Context Specific Knowledge Management Strategies

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"Sannin yoreba monju no chie" (a gathering of three people will result in wisdom equivalent to that of Monju Bodhisattva)
Japanese Proverb (APO *2010*)

Learning Outcomes
After completing this chapter
- You will know the challenges of knowledge transfer across cultures,
- You will be able to develop KM activities based on the projection, orchestration and integration approaches;
- You will know how international service organisations design their KM activities;
- You will be aware of KM solutions for small businesses
- You will have an idea how to organise KM at regional and country level
- You will be able to apply storytelling in your own context.

6.1 Knowledge Management in International Contexts

6.1.1 Challenges of Knowing Across Cultures

Cross-cultural knowledge management is becoming an increasingly essential factor in organizational practice and policy in the era of globalization (Del Giudice et al. 2012).

Knowledge management in an international context poses specific challenges in addition to those mentioned until now.

Integration of geographically scattered knowledge that is of no value without context or that is integrated in different cultural contexts: Transferring it detached from these contexts is not possible. Cross-cultural management (cf. Hampden-Turner and Trompenaars 2000) taught us that tacit knowledge developed in long socialisation processes of countries and regions goes along with different beliefs and behaviour. This leads in particular to variations in relations between people, motivational orientation and attitudes toward time. Thus, when the American parent company Disney transferred its amusement park concept to Euro Disney close to Paris, it discovered that the concept did not match with European customs of recreational activities. Another example is the transfer of total quality management approaches beyond the boundaries of countries which is successful only if an equally encouraging company culture is either present in context or is established (North 1997).

Complexity in acquiring, developing, transferring, using and safeguarding knowledge in the international context: With their network of «international sensors», companies should manage to find out early where new knowledge is created, safeguard knowledge sources from the competitors, make knowledge within the company useable worldwide and enhance it further. In doing so, companies should combine *local differentiation* and *global standardisation*. Thus, worldwide standardised products are developed in information and communication technology, produced using local cost advantages and sold over locally differentiated distribution channels. This involves setting up the function of research and development in a place where best talent is available, undertaking production where the labour is inexpensive and qualified, transferring best practices quickly across the world and finding efficient local partner for distribution.

Products in the automobile industry are adapted to the local market requirements based on common platforms and components, thus reducing the complexity of required knowledge. Platforms and components are increasingly being developed centrally and specific market requirements are introduced locally. However, this may give rise to experiences that could be of global interests, e.g. experiences of renewable raw material in Brazil were transferred to an automobile manufacturer in South Africa.

Del Giudice et al. (2012) note that in order to enable organizations to transfer knowledge effectively, mechanisms for dispute settlement, mediation of cultural conflict, and enforcing agreements need to be in place.

Mini Case Study

Knowledge Work Across the World

An automobile manufacturer works on building up a global development network. The largest vehicle manufacturer of Europe is thinking seriously about developing parts such as transmission, engines or chassis not just predominantly in the German locations but also in other continents via computers in order to develop the entire product. Accordingly, a developer in Germany starts working on a plan for a new brake in the morning. By evening, he transfers the design for further processing to his colleague in America, where the working day has just begun. By evening, the colleague in USA sends his work, his developed plans, to the operations in Asia. From there, the design plan comes back to Germany. The design time can be reduced to its one-third if this networking idea is implemented successfully. It will then be possible to work on the plans round the clock.

How can the principle «*being local worldwide*» be implemented from a viewpoint of learning and sharing knowledge across cultures? For this purpose, Doz et al. (1997) described three approaches viz. projection, integration and orchestration.

How to exploit the benefits of home base knowledge leadership in a way that is sufficiently sensitive to the deeper differences between their home environment and the new international environments in which they are attempting to operate?

6.1.2 The Projection Approach

The basic question of projection is how knowledge advantage that is available in the home country and that is to be incorporated in products, service packages and related logistics in foreign markets, be transferred considering its characteristics. From the projection viewpoint, it is the function of management to find a balance between blind transfer of experience from the home country and over-conformity to the local conditions. This balance can rarely be determined beforehand. That's how McDonalds established its US concept worldwide in a standardised form, yet varied the local taste through specific local products. Coca Cola tastes the same throughout the world. However, the selection of distribution channels and logistics varies significantly. Product knowledge is projected internationally by the centre while local partners undertake distribution based on their market knowledge. Projection requires an efficient knowledge transfer from the centre to the branches throughout the world. It also requires an efficient feedback system so that it is possible to distribute commonly relevant local experiences through the centre. International management and identifying the distinc-

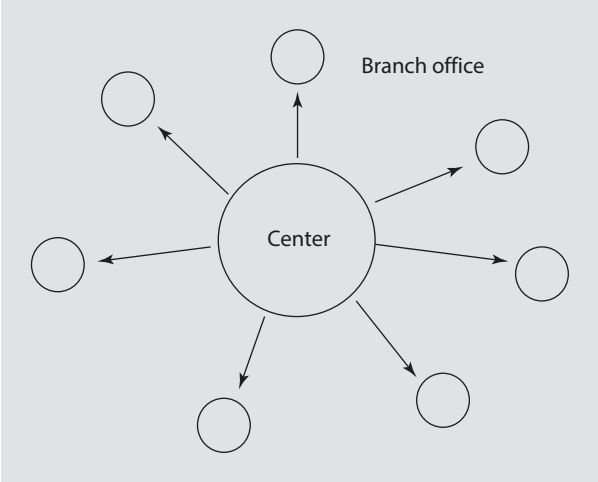


Fig. 6.1 Projection: push-out knowledge to subsidiaries

tion between the culture of local company and that of the homeland, simplifies the process of internationalisation.

The advantage of the projection approach is that knowledge and standards can be «pushed-out» quickly to subsidiaries. Disadvantages are related to a mind-set *«we are headquarters and know what needs to be done»* and consequently an inefficient learning between centre and branches (see Fig. 6.1).

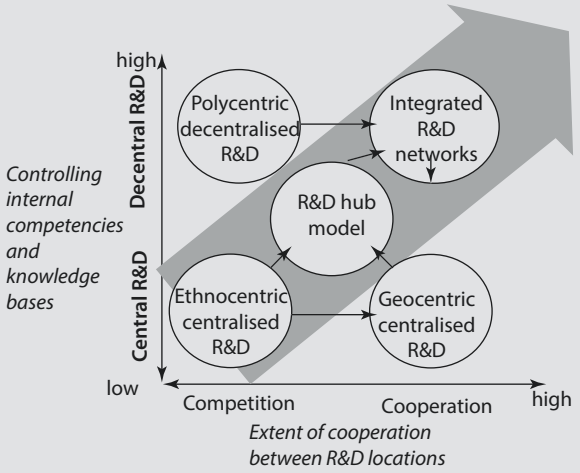
6.1.3 The Integration Approach

Integration goes a step ahead of projection. It not only involves learning from one's own company worldwide but also from outside. Similar to the inverted organisation, knowledge resides in the branches across the world, centres of excellence or alliance partners. The centre integrates a part of this knowledge without representing the leading competence. Detachment of knowledge from specific contexts can be problematic in this case.

A range of worldwide operational consultancies and auditing firms work according to the principle of integration. Decentralised networks develop core services that can be implemented locally. Quality guidelines and routines for executing orders apply to all the branches overall. The centre itself has less knowledge than the external nodes in case of integration. This gives rise to the question whether partial management without the centre is possible under knowledge viewpoint. This results in orchestration. The box below shows how these different concepts are applied to organising international research and development (see Fig. 6.2).

6.1.4 The Orchestration Approach

Orchestration brings together and fuses multiple capabilities and insights from different environments. In an extreme case, orchestration means collaboration of units of a company, alliance partners, customers and suppliers in a global network without a centre or headquarters. Units of a company work together in different coalitions in order to convert new knowledge into market solutions (see Fig. 6.3).



Trends

1. The R&D processes are strongly oriented towards international markets and technical knowledge centres, e.g. Mercedes, BMW, Volvo, Toyota, Volkswagen
2. Establishing firmly controlled and technologically sound listening posts, foremost being Japanese companies with basic research Laboratories in Europe, e.g. Hitachi's research centres in Dublin (information science) and Cambridge (microelectronics)
3. Enhancing competencies and empowering the foreign R&D sites; assigning a strategically active role e.g. Song
4. Increased integration of decentral R&D sites, e.g. Philips or General Motors (building competence centres for component groups - used in worldwide vehicle manufacturing - in Russelsheim)
5. Tightening the coordination and recentralising R&D activities to a few compentence centres for increasing efficiency, e.g. ABB, IBM, Hoechst

Fig. 6.2 Different organisational models of international research and development. Research and development is increasingly internationalised and carried-out distributed over several locations worldwide. From an analysis of 25 huge companies with headquarters in Europe, Japan and US five trends can be identified: **Trend 1**: Many companies with a centralised R&D are strongly oriented to their international surroundings. **Trend 2**: Build technological listening posts in the technological centres of excellence of trade. **Trend 3**: Companies with centrally regulated foreign R&D locations enhance their competency. **Trend 4**: Companies grown through acquisitions and having widely autonomous subsidiaries recognise the integration potentials and link their R&D activities more intensively. There is a trend towards an integrated R&D network. **Trend 5**: However, one can also notice a trend within the integrated networks. There is an increased focus on fewer centres of excellence and centralisation of decision processes in fewer competence centres. A lot of importance is being given again to focus on cost reduction. Consolidation aims at better use of economies of scale by increasing the coordination between R&D activities worldwide and reducing double developments if there is simultaneous intensification of international transfers within the company (Source: Based on Grassmann (1997))

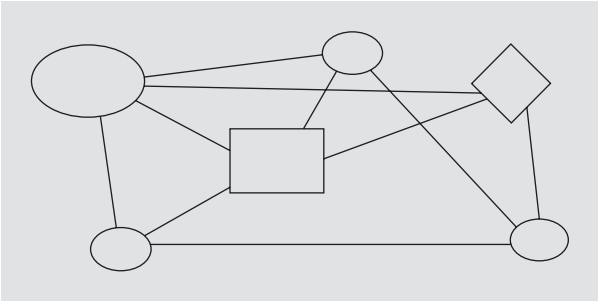


Fig. 6.3 Orchestration fuses multiple capabilities

Specialised units build knowledge alliances in order to offer complete solutions to the customers. Research and development centres pursue the know-how. Intensively decentralised international companies, such as ABB, work according to this principle. In an orchestrated company subsidiaries are empowered by taking global responsibilities for competence areas, business units, product groups or services.

Doz et al. describe three pre-requisites for effective implementation of orchestration, which they also term a «*meta-national strategy*»[1]:

- ***Effective Sensors:*** Presence of effective sensors in important markets and regions with critical knowledge. These sensors can come into effect through linkages to leading research institutes that develop knowledge in new areas by relocating critical functions- for example research functions from homeland can be linked to the leading regions by establishing branch offices, development centres and manufacturing plants in critical locations. The entities could be central functions at the headquarters, customer or product management structures, global platforms, comprehensive projects, logistics systems and global centre of excellence.
- ***Attractors:*** Establishing attractors, i.e. leading competence that focuses, gathers and provides distributed market knowledge, product knowledge and technological knowledge.
- ***Exchange of knowledge:*** Ensuring effective and efficient knowledge transfer between the nodes of a network. In order to encourage common creation and transfer of knowledge between the nodes of the «*orchestrated network*» it is first necessary to control the behaviour of the employee. Common ideals, common interests, common language and terminology are very important for creating and transferring knowledge in network structures. Companies with a distinctive company culture, such as Hewlett Packard or Motorola, move knowledge largely independent of the country culture (North 1997). International managers, who are committed to their company, are guarantors of such worldwide company culture (Doz et al. 1997).
- ***Local employees:*** Thorough selection of local employees and their intensive introduction to the values and work methods of the organisation are important measures to achieve same ideals and shared tacit knowledge.
- ***International incentive systems:*** Yet another requirement for the orchestrated company is internationally oriented incentive systems. These could exist in shares options for the entire organisation as found in General Electric or be oriented towards the worldwide results of company units. That is how Texas Instruments

1 See also Bartlett and Ghoshal (1989) and the concept of the Transnational Corporation developed by them.

promotes knowledge exchange between their factories by determining a global responsibility for wafer fabrication (APQC 1996).

- ***Intensity of communication:*** The orchestration is further supported by the intensity of communication, especially the scope of information. It is not enough to provide information only through Intranet. This should be supplemented by personal meetings, video conferences, emails, discussion forums, etc.

Even in the international context, it is apparent that company culture, incentive systems as well as information and communication become central components for creation and transfer of knowledge.

It becomes more and more difficult to achieve global competitive advantages by dominating one domestic market. In the knowledge competition, the competitive advantages are achieved increasingly by «*global orchestration*».

Case Study

GIZ: From Worldwide Project Experience to Service Products

The services delivered by the GIZ, the German International co-operation agency, draw on a wealth of regional and technical expertise and tried and tested management know-how. As a federal enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development. GIZ operates in more than 130 countries worldwide with more than 17,000 staff members across the globe – some 70% of whom are employed locally as national personnel.

GIZ starts hundreds of projects every year throughout the world for improving the living and working conditions of people across the globe. GIZ is increasingly starting projects even for non-government entities.

How can the experiences of one project be used again for a new project? How can the organisation learn systematically from the projects?

For this purpose, GIZ introduced a «product-based knowledge management» concept. The core of the initiative is the classification of the GIZ services in about 100 product groups, such as «clean air in cities», each with a product manager who operates like a knowledge broker. This gives rise to systematisation because different repeatable service packages are available which should be adapted only in rare cases. The respective product team works worldwide and mostly meets virtually. The product knowledge that originates from such interaction is made accessible to all the GIZ employees through a product database and virtual product teams. A knowledge manager coordinates further development of the «knowledge organisation» which results in the following benefits:

- Availability of information at a faster rate
- A more efficient use of human resources
- Safeguarding of strategically important knowledge and reduced in loss of knowledge due to employee turnover.
- Better communication within the GIZ
- The objectives of development policies can be achieved more efficiently by faster access to knowledge available worldwide.

Bundling the available knowledge helps in optimum utilisation of synergies from the worldwide projects. Thus, development projects become more effectively as per the benefit of the giver and receiver. With the introduction of product-based knowledge management, GIZ has increased market and customer orientation and has thus improved its lasting competitiveness even further. For this, GIZ won the special price of public companies – «Knowledge manager of the year 2005».
Source: ► www.wissensmanager-des-jahres.de

6.1.5 Knowledge-Oriented Project Planning[2]

Opening new markets, developing global products, planning new factories or technical cooperation in development require knowledge-oriented project management that harmonises different ideals, experiences and interests. Traditional concepts of projection of knowledge are always less suitable for setting up operations that are efficient, fast-learning and connected worldwide.

New approaches should be found in order to consider the socio-cultural environment of a country, integrate international best practices in new manufacturing plants and transfer know-how efficiently in a network of globally operating manufacturing plants. We shall now discuss different approaches of dealing with planning of an overseas factory.

In the «state of the art» approach towards planning, the project management team undertakes a key role as a generalist with high autonomy of decision making while handling a plan. The management coordinates team specialists of different divisions of the company. Recruiting key personnel from other leading local companies as early as possible can be very helpful while setting up operations in a foreign country. It is equally important to review the allocation of roles while working in a team with a local partner.

«T*winning*» of management of both the partners in all the important divisions of a company as well as in planning teams helps to integrate different views. Even when it takes long at the beginning to make such double allocations or mixed teams, it accelerates the overall planning and implementation.

Twinning and shadowing

Experts, colleagues or managers working in different contexts, countries, subsidiaries, branches can learn from each other by carrying out work together as «twins». For example, staff of the Cairo underground worked together as twins with their Paris homologues in Paris and in Cairo. Thus common understanding (tacit knowledge) about contexts was created and advanced practices were transferred in close interaction.

In twinning the twins together take responsibility for their actions, while in «shadowing» one partner follows the other like a shadow and learns, reflects and discusses without taking responsibility.

Traditionally, while planning a factory the subsequent operator replaces the planner and finds himself in such an environment that it is either difficult or impossible for him to participate if he has not been a part of the planning process. The planners of the overseas factory should be aware of the local environment and the involvement of local operators increases motivation and ensures a plan that is feasible as the project team knows that later on it is responsible for the execution of the plan.

Push versus *Pull approach:* It is important to abandon the know-how provider's «push system» (normally that of the parent company) under which turn-key factories are centrally planned. Such a system does not allow a person who is ultimately

2 Description according to North and Aukamm (1996).

responsible for the operations enough freedom in planning his work environment. On the contrary, in a pull principle, the subsequent operators are also the ones who have to decide which technology is best suitable under which circumstances. An important advantage of the pull of know-how by the on-site project team is that the transferred know-how is accepted locally and knowledge that is really necessary is requested. The use of this principle creates advantages not only while transferring knowledge to subsequent operators but also while bringing the local employees together with their management. It is necessary to structure an intensive exchange between the planning teams and competencies linked worldwide during and after the planning phase in order to transfer knowledge throughout the project.

Selection and training of employees is one of the most important planning functions. The employees recruited during the planning process should take up the role of pioneers who are in a position to pass on their knowledge to their colleagues after undergoing a separate training for this purpose. Therefore, it is necessary to send them to the country of the know-how provider before starting subsequent operations in order to see and understand the new company philosophy. Thus, as planners they can learn new production system and works, for example by creating documentation necessary for production in the language of their country/company. The documents can thus be processed by those who are supposed to use their own perceptions later in the operation. It is also customary that employees in the production are able to practise a true-to-life imitation of all the production processes of a vehicle in the simulators in training centres before they start with the production. Thus, the necessary controls can be practised without any time pressure.

One can also support the production process by producing the first products in cooperation with experts of the know-how provider. This ensures establishment of the «*We*» *feeling* right from the beginning and those participating can identify with the product in a better way. The arrogance of the know-how providers in doing everything better than the local employees should be avoided. Perhaps it is easier to repair the defects occurring in a vehicle rather than changing an unhealthy company culture.

In a nutshell, planning a manufacturing plant should involve a process that integrates important elements of socio-cultural environment of the country where the plant is located with the company philosophy and production philosophy of the know-how provider.

6.1.6 Bridging the «Knowing-Doing» Gap in International Service Organisations: Three Cases

Knowledge for Global Health: World Health Organisation

The increasing resources for international health aid and growing demand to improve health systems offer an opportunity to foster health equity in countries that need it the most. Many solutions are available to tackle the health problems of the poor but these are not implemented, leading to what is called the «know-do» gap: the gap between what is known and what is done in practice. The mission of World Health Organisation (WHO) Knowledge Management (KM) is to help by fostering an environment that encourages the creation, sharing, and effective application of knowledge to improve health.[3]

3 World Health Organisation, Knowledge Management Strategy, WHO/EIP/KMS/2005.1.

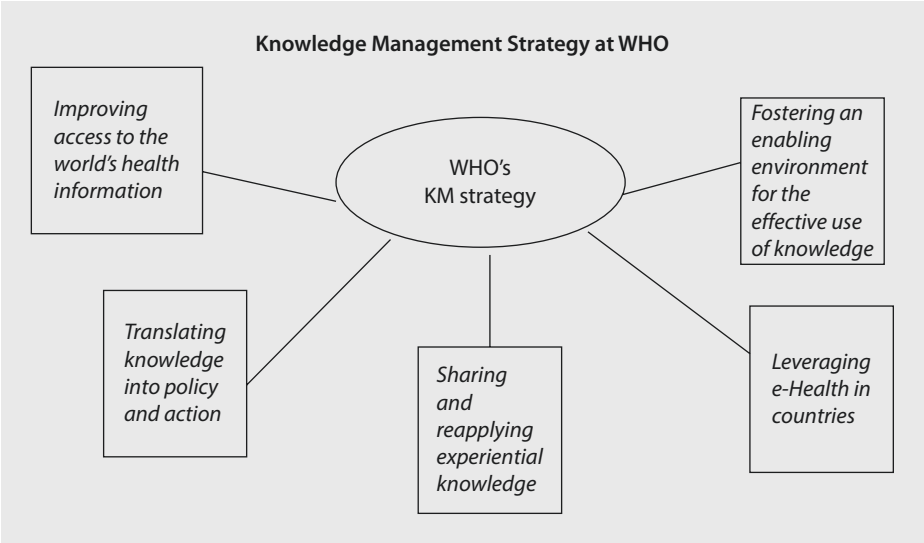


Fig. 6.4 Knowledge management strategy at WHO

The KM strategy of WHO (shown in Fig. 6.4) focuses on national policymakers, WHO programmes, and health professionals. The objectives of the strategy cover three main areas:

- Strengthening health systems in different countries through better knowledge management,
- Establishing KM in public health, and
- Enabling WHO to become a better learning organisation.

In order to achieve these objectives WHO has defined the following KM core functions:

Improving access to the world's health information

1. Support for WHO publishing. Publish, market and disseminate in priority languages, relevant and high-quality information products reaching a widespread, targeted readership in both print and electronic formats. Establish publishing policies and guidelines to ensure efficiency and quality of WHO publications.
2. WHO flagship publications. Publish WHO global and regional flagship products to communicate key issues and effective practices in the field of public health. Major products include the World Health Report, Bulletin of the WHO, regional medical journals, and regional director reports.
3. WHO network of libraries. Provide access for key audiences to scientific and health information in print and electronic media via the WHO library and initiatives such as, such as the Global Health Library and HINARI.
4. WHO Web communications. Provide multi-lingual access for millions of users worldwide to WHO health information via WHO websites at global, regional and country level. Provide guidance to health authorities and other institutions on effective use of the internet and web technologies.

Translating knowledge into policy and action

5. Good practice and guidance on knowledge translation and scale-up. Following on the recommendations of the Mexico Summit for Health Research in 2004, identify and disseminate good practice in translating health knowledge into policy and action.
6. Build capability in KM methods in public health practice. Assist public health communities to develop the capacity to translate knowledge into policy and action in their local context.
7. Promote evidence for policy and decision making tailored for key audiences, through programmes such as EURO's Health Evidence Network. Sharing and applying experiential knowledge
8. Improve ability to share knowledge in public health through KM processes. Employ KM techniques, including communities of practice, to assist countries and technical programmes to manage and use knowledge.
9. WHO and Global Health Histories. Document and analyse significant public health developments, milestones, trends and perspectives. Develop expertise in extracting and applying the lessons learned in public health.
10. WHO Collaborating Centres. Improve the use of the knowledge held by WHO Collaborating Centres through peer networks.

Leveraging e-Health in countries

11. e-Health frameworks, guidelines and tools. Make available evidence-based e-Health frameworks, guidelines and tools to support policy and practice in health systems and technical programmes.
12. e-Health services in countries. Provide technical assistance for governance, monitoring and improvement of e-Health services in countries.
13. Country capacity building via ICT. Utilise ICT tools to build capacity in the health sector in countries.
14. Public-private partnerships in ICT. Develop and utilise public-private partnerships in ICT to address priority issues in health systems and technical programmes.

Fostering an enabling environment

15. Foster a knowledge management culture. Promote a culture at WHO and the public health sector that encourages the routine capturing, sharing and application of knowledge to better deliver expected results.
16. Develop and deliver KM training programmes to build WHO and country capacity with emphasis on innovation, knowledge sharing and translation, and managing the reapplication and scaling-up of successful interventions.
17. Support countries, technical programmes and partners with KM approaches. Work directly with countries, technical programmes, and partner organisations to identify knowledge needs and opportunities, to develop and implement KM plans.

Asian Development Bank (ADB): A Pragmatic KM Approach

At the 42nd Annual Meeting of the Board of Governors, ADB President Haruhiko Kuroda stressed the importance of knowledge for an organisation: «To be fully effective,

we must also consciously and actively blend knowledge with financing. We will focus on developing, capturing, and sharing knowledge in all our work, ensuring that ADB serves an intermediary role for both financing and knowledge».[4]

ADB's plan of action for knowledge management connotes a pragmatic, step-by-step approach. With the objective of enhancing Knowledge Management under Strategy 2020, in July 2009 President Kuroda approved actions/outputs to advance the knowledge management agenda for Asian Development Bank. The strategy focused on four pillars:

- Sharpening the knowledge focus in all ADB operations,
- Promoting and empowering communities of practice for knowledge generation and sharing,
- Strengthening external knowledge partnerships to develop and disseminate knowledge, and
- Enhancing staff development programs to improve technical skills and manage knowledge.

The **Knowledge Management Results Framework** is an important instrument at ADB to assess and improve performance and help identify problems and their solutions. It was prepared after extensive internal consultations and is the basis for reporting. The highlights of the framework are:

- Enhanced appreciation for ADB's ***flagship knowledge products***, such as the Asian Development Outlook, Key Indicators for Asia and the Pacific, and Asia Economic Monitor among many others.
- Launch of ***communities of practice*** and the establishment of regional knowledge hubs, both adding to ADB's growing array of knowledge partnerships.
- Improved coordination mechanisms that govern ***cooperation between the knowledge and operations departments***, and encouraged development of approaches such as the Technical Assistance Strategic Forum.
- Nomination of ***focal persons for knowledge management*** in the operations departments, and establishment of knowledge management units in several departments.
- New ***information technology solutions*** for improved knowledge sharing in ADB, such as C-Cube and e-Star.
- Corporate-level ***recognition of knowledge management and learning*** by inclusion of chapters on sector and thematic highlights, generating and sharing knowledge, and independent evaluation in ADB's annual reports.
- ***Transformation of the ADB library*** into a knowledge hub to encourage knowledge networking.
- The framework created the following structure to ensure smooth implementation:
- **Technical Assistance Strategic Forum a**t the **regional level**, to coordinate the medium-term research and sector work among the knowledge and operations departments.

4 Enhancing Knowledge Management under Strategy 2020- Plan of Action 2009–2011 ► http://www.adb.org/documents/books/km-action-plan/enhancing-knowledge-management-under-strategy-2020.pdf

- **Country Partnership Strategies (CPS)** will explicitly reflect knowledge management as part of CPS formulation and implementation at the **country level**.
- **Teams** at project level were created to identify how the project can be designed to support rigorous impact evaluation, forge knowledge partnerships, harness sector and thematic know-how, and encourage learning and knowledge sharing.

World Bank «Knowledge Services»[5]

In the document «State of World bank Knowledge Services» the President of the World Bank describes the rationale of the bank for engaging in KM activities «The value the World Bank Group brings to our clients, and to the world, is grounded in developing and sharing knowledge. Our financial resources are significant—but they are finite. By contrast, knowledge is potentially unlimited: the more it is shared, the more new ideas develop, and the more improvement is possible. When strands of knowledge are connected, the possibilities for increased prosperity and improvements in human welfare multiply.

The more people know, the more they can expect, and the more they can do. As we consider the ways the Bank Group will support development in the twenty-first century, we understand that change and reform are dynamic processes involving the active participation of all segments of societies. My vision is for a World Bank Group that plays a catalytic role in linking up data, information, and ideas with those in search of development solutions—in ensuring that knowledge for development is readily available to citizens, civil society, opinion makers, researchers, and government policy makers at all levels. My aim is to sponsor a Bank Group that reaches out to better encompass the experiences of successful developing countries— not with ordered templates, blueprints, or prescriptions—but with inquiry, innovation, cooperation, and openness.»

The Bank's Knowledge Services

As the bank adapts its knowledge services to current demands, all three of the bank's knowledge roles are changing. As a ***knowledge producer***, the bank is doing less economic and sector work and more technical assistance. Its research activities are becoming more open and collaborative, and independent researchers worldwide are being empowered by access to the bank's open data and robust tools. As a ***knowledge customiser***, the bank is fostering more collaboration between and among bank teams, government teams, civil society, and academia to apply global knowledge to pressing development challenges. As a ***knowledge connector***, the bank links practitioners and development professionals across the globe. Increasingly, the focus is on empowering non-state actors to press for greater accountability through their engagement in public debate and policy formulation (in the past the focus was primarily on state actors). Knowledge activities exist not only as standalone services; they are also integrated with the bank's operations and underpin its lending activities.

Following the 2010 Knowledge Strategy and the bank-wide effort in preparing this first Knowledge Report, the extent of the bank's knowledge activities is becoming

5 The following text is based on World Bank (2011).

clearer. But the bank has only one lens through which to view its knowledge work – the management information system and the defined knowledge «products» it captures. That system has its roots in enterprise software developed to manage discrete or industrialised processes, built on the notion that individual products have defined starting and finishing points. This report deals mostly with the defined knowledge products and how they are produced. But that presents an incomplete picture of the bank's knowledge activities. And even as we speak about «knowledge products» and «product lines,» it is important to situate the discussion in a broader universe of World Bank–sponsored knowledge activities. These are as follows:

- **Core knowledge activities** funded by the bank's budget or by trust funds and subjected to one or another type of bank process for quality assurance;
- **Noncore knowledge activities** prepared for other bank management purposes (for example, country and sector strategies);
- **Noncore knowledge activities** for which the bank works within the organisational goals of a partnership, but for which the partnership itself retains responsibility for quality;
- **Knowledge activities** embedded in lending operations as part of project preparation and implementation

6.2 Knowledge Management in SMEs

6.2.1 Coping with Turbulent Environments

Knowledge management is often associated with firms operating in multi-locations with thousands of employees working on the same or similar projects who need to share information in order to be responsive and competitive in the market. But also SMEs need to manage their knowledge. Small and medium-sized enterprises (SMEs) are part of a heterogeneous universe of extremely diverse economic agents, whose characteristics vary depending on the business sector they operate in, the markets they serve, the products they produce and how involved and connected they are to the macroeconomic context and support institutions (Latameconomy 2013). Emphazing the social dimension we define a SME as «a small social collectivity whose participants share a common interest in its survival and engage in collective activities to secure this end» (Scott 1987 p. 23). North and Varvakis (2016) argue that SMEs need to develop towards «Dynamic SMEs» to cope with turbulent environments using their knowledge and other resource. A «Dynamic SME» is characterised by five capacities:

1. It recognizes or anticipates changes in the environment and (re)acts to them with high efficiency and speed,
2. It actively exploits market opportunities,
3. It develops a management approach of empowerment of employees and fosters the entrepreneurial spirit of employees,
4. It develops a high capacity for learning and innovation and integrates learning on the job in to daily business
5. It cultivates emotional intelligence which results in a culture attitudes and behaviors of trust and collaboration.

To sustain competitiveness in turbulent environments, SMEs face major challenges due to their limited human, organizational and financial resources and capabilities. On the other hand SMEs are more flexible to react to changing situations than big enterprises (Detarsio et al. 2016) but they are also more vulnerable. Even if one employee separates, a significant part of business expertise and experience is lost (for a review of KM in SMEs see Durst and Edvardsson 2012; Massaro et al. 2016).

The small and medium enterprises (SMEs) focus on running the business on a day-to-day basis and find no time to manage knowledge. Formal «knowledge management» is therefore not a common terminology that one hears in SMEs who perceive it as an «overhead». This could be due to several reasons, some of which are listed below:

- SMEs are too busy with running the business on a day-to-day basis and perhaps find little time to analyse it and retain the learning.
- SMEs already have a large enough informal network to enable people to get the job done which also makes them more flexible. It is generally felt that knowledge management is required only when there are a large number of employees.
- Risk of separation of key employees is not perceived as a big threat due to the informal network and the embedding of knowledge in the products and services (Kumta 2008).

Awazu and Desouza have identified five peculiarities of knowledge management at SMEs (Awazu and Desouza 2004) as:

- Dominance of socialisation in the SECI Cycle:
- Common knowledge: In SMEs, there is a prominence of common knowledge in terms of both depth and breadth.
- Knowledge loss is not a problem: Some of the mature SMEs in our sample had deliberate mechanisms in place to prevent knowledge loss from becoming a problem.
- Exploitation of external sources of knowledge: SMEs have a knack for exploiting foreign sources of knowledge.
- People centred Knowledge Management: SMEs knowingly or unknowingly, manage knowledge the right way – the humanistic way. Technology is never made part of the knowledge management equation. Knowledge is created, shared, transferred through people based mechanisms and immediately put into practice.

Significant research is the one undertaken by the West Midlands Knowledge Management Centre in the UK. This centre is a regional partnership between a university, local city council, and business support agencies, which identifies and addresses the business support needs for SMEs in developing their knowledge management practices. Based on analysis of patterns in more than 100 small businesses that have used the centre's business education and support services, its research director John Sparrow describes four aspects of knowledge management that feature strongly in small firm knowledge projects (Sparrow 2001):

- Appreciation of personal and shared understanding: This is reflected in management based on «management by perception». There is an ongoing recognition of the meaning and interpretation of events by others. There is strong evidence that businesses/owners do not act until there is compelling reason or a fear of difficulties.

- Effective knowledge bases and knowledge systems: Typically small firms are more ready to embrace technology when they have a good grasp of the importance of information management.
- Integrated and contextualised action: The knowledge approach is grounded in the way the small firm operates and is more strategic in its view of knowledge. An important element here is capturing and utilising intellectual property rights, with intellectual capital valuation being a consideration at times of succession.
- Effective learning processes: Small firms are very social organisations, yet owner managers may deliberately restrict diffusion of their core knowledge to protect their firm's competitiveness.

SME case studies from Australia (Hall 2003) suggest a relatively strong level of interest and sophistication in KM strategies and in the practices pursued by some SMEs. In general, the issues reported were no different than those encountered by larger organisations. It was found that different SMEs found different kinds and forms of knowledge valuable as compiled in ◘ Table 6.1:

SMEs need to use knowledge at two levels: (a) in day-to-day operations and (b) at strategic level to define organisational goals.

SMEs need to broaden their customer base, add new products/services, penetrate the domestic market, and strive for overseas expansion in order to grow to the next stage of the lifecycle.

As a vibrant and increasingly competitive part of any economy, SMEs are forced to innovate to remain competitive. This means constantly searching for ways to improve products and services, develop new products and introduce improved working methods.

◘ **Table 6.1** Specific knowledge in different types of firms

Type of firm	Most valuable form of knowledge
Accounting firm	Expertise of senior staff and partners
	Specialised and technical knowledge in procedures and manuals
	Partnership style relationships with clients
	Analytical knowledge, gained through experience
Risk management service firm	Developmental and procedural
	Tacit knowledge of its employees
	Market intelligence
	Customer knowledge
Manufacturing firm	Product knowledge, since a lot of knowledge is already a part of the product
	Process innovation knowledge
	Technology upgrade has a dynamic rather than a static conception of knowledge

6.2.2 Need for Harnessing Organisational Learning in SMEs

Most knowledge in a company is forgotten in relatively short time after it is invented or discovered. In an SME the core knowledge is normally with only one person who is the owner who deliberately or unconsciously retains all the knowledge with him due to lack of time or fear of «theft» of idea. Furthermore, SMEs cannot retain talent in a highly competitive market, as they cannot match the salary «packages» of large corporate: «*An organization's knowledge walks out of the door every night – and it might never come back*».

Organisational learning and personnel training are important activities of a modern company. In larger companies these procedures are well defined and thoroughly designed. In small and medium-sized enterprises the learning is far less supported and explored. The experience people gain during their employment is stored in their minds rather than in published documents.

Succession planning and preserving organisational memory in the event of attrition/death are two critical requirements for SMEs to survive in a competitive and dynamic market (cf. Durst and Wilhelm 2012). SMEs that don't plan knowledge management measures to preserve organisational memory are therefore taking the risk of decline/elimination.

All is fine when the enterprise is small and an informal network provides all the knowledge required to execute tasks and evolve a business strategy. But what happens when these enterprises see a dip in their sales and yet want to move into global markets? They need to know how their products/services evolved, what was the marketing strategy that succeeded or the strategy that failed, the reasons for its failure, what are the global challenges, what are the risks involved, and so on.

With a relatively low effort in KM these enterprises will be able to manage risk (cf. Durst and Ferenhof 2016) and to innovate and constantly search for ways by which they can improve products and services, develop new products and improve work processes. It will be interesting to study two distinct but interconnected knowledge cycles (Skyrme 2002).

Knowledge sharing cycle shows the processes associated with gathering and disseminating existing knowledge, having a knowledge repository as its focal point. This forms the basis of any knowledge management strategy.

Innovation cycle represents a progression from idea creation, i.e. progression of unstructured knowledge into more structured and reproducible knowledge, embedded within processes, products or services. If one views knowledge management in its broader context of exploiting knowledge for the development and growth of a business, then the innovation perspective is likely to be a more fruitful one in the small business context.

KM in the SME Lifecycle SMEs experience a rapid rate of change as they move through their organisational lifecycles. Each stage in the lifecycle requires a different approach and emphasis on managing knowledge. These unique characteristics determine how these enterprises strategically manage knowledge. Researchers have defined a lifecycle stage as a unique configuration of variables related to organisational context and structure. A lifecycle stage can be defined as a loose set of organisational activities and structures, (Dodge et al. 1994; Hanks et al. 1993; Quinn and Cameron 1983).

SMEs are normally started through entrepreneurship which is a process of creating value by bringing together a unique combination of resources to exploit an opportunity. These organisations have a typical lifecycle starting from a start-up phase to a maturity phase. Firms, however, do not go through their lifecycle in a vacuum. Environmental context plays a large part in determining the challenges faced by growing firms (Quinn and Cameron 1983). Enterprises in various stages of organisational lifecycle need different knowledge processes. We could broadly look at three main stages initially to evolve a feasible KM strategy.

The *birth stage* marks the beginning of organisational development. The focus is on viability. Decision-making and ownership are in the hands of one, or a few who share the same vision. The organisational structure is very simple with hardly any barriers for communication and knowledge sharing.

After the initial stage the organisation sees an *explosive growth* where each person is trying to bring in more business with no formal organisational structure. It now becomes difficult to get all the employees together and share knowledge. The focus is on growth and faster decision-making. More skilled jobs are required, roles become more specialised and decision-making needs to be delegated. This is where a change starts happening in SMEs. Here, the knowledge no longer flows easily as neither the owner nor the start-up group has time to discuss and create a knowledge repository that can be used by others.

As the enterprise moves further ahead, the focus is on *effective management* and efficient delivery of products and services. Job descriptions, policies and procedures, and hierarchical reporting relationships need to be much more formal. Formal organisational structures are defined to serve wider markets. At this stage it becomes imperative to create formalised structures and exploit its organisational knowledge by converting ideas into productive services. Lack of a formal structure at this stage can trigger the «demise» of the SME.

Diagnosis of problems facing an enterprise can be effective when the analysis is based on the stage at which the enterprise is. This helps them plan what will be required as the firm progresses from one stage to the next in the lifecycle (Kazanjian and Drazin 1990). Each stage in the firm's lifecycle requires emphasis on different knowledge managing practices. The need for a formal knowledge management programme does not come until quite late in the overall evolution.

6.2.3 Knowledge Management Strategies of SMEs

The success of any KM initiative is determined by its impact on the organisation's performance (Handzic and Hasan 2003). It is often said that one should not take a «one size fits all» approach to knowledge management. A critical starting point for a successful KM initiative is a clear KM vision, which is aligned with the overall business strategy of each organisation. KM tends to be driven by business strategy – innovation and succession planning. It is built on efficient business processes and supported by people, organisational structures and information technology. A KM strategy should seamlessly intertwine people, processes and technology. Though it is difficult to evaluate the return on investments in knowledge management most organisations, including SMEs feel that there are significant payoffs associated with KM initiatives (see ◘ Fig. 6.5).

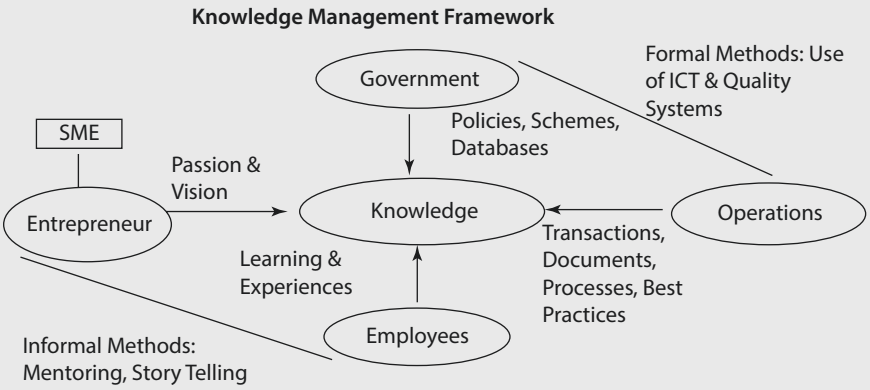


Fig. 6.5 Knowledge management framework (Source: Kumta and Mukherjee 2010)

The Asian Productivity Organisation (APO, see box below) defines and provides guidance for using simple and practical means of KM to support the SMEs.

- To satisfy Existing Customers and Attract More Customers.
- To Improve Productivity and Quality of Products, Services, Processes.
- To Develop New Products and Services (Accelerate Innovation).
- To Develop Skills/Motivation/Teamwork among Employees.
- Regardless of sector, size, structure or maturity, organisations need to establish an appropriate management system to be successful.

KM resources for SMEs

To support knowledge Management in SMEs the Asian Productivity Organisation (APO) has developed a series of three very useful publications:

- The Practical KM guide for SME owners and managers
- Knowledge Management Tools and Techniques Manual. This manual is also available on a website, as an example of a «living knowledge base», in other words, as a wiki, for you to input and share your experiences, and to receive your feedback and comments at ► http://sites.google.com/site/apokmtools/home/.
- Knowledge Management Case studies for SMEs

Download the manuals from: ► http://www.apo-tokyo.org/00e-books/IS-44_Practical-KM-Guide-for-SME-OwnerManager.htm

Videos on KM tools for SMEs can be found in the YouTube Channel «Dynamic SME»: ► https://www.youtube.com/channel/UCiBV_MUbzW1zDNdqBFlXbUQ

(for a review of KM Tools for SMEs see also North and Babakhanlou 2016)

Within such a management a «Knowledge Management process» needs to assess three major components (Kumta 2008):

- Business processes– do these help or hinder knowledge management;
- Infrastructure – the support required putting in place the «process» element to make knowledge management happen. This includes an organisational structure, an enabling technology and a content management strategy.
- Environment – A sharing culture and an environment that facilitates sharing.

In addition to the internal processes, knowledge in terms of environmental updates is required to support the development of SMEs. Being small in nature they need to know the environment in terms of government policies, standards, subsidies, development schemes, growing market space, avenues for financial help and procedures that would save time and eliminate reinventing the wheel.

KM supports and enhances the way the business operates. It does not replace one's strategy setting, but the strategy itself will be flavoured differently if one adopts a KM mindset. «KM will simply become M, a way of managing the business» (Bhatt 2000).

However, compared to large organisations, the successful SMEs were distinctive in the sense that they tended to be relatively agile, well integrated into international, national, professional and industrial associations and networks, and ready to learn from customers, clients, competitors, suppliers and providers (Handzic 2006). Knowledge was seen as information that could be used to act. It had to be in the form that is accessible, relevant and ready to use.

6.2.4 Framework for Effective Implementation of KM in SMEs

Many SMEs have always regarded knowledge as the lifeblood of their organisation and have managed it effectively, often just through the usual sharing of knowledge that occurs naturally in small organisations where structures are flat and communication is part and parcel of daily operations. Empirical studies have shown that while the SMEs use a similar range of techniques and strategies for KM as those employed by larger firms (e.g. mentoring, maintaining databases for lessons learnt, standardising business processes), these are organised on a less formal basis.

Implementing a knowledge management strategy can initially appear to be a daunting and overwhelming task. The initiator often has some basic questions in his mind, more specifically in the SMEs.

- Where do I begin?
- How do I ensure the process is managed correctly?
- Should I use sophisticated technology?
- How do I measure the effectiveness of my knowledge management solution?

In recent times, there have been a number of efforts at developing KM frameworks to understand KM phenomena. In order to make sense of the variety of existing KM frameworks they have been categorised into descriptive and prescriptive frameworks. Descriptive frameworks attempt to characterise the nature of KM phenomena, while prescriptive frameworks attempt to direct methods to be followed in conducting KM (Standards Australia 2003).

David J Skyrme states, «In my own experience there are other determinants that guide when it makes sense to embark on a formal programme in an SME»:

- The overall size of the business – If the personnel strength is less than 50, most staff will probably know each other fairly well; it probably therefore does not make sense to implement KM formally.
- Degree of dispersion – if the organisation is based at several locations, even when there are less than 50 employees, there are benefits achieved by putting key information into a shared repository.
- Number of distinct core documents – The repository may be able to handle only around 1500 documents efficiently. Beyond that, the retrieval of documents becomes time-consuming and ineffective.
- Knowledge-intensity of business – In organisations like legal firms, consultancies, engineering, that blend high degree of internal expertise with outside knowledge, the benefits of knowledge management are more immediately obvious (Kogut and Zander 1992).

The following are three key phases in developing and implementing KM as suggested by Standards Australia (2003):

- Understanding the context (Vision, business strategy and the lifecycle stage) for knowledge management,
- Conducting a knowledge gap analysis with reference to the business strategy,
- Facilitating «knowledge in action» plan to explore and exploit knowledge to achieve the business strategy.

Most organisations develop their strategy around a well-recognised business model and it is therefore logical to map KM issues to a recognised business model. In order to be successful, organisations need to establish an appropriate management framework regardless of sector, size, structure or maturity.

The EFQM Excellence Model is a non-prescriptive framework based on nine criteria. Five of these are «Enablers» and four are «Results». The «Enabler» criteria cover what an organisation does. The «Results» criteria cover what an organisation achieves. «Enablers» cause «Results» and «Enablers» are improved using feedback from «Results».

Based on findings from SME case studies and related research one could conclude that knowledge management frameworks for SMEs should focus on key imperatives such as (Kumta 2008).

- Translation of individual knowledge held by key personnel into organisational knowledge through:
  - Embedding routine process and procedural knowledge into standard operating procedures,
  - Codifying implicit knowledge through «lessons-learnt» programmes,
  - Drawing on deep tacit knowledge through mentoring programmes, and
  - Using case studies as a means of knowledge transfer (Hall 2003).
- Generation of new knowledge and ideas leading to innovation which when exploited result in proposals for new products or services, new clients and improved business processes. This is a more free-flowing approach and is encouraged by the culture in the organisation.
- Creation of an eternal learning environment from concepts to practice to cope with new business processes, new products, the ever-changing business environment,

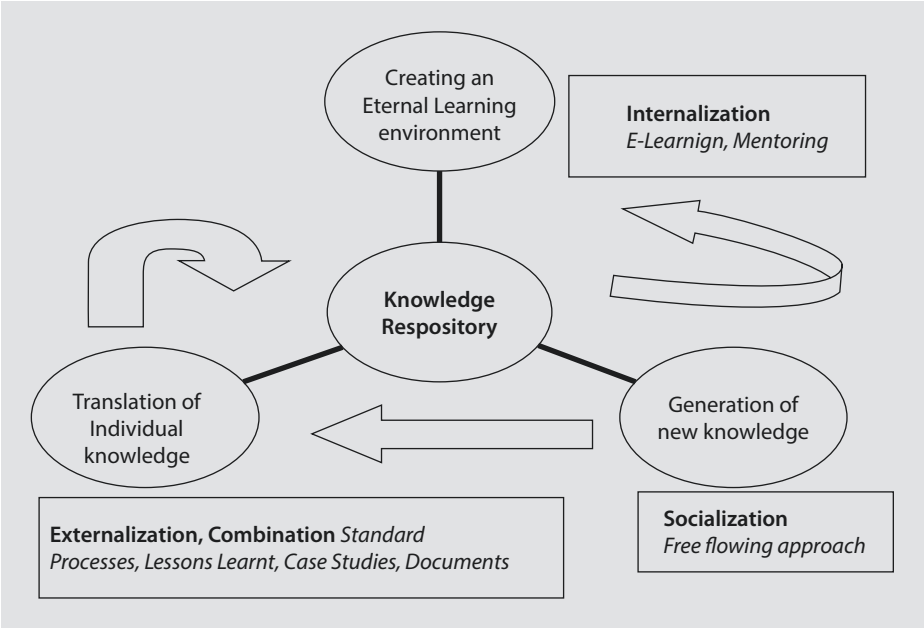


Fig. 6.6 Knowledge repository (Source: *Knowledge Management Integrated: Concepts and Practice*, Heidelberg Press)

and an increasingly dispersed workforce. E-learning will facilitate this process by drawing training content from frontline business applications in addition to providing modules on concepts.

- Providing access to external portals giving information about standards, regulations, statutory requirements, procedures and best practices. This will help build partnerships and networks that will support the business (Kumta 2008).

The relationships are summarized in Fig. 6.6.

A key point that results from research is that the more «formal» knowledge management approaches of large firms should not be imposed on small businesses. Sparrow reports that in contrast to large firms, small firms benefit from the perspective of understanding their business in knowledge terms, i.e. the emphasis on the development of knowledge as a *lens* (as opposed to a knowledge management system) together with the emphasis on knowledge system *principles* (as opposed to ICT knowledge system elements). Many of the high value-added SMEs are likely to be knowledge intensive, either in the processes they deploy or the products and services they produce and sell.

Both internal and external sources of knowledge are important to entrepreneurs Internal knowledge comes from reorganising, accidents, experiments, and inventiveness. External knowledge comes from new people, acquisitions, joint ventures and social networks (Kogut and Zander 1992).

In developing the KM strategy, the focus should be on three key points to ensure its success:

- Map a knowledge management strategy to the business strategy based on a Business Excellence model.

- Similar to six-sigma concept, KM initiatives should be treated as projects and designed to help solve business issues, such as improving customer, employee, or partner relationship management, accelerating innovation, or improving a process to reduce cost and turn-around time.
- KM systems should start from people processes and use technology only to enable them.

Establishing a KM strategy can be much less daunting if one looks at KM as organising, locating and reusing actionable information. The KM initiative will depend on the life-cycle stage in which the organisation is and its future growth plans. The need for formal knowledge management comes in quite late in the overall evolution of the firm (Kumta and Mukherjee 2010).

Through the KM strategy of personalisation, SMEs will able to leverage upon its tangible and intangible assets, to learn from past experiences, whether successful or unsuccessful, and to create new knowledge (Hussain et al. 2010). The KM strategy needs to be implemented at three different levels in SMEs,

- People level: KM needs to emphasise on the competencies, education and learning abilities of organisational members to create KM awareness and make them more creative and innovative.
- Organisational level: KM is related to the development of a visionary leadership and a sound organisational culture to ensure maximum sharing of innovative and creative knowledge (Chan and Mauborgne 2003). Chan and Mauborgne also suggested constructive leadership behaviour and development of a healthy organisational culture as important enabler of KM.
- Technology level: Effective KM requires the efficient organisation of a suitable communication and information infrastructure based on suitable and relevant taxonomies and knowledge repositories.

Though commercialising knowledge is an important role of entrepreneurship, there are many challenges in doing it effectively (Bird et al. 1993).

6.3 Knowledge Management in the Public Sector

6.3.1 New Public Management

Knowledge management is increasingly gaining attention in the public sector. This is due to an ever-increasing pressure to improve efficiency and effectiveness, together with a growing awareness for the importance of sharing knowledge across government organisations in maintaining a government overview perspective on policy making and service delivery (c.f. O'Riordan 2005; McEvoy et al. 2015; Massaro et al. 2015).

In general terms, the public sector consists of governments and all publicly controlled or publicly funded agencies, enterprises, and other entities that deliver public programs, goods, or services (► www.globaliia.org/standards-guidance, p. 3). Boundaries between «public» and «private», however, are becoming increasingly blurred. Privatization, delegation of public power, the joint public-private provision of services, usually regarded as «public», as well as institutional rearrangements, are making the

identification of the public sector difficult (APO 2013). Follow the approach of «New Public Management» many public organisations have implemented managerial processes and metrics from the private sector.

Administration, health care, education, security, ministries and parliaments are naturally incentivised to turn to knowledge management: Every citizen should have access to information, consultancy services and competent contact persons. Labour administrations would like to make their knowledge regarding job markets, training and advanced training as widely accessible as possible. Public services are often relying on standardised processes, which ease exchange of experience and transfer of «best practices». The findings of the Program for International Student Assessment (Pisa Study) show how important this is in the educational sector too, as the exchange of successful pedagogic concepts across schools, didactic preparation of specific contents, supervision and tutorials on new technical developments are required in all faculties.

Cooperation between various service providers, advanced training of doctors and specialists in health care, insights into the effectiveness of medicines, and online counselling of patients are just some of the topics which highlight the significance of a systematic management of knowledge in the health care sector (see Nicolini et al. 2008).

Under the key term «New Public Management», we find a wide range of initiatives for adopting the management methods of the private sector in the public sector, to achieve an increased customer orientation and efficiency. Knowledge management is an important element for informing responsible citizens in a transparent way and providing high quality and effective services.

Take the example of Taphanhin Crown Prince Hospital in Thailand, which adopted KM in response to pressing needs to improve productivity and to maintain service quality as the average workload of doctors reached 65 patients per day. The hospital has significantly decreased customer complaints and error rates through the KM initiatives that utilized high-contact methods such as communities of practices, after-action review, storytelling, and capturing of lessons learned (APO 2013, p. 7).

6.3.2 KM Challenges in the Public Sector

The OECD (2003a, b) emphasises, in their study on knowledge management practices in the central governments of member states, that government organisations have different strengths and weaknesses compared to private companies in relation to the management of knowledge. The pressure of competitiveness and the incentives to lower costs traditionally have been less important. In addition, outcomes are typically less clear and less measurable. In addition, management structures tend to be more hierarchical which provide fewer incentives for innovation and teamwork. It is also argued that in many countries motivation and reward systems within the civil service do not encourage knowledge sharing (cf. Syed-Ikhsan and Rowland 2004). In their study on the role of KM in enhancing government service delivery in Kenya, Ondari-Okemwa and Smith (2009) identify the culture of «secrecy» in most African governments as one of the challenges of KM in the public sector. They claim that this culture of secrecy is exemplified by the Swahili word for government «serekali», which means top secret.

Some further challenges for practicing KM in the public sector are rooted in a rule-based culture that seeks compliance rather than entrepreneurship, innovation and improvement (c.f. Taylor and Wright 2004). As changes emanate predominantly from government policies, they are perceived to be imposed, and consequently received as an increase of workload in an environment of scarce resources.

Some of the common challenges that affect public sectors worldwide include enhancing efficiencies across all public agencies, improving accountability, making informed decisions, enhancing collaboration and strategic partnerships with stakeholders, capturing knowledge of an aging workforce, as well as, improving operational excellence. (APO 2013, p 3.) The loss of professionals and in turn their experience and expert knowledge is progressively becoming a relevant problem for all organisations particularly in cases where there is large-scale retirement.

Knowledge management also plays an imperative role in providing strategies and techniques to manage e-government content to make knowledge more usable and accessible.

However, the greatest challenge to public-sector organizations lies in their natural inheritance of a mindset of compliance in administration. Furthermore, organizations must bear the periodic discontinuity of leadership in public-sector term appointments (APO 2013, p.1).

In ◘ Table 6.2 challenges and implications for managing knowledge in the public sector are summarized (North 2017).

◘ **Table 6.2** Challenges and implications for managing knowledge in the public sector

Challenge	Implications for managing knowledge in public sector
Public-private partnerships and new public management	Adoption of private sector management and knowledge sharing practices
Hierarchical leadership and few incentives to transfer knowledge	Knowledge sharing is not valued in the organization
Waves of massive retirement	Loss of knowledge, opportunity to «forget» obsolete knowledge
New officials «Facebook generation» enter	Different ways of learning and working, opportunity for new ideas and change
Vacant posts for longer periods	Impossibility of direct transfer of knowledge between predecessor and successor
Shortage of personnel and resources	Shortage of time for documentation and knowledge sharing
Many new topics to master	«Partial ignorance» on many topics
Information and communication systems outdated and underused	Lack of availability and easy access to up-to-date and well-prepared information for users

6.3.3 KM Practices in the Public Sector

Integration of KM in Public Sector Management Systems As «New Public Management» and e-government gain acceptance around the globe, KM practices increasingly take root in public sector organizations. In this context KM is integrated into business excellence models adopted by public agencies. A case in point is the Common Assessment Framework (CAF). It is a total quality management tool developed by the public sector for the public sector, inspired by the Excellence Model of the European Foundation for Quality Management (EFQM®). It is based on the premise that excellent results in organisational performance, citizens/customers, people and society are achieved through leadership driving strategy and planning, people, partnerships, resources and processes. The CAF aims to be a catalyst for a full improvement process within the organization and also facilitates bench learning between public sector organisations (CAF 2013).

CAF sub-criterion 4.4 «Manage information and knowledge» defines a number of practices which organizations are asked to evaluate and improve:

1. Developing systems for managing, storing and assessing information and knowledgein the organisation in accordance with strategic and operational objectives.
2. Ensuring that externally available relevant information is acquired, processed, used effectively and stored.
3. Constantly monitoring the organisation's information and knowledge, ensuring its current and future needs of stakeholders.
4. Developing internal channels which cascade information throughout the organisation to ensure that all employees have access to the information and knowledge relevant totheir tasks and objectives (intranet, newsletter, house magazine, etc.).
5. Ensuring a permanent transfer of knowledge between staff in the organisation (e.g. mentorship, coaching, written manuals).
6. Ensuring access to and exchange of relevant information and data with all stakeholders in a systematic and user-friendly way, taking into account the specific needs of all members of society such as elderly people, disabled people, etc.
7. Ensuring that key information and knowledge of employees is retained within the organisation in the event of their leaving the organisation.

In addition to overarching Organizational Excellence Frameworks (such as CAF) **management standards** provide guidance on the integration of KM in management systems. ISO 9001:2015 quality standard integrates quality, risk, and knowledge management. ISO 9001:2015 now follows the same overall structure as other ISO management system standards, making it easier for anyone using multiple management systems (for more detail on the standard see ► Sect. 9.2.2)

Organizational Culture and Leadership Practices Riege and Lindsay (2006) argue that a main driver for the adoption of KM initiatives in public services is the change of organizational culture which is closely related to leadership and human resource management practices. Based on their study on the food security and nutrition industry in Cambodia, Vong et al. (2016) conclude that information quality, organizational commitment, and top management support influence knowledge sharing within the public sector. A study from Ghana Boateng and Agyemang (2016) found that mutual trust, respect and care for one another, the quest for organizational success as well as education and experience level of

employees are the significant factors influencing knowledge sharing in the Afigya Kwabre District Assembly. Jain and Jeppesen (2013) conducted an empirical study about the relationship between cognitive styles of leaders and knowledge management practices in the Indian work context. The results show the relevance of the «adaptor style» of thinking versus an «innovative-collaborator» style, in promoting knowledge management practices, which is consistent with the prevailing public sector work norms in India, which do not support any radical changes in their ways of working and solving problems.

Process standardization and service platforms Managing knowledge is directly related to service delivery based on well-defined and standardized processes oriented towards internal or external customers. Many countries have developed activities to make information and knowledge available to citizens. Processes are being re-engineered to put in place improved, value-for-money processes that will reduce waste and duplication, producing an effective «customer experience» (PWC 2007). In 2001, the Canadian government developed a one-stop shop website: a single centralized point of entry for citizens to most federal websites . In 2005, this was extended to the whole of government to become the Government of Canada portal and became a part of a larger, cohesive strategy for a knowledge-based economy and society. At the same time, Service Canada introduced their portal to provide citizens access to a wide range of government programs and services (Dalkir 2016). In Europe Personal Service Numbers (PSN) such as the «115» in Germany are established in 13 EU Countries. The PSN offers the citizen of a country, region or city a single access number to enquire about public services or apply for them. The implementation of PSN requires the harmonisation of terms used for public services and the standardization of processes in the public administration (Heisig 2016).

Best Practice Sharing and Learnig Activities to improve service delivery are often accompanied by platforms and networks within and across organizations and countries to learn, to identify and to share Best Practices. There is, for example, the «Share-PSI» network. It is the pan European network offering advice on implementation of the European Directive on the Public Sector Information (PSI). It comprises many of the government departments responsible for implementing the (revised) PSI Directive across Europe along with standards bodies, academic institutions, commercial organisations, trade associations and interest groups (► https://www.w3.org/2013/share-psi/). In order to understand, compare and, learn across agencies «benchmarking» and «benchlearning» initiatives have been launched. Learning is not limited to the above organizational arrangements. Initiatives such as «colleagues learn from colleagues», exchange forums, lessons learned exercises and after action reviews are further effective means of knowledge sharing, learning and reflecting.

Knowledge Transfer across Generations As many public organizations face massive retirement of experienced officials, on an operational level KM practices to retain experiences and knowledge of leaving officials are becoming popular. International Enterprise Singapore, for example, have successfully retained knowledge of officers who moved to another department, or left, or retired through the method that they called RACK (retention of all critical knowledge) within the organization. These resulted in maintaining and improving the quality of their knowledge- delivered to Singapore-based companies to promote international trade. (APO 2013, p. 7). The Welsh Government (United Kingdom) has taken a similar approach with their «Headstart» initiative (see case study below).

KM practices result in an improvement of accountability and mitigation of risk by making informed decisions and resolve issues faster, supported by access to integrated, transparent information across all organizational boundaries. Fourth, KM contributes to deliver better and more cost-effective constituent services such as enhancing partnerships with, and responsiveness to, the public, thereby clearly demonstrating a higher return on taxpayers' money. Partnerships with stakeholders such as private industry and community organizations are critical to developing effective public policy (cf. Riege and Lindsay 2006).

Case Study

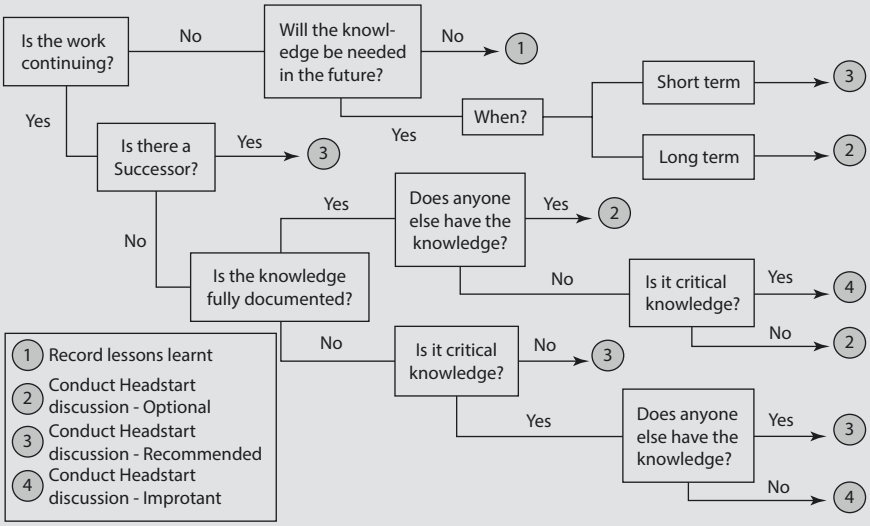
«Headstart» – Transferring Valuable Knowledge in the Welsh Government

When staff leave a team they take with them the valuable knowledge, experience and contacts they have built up during their time there. The team, and organisation, suffers if this knowledge is not shared before they leave. Estimates suggest it takes up to six months before staff taking on additional duties, or a new recruit, contributes effectively to the organisation.

Headstart is a process line managers are encouraged to use (if appropriate) to capture the knowledge held by an individual within their team who is leaving (either to another department or the organisation as a whole). The focus is on capturing the less tangible elements of how an individual does their job, i.e. through their experience and know-how, therefore not necessarily easily written down within more traditional methods, such as desk instructions or handover notes. Headstart doesn't aim to replace these traditional methods of capturing information but to supplement them.

■ Should I Conduct a Headstart Discussion?

There are a few simple questions that you can ask yourself to determine if going through the Headstart process is optional, recommended or important. The decision tree below can be used by managers to determine if going through with a Headstart discussion is optional, recommended or important:



■ **What do I Need to do Next?**

If it has been decided advantageous to conduct a Headstart discussion, there are three steps it is recommended that are followed in order to complete the process. These are:

1. **Early preparation**: Start planning the Headstart discussion as soon as you know a staff member is leaving. Identify who in the organisation might benefit from the staff members knowledge and what they will need to know. It's not only you, as line manager, that would benefit from capturing a staff member's knowledge, maybe other team members or stakeholders have questions for the leaver also.
2. **The discussion:** Prepare for the discussion by reviewing the key tasks the individual undertakes, use the job description or PMR. This will help you structure the discussion around how the individual goes about those tasks, what knowledge and skills are needed, any problems or pitfalls to be aware of and so on. It is recommended you go through the Headstart process face-to-face, but don't spring it on the leaving staff member. Share the process (and questions) with them, so that they can adequately prepare.
3. **Using the knowledge gathered:** Be clear who will make use of the knowledge collected and how it will be used, before you begin to gather it. The purpose of the discussion is not to capture all knowledge, but to gather knowledge that will be used. Consider the value – some topics will be of greater value than others. For the process to be worthwhile, something active needs to be done with the outcomes. Some of it, for example key contacts, can be easily exploited. Other information can be used to populate an induction pack, handover notes, or other documents. However, making use of the intangible knowledge around problem solving and lessons learnt also need to be considered.

Source: Headstart guide, Welsh Government, Murphy (2017)

6.4 Managing Knowledge at a Country or Regional Level

6.4.1 Tangible Versus Intangible Assets

The quality of society is largely determined by its capacity to generate genuine learning and working together and to produce new visionary knowledge. This being the case, our society imposes entirely new requirements on work methods, work cultures, information validity, media literacy, etc. (Markkula 2010). Further, digitalisation and globalisation have changed business processes rapidly. Measuring this capacity is a prerequisite for having the intellectual capital high on the political agenda of the decision-making processes of nations.

The old paradigm of the Wealth of Nations which was focused on the tangible assets is now moving towards a new economic landscape based on intangibles, in terms of Knowledge. Today we see that the dimensions of what nations spend on welfare, health, education, R&D, or security at macroeconomic level are more and more intangible. Every innovation step starts with a small spending on intangibles. Sometimes this is referred to as «soft» dimension such us culture and values. In Japan they had coined this in Soft Economics way back in the 1980s. Today METI in Japan is calling this Intellectual Asset-based Management (Lin and Edvinsson 2011). But to a large extent the mapping is still done based on the tangibles. The knowledge gap or ignorance on the value of intangibles is still huge. So we need both a new perspective and new metrics for the mapping.

Case Study

The Manifesto of «The New Club of Paris» on the Knowledge Society and its Economic Foundations Extract

Our society is undergoing a dramatic transition from the industrial & amp; information age towards a new era of brainpower industries, associated with upheavals in the global structure of the economy and accompanied by far-reaching demographic shifts and a transformation of social systems.

- A major challenge of such changes is that our economy is increasingly transforming into an «intangible» economy which is described as a «knowledge based economy».
- Indicators of this development at the time when this manifesto is issued initially are:
  1. The new relation between material (e.g. manufacturing) and nonmaterial (e.g. services) resources;
  2. The sharing of commonly available knowledge such as open source information;
  3. The insight that global competition can lead to rapid relocation of economic activities such as software, media creativity, healthcare and «mind-intensive» industries;
  4. The radical change in work structure causing everyone to continuously change profession and type of employment throughout their working life, inducing lifelong learning and flexibility;
  5. The increasing «knowledge divide», within societies, as well as among nations on a more global scale.

Intellectual capital (comprising assets such as human abilities, structural, relational and innovation capital, as well as social capital) founded on clear, practiced values such as integrity, transparency, cooperation ability and social responsibility, constitute the basic substance from which our future society will nurture itself.

► http://new-club-of-paris.org/mission/

Today we have a lot of data as well as contextual reports for a deeper understanding of the role of Intellectual Capital of nations for future wealth creation. It is starting to reveal an ecosystem of both, drivers for the Social Capital as the larger holistic perspective, as well as new softer dimensions of Mind set, Culture and Values of Nations. The ability of a nation to use and create knowledge capital determines its capacity to empower and enable its citizens by increasing human capabilities.

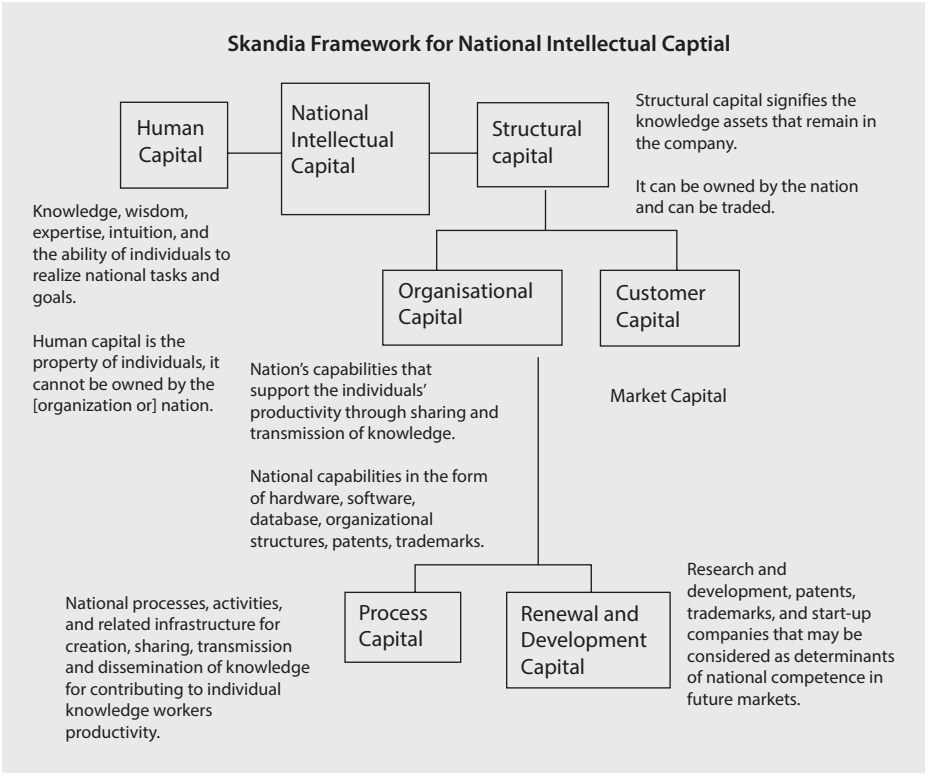
Investments in information technologies may not necessarily correlate with increases in performance, (Strassmann 1997). Hence, in all such contexts, the emphasis should not only be on investments in relevant technologies, but effective utilisation of such technologies, keeping in perspective the outcomes driven focus of intellectual capital. This shift in perspective would certainly bring the focus closer to *performance*.

A study of the Skandia model for measuring Intellectual capital would help in evolving a strategic KM framework for a country. The model attempts to provide an integrated and comprehensive picture of both, financial capital and intellectual capital. Generally, national economic indicators supported by hard quantitative data are used for examining the internal and external processes occurring in a country. In this model, there are four components of intellectual capital: market capital (also denoted as customer capital), process capital, human capital, and renewal and development capital. In the context of the national intellectual capital assessment:

- Financial capital reflects the nation's history and achievements of the *past*,
- Process capital and market capital are components upon which the nation's present operations are based,
- Process renewal and development capital determines how the nation prepares for the future, and
- Human capital lies at the crux of intellectual capital. It is embedded in capabilities, expertise and wisdom of the people and represents the necessary lever that enables value creation from all other components.

The key determinants of hidden national value, or national intellectual capital, are human and structural capital. The framework is depicted in the following ◘ Fig. 6.7.

It is therefore necessary for a nation to build its human and structural capital to enhance its capacity and empower and enable its citizens. Governments should begin to undertake information and knowledge audits of the resources available and the ways in which they can be deployed to achieve competitive advantage (Durrant 2001).



◘ **Fig. 6.7** Skandia framework for National Intellectual Capital (*Adapted from the Skandia model for measuring intellectual capital* (Hess 2006))

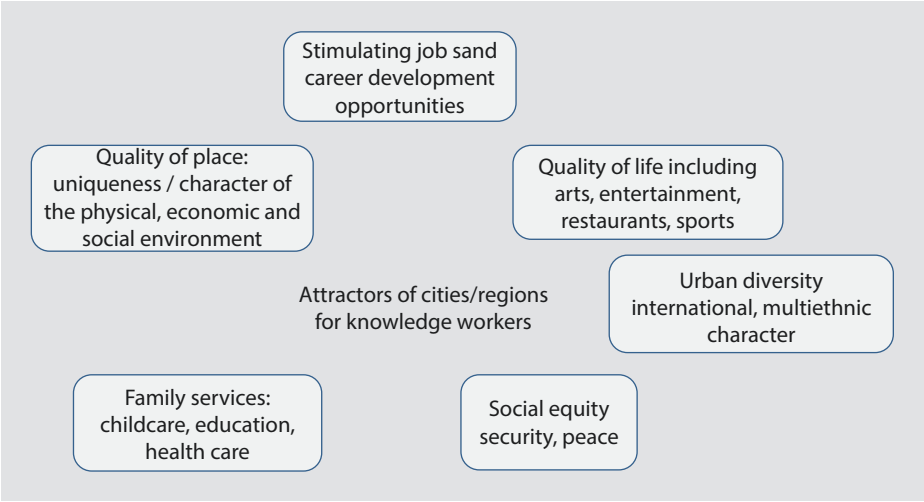


Fig. 6.8 What makes a region attractive for knowledge workers (Source: Based on Florida (2002), Montreal Knowledge City Advisory Committee (2003), Yigitcanlar et al. (2007))

6.4.2 Attracting Talents to Regions

Regions with a high percentage of people employed in knowledge-intensive occupations have a higher per capita Gross National Product (GNP) than comparable regions (Lisbon Council policy brief: Ederer/Schuller/Wilms 2011). Knowledge work is becoming the growth engine of the region. The «Creative Class» (Florida 2002) has high purchasing power, is mobile and is well-informed. Regions worldwide have recognised this and are courting the best talents. The lack of qualified personnel, predicted with the demographic development, can be reduced in regions which manage to attract knowledge workers. The motto is «Brain gain» instead of «Brain drain». Figure 6.8 shows the factors which make a region attractive for knowledge workers. The availability of well-educated qualified personnel encourages the establishment of knowledge-based companies which in turn adds value to the region thus leading to a virtuous circle. In order to use this potential in a planned manner, metropolitan regions across the world have started adopting strategies for developing into a knowledge region by promoting research and development and training of skilled personnel, and linking companies, research and educational institutions. Florida's three T's: «Technology, Talent, Tolerance» form the characteristics of a creative region.

Case Study

Indias National Knowledge Commission

For India to be globally competitive in the twenty-first century, a critical factor would be the ability to harness the knowledge potential. To make the best of the opportunities and respond to global challenges more strongly than ever before, the National Knowledge Commission (NKC) was constituted on 13th June 2005 as a high-level advisory body to the Prime Minister of India, with a mandate to guide policy and direct reforms.

NKC's overarching aim is to transform India into a vibrant knowledge-based society. This entails a radical improvement in existing systems of knowledge as well as the creation of avenues for generating new forms of knowledge In view of this, NKC developed appropriate institutional frameworks to strengthen the education system, promote domestic research and innovation and facilitate knowledge application in sectors like health, agriculture, and industry. It also highlighted the need to leverage information and communication technologies to enhance governance and connectivity. Its prime focus was on the on five key areas of the knowledge paradigm:

- ***Access to knowledge:*** Enhancing access to knowledge
- ***Knowledge-concepts:*** Reinvigorating institutions where knowledge concepts are imparted
- ***Knowledge-creation:*** Creating a world class environment for creation of knowledge
- ***Knowledge application:*** Promoting applications of knowledge for sustained and inclusive growth
- ***Development of better knowledge services:*** Using knowledge applications in efficient delivery of public services
- *The methodology followed by the National Knowledge Commission involved*
- Identification of focus areas through wide consultation, within and outside the government
- Identification of diverse stakeholders in these focus areas
- Constitution of Working Groups of specialists and practitioners to deliberate and prepare a report.
- Organising workshops and seminars periodically along with informal consultations with concerned entities and stakeholders to get as broad-based a point of view as possible.
- Communication of key recommendations to the Prime Minister
- Widespread dissemination of NKC recommendations to state governments, civil society and other stakeholders
- Implementation of the recommendations under the aegis of the Prime Minister's office along with coordination and follow up with various implementing agencies.

6.4.3 Knowledge Management for Rural Development

C. G. Hess (2006) in his paper *Knowledge Management and Knowledge systems for Rural Development* has brought out different perspectives for the rural segment. This segment requires knowledge networks, forums that facilitate exchange of learning, network of development agencies that can provide advisory services and technical co-operation which facilitates exchange of knowledge among various stakeholders in the value chain. Here Hess identifies that social, linguistic and cultural barriers impede effective communication between rural producers and outsiders which results in the clash of knowledge systems in many rural technology co-operation projects (Hess 2006). Agricultural experts acquire knowledge which is generated in formal educational settings (schools, universities, research institutes) and circulated through the global network of professionals, institutions and publications (Warren and McKiernan 1995) while farmers acquire knowledge by practice, trial-and-error and experience and usually receive little formal education.

An analysis of the maladies afflicting rural areas has brought out the need to develop an information and knowledge-led rural economy in order to promote rural prosperity. It has been found that knowledge transfers between and across rural communities, scientists,

educators, administrators, health care providers and access to information on matters such as farming methods, health issues, rural credit and entrepreneurship opportunities could play a crucial role in such a process. The ancestral knowledge embedded in traditional crafts and agricultural methods needs to be captured and shared as some of these cannot be replaced by technology.

Example

KM Toolkit for Local Government Organisations

The Knowledge Management Toolkit has been developed to help local government organisations generate value from their intellectual and knowledge based assets. This value is unlocked when knowledge is shared across an organisation, among employees and departments and even with other organisations. In most organisations there are two types of knowledge assets:

- Information that the organisations hold and this can include business plans, client lists and databases. As a good rule of thumb this information can be stored either electronically or on paper.
- The more elusive asset is the knowledge, skills and experience that is in the heads of employees, which is often the most valuable asset that an organisation holds.
  The major difficulty with unlocking this value is to work out an effective methodology to recognise, generate, share and manage that knowledge. This toolkit has been developed to assist organisations to identify their knowledge based assets and suggests strategies for sharing that knowledge across the organisation. This toolkit has been designed in two parts.
- Part One offers key definitions and knowledge statements that will help you to develop the skills necessary to undertake a knowledge management project and to determine how well your organisation manages its knowledge.
- Part Two contains six modules. By working through these you will help your organisation to move from being knowledge blocked to knowledge centred.
  The how-to-guide comprises six modules and a number of checklists. Each of these modules will help local organisations to increase their capacity and success at harvesting the knowledge within, and potentially available to, their organisation.

Source: Australian Local Government Association ALGA 2004. ► http://www.alga.asn.au/?ID=138

6.5 Key Insights of Chapter 6

- Knowledge-based management of a company in the international contexts poses two major challenges-integration of geographically scattered knowledge and complexity in acquiring, developing, transferring, using and safeguarding knowledge in the international context.
- Doz et al. described three approaches viz. projection, integration and orchestration. From the projection viewpoint, it is the function of management to find a balance between blind transfer of experience from the home country and over-conformity to the local conditions. This balance can rarely be determined beforehand. Integration not only involves learning from one's own company worldwide but also from outside. Orchestration, in extreme case, means teamwork of units of a company, alliance partners, customers and suppliers in a global network without a centre or headquarters.

- Opening new markets, developing global products, planning new factories or technical cooperation in development require knowledge-oriented project management the principles of which have been outlined. ADB's plan of action for knowledge management connotes a pragmatic, step-by-step approach. The Knowledge Management Results Framework is an important instrument at ADB to assess and improve performance and help identify problems and their solutions.
- In an SME the core knowledge is normally only with the owner, who deliberately or unconsciously has retained all the knowledge with him due to lack of time or fear of «theft» of idea. When the enterprise is small an informal network provides all the knowledge required to execute tasks and evolve a business strategy. As the enterprise grows, it is imperative for these enterprises to plan the management of knowledge effectively to manage the risk and be able to innovate and constantly search for ways by which they can improve products and services.
- The quality of society is largely determined by its capacity to generate genuine learning and working together and to produce new visionary knowledge. The old paradigm of the Wealth of Nations which was focused on tangible assets is moving towards a new economic landscape based on intangibles in terms of knowledge.

6.6 Questions

1. What are the differences between the projection, integration and orchestration approaches to international management?
2. Managers, experts and organisations experience difficulties on learning and sharing knowledge across cultures. What are the reasons for misunderstanding and barriers to sharing/transferring knowledge?
3. What are strengths and weaknesses of small businesses in managing knowledge compared to big enterprises?
4. The knowledge and success of SMEs very often depends nearly exclusively on the owner. Which measures will allow this to change and create a team which is able to run the firm also in absence of the owner?
5. How can knowledge management contribute to regional development?

6.7 Assignments

1. **Exporting ornamental fish** Qian Hu Corporation Limited is a leading exporter of ornamental fish, exporting to more than 70 countries worldwide; Qian Hu's mission is to create a premium lifestyle experience in ornamental fish-keeping by providing a one-stop aquatic shop for both local and international wholesalers, retailers, and consumers. It engages in the full ornamental fish process: import and export;

breeding and quarantine; conditioning and farming; and distribution activities. Qian Hu recognised the importance of knowledge in its early days, when the entire stock of guppies and loaches was lost. Knowledge is integral to improving the organisation's operational efficiency, enterprise planning, and decision-making, and to creating value for stakeholders.

Sketch a knowledge management strategy and respective measures to be taken for this company.

The full story you will find under: APO, knowledge management case studies for SMEs, p. 40 ► http://www.apo-tokyo.org/publications/files/ind-40-km_smes-2010.pdf

2. **Transferring manufacturing know-how** A German company wants to open a new production line in India. Qualified people have been hired.

In the project team you are responsible for training/know-how transfer. You are asked to give a presentation about the steps to take that the Indian associates will develop a deep understanding of the German production philosophy and the systems in order to adapt it to Indian circumstances.

6.8 KM-Tool: Storytelling

What is storytelling:

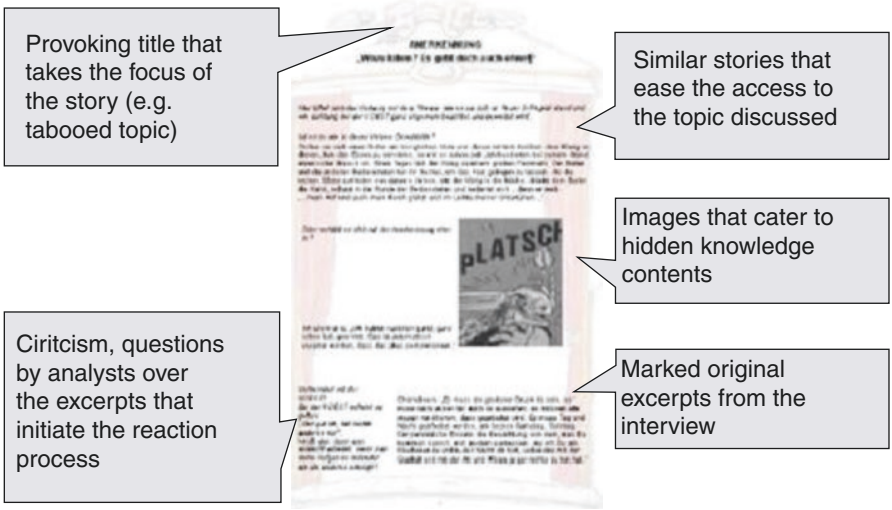
The act of telling a story is a deceptively simple and familiar process, a way to evoke powerful emotions and insights. By contrast, working with stories in organisational settings – to aid reflection, build communities, transfer practical learning or capitalise on experiences – is more complicated. Storytelling has been used as a powerful way to share and transfer knowledge, especially experiential and tacit knowledge. For an example of a story see also case study «The inspiring pot» in ► Sect. 2.2.

Why use storytelling?

Storytelling **transfers the tacit part of knowledge:** Because it conveys much richer contexts through stories than other means of KM, storytelling by a vastly-experienced person in any field has the power to transfer his or her experiential knowledge.

Storytelling **nurtures good human relationships:** When someone tells his/her story, the action also conveys significant volume of the storyteller's personal information through the story itself, facial expressions, tone of voice, gesture, etc. This aspect nurtures trust between the storyteller and audiences that often becomes a seedbed for a community of the practice, which enables further sharing and creating of knowledge.

Storytelling **brings out the passion in audiences:** A great part of storytelling is that it is able to address the logical, as well as emotional, part of the brain. As a result, good storytelling can change people's mindset and behaviour to share and create more knowledge than before.



In the following we describe a storytelling process that results in a written story (or preparation as podcast) and therefore will be available organisation-wide. These are the steps:

Planning phase: Problem areas that always create difficulties in the company are identified (e.g. communication, team building or teamwork) and are fixed to typical results.

Interview phase: The experiences of all the participants are recorded, in order to get acquainted with different perspectives of one event by combining narrative and half-structured interviews.

Extraction phase: This phase involves evaluation of the interviews and extraction of important core statements. Statements that describe the problem areas appropriately are searched.

Writing phase: Now the story of the experience is written. The story begins with a provocative title that creates interest among the readers. The story is built in two columns so that it is possible to differentiate between the original excerpts in the right hand column from the comments of the author in the left hand column. Comments are meant to initiate the readers to think and reply.

Validation phase: The story is given to all the participants for reading with the option to make changes. This binds the interviewed employees in the process of creating the story.

Circulation phase: By circulating it one wants to achieve a company-wide discussion pertaining to the experience document; for instance in workshops (where the employees come together to develop methods of solution and also practice teamwork). The purpose of this phase is to trigger the learning and change processes in the entire company.

Example

Storytelling: The inspiring pot: The Difference Between a Report and a Story

- **Version A:**

In our evaluation of a project in Bangladesh we noted a wide variance in the competence of individual villages to develop sustainable and effective solutions to problems encountered, for example in replacing broken parts or developing low cost products such as new latrines. The lessons to be learned from this evaluation are that we should:

- Work against over-dependence on donors;
- Note and encourage entrepreneurial approaches to problems;
- Identify existing and repeatable good practices;
- Build and strengthen communication between villages to assist cross-fertilisation of ideas at the grassroots level.

- **Version B:**

Bangladesh is a really impressive place… in a positive sense. I was in a village last year working in water and sanitation. We were trying to promote the use of improved latrines, but could not produce concrete slabs and rings locally for a low cost. Somebody told me to visit the latrines of a lady in the village, so I went along and said,

«Can I see your latrines?» She had made a latrine out of a clay pot with the bottom cut off. Then with a potter from the area, she developed a small local production of bottomless pots and they became the latrines. Ingenious.

A few weeks later I was in another village and saw a hand pump; it was broken, just a small piece missing. So I said to the villagers, «Why don't you repair your pump?» And they said, «Oh, we just wait for another donor to bring a new pump.» So I said, «Why don't you visit the lady in the village over there? She finds ways of getting things done on her own.»

Source: Swiss Agency for Development and Cooperation 2006: Story Guide – Building bridges using narrative techniques.

- Brown JS, Denning S, Groh K, Prusak L Storytelling in organisations. ► www.amazon.com/dp/0750678208
- Stephen Denning's website at ► www.stevedenning.com/site/Default.aspx
- Sources/links: Erlach, Thier, Neubauer 2005; Swiss Agency for Development and cooperation: Story Guide-Building bridges using narrative techniques ► www.youtube.com/watch?v=UFC-URW6wkU&feature=player_embedded
- Wikipedia. «Storytelling». Available at ► http://en.wikipedia.org/wiki/Storytelling

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