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# FACT SHEET

## UNDERSTANDING AND MAPPING ORGANISATIONAL NETWORKS

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# INTRODUCTION

The December 2020 Fact Sheet on the future forms of organisations notes the increasing salience of organisational networks, especially in view of the calls for decentralisation and distributed forms of teams, leadership, and decision-making. The importance of organisational networks is also implied in, for example, the Fact Sheets on internal talent mobility, hybrid teams, and the considerations on culture, collaboration, and connection in the return to the office debate. The present Fact Sheet focuses attention on understanding and mapping organisational networks. It draws on the field of organisational network analysis (ONA) primarily. ONA can complement various HR analytics including talent development and mobility, knowledge transfer, team dynamics and productivity, and inter-functional collaboration and productivity for example.

**WHAT ARE ORGANISATIONAL NETWORKS?**

**WHAT IS ORGANISATIONAL NETWORK ANALYSIS (ONA)?**

**WHAT ARE THE TYPES OF NETWORKS?**

**UNDERTAKING AN ONA**

**CONCLUSION**

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## WHAT ARE ORGANISATIONAL NETWORKS?

Networks are present in all organisations, not just those self-defined or labelled as 'networked organisations' (Brass, Galaskiewicz, Greve, & Tsai, 2004; Crocker, Cross, & Gardner, 2018; Cross, Borgatti, & Parker, 2002; Labianca and Brass, 2006; Schweer, Assimakopoulos, Cross, & Thomas, 2011).). For purposes of the present Fact Sheet, a basic understanding of organisational networks is that it comprises of all the relationships between individuals and groups as well as the varied flows, exchanges, communications, power, and other dynamics between them. More specifically, it is the patterns

(or configurations and degree) of these relationships and the various impacts on information, knowledge, and other resources for example; and the quality and impact of these relationships on the different individuals and groups/teams within organisations and their decision-making, behaviour, and performance. Organisational networks comprise of both formal and informal relationships and flows and exchanges, and include both positive and negative relationships as well as outcomes.



# WHAT IS ORGANISATIONAL NETWORK ANALYSIS (ONA)?

ONA is an approach to measuring and mapping the formal and informal relationships and flows and exchanges. It also refers to the various software and digital tools for graphing these.

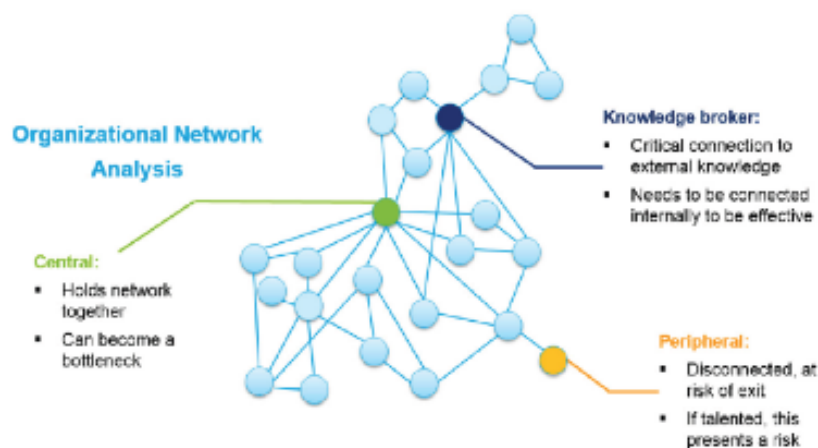
“ONA provides a systematic approach to examine how the **position** of individuals, groups or organisations within the **collective arrangement** of network relationships as well as the **nature** and **quality** of these connections can influence their behaviour and performance. This approach has been shown to impact organisations’ **efficiency** by identifying communication breakdown risks as well as the **vulnerabilities** to turnover. Similarly, ONA facilitates **innovation** and **organisational change** by identifying silos and engaging employees with significant relationships across multiple boundaries” (bold added, Cranfield School of Management, n.d.)



See the short **introduction video** on ONA and its applications. What do you think is the potential of wearable and digital technologies in enabling the measurement and graphing of relationships and collaboration within organisations? What are the risks in terms of privacy, the concerns about surveillance technologies, and ethics?

ONA can be active or passive depending on the type and the way data is collected. Active ONA is based on an employee’s active participation through a self-report survey for example. Passive ONA utilises employees’ existing digital footprint, that is, their use of digital platforms and tools such as email and messaging services. The metrics and analytics of passive ONA can also be shared with the employee to help them track their own relating, collaborating, and performing. For example, Microsoft Outlook’s Viva and Cortana, which are personal productivity digital tools, provide individuals a weekly summary statistic of their engagement, collaboration, and working time and breakdown.

Some authors tend to define ONA from their specific focus or outcome of interest. For example, Cross focuses on collaboration and states that ONA “measures and graphs patterns of collaboration by examining the strength, frequency and nature of interactions between people in networks”. A Deloitte report describes ONA a little more broadly from an effectiveness and efficiency perspective as a “structured way to visualize how communications, information, and decisions flow through an organization”, including “visualizing and analyzing formal and informal relationships” (McDowell, Horn, & Witkowski, 2016, p2). The figure shown below from the Deloitte report provides an illustrative example of an analysis of an organisational network.



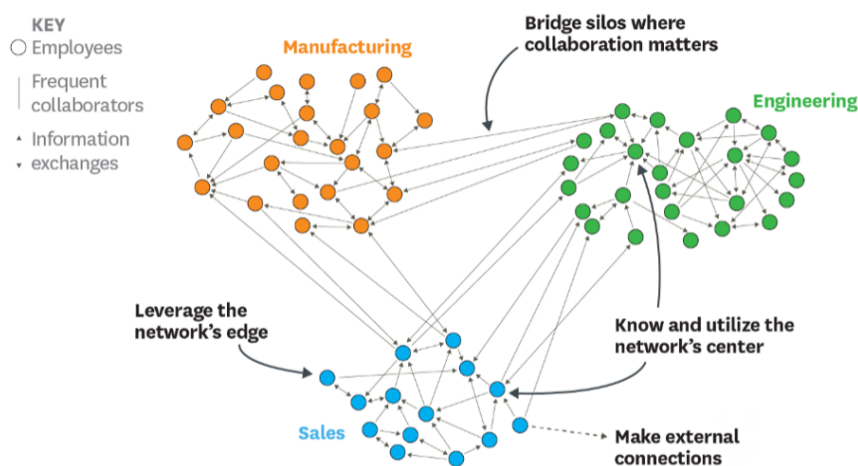
Source: Deloitte report (McDowell et al, 2016)

As can be seen in the above illustration, specific roles and relationships within the networks are defined, in terms of the exchange of ideas and information. The report first defines individuals as nodes within the network and their ties, which are the formal and informal relationships between them. Thereafter, it defines specific roles: central nodes who are highly connected and influential to many individuals and tend to be the 'glue' holding the network together; knowledge brokers who create bridges between groups within the network; and peripherals who may be high-potential talent but disconnected from others and at risk of exiting the network. Other possible role definitions can include: "Central connectors, who are crucial to performance and yet risk overload and burnout. Energizers (sic), who generate enthusiasm and a sense of purpose amongst their networks" (I4CP, 2021). Boundary spanners, who appear similar to knowledge brokers, but reside in-between unconnected or disconnected networks and can create potential connections between them. Gatekeepers, in contrast, control access to their networks.

How can ONA assist the HR practitioner? Consider the previous Fact Sheet on internal talent mobility and the discussion on opportunities and barriers to talent mobility. The ONA, specifically the identification of central nodes, connectors, energisers, knowledge brokers, and gatekeepers, and the measurement of the degree of flow, exchange, and interactions, can help the HR practitioner diagnose where the barriers for talent mobility are and where deployed talent may need support. Another example is from Crocker et al (2018) on building collaboration. The authors' figure below illustrates how to identify and manage the different internal networks within an organisation, address silos through central nodes and frequent collaborators, and leverage the edges of the networks for connections to internal and external networks. It could also be useful in talent development, specifically in mentoring, to help the mentee identify useful sources of assistance and to highlight risks.

### To Manage Collaboration, Pay Attention to 4 Points of Execution

Ask yourself if you're identifying networks' centers, leveraging their edges, bringing silos together, and making external connections.

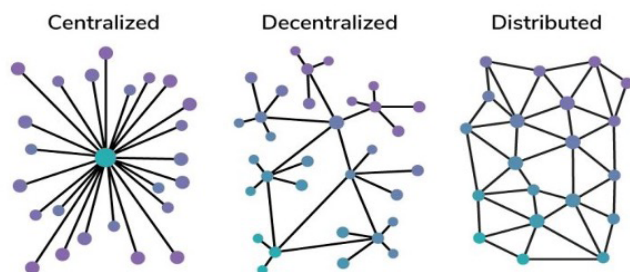


Source: Crocker et al (2018)



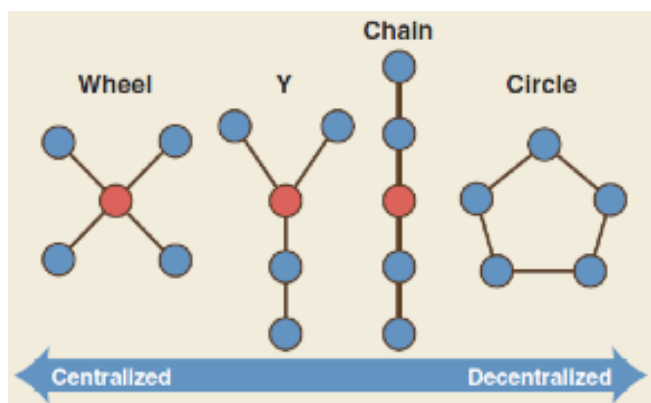
# WHAT ARE THE TYPES OF NETWORKS?

All networks differ. In the previous section we explored the differentiation of roles within and between networks. In the below diagram the networks themselves can be differentiated as centralised, decentralised, and distributed.



Source: IOTA (2020)

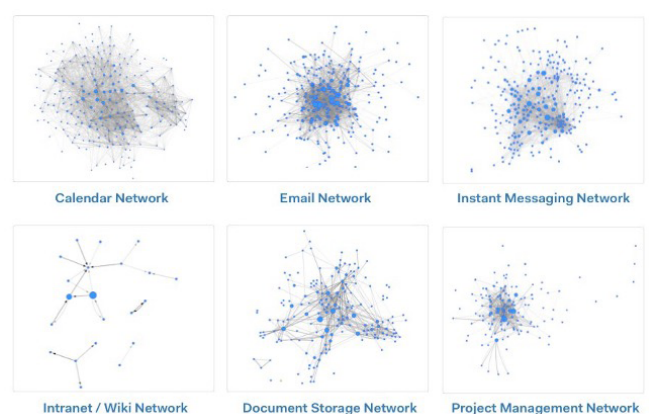
A step further one could examine possible communication structures and how centralised or decentralised these are and the role of central nodes. The below figure provides an example with the central nodes indicated by red circles.



Source: Borgatti, S., Mehra, A., Brass, D., & Labianca, G. (2009)

One can also differentiate networks in terms of their functional or task role within organisations. For example, one can differentiate informal specialist knowledge, innovation, and decision-making networks within an organisation. The active and passive ONA, including different data sources, can also surface and represent the different networks based on different ways of relating and engaging.

The diagram below provides an illustrative example of this. This should caution the HR practitioner against drawing conclusions and generalising from specific sources and data points on employees. It also returns us to the ethics of the data collection and analysis and the concerns regarding digital surveillance. How will the increasing digital surveillance impact employee psychological safety, psychological contract, and their experience? What consent will be required from employees? What metrics, data, and analytics will be shared with employees?



Source: Worklytics (2017)

## DIGITAL SURVEILLANCE

Employees are increasingly concerned about surveillance by their managers. For example, with remote working employees fear being constantly monitored and measured at a very granular level. The CIPD's (2020) research found that:

- "45% of employees believe that monitoring is currently taking place in their workplace"
- "86% believe that workplace monitoring and surveillance will increase in the future"

Employees are aware that monitoring software makes visible each and every activity to the smallest degree, 'non-activity', and error or slip-up from their clicks and browser history, their time spent on applications to detailed analytics on their online times, communication patterns, meetings, collaboration, focused time, and task completion. For managers, the monitoring software can be rather 'seductive' in that it gives a false sense of being in control and measuring (rather than managing) employees.

This sense and reality of constant monitoring and surveillance can negatively impact on trust, engagement, and ultimately the achievement of organisational outcomes. For example, in the CIPD research, "73% of employees feel that introducing workplace monitoring would damage trust between workers and their employers". Employees feel as if they do not have a voice and may feel disempowered and become more disengaged as they feel their job quality will be impacted. This can be seen in the CIPD research:

- "Only 35% of employees and/or their representatives have been consulted on the introduction and/or implementation of new technology"
- "Where employees have not been consulted about technology change, only 20% are positive about the likely impact on their job quality, compared with 70% for those who have been consulted"



# UNDERTAKING AN ONA

As with other HR interventions, the HR practitioner first needs to identify the business and HR objectives. And thereafter deliberate on the applicability and use of ONA, as an approach, for the diagnosis or problem identification and then data collection and people analytics. The below diagram flow provides an example that is adapted from a Society for Human Resource Management (SHRM) article by Garcia and Wallace (2015).





# CONCLUSION

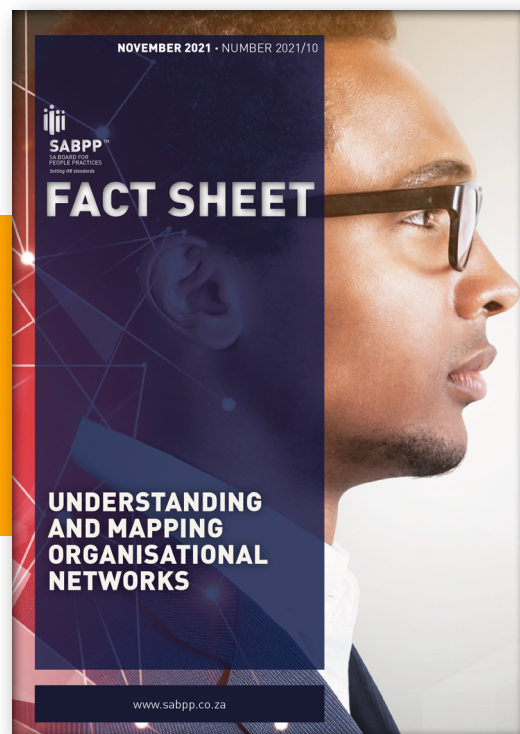
As with the introduction and adoption of any tool and intervention, the HR practitioner needs to consider the employer, employee, and people profession perspectives. ONA can enhance people analytics and provide deeper insight into the relationships, flows, and exchanges within an organisation. And these can help diagnose issues within the HR value chain and HR service delivery. However, its applicability, use, and the ethics and risks thereof need to be deliberated on by the HR practitioner and the organisation before introducing and deploying ONA.

EARN 1 CPD POINT

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