

Knowledge Management Consulting Method

Part 4 – KM Development Plan

Module 4.2 – Analyse and Leverage the Knowledge Networks

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Introduction

An Overview of the KM Consulting Methodology

The KM Consultancy Methodology enables structured thinking and planning for a knowledge management project. The KM Consultancy Methodology is designed to be modular so that an organisation can choose to start at different levels depending on its readiness, needs and requirements.

The KM Consultancy Methodology is divided into 6 parts of learning and activity. Part 1 concentrates on KM Education, understanding what KM is, the terminology used and why it is important. Part 2 introduces the individual to the importance of KM frameworks, and more importantly, the framework used for the KM Consulting Methodology.

Parts 3, 4 and 5 focuses on the planning, developing and implementing KM within and organisation. This involves looking at the initial or the planning stage of the strategic planning for knowledge management, in Part 3. Part 4 looks at developing the knowledge organisation, looking at how to KM enable the organisation and the need to iteratively develop the KM initiative. Part 5 looks at implementing the KM initiative, from a small pilot project, to a organisation wide KM roll-out and then to an inter-organisation wide KM roll out.

Part 6 focuses on the knowledge and skills required to successfully conduct KM on a daily basis. This involves fundamental skills, such as utilising the KM system and working effectively as virtual teams through to understanding the new roles and responsibilities of the Chief Knowledge Officer, Knowledge Manager, Knowledge Administrator and the Knowledge Workers.

Part 7 introduces the 9 steps of the KM Process. The KM process enables organisations to introduce, implement and assess how an organisation can become KM enabled. This part will introduce the 9 Steps and describe their purpose and importance. A KM Maturity Model is introduced to allow users to start assessing how effectively they are KM enabling their organisation/process/project.

Part 4 - Develop the KM Organisation

Part 4 of KM Consulting Method concentrates on developing the KM organisation. There are six different modules as follows:

- Modules 4.1 are an audit-leverage pair that focuses on business processes.
- Modules 4.2 are an audit- leverage pair that focuses on organisational structures and networks of people.
- Modules 4.3 are an audit- leverage pair that focuses on technology issues.
- Module 4.4 focuses on the development of the underlying model for knowledge asset organisation and is essential for the customisation of KM System tool, such as Knowledger.
- Module 4.5 focuses on the knowledge assets measurements
- Module 4.6 is a module that synthesises and documents the changes that the organisation is implementing as a result of the knowledge management initiative.

The purpose of this Part 4 is that it is iterative in nature, where an organisation will constantly analyse and leverage the knowledge for continuous further improvements. Modules can run in parallel and can be repeated several times throughout the knowledge management initiative. Three simple steps underlie the proposed iterative approach. First, diagnose the most critical problems and opportunities facing the organisation with respect to knowledge management and sketch out a possible solution. Second, quickly, over a few months, translate the sketch of a solution into new work processes and systems; include new ways of working as well as new computer systems, and begin using both for real. If, for example, the problem at hand is customer knowledge management, use the new process to manage some important customers at several offices (or business areas). Given this real-world experience, determine where these new processes and systems succeed or fail, and quickly fix the failures. In other words: do it, then fix it. Third, scale up systems for rollout across the whole organization. Communicate the proven success of the trials in order to build momentum for change.

The essence of the iterative prototyping approach is rapid learning from doing. Speed ensures that change is always relevant, it forces trade-offs so that limited resources are devoted to pursuing goals of real value, it allows top people to participate in change, and it builds unstoppable momentum. Trying out new ideas in the real world allows their shortcomings to be rooted out by the harshest of tests - real-world experience - and their successes to be proven beyond challenge from the most cynical critics. By stressing speed of change and using the real world as a laboratory to learn from, the iterative prototyping approach makes change and improvement a constant fact of corporate life.

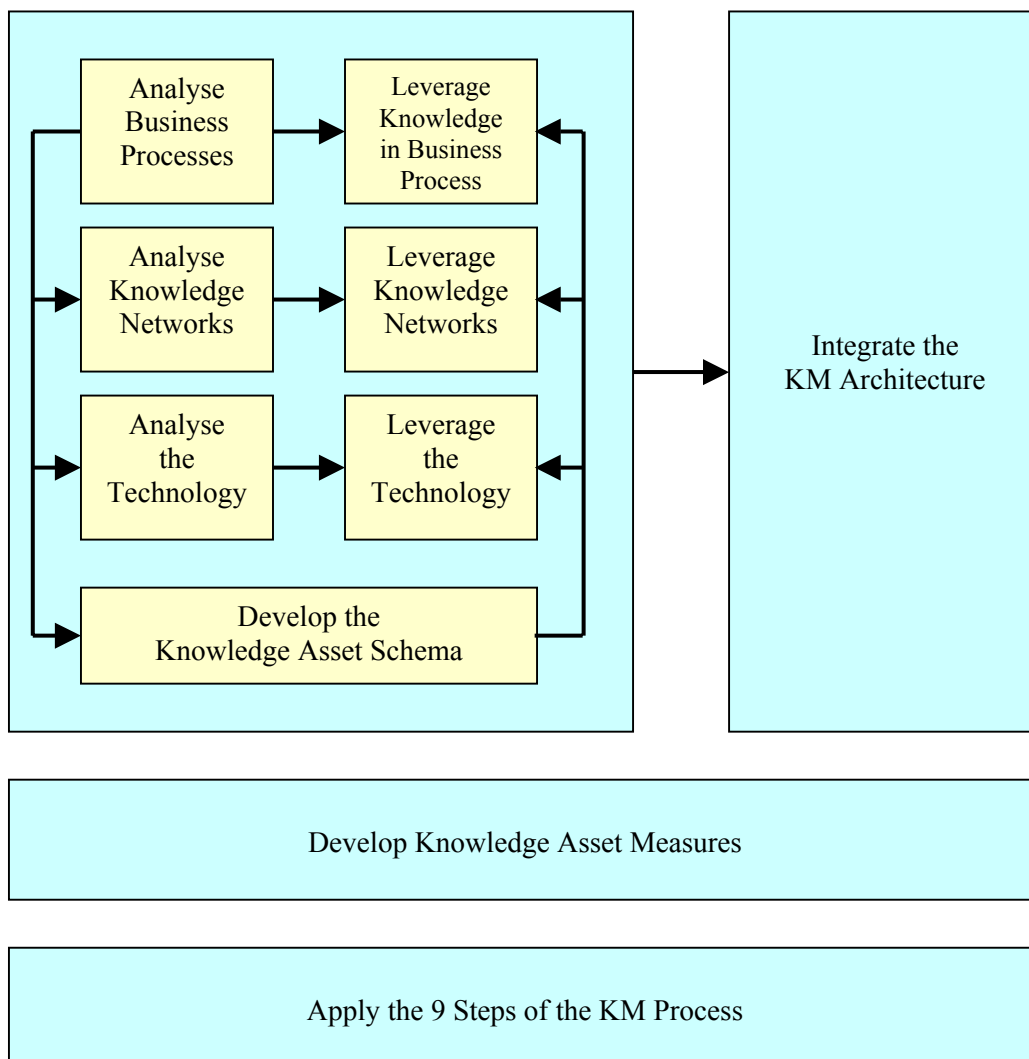


Figure 1 – Develop the KM Organisation

Summary of Activities per Module

Module		What is it used for?	Who is involved?	What are its prerequisites?	Comment
4.1	Analyse Business Processes	This module helps you audit the knowledge requirements of business processes.	Consultant and employee that 'governs' BUSINESS process. Additional interviews with employees involved in process.	High-level identification of key knowledge assets and key business areas of the organisation.	This module is useful: in relatively structured environments when there is a need to better manage knowledge in specific business processes
	Leverage Knowledge in Business Processes	To design and implement additions / modifications in business processes to improve knowledge management within process	Consultant and employee that 'governs' business process. Additional interviews with employees involved in process.	An analysis of the existing process; Knowledge Asset Schema	
4.2	Analyse Knowledge Networks	This part of the module helps you understand the informal flow of knowledge within networks of people in the organisation.	Consultant and Change Agent. Additional interviews with people in knowledge networks.	High-level identification of key knowledge assets and key business areas of the organisation.	This module is to be used only in environments that there already exist informal networks of people that focus on a specific knowledge asset or business area
	Leverage Knowledge Networks	This part of the module helps you design and moderate Knowledge Networks within the organisation.	Consultant and Change Agent. Additional interviews with people in knowledge networks.	Knowledge Asset Schema	This module is used by organisations that wish to build communities that will be collecting, storing and advancing key knowledge assets of the organisation. Particularly important for dispersed organisations.

Module		What is it used for?	Who is involved?	What are its prerequisites?	Comment
4.3	Analyse the technology	Asses the current state of IT in the organisation and identify existing information sources	Consultant, Change Agent, CIO, IT director or similar		This module supports the integration with existing enterprise systems.
	Leverage the technology	Present the technology element in knowledge management	Consultant, Change Agent, CIO, IT director or similar	Ideally Modules 4.2 and 4.3	
4.4	Develop the Knowledge Asset Schema	Design the knowledge asset schema, knowledge objects and attributes, and ontology	Consultant with Change Agent		This module provides essential input for the design of the knowledge repository.
4.5	Develop the knowledge asset Measures	To measure, track and report on the organisations knowledge assets	Consultant with Change Agent	Knowledge Asset schema	This module is essential for knowledge accounting
4.6	Implement the KM architecture	Helps integrate people, process and technology changes into one holistic solution	Consultant with Change Agent		Practical tips on integrating the people. process and technology changes. Addresses cultural issues.
4.7	Applying the 9 Steps of the KM Process	To KM enable the organisation/process/project. To monitor and measure the progress of KM enabling your organisation.	Consultant with Change Agent	A clearly defined area to be KM enabled	This module supports integration of the KM process within an organisation.

Module 4.2 - Analyse and leverage the Knowledge Networks

1.0 Analyse the Knowledge Networks

1.1 Purpose of module

- To identify if knowledge networks exist within the organisation.
- To identify the requirements for better knowledge management within knowledge networks.
- To identify inefficiencies of the knowledge flow within the knowledge networks.
- To understand the basic patterns of informal knowledge flow needed in order design and moderate knowledge networks (leveraging knowledge networks).

1.2 Definition of Knowledge Networks

We define Knowledge Networks as informal networks of people who share similar goals and interests. Knowledge networks emerge as a side effect of participation. Learning is facilitated in these communities as people participate in new and different Knowledge Networks. Knowledge Networks are often described as Communities of Practice/Interest. For example, workers organise their working lives with their immediate colleagues and customers to get their jobs done. In doing so, they develop or preserve a sense of themselves, have some fun, and fulfil the requirements of their employers and clients. Although they may be employed by a large organisation, in day-to-day practice they work with and, in a sense, for a much smaller set of people and communities.

1.3 Where to start from

To identify existing knowledge networks, you might start from the high level identified strategic business areas where the KM initiative is going to focus. Figure 1.1 explains how Knowledge Networks are linked to business areas.

Alternatively, if the high level audit, (part of KM Strategy Planning - Module 3.3) has revealed strategic knowledge assets or core competencies of the organisations you may start directly from there and work to identify Knowledge Networks that embody the organisation's knowledge assets and core competencies.

From Strategic Business Areas to Key Knowledge Assets

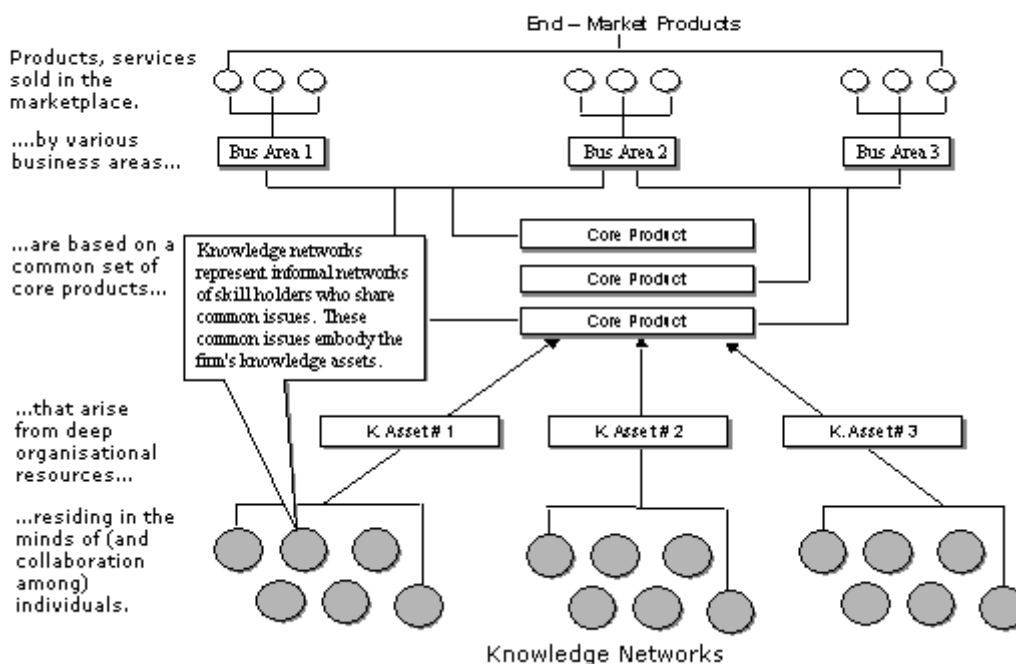


Figure 1.1: From Business Areas to Knowledge Networks

In a second phase the knowledge networks that embody the organisation's knowledge assets should be identified. The consultant in collaboration with the change agent can analyse networks in three steps:

Step1 - Conduct a network survey

Step one is conducting a network survey using interviews with employees. The survey is designed to solicit responses about who talks to whom about work, who advises whom on technical matters, etc. It is important to pre-test the survey on a small group of employees to see if any questions are ambiguous or meet with resistance. The following are among questions that should be asked:

- Whom do you talk to every day concerning knowledge asset #n?
- Whom do you go to for help or advice at least once a week concerning a particular knowledge asset?

- With one day of training, whose job could you step into?

It is very important that such interviews with employees ***should be focused around the knowledge asset under examination***, and not general discussions regarding internal communication patterns.

Step 2 - Cross check responses

After interviews are completed, the second step is cross-checking the responses. Some employees, worried about offending their colleagues, say they talk to everyone in the department on a daily basis. The final map should not be based on the impressions of one employee but on the consensus of the group.

Step 3 - Draw a map

The third step is processing the information using one of several commercially available flowcharting computer programs. Maps in hand, the consultant in close collaboration with the change agent and other managers can devise a strategy that plays on the strengths of the informal organisation.

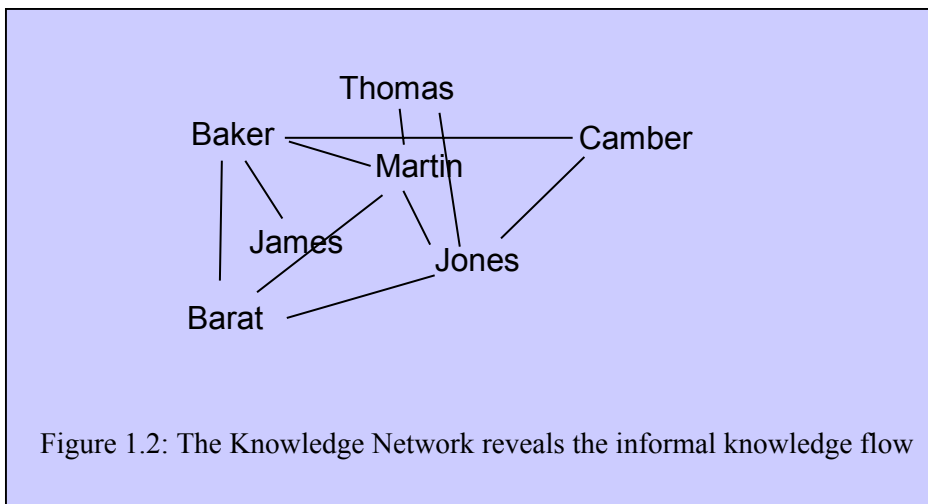


Figure 1.2: The Knowledge Network reveals the informal knowledge flow

1.4 Profile People in the Network

Profiling people that participate in knowledge networks is the key to successfully leveraging knowledge creation and management within these networks. People usually become members of knowledge networks not because they are obliged to do so but mostly because they receive personal satisfaction by being part of these communities. Because this is a fundamental driving force of knowledge networks, understanding and supporting the human factor is of imperative importance. Profiling of people should therefore be done in this context and should be aimed primarily at understanding issues such as ‘meaning in the workplace’ for the people involved in the networks. Therefore

questions to be asked should aim at identifying personal interests, job satisfaction factors, personal ambitions and expectations, but also personal competencies, experiences, skills, etc.

Indicative questions include:

- What are your personal interests? Which one of the knowledge assets described above would you be more interested in actively participating? With what people would you like to collaborate on this?
- If you need to informally call someone for information regarding this knowledge asset, how do you know whom to call? What do you do if you don't? Why do you call this particular person?
- What do you best like to do when you informally collaborate with other people from the knowledge network?
- What do you do in your free time regarding this knowledge asset?
- What are your favourite sites / journals / newspapers regarding this knowledge asset? Which ones do you read in your free time?
- What are the factors that hinder/ encourage you to contact someone from the same / different department?
- What do you think could be improved in the network? Would you like to have someone facilitating communication and collaboration in the network? Who would be ideal for this?
- What about technology? Would you use Internet forums for instance to communicate? Is a more specialised application required?
- What experience / competencies / skills you have with respect to these knowledge assets?
- It is important to notice that such questions or interviews should be focused on the key knowledge assets that the network deals with, and not a general discussion about all personal interests and habits.

1.5 How to identify Knowledge Networks

There are several ways to identify Knowledge Networks in an organisation. The following three characteristics make a Knowledge Network:

1. Mutual engagement

Mutual engagement is the combination of what we do, what we know, and the ability to connect meaningfully to the contributions and knowledge of others. In these communities, it is important to give and receive rather than to try to know everything yourself. Furthermore, each participant in a community of practice finds a unique place and gains a unique identity, which is defined in the course of engagement.

2. A joint enterprise

The enterprise of a Knowledge Network refers to a statement of purpose, and also includes a sense of mutual accountability among those involved. Accountability include a shared understanding of what matters, what does not, what is important and why it is important, what to do and not what to do, what to pay attention to and what to ignore, what to talk about and what to leave unsaid, what to justify and what to take for granted, what to display and what to keep in, when actions and artefacts are good enough and when they need improvement or refinement.

3. A shared repertoire

The repertoire of a Knowledge Network includes routines, words, tools, ways of doing things, stories, gestures, and symbols. The community has either adopted these or produced this repertoire in the course of its existence and they have become part of its practice. Further, communities develop a sense of identity. This identity may be reflected in how the members dress or even in how they maintain their desks.

1.6 Types of Networks

Knowledge sharing is takes place between informal networks of people who share similar goals and interests. Such informal networks or communities are different depending on the geographical distribution of their members or the social proximity of people participating in them.

Ernst & Young recognises five types of communities, as shown in figure 1.3. These are characterised along two dimensions: organisational reach (global versus local) and community member cohesiveness (low versus high). On the one end we have economic webs. These are networks with wide geographical distribution (could be nation-wide or

even worldwide) and very low social cohesiveness (typical members have not even met each other in person). An economic web can be formed by companies that participate as part of the supply chain (such as main manufacturers, subcontractors, suppliers, etc.). On the other end we have work or projects teams of people who know each other quite well, meet regularly face-to-face and share professional as well as social encounters. In the middle there are communities that share similar interests, professional experience, etc. or communities of interest (e.g. professional chambers or associations).

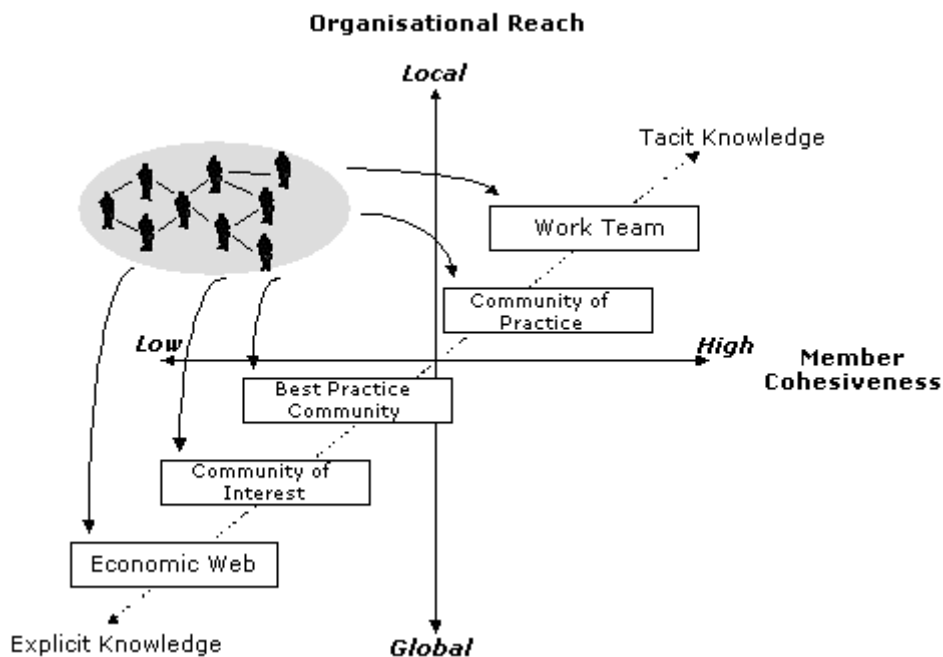


Figure 1.3 Types of networks (source: Ernst & Young)

1.7 Things to look for:

Fit between networks and business objectives: Whether networks are in sync with the identified strategic knowledge assets and key business areas.

Imploded relationships: Communication maps often show networks of people within departments that have few links to other groups. In these situations, employees in a department spend all their time talking among themselves and neglect to cultivate relationships with the rest of their colleagues. Frequently, it is only the most senior employees that have ties with people outside their areas.

Irregular communication patters: The opposite pattern can be just as troubling. Sometimes employees communicate only with members of other groups and not among themselves. A lack of cohesion resulting in factionalism suggests a more serious underlying problem that requires bridge handling. Initiating discussions among peripheral players in each faction can help uncover the root of the problem and suggest solutions.

Fragile structures: Sometimes group members communicate only among themselves and with employees in one other division. This can be problematic when contribution in several areas is necessary to accomplish work quickly and spawn creativity.

Holes in the network: A map may reveal obvious network holes, places you would expect to find relationship ties but don't.

“Bow ties”: Another common trouble spot is the bow tie, a network in which many players are dependent on a single employee but not on each other. Individuals at the centre knot of a bow tie have tremendous power and control within the network.

Geographical distribution: The geographical distribution of the network may be an issue. Group members may feel they are restricted due to geographical distribution preventing them from communicating and participating in communities. This issue is important to identify and to ensure that at a later stage when technology is being considered that this is addressed.

1.8 Module interdependencies

- This module does not require any other module to have been used.
- This module captures the knowledge flow within a specific network of people. This information is used as input for leveraging knowledge in the Networks, which facilitates organisational knowledge creation based on communities of people.

2.0 Leverage Knowledge Networks

2.1 Purpose of module

- To design and moderate Knowledge Networks that manage identified knowledge assets.
- To support through management and non-management as well as technology existing Knowledge Networks of people.

2.2 Where to start from

You should start from the detailed description of the Knowledge Asset Schema. As a rule of thumb, one Knowledge Network should be built for each core Knowledge Asset. Additional Knowledge Network can act as satellites and serve subsets of knowledge (i.e. specific attributes of a core Knowledge Asset). In the Product Knowledge Network for example, the satellites could be networks that deal with technical specifications, training material, product best practices, etc. Ideally this organization of the Knowledge Networks should map directly to the already developed knowledge Asset Schema. It is important to stress that the point is to organise Knowledge Networks around the core knowledge assets of the organisation and not to replicate the existing departments and organizational structures.

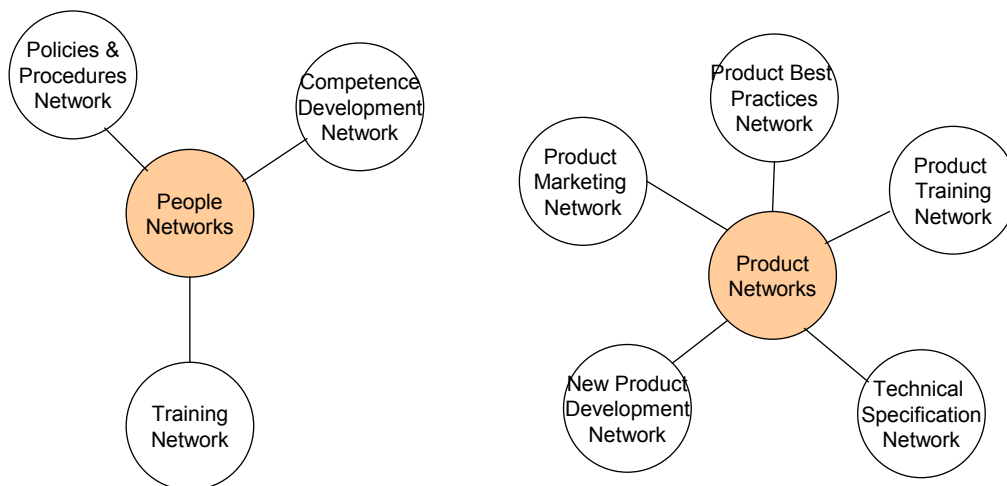


Figure 2.1: Knowledge Networks should map the Knowledge Asset Schema

2.2.1 Things to consider

- Rely on the already developed Knowledge Asset Schema. If necessary make required adjustments to it.
- As a rule of thumb, each network satellite should be a manageable domain for a single person who can oversee the content.
- Build on existing Knowledge Networks. Go through the Knowledge Networks Report and identify if there are already Knowledge Networks that deal with the Knowledge Asset under examination.

2.3 Create the Knowledge Network Blueprint

The Knowledge Network Blueprint aims to support the entire process of creating a Knowledge Network, from design to implementation. Although typically knowledge networks are self-organised groups which ‘naturally’ communicate with one another because they share common work practices, interests, and aims, The KM Consulting methodology aims to formalise the internal dynamics of the community by establishing the so-called ‘Knowledge Interchange System’. This not only includes the definition of community roles and responsibilities, but also technology support for collaboration. The Knowledge Network Blueprint comprises six main steps, as shown in the following figure.

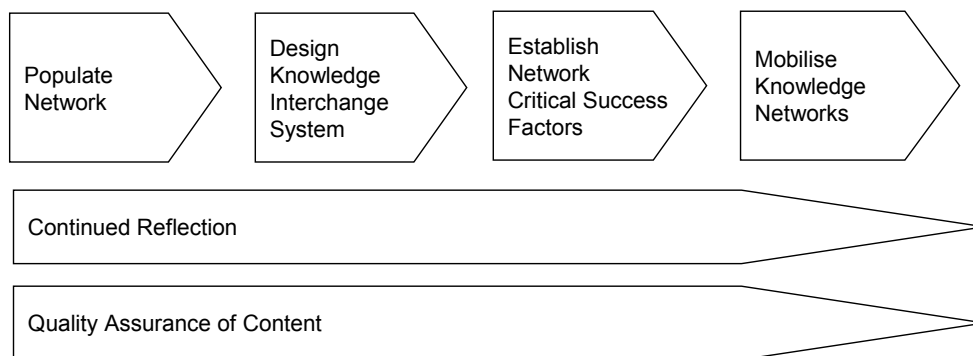


Figure 2.2: Main steps for creating the Knowledge Network Blueprint

2.3.1 Things to consider in populating Knowledge Networks:

- Build on existing networks of people as much as possible. It is much easier to make minor shifts of the focus of an existing network (where people know each other and the trust and politic issues have been balanced out) rather than putting the effort to establish a new community.
- When populating a new Knowledge Network around a knowledge asset consider the people profiles as identified with the diagnostic tools. Try to match, as much as possible, people's interests and experiences with the knowledge assets and content satellites.
- Involve people with overlapping personal goals.
- Network membership should span the corporate organisation chart both laterally and vertically. It may contain individuals dispersed throughout the organisation and in different departments, see figure 2.3
- Each Knowledge Network should involve approximately 5 to 15 professionals. Too large networks can hinder effective communication and collaboration.
- There should be a mix of people in the network ranging from experts in the area, professionals that have working experience or others that are just interested in the area. You can also consider the involvement of outsiders, such as academics, vendors, former employees, even competitors (of course with limited access), see figure 2.4

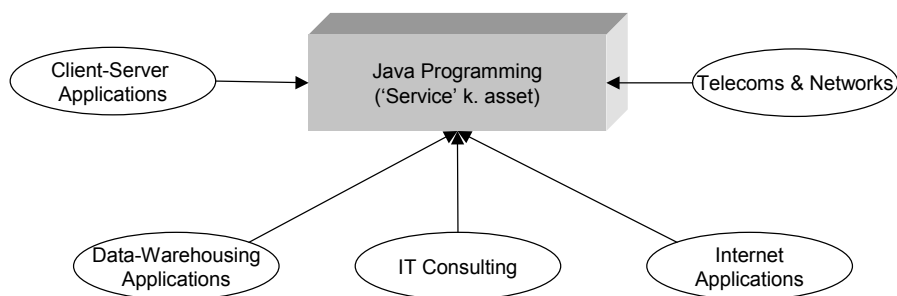


Figure 2.3 Knowledge Networks participants span the organisation

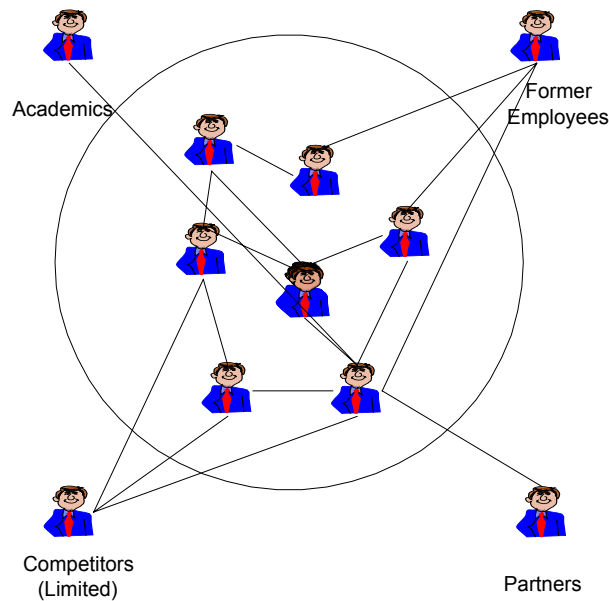


Figure 2.4 Knowledge Networks Extending Beyond Company Borders

2.3.2 Things to consider in designing the Knowledge Interchange System:

The Knowledge Interchange System includes:

- Definition of roles in the network.
- Definition of responsibilities and expectations within the network.
- Appointment of new roles to support the network.
- Assignment of ownership for content.
- Owners of information should be management-level people.
- Owners should provide contact point for clarification and validation of content. Without ownership at the network satellite level, it is difficult to enforce discipline in terms of ensuring the quality of information. No matter how well the collection and presentation of useful information is, people need to know who they can call or e-mail for more.
- Formalisation of boundaries and key knowledge processes within network.
- Appointment of role for quality assurance of content.
- Selection and customisation of KM Technology application (such as Knowledger).

This should address practical requirements (e.g. geographical distribution of network) but also cultural and habitual requirements (e.g. is team Internet literate or are used in using the phone). Alternative strategies for capturing knowledge should be revised *ad hoc*, depending on the peculiarities. For instance, if the network rejects the idea of an internet discussion forum and

prefers the phone, it should be made sure that there is a mechanism or a person that captures the essence of the communication, so that this is reusable by others. Another example: if the network communicates via high-bandwidth internet access then Audio or Video conferencing could be used. At this phase any customisation required for the agent facilities should be addressed.

- Assignment of Filtering / Access Rights for Knowledger applications.

2.3.4 Things to consider in establishing network Critical Success Factors:

- Personal satisfaction and fulfilment.
- Organisational knowledge management and advancement.

2.3.5 Things to consider in mobilizing Knowledge Networks:

- **Introduce members:** Introduce individuals (especially those indifferent locations) facing similar issues to one another, perhaps by sponsoring internal symposium addressing large common problems.
- **Provide resources:** Resources include items, such as small budgets for booking conference location to network members as requested.
- **Allow slack time:** Create time for network members to interact, perhaps by including the creation of “slack time”. Talk to members’ managers about the need for “slack time”!
- **Provide visibility:** Publicise network to ensure that all potential members are aware of its existence; encourage participation based on desire to attract senior management attention.
- **Recognise Output:** Acknowledge output of the networks to encourage continued creation of collaborative solutions over time.

2.4 Module interdependencies

This part of the module requires outputs from

- Knowledge Asset Schema
- Ontology, taxonomies, classification schemata, etc.
- Description of available applications and services.

This part of the module provides input to Module 4.6 – KM Architecture

- Customisation for Knowledger applications (if required).
- Customisation for Knowledger services (if required).
- Definition of Access Rights for Knowledge Objects and applications.
- Assignment of ownership to Knowledge Objects.

Appendix 1

Analyse the Knowledge Networks - Module Template

The following table can be utilised to report on the analysis of the knowledge networks.

People Involved	< Enter the names of people involved in the network >
Knowledge Asset(s) and Object(s)	< Enter detailed description of the knowledge assets that the network deals with >
Current systems used	< (e.g. phone, physical meetings, IT-based communication) >
Inefficiencies of systems identified	
Network irregularities identified	
1. Imploded relationships	
2. Irregular communication patterns	
3. Fragile structures	
4. Holes in the network	
5. "bow ties"	
Network map	<insert Network diagram, if available>

Appendix 2

Leverage the Knowledge Networks - Module Template

Knowledge Network Blueprint template:

Knowledge Asset(s) / Object(s) and Attributes	<Enter related elements from the knowledge asset schema>
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Network Critical Success Factors	
---	--

Knowledge Interchange System

Person	Role in network (Responsibilities / Expectations)	Owner of k. object(s)	Filtering / Access rights

Content Quality Assurance by	
-------------------------------------	--

KM system(s) / application(s)	Modifications required
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Mobilising Knowledge Networks	
1. Actions to introduce members and provide visibility	
2. Resources	
3. Slack time allowed	
4. Actions to provide visibility	
5. Actions to recognise output	

Glossary

Knowledge The ideas or understandings, which an entity possesses that are used to take effective action to achieve the entity's goals.

Knowledge management The ways to create, retain, share, account for, and leverage knowledge - at all levels, from the personal level to the team level, the organisational level, the inter-organisational level, and the global level.

Knowledge Asset A resource that an organisation wants to cultivate and manage. Human assets are people and networks of people, structural asset could be an automated sales process and market asset could be a corporate brand.

Business case A document describing the business issues driving the project, the project objectives, the project scope, the approach and time frame for achieving results, the budget and the project team.

Critical Success Factors The most important activities and processes the organisation has to make right to reach the goals outlined in the strategy. Examples include: product development, inventory reduction, time to market, customer service and so on.

Vision The dream of a future state for the organisation.

Change Agent The person responsible for the process of change and incorporating the principles and tools of change management into an organised and systematic plan of implementation.