

The social network

Who do you turn to for the information you need to do your work, ask **Matthew Healey** and **Lakshan Saldin**

Formal organisation charts set out how an organisation is expected to operate. However, there is an increasing recognition in rail and many other industries of the importance or the role of informal networks in getting work done [1]. These informal networks often look very different to the official organisational hierarchy.

Social network analysis – what is it?

Social network analysis uncovers the informal links and relationships between individuals in an organisation. It allows organisations to understand their communication and knowledge transfer pathways, and establish whether their organisation chart is a true representation of how they are functioning. Asking individuals 'Who do you turn to for information to do your work?' is often

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the most important question to ask in understanding a company's informal network [2].

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Why do it?

Social networks are especially important in knowledge intensive industries, such as those associated with engineering and technology [3]. Research has shown that engineers are five times more likely to turn to friends or colleagues for information than to impersonal sources [4].

Typical applications of social network analysis include:

- helping managers understand how their teams work
- identification of candidates for promotion and managing flight risk
- merging teams/organisations with different cultures
- improving communication and collaboration between specialists and specialist departments

- discovering conduits for promoting innovation and the uptake of management initiatives
- assessing organisational vulnerabilities.

Network analysis shows the impact of thought leaders in an organisation – those with 'social capital'. Employees who may not be visible in the formal 'org chart' company structure may be highly valued by colleagues and serve critical roles in the functioning of the organisation [5].

In organisations with multiple departments or disciplines, thought leaders play a key role in information and knowledge sharing. They are the source of an organisation's institutional memory, an intangible yet often critical aspect to the success of any company.

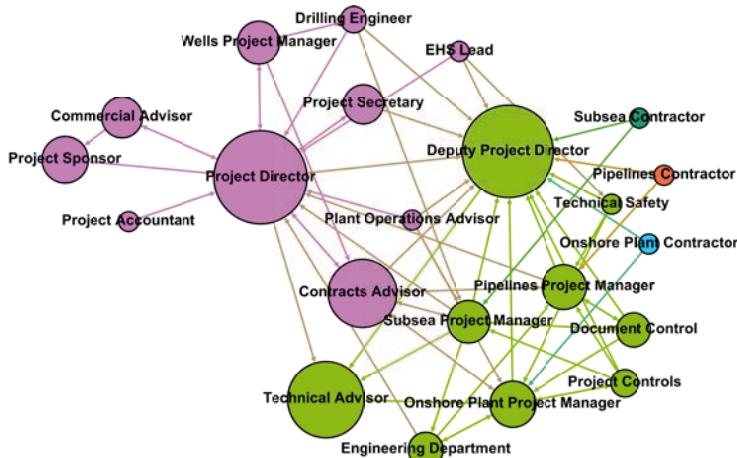
Case Study – how is it done?

In the example provided below, a project organisation was analysed. The organisation consisted of five company groups:

- the project owner
- a consultant responsible for the provision of the owners' engineering and project services
- three specialist contractors.

The organisation was a mix of full and part-time resources and was geographically





dispersed in clusters across a number of locations.

Social network analysis uncovered the real communication within the organisation:

In the above diagram:

- colours are used to identify the parent organisation of the individuals
- the arrows show the direction of information requests
- the size of each node correlates to the individual's relative importance as an information source
- the layout of the network is based on each individual's centrality to the network and their relationships to one another.

This social network diagram clearly shows the transfer of knowledge, and the sources of that knowledge. In this case there are some causes for concern:

- does the clustering of the two main companies indicate a lack of integration?
- the organisation is dominated by the project director or deputy director, and is vulnerable should one leave.
- the technical advisor, an important source of information, sits on the margins of the organisation.

New information for managers

Social network analysis focuses on the relationships between people rather

than their individual attributes. In this way it is able to move beyond individual perceptions and provide a fuller view of how communication takes place within an organisation. The ability to visualise these flows provides organisations with the information to ask the right questions to improve the way they communicate, share knowledge and make better use of institutional memory.

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References

- [1] N.P. Ferriera et al. *Identification of resilience factors in rail engineering work*. In J.R. Wilson et al. ed. 2012. *Rail Human Factors around the World: Impacts on and of People for Successful Rail Operations*. CRC Press
- [2] R McDermott & D Archibald, *Harnessing Your Staff's Informal Networks*, Harvard Business Review, March 2010.
- [3] R Cross, N Nohria & A Parker, *Six Myths About Informal Networks – and how to overcome them*, MIT Sloan Management Review Magazine, April 2002.
- [4] G. Simmel, *The Sociology of Georg Simmel*, New York: Free Press, 1950.
- [5] M Granovetter, *The Strength of Weak Ties*, American Journal of Sociology, May 1973