



# Multi-sourcing in the networked marketplace: what you can see is what you get

**The clear trend in the current networked IT marketplace is towards multi-sourcing, but it presents significant challenges. This article outlines those challenges and introduces a tool that could help potential outsourcers understand the complexity and dynamics of the marketplace, and inform their choice of suppliers.**

## Outsourcing trends

The concept of dynamic outsourcing was introduced by the LEF EP in response to a number of clear trends in the outsourcing marketplace. Such trends are challenging the traditional models of outsourcing and arguably explain the unacceptably high levels of disenchantment with many current outsourcing arrangements. These trends include:

- The marketplace is becoming more networked and interdependent through an increasingly complex array of joint ventures, alliances, mergers and acquisitions. This is happening not just in the IT vendor market but is a general trend across all industry sectors<sup>1</sup>.
- Multi-sourcing is here to stay. As outsourcing arrangements evolve from IT infrastructure through to the outsourcing of business processes, the likelihood of sole-sourcing is becoming more remote.
- The ability to thrive in the networked economy is directly related to business performance and increased shareholder return<sup>2</sup>.

## Complications

Thriving in the networked economy presents some unique challenges. Many of these challenges were identified in our earlier research on dynamic outsourcing<sup>3</sup> and include:

- Managing an array of partners participating in an overall sourcing strategy.
- Accommodating business change and innovation across the variety of contractual arrangements with multiple partners.
- No longer treating each outsourcing agreement as a 'one to one' agreement without consideration of the collaboration among the portfolio of partners that will be required to achieve the best results.
- Higher levels of trust, collaboration, transparency and disclosure amongst partners who are potentially competing for business where their competencies overlap.

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1. CSC's Research & Advisory Services published extensively on this topic in 2001, in the March edition of the Foundation Journal on "The Networked Enterprise" and the forum on "Partnering in the New Economy".

2. See M. Iansiti and R. Levien, "The Keystone Advantage: What the New Dynamics of Business Ecosystems Mean for Strategy, Innovation, and Sustainability", Harvard Business School Press, 2004.

3. See T. DiRomualdo and F. Hayden, "Dynamic Outsourcing", CSC's Research & Advisory Services, November 2004.

- Extreme demands on the skills and experience of the client procurement staff to effectively understand the intricacies of the marketplace and the interdependencies of the vendor communities<sup>4</sup>. Market analysts can provide detailed profiles of individual vendors, but rarely on the networked collection of a community of vendors (the IT market 'ecosystem').
- Making the networked IT marketplace more visible to clients trying to understand its complexity and dynamics.

The recent LEF EP report on *The Future of the IT Organization*<sup>4</sup> traced the evolution of the IT marketplace from the 1960s, when the IT organization could comfortably design its total IT architecture around a single vendor's offerings. Today, however, business users are more IT-aware and the corporate IT organization is focusing more on 'directing traffic' than running a monopoly service. Directing traffic is much easier if one has the benefit of a 'helicopter view' of the city. The next section provides such a view of the IT marketplace.

### Visualizing the networked marketplace

The following network maps have been generated using a combination of data and web mining of both public and subscribed information sources, and social network analysis visualization tools<sup>5</sup>.

The map in Figure 1 explores how the major IT integrator firms relate to each other and other suppliers in the marketplace. Linkages represent alliance relationships identified through a web mining process.

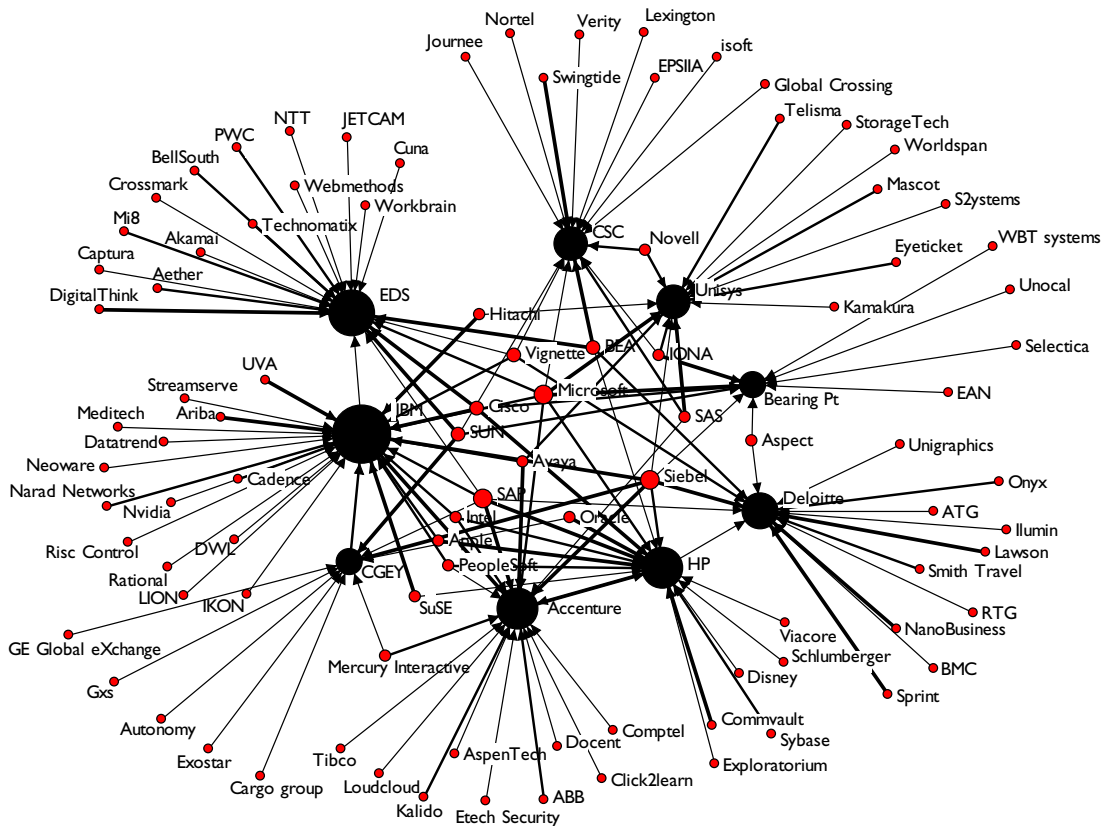


Figure 1 – Alliance network map for nine major IT integrators

4. See D. Moschella, "The future of the IT organization – A research perspective", Leading Edge Forum Executive Programme, June 2005.  
 5. See L. Lock Lee, "Web Mining", Leading Edge Forum Research Grant 2003/4 report.

The map shows the nine competitors surveyed as black circles and their alliance partners as red circles. The size of the circles reflects the number of connections that each node has. For example, IBM has the largest number of connections and therefore is the largest node. The surveyed companies are naturally larger than non-surveyed companies (red circles), whose size reflects only the number of alliances they might have with the nine surveyed companies – the map does not attempt to show all of each company’s alliances. The thickness of the line reflects the strength weighting (based on citation attributes derived from the web mining process). For clarity, filters have been applied to the data to expose only the strongest relationships, but enough to identify the nature of the marketplace.

The key features include:

- The analysis identifies only around 12 ‘core suppliers’ to the IT services industry. The rest of the alliances appear to be one-off unique alliances that the individual companies may have formed, perhaps as a joint venture on a contract requiring more than purely IT services, to pursue a niche strategy, or explore a new business opportunity.
- The spatial layout of the map is also important. Essentially, the network layout algorithm attempts to minimize link distances. The relative distance of suppliers and alliance partners from the nine surveyed companies can give some loose indication of the relative closeness of the relationships. You might want to liken the network map to a city street map: the core suppliers all appear in the ‘central business district’, and suppliers who might link to only a single IT service provider are in the ‘outer suburbs’.
- One could speculate that major innovations in the IT industry will mostly come through the ‘satellites’ in the map, many of whom are small or medium-sized companies looking to access clients through relationships with major integrators. Their success will perhaps be flagged by their movement into the centre of the map to join the Microsofts, SAPs and Siebels.

### Implications for the buyers

What can the astute buyer do with maps like these? In an era of multi-sourcing it can be a serious error to believe that your carefully selected ‘best-of-breed’ suppliers will happily collaborate on your critical business change initiatives. This is especially so if they are fierce competitors with other clients. An understanding of the market ecology will immediately provide a view of firms already working well with each other. By choosing a ‘cluster’ of suppliers who already have pre-existing relationships you can procure a ready-made ‘team’ which will more than make up for minor shortcomings of an individual supplier in the cluster.

The core suppliers at the centre of the map have often achieved their status through being ‘platform’ suppliers to the industry. They are members of many clusters. Because of their industry positioning they could be seen as a lower risk than suppliers on the fringes.

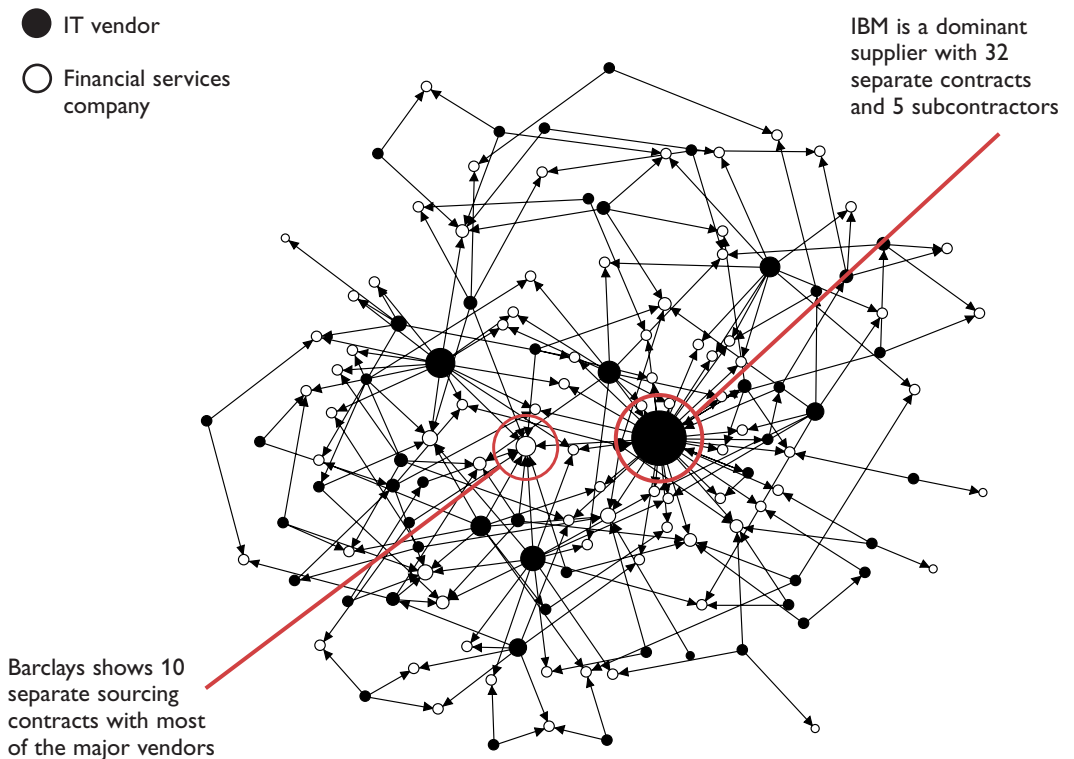
However, the suppliers on the outer areas are often either smaller niche firms or industry newcomers and could potentially provide the unique innovations that your business is looking for. For example, if you are looking to establish an online consumer presence you might first look to identify the cluster of innovative web presence firms and then see which established systems integration firm they are connected to, to help deliver the overall solution for you.

### Knowledge flows and market insights

The complexity of the IT marketplace presents substantial challenges for IT procurement officers. While there exists a plethora of market analyst reports and advice on new product or service offerings, pricing, delivery performance, geographic coverage and so on, many of the softer relationship issues that reflect adaptability, flexibility and client focus are more often than not shared through informal channels. Prior experiences, trusted advisors from other firms and industry peers all play important roles in IT procurement decisions. A well-connected existing supplier with whom you have a trusted relationship can also be a key channel for industry knowledge.

The knowledge flows which provide key market intelligence can help inform the most critical decisions made within a multi-sourcing strategy: What to outsource? To how many vendors? Is more better? What is the right balance? Market network maps can also provide information on who is buying from whom, how many vendors are companies using in your industry, and how they are inter-related. Are you sharing the same suppliers as your competitors? How are the suppliers connected in servicing your industry?

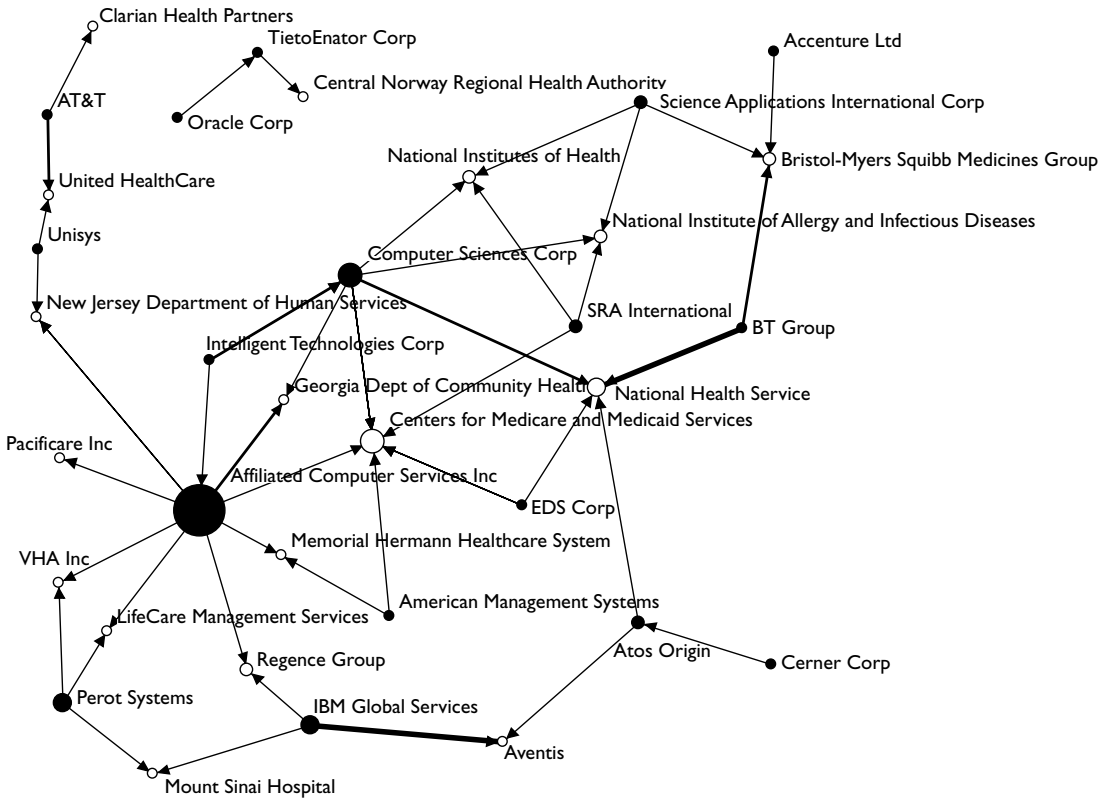
Figure 2 shows part of a market map developed using data mined from 10 years of transactions in the IT services sector<sup>6</sup>. The subset shown in Figure 2 relates to the financial services sector.



**Figure 2 – Subset of the IT services market for financial services**

It becomes quickly apparent from the market map who the dominant vendors are, and which financial services firms are multi-sourcing and with whom. The size of the nodes reflects the number of sourcing contracts the firm is involved in. The map indicates that many financial services firms have more than one IT provider, with Barclays the leading multi-sourcer with 10 separate contracts<sup>7</sup>. IBM is the clear market leader with 32 separate sourcing contracts.

Similarly, Figure 3 explores the IT market in the health sector. For clarity the map only shows the most actively networked vendors and clients for contracts greater than \$50 million. Again, the size of the nodes reflects the number of connections or contracts. Additionally the size of the contract is shown by the relative thickness of the connecting lines.



**Figure 3 – The IT market ecosystem in the health sector**

7. In fact, the full data set shows Barclays has some 15 separate sourcing agreements.

Affiliated Computer Services and Computer Sciences Corporation are shown as key suppliers to the industry, with the Centers for Medicare and Medicaid Services and the British National Health Service being the most 'multi-sourced' health providers. More importantly, these organizations are best placed to comment on how well the ecosystem of vendors is providing the services collectively. Do they collaborate well? Do particular vendors need to be partitioned by specific lines of service? Which vendors regularly bring in specialist subcontractors and which vendors prefer to sole-source? What are the potential governance issues with multiple vendors?

When considering best-of-breed suppliers as part of a multi-sourcing strategy, market maps can be used to identify if other companies have already engaged the same portfolio of vendors or whether certain vendor combinations are 'off-limits' for either cultural or competitive reasons.

In summary, multi-sourcing in a networked marketplace provides some significant challenges. The tools for analysing and supporting sourcing decisions are largely focused on the stand-alone transaction, with little consideration for how multiple suppliers might effectively work together to deliver on your business imperatives. A worst-case scenario is that the benefits of selecting the best of breed can be destroyed by the 'relationships overhead' required to facilitate effective collaboration amongst suppliers. Market network mapping is a tool that provides a view into the intricacies of the networked marketplace. With a heritage in the field of social science and social network analysis, it has the potential to expose the softer relationship attributes that will underpin all successful multi-sourcing strategies. Looking ahead, outsourcing firms will increasingly need to sell not only themselves, but also their 'network', to a broader base of clients. Buyers will need to know the market and the full intricacies of the natural networks that are forming in the marketplace, to ensure that their portfolio of outsourced and in-sourced services is optimized for business performance. Effective management of the relationship overhead will clearly become a critical success factor for successful multi-sourcing strategies.

## MARKET MAPS – WHERE DID THEY COME FROM AND HOW ARE THEY BUILT?

Marketplace mapping is a new application of an old technique known as sociograms (the picture) and social network analysis (SNA). The invention of the sociogram is often credited to a social psychologist, Dr. J. L. Moreno, who used them to map 'liking' and 'disliking' relationships between New York schoolgirls in the 1930s. The technique has since evolved into a commonly accepted sociological tool, but it is only recently that sociograms have come to the attention of the corporate world. The growth in the importance of networks, both internal and external to the organization, has provided the impetus for the exploration of a new suite of tools. These network analysis tools can help executives better understand the dynamics of their organizations and the marketplaces that they participate in. SNA is now widely used to understand the informal structures that exist within an organization, with a view to leveraging them better. Communities of practice, leadership networks, partnerships and alliances, innovation networks, and sales networks are just a few of the areas in which SNA has been applied<sup>8</sup>.

Typically, SNA relies on individuals responding to surveys asking them to identify who their key contacts are. This is less practical when applied at the organizational and/or marketplace level, where other sources of 'linkage or relationship' data are required. The author has used data and web mining techniques to uncover marketplace relationships from both publicly available and privately subscribed sources. Public news sources can provide information on joint ventures and alliances, either for marketing or contract performance purposes. Subscription sources like ComputerWire's contracts database can provide details of signed contracts, identifying the client as well as the prime and subcontractors. The strength of a relationship can be inferred from both the number of citations in the public press and the type of relationship – R&D partnership, marketing joint venture, project partners and so on. Relationship strengths can be cross-checked by looking at the individual companies' websites, noting who is nominated as the most important alliance partners.

Both commercial and academic SNA tools are available to produce the maps and analyze the patterns of relationships<sup>9</sup>. Most of these tools can operate on standard PCs and generate graphics in most of the common formats. Analytical interpretation of the maps can vary from a simple visual analysis to quite sophisticated statistical analyses of the graphs represented. For most business applications, the rudimentary metrics and measures are usually sufficient.

Developing and analyzing IT market maps using 'data mined' information is a new initiative and far from standardized. Those interested in specific market maps are invited to contact the author.

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8. See R. Cross and A. Parker, "The Hidden Power of Social Networks", Harvard Business School Press, 2004, for a good review of SNA applications.

9. See [www.insna.org/INSNA/soft\\_inf.html](http://www.insna.org/INSNA/soft_inf.html) for a review of SNA tools available.