

The PISCES Network: A change in the way we do business?

The business world changes fast, and those who stay one step ahead are those who succeed. At present the old picture of management is being turned on its head, as companies come to terms with an ever more collaborative commercial environment. New ideas of competition and innovation are forming. The PISCES network has been set up as a breeding ground for these new ideas...

"No corporation can go it alone." With regard to a company's long-term condition, the decision whether to contract out—the make/buy decision—is the most important decision that company will make. To make the right decision requires an accurate assessment of the entire industry within which the company is embedded, and even of those other industries that may affect it, however indirectly. Charles H. Fine, author of *Clockspeed*, puts it that supply chain design is the "core capability" of any successful modern business.

To ensure survival the company blinkers need to be removed, and in this way the position of the company within various Extended Enterprises, rather than simply a limited number of product-supply relationships, can be appreciated. This is instructive of the future manoeuvres the company will have to make. An activity which to them is paramount, the focus of all effort and thought, may be, in the outlook of one of the companies with which they are engaged in an Extended Enterprise, only a minor activity that produces a trivial, and perhaps replaceable, component. For mutual benefit a new objective perspective can be created, of the project as a whole, to be shared by all collaborators.

This shift of outlook needs an improvement in the flow of information, both within Extended Enterprises and within the business community, so that potentially destructive changes can be better anticipated, and truly progressive ideas regarding the delivery of goods and services can emerge. To this end, the PISCES network has been established. The acronym stands for Product Innovation across Supply Chains using

Enterprise Systemics, where "Enterprise Systemics" is a term coined to apply to this whole field of business research: supply chain design, the Extended Enterprise, the theory of temporary commercial advantage, complexity thinking.

Funded by the EPSRC, PISCES will investigate how product introduction can be made a seamless process given the complexity of supply webs and the volatility of the business world. And the means to evolving and disseminating this knowledge will itself be a communicative, unobstructed network, a collaboration between industrial and academic partners united by a need to discover more about business dynamics.

Competitive boundaries are removed for the sake of the mutual development of best practice and an agenda for future research. There will be a series of workshops covering new approaches to the Extended Enterprise, a "who's who" within the field, and a central website to establish a body of knowledge that is inclusive regarding modes of analysis. One core objective is to remove terminological differences or ambiguities, which can result in parties remaining unaware of potential knowledge partnerships. Thus a vast understanding can be achieved on an expanding and highly topical subject, derived equally from academic theoreticians and industrial practitioners.

All over the world major firms are seeking to gain advantage by anticipating the revolution in product development, to achieve supply chain management that accommodates the true complexity of producer-supplier structures. PISCES pursues this goal without the politics of commercial competition, through genuine collaboration.

The errors of contemporary business thinking:

➤ The concept of a simple, linear supply chain is a convenient reduction, a working model that bears only a slight relation to the true arrangement between collaborating companies, which is a dense and ever-changing network of complex interactions. Most companies are simultaneously engaged in a number of different enterprises, in some of which they take a more central, coordinating role and in others a more detached, contributory role. Modern companies bear multiple functions to maximize profits, and the complexities of outsourcing are captured by the idea of the Extended Enterprise, which corresponds to *all* of the companies involved in making a product or providing a service. The major practical implication of which is that, with an updated, more inclusive supply model, we can thereby improve the way that suppliers contribute to product development.

➤ The feudal system for the production of new ideas: bosses → middle managers → minions. The same applies to the conception of the producer-supplier relationship: product development occurs at the centre. In truth, suggestions come from all levels, some feed up, some feed down, some are rejected higher up, some prove unworkable lower down, and all are modified at all levels. Again the best model is a complex web, and the best results come when change is regarded as originating from the web, not from any one section or person.

➤ A shared purpose, of company-wide objectives, is in theory one of the most important unifying factors within an organization, but so often in practice we find a loose array of departments all with their own agendas, all seeking to meet specific short-term targets to discharge their localized responsibilities. The common goal is also key to thinking within an Extended Enterprise framework, as it requires the adoption of a “whole project” perspective even where the project exceeds the boundaries of the company. In turn the unique perspectives of collaborating parties can be assumed, an ability which is essential to self-realization.

➤ The mechanistic conception of companies, whereby humans are simply interchangeable parts. This is not compatible with a model of complex interrelations, continuously evolving, and in its place can stand a more organic conception, based on the democratic ideal of a thriving community. Thus the shared end is achieved which determines a collective effort. All parties committed to a project can contribute at the “whole project” scale, in spite of departmental or company distinctions that create other loyalties. Each individual can then combine a precise local responsibility with the shared motivation that unifies the whole.

Who is involved so far?

The PISCES project brings together university-based researchers from Cambridge, Stanford, Leeds, the LSE, the Logistics Systems Dynamics Group at Cardiff, and the Systems Engineering Group at De Montfort, with experienced and progressive commercial organizations such as Rolls-Royce, BAE SYSTEMS, London Underground Ltd., NATS Ltd., BFGoodrich, Kidde-Graviner, and TRW Aerospace. The quality and diversity of the partners illustrates the signal importance of the topic. Some of these partners were engaged in a prior industry-funded project, MITEE (Management in the Extended Enterprise), which provided an initial forum at senior level for the combination of theory with practice in this field, but the dominant feature of PISCES is that it is inclusive and expanding. New partners are not simply welcome, they are *required*, to ensure the creative tension of multiple viewpoints within the network.

What do I do now?

To join up, or to request more information on PISCES, contact Dr. Matthew Turner at:
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