

## 1. Case description

### Best practice description

Background	<p>This case shows how a large multinational went through a bottom up organisational change to become a knowledge-based company. A small community on knowledge Management within Siemens grew to a corporate office, which interlinked all KM initiatives in the company and helped it to become a leading global player in Knowledge Management.</p> <p>The Siemens Corporation is a networked organisation, spread through 190 countries, with a total of over 450,000 employees. The core business is electrical engineering and electronics in air traffic, healthcare, railroads, telecom, power, medical, lighting, finance and more. But Siemens isn't a company that just sells products; they sell "total solutions", which are knowledge-based. According to Siemens CEO, Dr. Heinrich v. Pierer, between 60 and 80% of the value added which Siemens creates is directly linked to knowledge – and this proportion is growing. Therefore the first priority is to network and manage their internal knowledge efficiently.</p> <p>In this context, Communities of Practice are defined as: "a group of people who are linked together by a common ability or a shared interest, and consequently possess common practical experience, specialist information and intuitive knowledge. They share information, experience and insights and are supported by various tools."</p>
Objectives	<p>Knowledge management in Siemens is aimed at promoting knowledge processes, such as the localisation, recording, dissemination and accumulation of knowledge. One of the definitions for Knowledge management used here is: "an improvement of organisational capabilities on all levels of the organisation through better handling of knowledge as a resource."</p>
Resources (apart from ICT)	<p>The costs of whole creation of the Corporate Knowledge Management Office amounted: € XXX involving XXX people. The Office is now run by XXX people, at an annual exploitation cost of: € XXX</p>
Activities	<p>The Knowledge Management initiative started with a group of 15 people throughout Siemens who formed a Community of Practice on Knowledge Management (CoP KM). They shared their know-how on a quite informal base and met regularly on line or face to face. It developed as informal communities do: it had no particular mandate and participation was voluntary and open to everyone who was or wanted to be in the area of KM. But as the community grew to over a hundred members, the need for support and formalisation grew.</p> <p>A request for support resulted in an interdisciplinary KM taskforce at corporate level, which consisted of several community members, supported by a steering committee with management from all over Siemens. A council was formed to identify the official representatives of the business units that could serve in the Community and thereby build bridges between departments. In the whole discussing on the tasks of the new office, corporate integration was an important topic. In October 1999 Corporate Knowledge Management Office was a fact, with its own special mandate and resources.</p> <p>By that time, the Community of Practice on KM grew to 350 members. So the informal KM organisation is still alive. But this wasn't the only KM activity: there were over a hundred more KM initiatives throughout Siemens, which could now count on support from the CKM office. Its main tasks are:</p> <ul style="list-style-type: none"> <li>• The development of a corporate knowledge sharing culture.</li> <li>• Definition of a knowledge strategy and framework (including standards and guidelines.</li> <li>• Alignment of existing Knowledge Management activities.</li> </ul>

	<ul style="list-style-type: none"> <li>• Development and roll out of a CKM roadmap.</li> <li>• Initiation and support of Communities of Practice.</li> <li>• Introduction and promotion of Best Practice sharing across groups, regions and central departments.</li> <li>• Provision of a Best Practice Marketplace for company wide knowledge exchange.</li> <li>• Definition and introduction of reference architectures and qualified services for Knowledge and Information Management systems and working environments.</li> </ul> <p>On a more practical level, the CKM improves Knowledge Management with the following means:</p> <ul style="list-style-type: none"> <li>• An internal Knowledge Community guide.</li> <li>• A community support team with hot line and intranet webpages.</li> <li>• A <a href="#">Community@Siemens</a> landscape in the employee portal where all employees can register their communities. (In Spring 2002, more than 400 communities are registered)</li> <li>• ShareNet, a standardized collaborative platform (see ShareNet case).</li> <li>• Every 6 months there is a conference on KM.</li> </ul>
Outputs/results	<p>In Spring 2002, a total number of 400 communities are registered, which are supported by the new office. Together with all other KM initiatives, the creation of the Corporate Knowledge Management Office contributed to the reputation of Siemens as a highly respected learning organisation, serving as a highly qualified benchmark for others. Siemens received several awards for this, with, amongst others:</p> <ul style="list-style-type: none"> <li>• Most Admired Knowledge Enterprise (MAKE) by Teleos, Great Britain: Siemens selected 1998-2002 as best German KM company by Fortune 500 CEOs/CFOs and 300 KM experts worldwide.</li> <li>• APQC, USA, International Benchmark on KM: Siemens selected 1999-2002 as Best Practice Partner.</li> <li>• MACILS, Germany: Siemens selected 1999-2001 as KM benchmark for German companies.</li> <li>• KVD, Germany: Service Management Award 2001 for Knowledge Networking in Teleo-services</li> </ul>
Lessons and conclusions	<p>This case illustrates that Siemens needed both informal communities as well as a central organisational unit to transform into a knowledge based company. But, as Davenport and Probst state in the <i>Knowledge Management Case Book</i> (2002) on Siemens, certain tensions and challenges rise. These are:</p> <ul style="list-style-type: none"> <li>• Local versus global knowledge exchange. Employees have to choose to allocate their time between local and global KM initiatives. The global knowledge exchange can leverage expertise that cuts across countries and businesses, while some employees might feel more comfortable exchanging local knowledge in their own language.</li> <li>• Corporate versus business unit KM. Firm-wide initiatives help to exploit the scale of Siemens' business, delivering more knowledge synergy. But soecialised initiatives are easier to measure and may be better supported by managers who are responsible for a unit's financial performance.</li> <li>• How to nourish Knowledge Management in difficult economic times. KM grew in a growing world economy, but after the Millenium Siemens and its competitors experienced substantial decreases in demand, particular in information technology and telecommunications.</li> </ul>

	<p>Specifically on Communities of Practice, other lessons can be learned. According the authors of “<i>The power of communities: How to build Knowledge Management on a corporate level using a bottom-up approach.</i>” (Enkel, Heinold, Hofer-Alfeis, Wicki, 2002) a number of key propositions can be drawn from this case:</p> <ol style="list-style-type: none"> <li>1. Communities of Practice are an effective and efficient form of Knowledge Management, exchanging knowledge across hierarchical and Group borders. They are the heart of the KM system.</li> <li>2. CoPs form sub-Communities concerned with special topics, which enables them to elaborate on solutions in short notice.</li> <li>3. A central form of organisation, like the CKM office, can satisfy the needs of the Communities for central co-ordination and can also act as foundation in a heterogeneous company.</li> <li>4. In order to form CoPs, it is vital to first understand existing informal CoPs.</li> <li>5. Communities should be supported through both a provision of a knowledge marketplace (e.g. space, services and platform for knowledge sharing and creation) as well as nurturing culture (e.g. official recognition, time and common understanding of business and knowledge strategy).</li> <li>6. Openness to new organisations and challenges plays a significant role in establishing successful CoPs.</li> </ol>
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**Executive summary** (summarize the boxes above in two or three lines):

Preferred maximum number of words: 500.

Timing of the case	1997-2002
Geographic setting	Global
Type and use ICT	Intranet, e mail, teleconferencing, data bases.
Main actors contributing	The Community of Practice on Knowledge Management and the Corporate Knowledge Management Office.
Main actors benefiting	The 450,000 experts working at Siemens
Background	This case shows how a small community on Knowledge Management within the Siemens grew to a Corporate Knowledge Management office. Siemens is a large multinational in electrical engineering and electronics.
Objectives	Promoting knowledge processes, such as the localisation, recording, dissemination and accumulation of knowledge.
Resources (apart from ICT)	A corporate office was set up.
Activities	A small community on knowledge Management within the big multinational Siemens grew to a corporate office, which interlinked all KM initiatives in the company and
Outputs/results	Knowledge Management helped Siemens to maintain its position as a leading global player. For this effort they received several KM awards.
Lessons and conclusions	Implementing Knowledge Management in a large company like Siemens gives tensions between local and global knowledge exchange and between corporate and business unit knowledge exchange. A Communities of Practice, supported by a central office, is a useful structure for optimising knowledge exchange.

**2. Case title** (obligatory):

The case title must identify in a few words what the whole case is about, including location (or geographic spread) plus sectors covered where relevant, and the general type(s) of best practice it demonstrates, so that it can be distinguished from all other cases.

**Siemens Corporate Knowledge Management Office (Global)**

**3. Beep input responsible for overall case characteristic coding (obligatory):**

Input	Name of person	Organisation	Date (dd/mm/yy)	Comments
1	Chris	RAND Europe	08/04/02	
2	Romana (review)	RAND Europe		

**4. Case family (obligatory):**

Is this case part of a “case family” in the Beep knowledge base. Answer yes if it is any of the following:

- does it as the “head case” wholly contain one or more “member cases” ?
- is it a “member” case wholly within a “head case” ?
- is it a “member case” alongside other “member cases” ?

Yes

If yes, please list all other cases in the “case family” (the current case is automatically entered into the first row), and if there is a “head case” mark the appropriate row:

	Case reference number	Case title	Mark if “head case”
		Siemens Corporate Knowledge Management Office (Global)	Yes
1		Siemens ICN ShareNet, an Intranet application for managing knowledge (Global)	
2		Siemens Knowledge Master e learning (DE)	
3		Siemens <a href="#">KnowledgeSharing@MED</a> (Global)	
		Siemens Telework (FIN)	

**5. IPR status (obligatory):**

V	Public – no restrictions
	Public – but needs acknowledgement
	Pending

Comments:

**6. Language of source material (obligatory):**

Language(s) of original documents	English
Languages(s) of translations of original documents	English

**7. Information source(s) (obligatory):**

Description	The information for the case is gathered from the Siemens Case Book, together with e mail correspondence with Peter Heinold, CIO Marketing & Communication
List of main case sources	Enkel, E.; Heinold, P.; Hofer-Alfeis, J.; Wicki, Y.; "The power of communities: How to build Knowledge Management on a corporate level using a bottom-up approach." In: Davenport, Th., Probst, G.J.B. (2002), <i>Knowledge Management Case Book</i> . Publicis Corporate Publishing
List of main case web-sites	<a href="http://books.publicis-erlangen.de/de/produkte/management/bwl/index.cfm?bookid=5697">http://books.publicis-erlangen.de/de/produkte/management/bwl/index.cfm?bookid=5697</a> www.siemens.com

**8. Contact information (obligatory):**

The only obligatory field is "organisation name" in column 1, but fill in as much as possible. Inclusion of data here is for Beep team purposes only, and does not imply automatic availability to Beep users. Whether and how much is put into the public domain are separate decisions.

	1	2	3	4
Name of case person	Peter Heinold	Günther Klementz	Dr. Josef Hofer-Alfeis	
Role in case	CIO Marketing & Communication	Contact person 1	Contact person 2	
Role in organisation	head of marketing communication at Corporate Knowledge Management Office	Vice President and Chief Knowledge Officer, Siemens AG Corporate Information and Operations Enabling Processes and Knowledge Management (CIO EPK)	Senior Manager Siemens AG, CIO EPK Corporate Information and Operations Enabling Processes and Knowledge Management	
Organisation name	Siemens	Siemens	Siemens	
Address, including post code (if known) and country.		Südallee 1 D-85356 Munich	Südallee 1 (München-Airport) D-85386 Munich Germany	
Telephone		+49 89 636-36466	+49-89-636-36408	
Mobile		+49 171 5583003	+49-171-7659829	
Fax		+49 89 636-37591	+49-89-636-718838	
Email	Peter.Heinold@siemens.com	guenther.klementz@siemens.com	josef.hofer-alfeis@siemens.com	
Web	www.siemens.com	www.siemens.com	www.siemens.com	

**9. Timing of case (obligatory):**

At least part of row 1 and the executive summary must be filled.

<p align="center"><b>Case timings -- as precisely as possible</b></p> <p>Give start and termination dates in actual month (mm) and actual year (yy) if possible. If not possible to give dates, enter "unknown", "on-going", etc. in comments.</p>	<p align="center"><b>Comments on what timing refers to – as precisely as possible.</b></p> <p>If more than one timing, including which elements/CSEs of case referred to if possible</p>
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	Start				Termination				elements/CSFs of case referred to if possible.
1	Month	1	Year	1997	Month		Year		15 people from across Siemens start a Community of Practice on KM, sharing experience and know how and creating a common understanding of Knowledge Management..
	Comments				Comments				
2	Month	12	Year	1998	Month		Year		The community grows to over a hundred members
	Comments				Comments				
3	Month		Year	1998	Month		Year		The community officially requests central support for KM activities. A task force is established on corporate level, supported by a steering committee.
	Comments				Comments				
4	Month	2	Year	1999	Month		Year		A meeting on organisational integration. A council was formed for the CKM and the future tasks were described.
	Comments				Comments				
5	Month	10	Year	1999	Month		Year		The Corporate Knowledge Management Office goes down to work.
	Comments				Comments				
5	Month	5	Year	2000	Month		Year		The Community has grown to 350 members. An International meeting was held on the purpose of self-reflection. Since then every 6 month a conference is held on KM.
	Comments				Comments				
5	Month		Year	2002	Month		Year		Most Admired Knowledge Enterprise (MAKE) by Teleos, Great Britain: Siemens selected 1998-2002 as best German KM company by Fortune 500 CEOs/CFOs and 300 KM experts worldwide. APQC, USA, International Benchmark on KM: Siemens selected 1999-2002 as Best Practice Partner.
	Comments				Comments				
5	Month		Year	2002	Month		Year		Total number of registered communities: 400
	Comments				Comments				

**10. Number of people directly involved in case (not obligatory):**

These are full-time person equivalents (where relevant), and should include all persons directly involved in the case itself, whether or not paid.

	Enter a number (as accurately as possible)	Describe types of people (use descriptors from CHAR 13 if this is relevant and helpful)
<b>Contributor:</b> number of people directly responsible for, or	350 (1)	The Community of Practice on

contributing to, the case – persons who have an interest or involvement in the case but are not the ultimate beneficiaries of it (these can include Beep users, i.e. those who will use the Beep services)	unknown (2)	Knowledge Management (1) and the Corporate Knowledge Management Office (2)
<b>Beneficiary:</b> number of people directly benefiting from the case (these are equivalent to Beep end-users).	450,000	Employees of the Siemens AG (Corporation)

**11. EU support classification** (not obligatory):

None

**12. Investment in, and costs of, case** (if possible):

	Investment source for case	Comments, including timing (in months) if known	Euro '000
<input type="checkbox"/>	EU Programme		€
<input type="checkbox"/>	National government programme/initiative (NUTS 1 level)		€
<input type="checkbox"/>	Regional programme/initiative (NUTS 3 level)		€
<input type="checkbox"/>	Local programme/initiative		€
<input type="checkbox"/>	Industry organisation		€
<input type="checkbox"/>	Private		€
<input type="checkbox"/>	NGO, charity, non-profit trust/fund		€
<input type="checkbox"/>	Other (specify)		€
	<b>Total investment</b>		€

	Cost expenditure for case	Enter actual components, plus other comments including timing (in months) if known	Euro '000
<input type="checkbox"/>	<b>Expenses for end user hardware</b> Examples: PCs, laptops, mobiles, PDAs, local printers, etc.		€
<input type="checkbox"/>	<b>Expenses for end user software</b> Examples: off-the-shelf applications/tools, client software, etc.		€
<input type="checkbox"/>	<b>Expenses for system hardware</b> Examples: servers, routers, switches, networks, centralised storage media, centralised printers, etc.		€
<input type="checkbox"/>	<b>Expenses for developments and changes</b> Examples: applications development, software programming, software modification, content developments such as populating a database, integrating new software with existing tools or designing new Internet/web-based facilities, etc.		€

	<b>Cost expenditure for case</b>	<b>Enter actual components, plus other comments including timing (in months) if known</b>	<b>Euro '000</b>
<input type="checkbox"/>	<b>Expenses for actions of implementation</b> Examples: planning, surveying user requirements, pilot testing, evaluation, etc.		€
<input type="checkbox"/>	<b>Expenses for operation of service etc. of the case after implementation</b> Examples: Yearly operational costs i.e. maintenance costs, cost of personnel, marketing costs, etc.		€
<input type="checkbox"/>	<b>Expenses for training and technical support</b> Examples: courses funded by organisation, hiring trainers, etc.		€
<input type="checkbox"/>	<b>Expenses for other activities/purchases</b>		
<input type="checkbox"/>	<b>Other (specify)</b>		€
	<b>Total cost</b>		€

**So, how does this all fit in our conceptual matrix?**

Procedure:

1. Select one or more KF from the list below that apply to the case
2. Describe what happened on KF level, only if this is different from the description in the beginning
3. Put information with one or more of the indicator, in a way that we can put a score to the outcomes.

Examples:

Teleworking mostly applies to: KF 121, 133

Knowledge Management tools: KF 113, 122, 123 and 125

E learning: 111, 112, 113, 114

<b>Key Factor</b>	<b>KF: 1-1-3-0</b> <b>Improved provision of learning</b>
Relevance of KF	highly
Timing of the key factor	(only if different from best practice description/executive summary)
Geographic setting	(only if different from best practice description/executive summary)
Type and use ICT	(only if different from best practice description/executive summary)
Main actors contributing	(only if different from best practice description/executive summary)
Main actors benefiting	(only if different from best practice description/executive summary)
Background	(only if different from best practice description/executive summary)
Objectives	(only if different from best practice description/executive summary)
Resources (apart from ICT)	(only if different from best practice description/executive summary)
Activities	(only if different from best practice description/executive summary)
Outputs/results	(only if different from best practice description/executive summary)
Lessons and conclusions	(only if different from best practice description/executive summary)
Indicator 1: what happened?	IND: 1-1-3-1 Improvement in conditions for Non-Formal or Informal Learning Activities  The new Corporate Knowledge Management Office facilitated Communities of Practice. In Spring 2002, a total number of 400 communities are registered.
Indicator 2: what happened?	IND: 1-1-3-2 Improvement in time spent by employees in non-formal learning activities  Employees will spend more time on informal learning through Communities of Practice.
Indicator....	IND: 1-1-3-3 Improvement in the use of work-based ICT facilities for continuous learning  The Communities of Practice are facilitated by the Intranet: for e mail newsgroups, registering new communities, giving overview of communities one can attend, etc.

<b>Key Factor</b>	<b>KF: 1-2-2-0</b> <b>improved management of organisational knowledge</b>
Relevance of KF	most
Timing of the key factor	(only if different from best practice description/executive summary)
Geographic setting	(only if different from best practice description/executive summary)
Type and use ICT	(only if different from best practice description/executive summary)
Main actors contributing	(only if different from best practice description/executive summary)
Main actors benefiting	(only if different from best practice description/executive summary)
Background	(only if different from best practice description/executive summary)
Objectives	(only if different from best practice description/executive summary)

Resources (apart from ICT)	(only if different from best practice description/executive summary)
Activities	(only if different from best practice description/executive summary)
Outputs/results	(only if different from best practice description/executive summary)
Lessons and conclusions	(only if different from best practice description/executive summary)
Indicator 1: what happened?	<p>IND: 1-2-2-1 An increase in knowledge sharing facilities within the organisation</p> <p>The CKM office supports knowledge sharing by:</p> <ul style="list-style-type: none"> <li>• The development of a corporate knowledge sharing culture.</li> <li>• Definition of a knowledge strategy and framework (including standards and guidelines).</li> <li>• Alignment of existing Knowledge Management activities.</li> <li>• Development and roll out of a CKM roadmap.</li> <li>• Initiation and support of Communities of Practice.</li> <li>• Introduction and promotion of Best Practice sharing across groups, regions and central departments.</li> <li>• Provision of a Best Practice Marketplace for company wide knowledge exchange.</li> <li>• Definition and introduction of reference architectures and qualified services for Knowledge and Information Management systems and working environments.</li> </ul>
Indicator 2: what happened?	<p>IND: 1-2-2-2 An increase in the use of ICT knowledge sharing tools</p> <p>The CKM improves knowledge sharing with the following means:</p> <ul style="list-style-type: none"> <li>• An internal Knowledge Community guide.</li> <li>• A community support team with hot line and intranet webpages.</li> <li>• A <a href="#">Community@Siemens</a> landscape in the employee portal where all employees can register their communities. (In Spring 2002, more than 400 communities are registred)</li> <li>• ShareNet, a standardized collaborative platform (see ShareNet case).</li> <li>• Every 6 months there is a conference on KM, which can also be attended through the Intranet.</li> </ul>
Indicator....	<p>IND: 1-2-2-3 An improvement in the use of ICT to capture organisational knowledge</p>

<b>Key Factor</b>	<b>KF: 1-2-3-0 improved participation on decision making.</b>
Relevance of KF	medium
Timing of the key factor	(only if different from best practice description/executive summary)
Geographic setting	(only if different from best practice description/executive summary)
Type and use ICT	(only if different from best practice description/executive summary)
Main actors contributing	(only if different from best practice description/executive summary)
Main actors benefiting	(only if different from best practice description/executive summary)
Background	(only if different from best practice description/executive summary)
Objectives	(only if different from best practice description/executive summary)
Resources (apart from ICT)	(only if different from best practice description/executive summary)
Activities	(only if different from best practice description/executive summary)
Outputs/results	(only if different from best practice description/executive summary)
Lessons and conclusions	(only if different from best practice description/executive summary)
Indicator 1: what happened?	IND: 1-2-3-1

	<p>An improvement in the organisational structure to allow greater participation in decision making.</p> <p>The new Corporate Knowledge Management Office facilitated Communities of Practice, which in their turn stimulate organisational change.</p>
Indicator 2: what happened?	<p>IND: 1-2-3-2</p> <p>An increase in the use of ICT to enable self-managed teams.</p> <p>E mail, newsgroups and the Intranet is used by the Communities of Practice, which can be seen as self-managed teams.</p>
Indicator....	

<b>Key Factor</b>	<b>KF: 1-2-5-0</b> <b>more innovation organisational structures</b>
Relevance of KF	most
Timing of the key factor	(only if different from best practice description/executive summary)
Geographic setting	(only if different from best practice description/executive summary)
Type and use ICT	(only if different from best practice description/executive summary)
Main actors contributing	(only if different from best practice description/executive summary)
Main actors benefiting	(only if different from best practice description/executive summary)
Background	(only if different from best practice description/executive summary)
Objectives	(only if different from best practice description/executive summary)
Resources (apart from ICT)	(only if different from best practice description/executive summary)
Activities	(only if different from best practice description/executive summary)
Outputs/results	(only if different from best practice description/executive summary)
Lessons and conclusions	(only if different from best practice description/executive summary)
Indicator 1: what happened?	<p>IND: 1-2-5-1</p> <p>An increase in the use of ICT for informal communication within the organisation.</p> <p>The Community of Practice used e mail and newsgroups to evolve and paved the way to the organisational change to a learning organisation. This resulted in the Corporate Knowledge Management Offices, which, on their turn, use Intranet to stimulate Communities of Practice and facilitate telemeetings on KM.</p>
Indicator 2: what happened?	<p>IND: 1-2-5-2</p> <p>An increase in the use of ICT to disseminate organisational innovation</p> <p>The Community of Practice used e mail and newsgroups to evolve and paved the way to the organisational change to a learning organisation. This resulted in the Corporate Knowledge Management Offices, which, on their turn, use Intranet to stimulate Communities of Practice and facilitate telemeetings on KM.</p>
Indicator....	<p>IND: 1-2-5-3</p> <p>An improvement in employees' participation in organisational innovation</p> <p>This major organisation change evolved out of informal communication of employees on Knowledge Management.</p>