals and the different contents of presentations coming from varied value systems present in the meeting.

## The project

### Rationale for Conditions of Success

The study was to identify issues critical to the future of the construction industry. Its future, as described in the COS research reports continues to be relevant. The most widely available description of this future was published by the Swedish Building Research Foundation (Hawk, 1992). As was outlined therein, most COS participants saw globalisation as an attractive enterprise, but were unsure of what it was. Questions behind the study had been designed to help participants better prepare for and respond to a somewhat ambiguous future.

During the interviews responses to the question: 'What question would you ask the industry if you could find out anything you wanted?' turned out to be so intriguing that they were ultimately composed into a 19-page questionnaire. Only one participating firm failed to fill out the questionnaire.

In addition to including the full array of activities involved in the construction value-adding process, as mentioned before, the study included a full array of economic philosophies. Some participating firms stayed close to the advice they might find in reading Adam Smith and/or Michael Porter. The common interpretation from such readings would be to specialise in an ever more narrow aspect of construction. Using this approach integration comes from management of a value-adding chain of various sub-projects.

In opposition to the Michael Porter logic were non-US firms found doing a wide array of value-adding activities and avoiding core competence concentration and tight value chain management. These successful firms had shifted to concentrating on new ideas of client service, value clusters and client creation. Instead of hierarchies of control they relied on network formed combinations of possible relationships organised to suit

the conditions of the moment. This second group was closer to the model of GE of North America, where there were clusters of competencies that could come together in unique arrangements for specialised clients. They gave greater value to rapid adaptation than dependable structure.

Study results illustrated that we should be sceptical of strategic approaches coupled to core competence dreams as a means to globalise. Results illustrated that depending on strong relationships between diverse arrays of activities was generally superior to strategic thinking linked to core competence ideals under conditions of high uncertainty, such as those found in internationalisation. Further support for doubting strategic avenues was seen in the recommendations formulated at the Stockholm Symposium.

Ten recommendations resulted from the project. Many continue as concerns of today's still changing industry. Construction continues to develop ways to respond to a shifting customer base with changing expectations, requirements and financials. Those who are not doing this have found greatly reduced roles in the industry. In brief, construction needs to continually try new ways to keep pace with rapidly changing resource availabilities and costs, availability of new organisational forms, innovative financial arrangements and advanced technological possibilities. Several of the following recommendations clearly contain this continuing concern.

### Recommendations from the project

#### 1. Embrace changing consumer ideals

Construction will need to be inventive in how it accommodates changing consumer values and expectations. Being innovative necessitates changes in how and where firms seek their clients, how they negotiate with clients over mutual realities, and how to maintain long-term relations around products with multiple shortcomings. One firm in the study had found ways to successfully invent clients and then negotiate with them over the definition of mutual expectations.

#### 2. Seek new business ideas in new customer relationships

New opportunities for adding value emerge in new markets. Firms need to respond by being able to create more obvious value via more fluid operations. This is seen in industrial clients requiring their home-based construction firm to accompany them when they require facilities in other countries. At this point this is seen as more negative than positive for the construction firm. Construction needs to find ways to interpret this forced transplantation as a potential, not a problem. The experience gained from this can become

a basis for later expansion into work for the foreign associates of the home-based industrial partner.

### *3. Add new value potentials via innovative design and procurement processes*

Value adding is clearly central to the relationship between builder and customer but the value definition process is just as clearly changing in significant ways. An important area of untapped potential is seen in processes and products of design. Design in construction was once limited to the activity that architects were paid a fee to go off and 'do', prior to the real men's work of producing a building. In this study design is seen as an emergent activity that needs to be seen in a more general way, and one that needs to involve all participants in the process. Design can be used to pre-problem-solve and post-opportunity-create. There are additional opportunities in redesign to include new social processes and technologies for production, sales, distribution and use.

### *4. Use of global construction to discover new local visions*

Even a global construction industry needs to associate with the reality of the local. Real estate is the basis for all construction, thus its products cannot have the economic mobility of autos, drugs and electronics. This offers special advantages to the industry but the mindset behind the design of its products will need to be different. Construction needs to innovatively bypass the dilemmas of the national while tapping more securely into the long-standing potentials of the local.

### *5. Accommodate diversity while embracing the contradictory*

Much executive discussion centres on whether a construction company must accept the diversity it continually encounters, or can find ways to simplify its situations by redefining its core, or even defining away complexity. The study results show how firms that can accommodate contradictions and ambiguity end up doing very well.

### *6. Adapt and adopt new design and production processes for construction products*

Construction clings to crafts and trades tradition. It resists some important concepts and practices that have been successfully applied to problems in other industries. Redesigning the idea of product and the tightly defined rules of traditional project management, to gain new opportunities for improved results, provides exciting alternatives for finding a more effective industry.

### *7. Find and organise new knowledge for the industry*

Construction needs to invest in a stronger scientific-technical base for its continual improvement of the

quality and efficiency of what it does. This could be seen as a renewal of the importance of R&D, or as developing a basis for renewed knowing in an industry that is often too proud of doing and not reflecting. Construction, as well as others, seems to suffer from the dilemma of knowing standing in the way of learning.

### *8. Innovatively avoid the limits in traditional hierarchical structures*

Some construction activities can continue to operate effectively as autonomous, small-scale fragments. Others become much more efficient as part of an organised system. Finding management systems that can accommodate autonomy alongside complexity presents a great challenge. Study results show how traditional hierarchies are insufficient to the challenge.

### *9. Integrate the mutual strengths of the Asian and European models*

The Asian model of construction offers an interesting philosophy and approach to future construction operations of European firms. Its strength lies in how it places high value on details, quality and collaboration between the stakeholders in the total process. A current shortcoming is its ethnocentricity. The western model has taught a great deal to eastern-based firms but has been seen to give too much emphasis to big ideas that are too often vacuous and end up being controlled by the vagueness allowed in speculative finance. Equity stakes between the two models were seen as a way to combine the best of each.

### *10. Learn to learn*

Construction firms traditionally hire physically robust people proud of their low to moderate education and then place them in a stable value-adding stream. The assumptions behind this practice are breaking down and require more diversity of attitude and employees. New challenges face the industry's clients and new untapped potentials in the industry are now called for. The industry needs to find ways to manage its employees so as to use more of their brains than brawn. This pushes construction to become like its clients and expect more of its employees. As was implied in item eight above, arrogance was seen to be the major deterrent to learning.

## **Potentials in relationship building versus strategic positioning**

The Western firms in the study had invested significant efforts in strategic thinking throughout the 1980s and planned to continue this approach into the 1990s. For

some firms an espoused need to arrive at an improved strategic plan is at least as important as it was then. One of the conclusions arising from the firms' information in the research was that there must be and are alternatives to formulating strategic plans that become increasingly fixed and counter-productive to the conditions within which they are acted out. This was identified as an American approach to business, and to some extent British, and therefore not necessarily applicable to company management outside North America and England. The US-based firms added to this by pointing out that they had lost confidence in this approach outside North America, and sometimes even there. They too were seeking more variety in their responses to a changing future. Participants agreed that a major alternative to strategic thinking was relationship building.

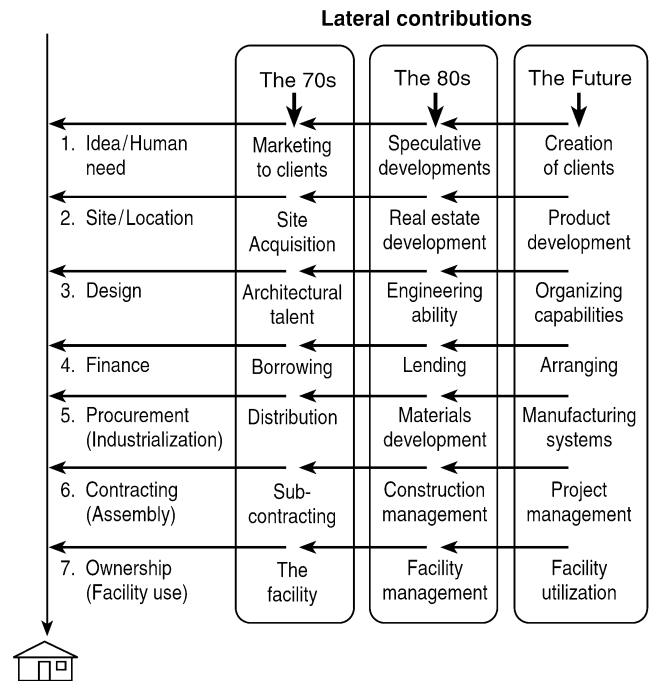
Negotiating with the future via strategic thinking continues as a dominant vehicle for public and private organisations involved in construction in the US and other countries. This need to have a widely espoused strategic plan to rely on and act from is now ingrained in policy. The COS study identified early signs that firms were finding problems with strategic thinking and alternatives were needed. These firms argued that they needed more flexibility to cope with conditions of ambiguity and uncertainty than that allowed by traditional approaches to management. They went on to argue that their efforts to globalise required even greater degrees of flexibility than allowed by strategy formation.

**The emerging nature of international construction conditions**

Construction activities stem from local acts organised by memories about the past set up to meet hopes about the future. This has historically been the challenge of construction. What is new is that construction needs to prepare for market opportunities based on fleeting ideas about the future that may never exist, while learning to utilise capital, material and human resources that transcend economic, scientific, cultural and national boundaries. Firms that are now succeeding were early to define themselves around opportunities derived from worldwide markets, procurement and capital flows. Buildings will continue to be connected to the earth, but land is no longer a passive stage set. Via real estate land has become a major actor in the process. Major global shifts are taking place in this most local of industries. This is the industry that creates shelter for humans and their social activities, but these activities are increasingly interconnected in a global network.

Ranko helped with the formulation of the following chart that shows how construction value-adding processes had been changing and were envisioned to change in the near future. A question arising from the chart was how to prepare students for careers in an industry that seemed to require new areas of competence. The stages of project development are kept traditional while innovation focuses on moving ever deeper into the value, and values, of each stage to add greater worth to the total process.

Consistent with the shifting competencies needed by those who provide the facilities for all industries there appears to be a need for more flexible definitions of construction. This was addressed in the study by defining it as a complex set of paradoxes. It was seen as locally based and tradition-bound yet living in a world that was becoming increasingly international. While construction continues to be susceptible to local influences it must develop ways to respond to the forces of internationalisation. Design processes and technology development are often seen as enigmas to traditional construction yet its products are increasingly found to be central to its success. In addition, the industry is structured by the most traditional of methods of management and hierarchy yet increasingly accepts that it needs to experiment with innovative ways to manage new resources and conditions.



**Figure 1** Evolutionary contributions to construction value adding

### Additional specialised findings

The primary industrial characteristics of construction in 1991 were found to include the following:

- Low capital intensity.
- Specialised markets.
- Fragmented structure.
- Locally based, biased and focused.
- Technically dependent.
- Design reliant.
- Resource intensive.
- Long life cycle product based.
- Slow product development processes.
- Highly regulated by multiple levels of government.
- Standards dependent yet requiring infinite variety.

Most of these remain in 2006. It is also important to note that many of the characteristics stand in opposition to each other. This and the segmented nature of the markets that construction serves contribute to a widely quoted perception that construction is highly fragmented. This is generally seen as a sign of weakness of construction, in contrast to the advantages of aggregated, mass markets for cars, clothes and consumer electronics. In response, attempts have been made to create mass markets for construction, to provide an appearance of sophistication. Unfortunately, the firms pursuing this model have had little success in the conditions of the past 15 years. The general economic landscape has instead been transformed to something closer to the fragmented nature of construction. Now others are attempting to learn from construction.

Successful construction firms have been able to nurture the paradoxes that other industries are still learning to deal with. Just as construction has learned from other industries that entered internationalisation earlier, construction can teach its client industries about flexibility and integrated project management. The construction industry integration has primarily accomplished this through informal networks of relationships that can compensate for defects in materials, design, documentation or construction.

The construction industry provides a context to examine the extremes now facing most other industries. It is one of the most locally bound industries yet is highly dependent on international events that govern all resources. The local is most clearly seen in its historic ties to local building codes, laws, politicians and trade practices. The international is seen in its dependence on large quantities of material, energy and money flows at stable prices. As such, it is clearly susceptible to changes in local whims and international events. The industry has been forced into significant adaptation

over the past 15 years. It has abandoned many of its safe traditions and ideologies and learned to live with risk. Members of the industry have not always dealt very well with issues of risk but the same can be said of other industries. Regardless, construction firms have learned a great deal via their relations to the clients and the growth in international operations over the past 15 years. Some of their experiences are quite instructive to the continuing international challenges of their clients.

Aspects of what others can learn from construction can be seen in the results of the questionnaire used in the COS research. Some of the results are listed below. The following represents composite responses of 59 firms in response to the question area that precedes each list. The following are rank ordered beginning with '(i)' as the highest.

- (1) Most significant areas of opportunity will come from:
  - (i) European markets.
  - (ii) Ecological value shifts.
  - (iii) Future infrastructure work.
  - (iv) Asian markets.
  - (v) Process integration.
  - (vi) Industrial expansion.
  - (vii) Existing infrastructure work.
- (2) Factors most important for international expansion are:
  - (i) Management skills.
  - (ii) Global perspective.
  - (iii) Local presence.
  - (iv) Technical knowledge.
  - (v) Alliances.
  - (vi) Specialisation of function.
  - (vii) Integration of functions.
- (3) Research priorities for next 10 years should be:
  - (i) Management information systems.
  - (ii) Building production technologies.
  - (iii) Building operations technologies.
  - (iv) Environmental technologies.
  - (v) Other.
  - (vi) Traditional materials developments.
  - (vii) New materials developments.
- (4) Significant technologies during next 10 years should be:
  - (i) Production technologies.
  - (ii) Building operations technologies.
  - (iii) Building component technologies.
  - (iv) New materials.
  - (v) Telecommunications.
  - (vi) Environmental technologies.
  - (vii) Other.

- (5) Factors most critical to applying or not applying the results of R&D are:
- (i) Organisational communication.
  - (ii) Knowing customer needs.
  - (iii) Cost–benefit analysis.
  - (iv) Management systems.
  - (v) Perceptions of difficulty.
  - (vi) Organisational synergy.
  - (vii) Other.
- (6) Most promising business ideas over the next 10 years are:
- (i) Intelligent systems applications.
  - (ii) Lateral thinking capabilities.
  - (iii) Growing environmental concerns.
  - (iv) Decentralisation needs.
  - (v) Other.
  - (vi) Leisure time facilities.
- (7) Reasons for making acquisitions:
- (i) To grow.
  - (ii) To acquire expertise.
  - (iii) To broaden home market.
  - (iv) To access foreign markets.
  - (v) To acquire technology.
  - (vi) To vertically integrate.
  - (vii) Other.
- (8) Major advantages in acquisitions:
- (i) To remove competitors.
  - (ii) To raise firm's image.
  - (iii) To access foreign markets.
  - (iv) To raise profits.
  - (v) To access potentials in scale.
  - (vi) To gain new technologies.
  - (vii) Other.
- (9) Major disadvantages in acquisitions:
- (i) Company culture incompatible.
  - (ii) Cost was too high.
  - (iii) Management shortcomings relative to acquisition.
  - (iv) Worker integration difficulties.
  - (v) Integration too slow.
  - (vi) Other.
  - (vii) Non-industry type firms proved to be worthless.
- (10) Key problems facing management during next 10 years are:
- (i) Attracting quality people.
  - (ii) Retaining people.
  - (iii) Continuing education.
  - (iv) Incorporating technical change.

- (v) Decentralising operations.
- (vi) Other.
- (vii) Lowering production costs.

## Conclusions

The results of the study were intended to help managers in the construction industry that were presumed to be behind other industries in their efforts to internationalise attitudes and operations. In fact the study demonstrated that the construction industry could teach others, especially its clients, about success in internationalisation.

Many changes are taking place in the environment of business economic exchange and thereby the industry that provides and cares for the facilities that provide the stage set of socio-economic acts. Some of these are within the actors while others are in the context within which they act. These contextual changes are more profound but more difficult to see and articulate. One view, which emerged during the COS project, was that the global context is becoming increasingly interdependent while the actors and their acts continue via an independent/dependent world model. Innovative means to bridge this gap were called for, by some, during the symposium held at the end of the project. That call seems more relevant 15 years later.

The project, 'Conditions of Success: The Internationalisation of Construction' was initiated in 1989. The title was to emphasise the then controversial idea that success of a strategic act depended more on its systemic fit into a set of contextual conditions than on its intrinsic analytic beauty. This was in contradiction to mainline business theory of 1989, and in opposition to North American belief systems on how to become successful in international business. Even in North America there is now scepticism with the strategic tradition. As examples: (1) A 2004 management study at Boston and Harvard Universities adopted the phrase 'conditions of success' in its title. (2) A 2004 guidebook for accessing a new world for IBM Global Services was written via the logic of the COS study, where relationships were found to be more valuable than strategies for managing conditions of ambiguity. The IBM researchers behind the guidebook went an additional step to argue that during conditions of instability relationships may be your major resource (Kosits *et al.*, 2004). (3) A 2004 National Academy of Sciences Committee used the COS logic to recommend new forms of public–private relationships to help bring what has been learned from innovations in the private sector into public sector construction. Its members specifically recommended development of a public sector version

of the pro forma approach to relationship articulation, as it was successfully used in COS participating firms (Dorman *et al.*, 2004).

The idea of quality is important to motivating processes towards improvement, but quality definitions have a heavy cultural content and should only be used as an international standard with great care. It was seen that quality often became interpreted, via a cultural filter, as removal of variation and retention of constancy and repetition. The dilemma is that efforts to improve quality can operate in opposition to innovation, which was seen as more critical to future success of the industry (Hawk, 1999).

Most participants in the project have seen their business cards change many times during the past 15 years. Via mergers, acquisitions, realignments and promotions they have moved throughout the industry and its global operations. Executives at the Stockholm Symposium made presentations on their firm's view of the industry's future. Ranko continues to be remembered with affection by this group for his ability to integrate the varied ideas as they were presented. This paper outlined some of the ideas Ranko helped weave together to provide a tapestry of the industry's future.

Research results demonstrated a great deal of innovative thinking in all areas of concern, as defined by the participants, except in mergers and acquisitions. Very few participants were willing in 1991 to see M&A as only one response in a much more robust set of relationship possibilities. This is seen in the responses to several of the 10 question areas listed above. A few other industries, especially those that are IT related, have reached a very advanced stage of rethinking the importance of relationships and the limits of strategies. The IBM booklet by Kosits, mentioned above, illustrates this transformation quite clearly. An even broader description of what this transformation means for societal economic exchange is well described in a recent book of the widely quoted management adviser

Jonas Ridderstrale (Ridderstrale and Nordstorm, 2005), also of the IIB group in Stockholm.

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