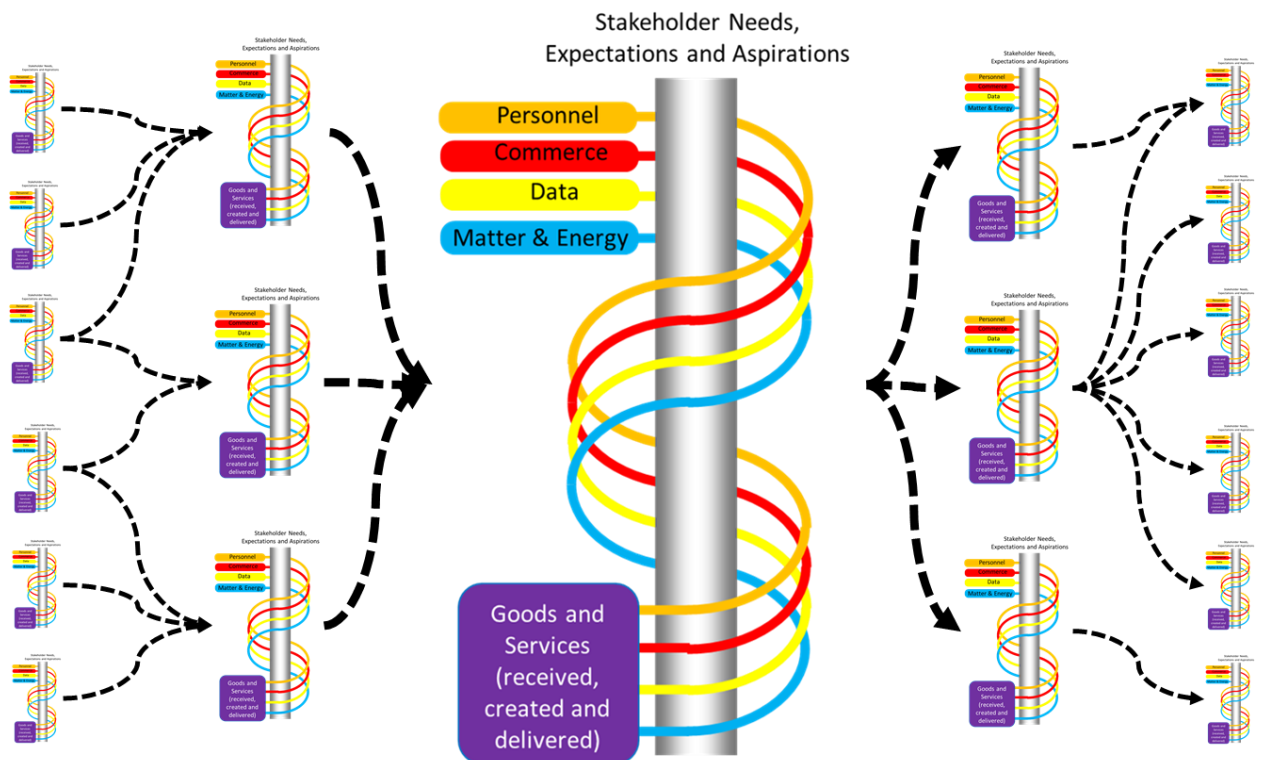INTEGRATED MANAGEMENT COMMUNITY

Interorganisational Networks

Including supply and delivery chains

Executive Summary

This paper provides guidance on the effective and efficient creation of interorganisational networks including supply and delivery chains which are generally commonplace throughout the globe, varying in size and complexity.

Any perception of adding value via some form of cooperative networking with one or more other organisation is the exploitation of opportunity (likely upsides). However, opportunities inevitably have associated risks (likely downsides). This presents the organisation with a complicated calculus which potentially increases with the size and diversity of the context of the interorganisational network.

The primary motivation to create all organisation networks is to improve the effectiveness and efficiency of the organisation in fulfilling its purpose through the delivery of its goods and/or services. An interorganisational network enables an organisation to potentially punch above its weight through intelligent and creative cooperation. Just as an organisation is greater than the sum of its parts, it is also true for organisations cooperating together to equitably satisfy individual and shared objectives. This is much more likely to be effective and efficient if the interorganisational structures and processes are based on the principles of Integrated Management. An Integrated Management approach manages each significant element of the organisation with respect to the whole and recognises no boundaries. Cooperating organisations need to serve a much larger whole than their own organisation working alone including a wider set of stakeholders.

Enlightened stakeholder aware organisations are additionally motivated to conduct ethical commercial relationships and to be socially responsible. These two additional motivations may naturally emerge through having enlightened values, or from the awareness that it is good business practice, or from being conscious of both. These three stages of maturity benefit from taking an integrated approach to management. However, stages two and three more critically depend on an Integrated Management approach to equitably satisfy a widening spectrum of stakeholder needs, expectations, and aspirations while making the best use of resources. This is the foundation principle of Integrated Management defined by the IMC in 2002. Stakeholders may exist within the organisation and outside across its network of commercial and other relationships.

This paper is structured to assist organisations of all types and sizes to systematically review their current interorganisational management arrangements. The approach recognises that success primarily depends on the entrepreneurial and other competences within the organisation or otherwise accessible via consultants, government, and trade bodies etc. Performance improvement can be obtained by systematic structured review processes prompted and informed by knowledge of what can potentially aid and harm success contained in this paper. Its value is educative and acting as a tool to assist organisations to think more creatively, systematically and in a joined-up way to create, change and evolve interorganisational networks to achieve strategic, tactical, and operational objectives.

Integrated Management Community (IMC)

The Integrated Management Community was established in August 2020 following the mothballing of its predecessor, the Integrated Management Special Interest Group (IMSIG) by the CQI. IMSIG was believed to have been created around 1995 to advise on simultaneously complying with the new standard ISO 14001 for environmental management systems and the existing ISO 9001 for quality management systems. However, early in the new millennium, IMSIG broadened its perspective to address the management of the totality of an organisation's functionality to optimise stakeholder satisfaction while making the best use of resources. This involved focusing on the theory and the application of Integrated Management in its widest sense and also Integrated Management Systems which have now become best practice.

In 2014 IMSIG created the world's first universal management system standard MSS 1000 facilitating fully integrated management systems without boundaries. Prior to being mothballed, IMSIG became the largest CQI SIG with a global CQI and non-CQI membership and a global leader in facilitating Integrated Management.

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Ian Dalling acting as the Integrated Management Hub Chair was the principal author of issue 1 this document.

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Revisions

Issue	Date	Changes	Participants
1	30/07/2022	Original issue.	Document drafting - Ian Dalling (IMC Chair) Contributors - Cheryl Burgess, Mary Grech-Hardie, Paul Harding, Mark Beardmore, David Scrimshire, Charles Malack (IMC Hub members).

Table of contents:

1 Introduction

This paper was initiated from an Integrated Management Community (IMC) Hub online meeting presentation and discussion held on 17th January 2022.

The Integrated Management Community (IMC) originated as an IQA special interest group in 1996 to assist interested parties and organisations wishing to adopt and implement integrated management. Clearly defining Integrated Management and how it is applied is part of that role. When governance and management are defined without boundaries, they become congruent concepts. Integrated governance and Integrated Management are interchangeable and essentially the same topic.

1.1 Scope of this paper

This paper focuses on taking an integrated approach to managing interorganisational networks including supply and delivery chains which are commonplace throughout the globe and vary in size, type, and sophistication. The architecture of successful networks needs to be functional and elegant and possess similar performance characteristics to individual organisations such as effectiveness, efficiency, resilience, flexibility, profitability, stakeholders' satisfaction, regulatory compliance, ethical behaviour, and social responsibility etc.

1.2 Purpose of an interorganisational network

Interorganisational networks expand the scope and context of an organisation and emerge when organisations cooperate with one or more other organisations for mutual gain and support.

Networks also exist delivering external support from government and trade bodies and can help facilitate commercial cooperation.

Interorganisational networks may also arise from an organisation endeavouring to establish an exploitative relationship facilitating a win-lose relationship. However, they are outside of the scope and objective of this paper as they are socially irresponsible and not sustainable. This paper focuses on practices that collectively endeavour to deliver win-win outcomes.

1.3 Types of interorganisational network relationship

A network is defined as a natural or engineered set of links between living and non-living entities. An interorganisational network is formed by the links or relationships between organisations and can take various forms. The purpose of the interconnections may typically include the facilitation and exchange of data, the transportation of energy and matter, delivering of goods and services and their support systems, processes, coordination, and control. The links may be unidirectional e.g., the flow of product, or unidirectional communication and exchange of energy and matter e.g., exchange of packaging and reuse. Commercial contracts and financial settlement tend to be unidirectional. Different types of link are common in networks and act together synergistically to deliver its purpose and value.

Interorganisational cooperation may be geographically local or wider including pan national and global. Expanding beyond national can present more legal compliance challenges and the potential for clashes of differing cultural values and practices. An organisation committed to goods and service excellence, commercial responsibility and social responsibility will need assurance that it cooperates and interacts with organisations that will uphold those values.
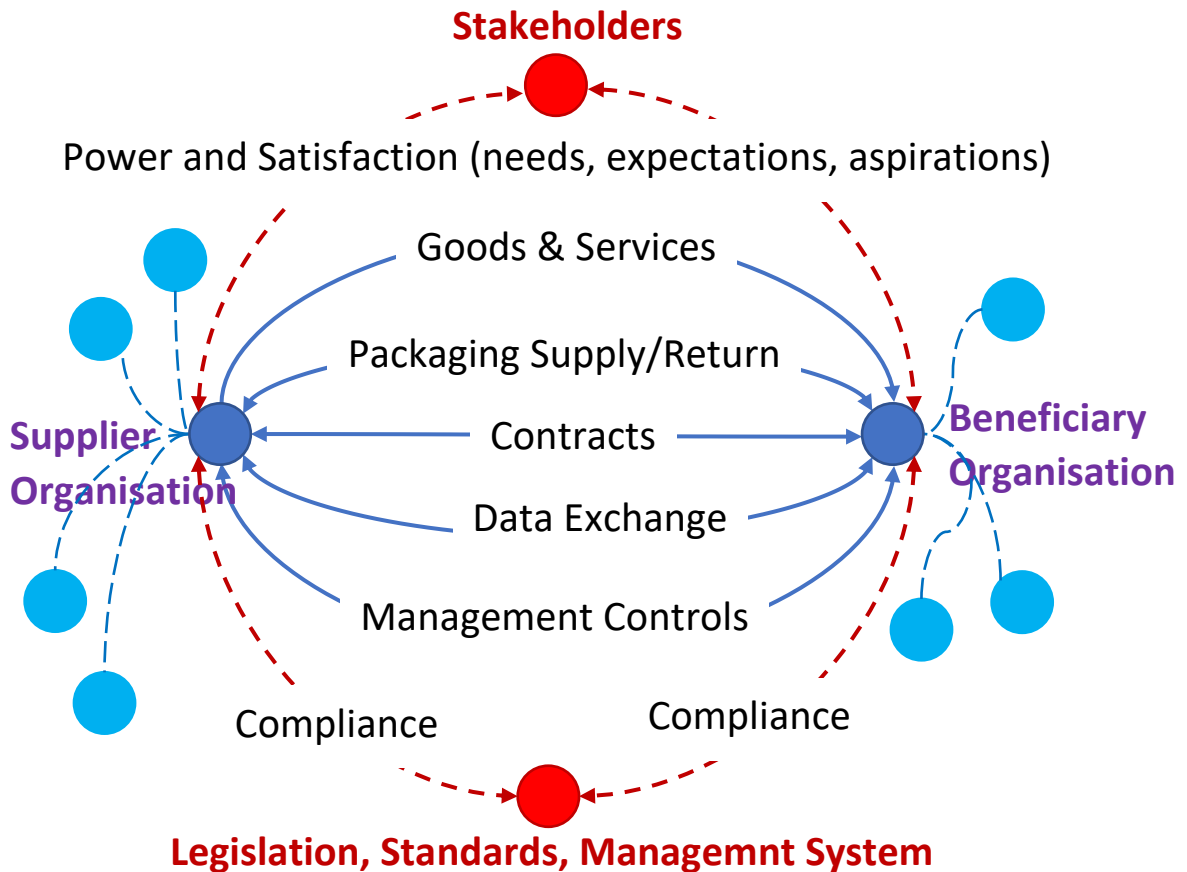
Figure 1: Interorganisational Relationships

1.4 Strategic, tactical, and operational focus

Networks can be established at strategic, tactical, and operational levels and all can potentially contribute value. However, some relationships invariably contribute more value than others demanding deeper analysis and establishing higher levels of management control. Nevertheless, for whatever reason, every element of an organisation interorganisational network will have a purpose which must in some way contribute to fulfilling the purpose of the whole which motivated its creation.

The interconnected dual motivation of creating networks is to create value and to retain value. This is addressed by intelligently and creatively exploiting opportunities and its subordinate prospects and risks when operating under uncertainty.

1.5 Macro and micro perspectives

Effective and efficient management by necessity must focus on each purposeful element of an organisation and its impact overall. Interorganisational networking means that the whole expands beyond the context and boundary of an organisation acting alone.

In general, the same management principles generically apply irrespective of the size and type of organisation. This also applies to a situation where two or more organisations are cooperating via networks of relationships. We can usually use the same relevant techniques and tools whether we zoom outwards or inwards.

We can apply a management standard such as MSS1000 to a single organisation or a collection of organisations cooperating together to deliver more value. This must be true because a large organisation can be created by merging smaller organisations. Patterns of organisation cultures and subcultures tend to emerge wherever personnel are interacting together within a grouping and are not necessarily bounded by legal entity boundaries. Structures and processes, substructures and subprocesses are not necessarily constrained by these boundaries.

Although management systems are normally owned by a legal entity, they can be shared across legal entity boundaries in part or in total. Company group structures typically share mutually agreed a common management system as do joint ventures. Such considerations are a component of the design of interorganisational arrangements.

1.6 Interorganisational network lifecycle

An organisation should design, implement, monitor, and review its interorganisational network systematically on a regular basis to ensure it is fit for purpose and is evolving in alignment with its stakeholder wishes. This should be done in conjunction with the way that it manages its internal network of relationships. Overall, this embraces equitably satisfying the needs, expectations and aspirations of the organisation's internal and external stakeholders while making the best use of resources (the foundation principle of Integrated Management).

Reasonable attempts should be made using analysis, simulation, and testing to build and maintain confidence that the interorganisational network is resilient in normal and abnormal conditions. Enhanced confidence may be gained from the appropriate application of stress testing of the critical aspects of the functionality of the network. Networks can be made more resilient through applying the principles of redundancy, diversity, and segregation etc.

The contractual relationships should be equitable, transparent and permit participants to join and leave the interorganisational network and participate in its dissolution without punitive sanctions being applied. The arrangements should promote win-win outcomes or where not possible equitable outcomes.

2   Using this document to improve arrangements

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┌─────────────────────────────────────────────────────────────┐
│   Agree Interorganisational Network Review Structure and     │ ◄┄┐
│   Processes.                                                 │   ┆
└─────────────────────────────────────────────────────────────┘   ┆
                          │                                        ┆
┌─────────────────────────────────────────────────────────────┐   ┆
│   Confirm Network Organisations and Stakeholders Objectives. │ ◄┄┤
└─────────────────────────────────────────────────────────────┘   ┆
           │                              │                        ┆
  ┌──────────────────┐         ┌──────────────────┐               ┆
  │ Identify         │ ◄┄┄┄►   │ Identify/define  │ ◄┄┄┄┄┄┄┄┄┄┄┄┄┄┤
  │ organisations    │         │ network          │               ┆
  │ motivations      │         │ context          │               ┆
  │ (Section 3)      │         │ (Section 4).     │               ┆
  └──────────────────┘         └──────────────────┘               ┆
                          │                                        ┆
┌─────────────────────────────────────────────────────────────┐   ┆
│   Identify upsides (prospects) and downsides (risks).        │ ◄┄┤
│   Identify potential for improvements (Sections 5 and 6).    │   ┆
└─────────────────────────────────────────────────────────────┘   ┆
                          │                                        ┆
┌─────────────────────────────────────────────────────────────┐   ┆
│   Regulatory and standards compliance checks (Section 1.5).  │ ◄┄┤
└─────────────────────────────────────────────────────────────┘   ┆
                          │                                        ┆
┌─────────────────────────────────────────────────────────────┐   ┆
│   Stress test critical aspects of network functionality      │ ◄┄┤
│   (Section 1.6)                                              │   ┆
└─────────────────────────────────────────────────────────────┘   ┆
                          │                                        ┆
┌─────────────────────────────────────────────────────────────┐   ┆
│   Agree network improvements and actions.                    │   ┆
└─────────────────────────────────────────────────────────────┘   ┆
                          │                                        ┆
┌─────────────────────────────────────────────────────────────┐   ┆
│   Monitor implementation and consequences of actions.        │ ┄┄┘
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                                                      Iteration
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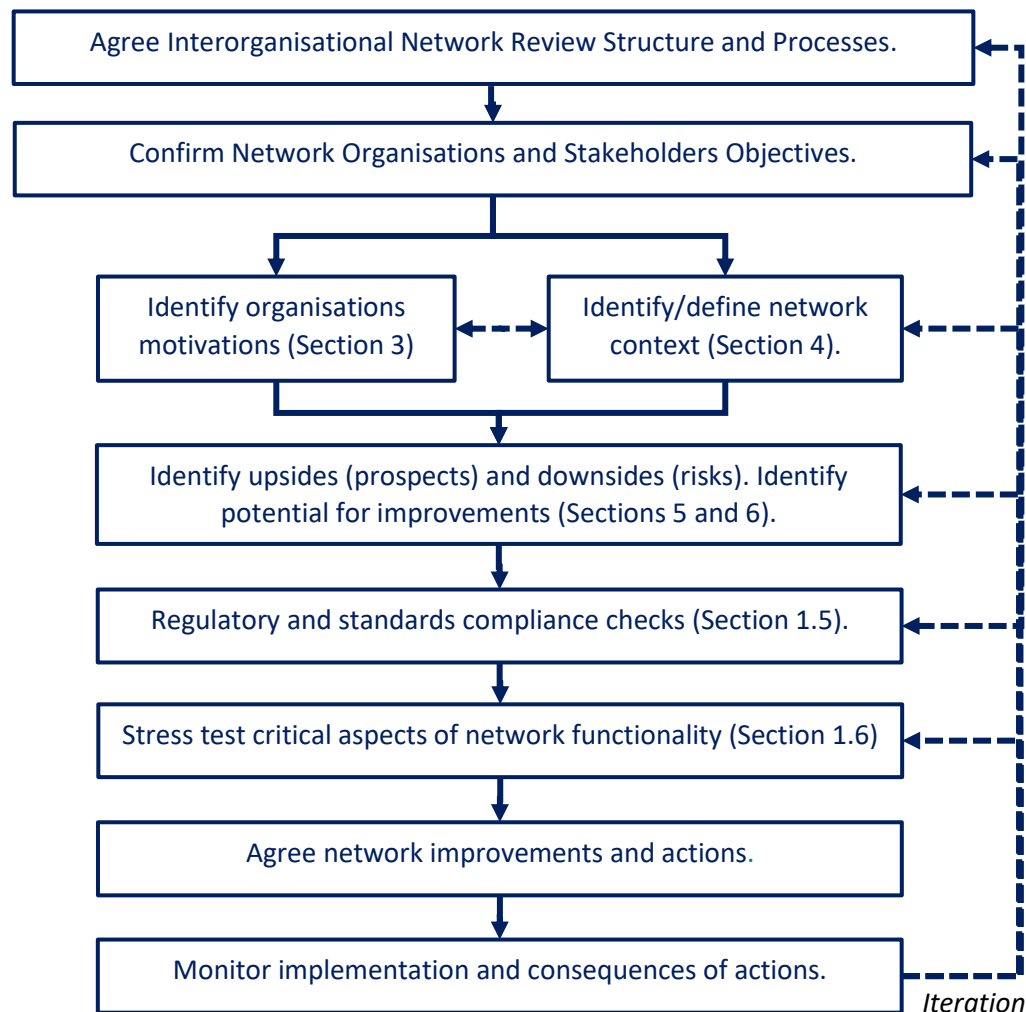
Figure 2: Interorganisational Network Design/Performance Review

This paper is structured to assist organisations of all types and sizes to systematically review their current interorganisational management arrangements.

The following four sections have been created to act as stimulation and guidance in planning, implementing, monitoring, and reviewing intended or already established interorganisational networks whether they be simple or sophisticated.

Referring to Figure 2: Interorganisational Network Design/Performance Review, the guidance sections should be used iteratively, as necessary, to refine and improve, as appropriate:

- The proposed interorganisational network design.
- The proposed/potential design changes.
- The performance of an already existing network.

The approach recognises that success primarily depends on the entrepreneurial and other competences within the organisation or otherwise accessible via consultants, government, and trade bodies etc. Performance improvement can be obtained by systematic structured review processes informed by knowledge of what can potentially aid and harm success

contained in this paper. Its value is educative and acting as a tool to assist and prompt organisations to think more creatively, systematically, and in a joined-up way that pushes all boundaries to expedite change and evolve interorganisational networks to achieve strategic, tactical, and operational objectives.

3   Motivation to Create Networks

Organisations need to clearly define their motivation(s) to be able to conduct a meaningful review and to judge the success of any improvement initiative. The following are a non-exhaustive set of typical motivating and demotivating management issues.

This section may be used iteratively and in parallel with Section: 4 Context of Networks.

Figure 2: Interorganisational Network Design/Performance Review is relevant to the following subsections.

3.1   Potential outsourcing motivators

a) Assist business growth and achieve strategic objectives more quickly and cheaply.
b) Exploit an existing organisation's reputation and brand.
c) Creation of better goods and services.
d) Creation of cheaper goods and services.
e) Enable quicker delivery of goods and services.
f) Transfer, reduction and/or avoidance of risk.
g) Access additional and diverse markets.
h) Socio-economic, reputational and brand improvement.
i) Less problematic industrial relations (reduced pressure and disruption, greater control and flexibility).
j) Expand capacity, access more and diverse assets.
k) Expand capability (additional or different competence) – access intellectual property.
l) Less restrictive or simpler regulatory environment.
m) Work around for policy constraints (e.g., existing stakeholder commitments).

3.2   Potential outsourcing demotivators

a) Uncertainty and fear of change – unknown or unquantifiable risks.
b) Loss of control.
c) Loss of oversight.
d) Loss of intellectual property.
e) Loss of transparency of business processes.
f) Exposure to complicating legislation and regulation.
g) Unforeseen costs.
h) Exposure to an unethical organisation or people.
i) Potential for clash of cultures.
j) Potential reputation or brand damage (guilt by association).

4   Context of Networks

Interorganisational networks vary considerably in size and sophistication and can contain several potential characteristics which may positively and negatively impact stakeholder needs, expectations, and aspirations. Organisations need to understand and define the context of their networks and any proposed potential changes to it to inform a deeper analysis of the interorganisational network aspects and stakeholder impacts.

This section may be used iteratively and in parallel with Section: 3 Motivation to Create Networks.

The following is a non-exhaustive set of potential characteristics for organisations to consider and help identify potential upsides and downsides needing to be avoided or otherwise controlled.

    a)   Purpose of establishing and maintaining the interorganisational network.
    b)   Role of each participating organisation.
    c)   Regions, geography, transport routes, climates spanned by the network and location of participating organisations.
    d)   History, development of societal and business cultures, regulatory, and business environments of participating organisations.
    e)   Resources readily available to the participating organisation including competent personnel, raw materials, energy, and transportation.
    f)   Stability of region of participating organisation and its essential transport links.

5   Network Improvement and Degradation

Improvement and degradation can take many forms and vary in magnitude and likelihood giving rise to prospects and risks. Participating organisations and their stakeholders may be impacted differently and may also cause conflicts. Organisations should attempt to construct a profile appropriate to its own nature, circumstances, and maturity.

5.1   Potential supply and delivery chain improvements

n) Integrated management systems, interface agreements.
o) Use of redundancy, diversity, segregation, and spare asset capacity (capitals) to reduce risks, improve resilience and reduce vulnerability to disruption.
p) Supplier and customer classification and proportionate management controls.
q) Due diligence checking.
r) Prequalification and certification.
s) Prototyping and experimentation.
t) Use of consultants and government bodies with local knowledge relating to potential cooperating organisations.
u) Contingency planning (emergency, crisis, continuity, succession).
v) Periodic monitoring and review (total arrangements).
w) Effective and efficient collaboration and cooperation.
x) Transparency (open books).

5.2   Potential degrading of supply and delivery chains

a) Being unnecessarily complicated or large, impeding monitoring and control.
b) Poor or lack of communication, misunderstandings.
c) Lack of formality, fragmentation, or gaps in management arrangements.
d) Disasters, conflicts, and pandemics etc. Lack of, unvalidated or out of date contingency arrangements.
e) Economic instability, currency fluctuations.
f) Restrictive or excessively bureaucratic or problematic trade barriers.
g) Political, regulatory and policy change.
h) Just in time, lack of reserves and buffering (too lean).
i) Common cause impacts and disruption.
j) Interdependencies.

6 Ideal Interorganisational Network

Although perfection must inevitably remain an aspiration, a vision of an ideal interorganisational network helps set the management compass, appropriate objectives, and drive continual improvement.

An effective and efficient interorganisational network is believed to be one where:

a) Every participating organisation respects the needs, expectations, and aspirations of every other participant.
b) The participant short-, medium- and long-term plans are appropriately coordinated to nurture and safeguard the network.
c) Value is delivered to all network participants.
d) The purpose and the purpose of its participants are equitably fulfilled by delivering win-win outcomes in contrast to win-lose or lose-lose outcomes, as judged by a consensus of stakeholders.
e) It is commercially responsible, socially responsible, life supporting, and sustainable.
f) There is a set of shared values that that is universally respected and followed by all participant organisations.
g) An integrated approach to management, working to common standards and a common Integrated Management System is established.
h) Structures, systems and policies are transparent to stakeholders.
i) As appropriate, the elements of the network's structure and functionality are classified according to the potential to impact its ability to create value and lose value whatever its form. Appropriate agreed and coordinated management controls are established for normal and abnormal situations which are intelligent, creative, proportionate, appropriately informed by prospect and risk assessment, and are periodically validated and tested. These controls are continually reviewed, adjusted, as necessary, to take account of the evolving needs, expectations, and aspirations of the stakeholders.

7 Conclusion

Value can be added in a multitude of ways when commercial entities cooperate and submit to a degree of coordination beyond their own operational boundaries. This can happen within a single legal entity or across two or more of them networking together. Irrespective, the challenges tend to increase as the networks become larger and more complicated. The prospects of value gain and the risks of value loss have to be carefully assessed, judged, and balanced for the participating entities to experience win-win outcomes, flourish and endure.

Good interorganisational network architecture demands management creativity and intelligence so that stakeholder value in all its forms is created and retained. Each stakeholder will have evolving needs, expectations and aspirations that must be identified and understood so that the aspects and impacts of any interorganisational network are optimally managed. Fortunately, the principles of effective and efficient management tend to be universal and are therefore applicable to all organisations and interorganisational networks for a given context.

The proven benefits of Integrated Management are also universally applicable but become even more critical to success when designing and establishing large interorganisational networks. It should be noted that larger is not necessarily optimal or better. The key is to focus on making the best use of resources to equitably satisfy stakeholder needs, expectations, and aspirations in any given context. This requires assessing how the aspects of the whole interorganisational network impact stakeholders in the short, medium, and longer terms taking account of multiple interdependent uncertainties. The complexities involved are considerable, but their management can be greatly simplified and improved by systematically applying appropriate proven management principles, analysis, and tools, including simulation and stress testing. The objective of this document is to assist with the process of systematically creating and reviewing interorganisational arrangements to support the intelligence and creativity of the participating management teams.

8 References

MSS 1000 Management System Standard

Management system specification and guidance MSS 1000:2014

9 Definitions

The meaning of words and concepts in this paper are as defined in MSS 1000 with the following additions and reproductions of MSS 1000 definitions.

Integrated management

Approach to management that seeks to understand and effectively direct every aspect of an organization so that the needs and expectations of all stakeholders are equitably satisfied by the best use of all resources.

NOTE 1: 'direction' implies the use of a management system addressing the totality of the organization and its interaction with stakeholders.

NOTE 2: 'stakeholders' and 'equitably' implies that an organization should seek transparent win-win solutions where this is possible.

NOTE 3: Integrated management makes no distinction in its general approach to managing potential gain and managing potential loss as perceived by stakeholders.

NOTE 4: Integrated management recognizes no time, geographic, demographic or other types of boundary. It globally addresses future as well as current stakeholder needs, which naturally promotes sustainability. This implies that complete life cycles are addressed such as industry, organization, plant, asset, good or employee (e.g. induction, development and retirement) etc.

NOTE 5: Best use of resources implies effective, efficient (waste minimization), agile and resilient processes as judged by a consensus of stakeholders.

NOTE 6: Integrated management implies that all elements of an organization should add optimal value both individually and collectively i.e., acting as a whole and delivering a synergistic benefit.

NOTE 7: Integrated management allows uniformity and diversity to coexist harmoniously within an organization. Generic approaches are used only if they add value.

Integrated management system

Management system that has a scope that includes two or more aspects of an organization's performance that is capable of being managed by separate distinct management systems. See also fully integrated management system.

NOTE 1: As an example, it may cover two or more of the management of good or service quality, environment, and personnel health and safety performance.

NOTE 2: A management system may be fully integrated.

Interorganisational Network

Consensual arrangement of relationships between organisations motivated by an objective to improve performance.

Prospect and Risk

Respective combinations of positive and negative consequences of a potential event or outcome and the associated likelihood of occurring.

NOTE 1: Prospect and risk are stakeholder judgements or perceptions of whether value is likely to be created or lost and may vary according to the stakeholder and are therefore relativistic and may even conflict with other stakeholders.

NOTE 2: Prospect and risk may be understood conceptually as the mirror of each other.

NOTE 3: Prospect and risk may coexist, may exist in close physical or virtual proximity and may be mutually dependent.

NOTE 4: Prospect and risk may be space or time dependent e.g. during a scenario or during the changes of the seasons etc.

NOTE 5: Estimates of prospect or risk may be expressed qualitatively or quantitatively. For a qualitative example, refer to Appendix 3: Prospect and Risk Rating System Example.

NOTE 6: The aggregation of prospect and risk is generally not meaningful and should only be done if the respective profiles are similar and expressed in the same units.

NOTE 7: High prospect combined with low risk is the most desirable.

Prospect

Combination of the potential gain and the likelihood of its realization. See also risk, prospect and risk.

NOTE 1: Gain may be financial or any other perceived benefit.

NOTE 2: Prospect is conceptually negative risk. The preferred term is 'prospect.'

Risk

Combination of the potential loss and the likelihood of its realization. See also prospect, prospect and risk, and precautionary principle.

NOTE 1: Negative consequences may include any types of actual or perceived loss or realised threat such as harm to personnel, the environment, commerce, data, suppliers or any other asset structure or process.

NOTE 2: Risk is conceptually negative prospect.

NOTE 3: Loss is that perceived by the stakeholder.

Stress Test

A stress test is used in several industries and applications but in the context of this paper is an analysis and/or simulation of the ability of an interorganisational network to endure a hypothetical adverse scenario. Stress tests became widely used in banking after the 2008 financial crisis.