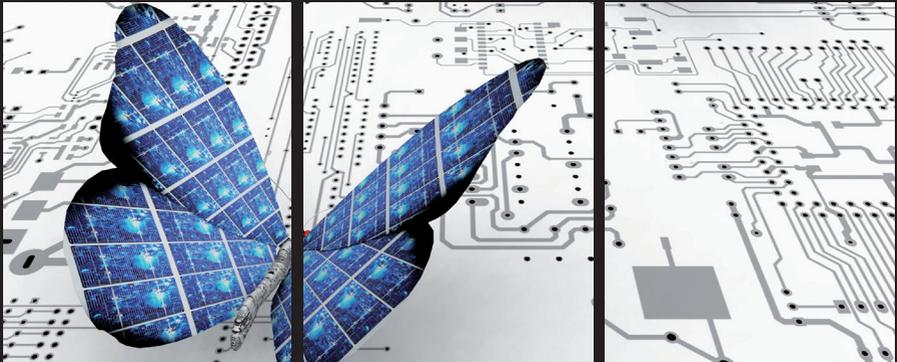


Innovation and Transformation Through Knowledge Management

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Global knowledge exchange using References+ within the Siemens intranet

By Johannes Müller, Jaren Krchnavi and Alexander Stocker

REFERENCES+ IS an innovative Web 2.0 application¹ designed to facilitate the worldwide sharing of knowledge, experiences, and best practices on the Siemens intranet. Efficient knowledge sharing focuses primarily on the user community, which currently has approximately 9,200 members, rather than on the IT application. References+ connects Siemens employees across organisational, hierarchical, and geographic boundaries, and stimulates direct communication. Observations have shown that the resulting knowledge transfer takes place not only via the application but also in tandem via bilateral communication channels.

Introduction of References+ within the Building Technologies Division

The story of References+ began at Security Systems (SES), a previous business unit within the Siemens Building Technologies Division. On complex projects, customers usually request information about successfully completed reference installations and a rough draft of the subsequent solution as early as during the offer phase. Supplying this information requires comprehensive research on the part of sales professionals. In the past, this research was conducted primarily via bilateral channels (phone and e-mail), and its success largely depended on the sales employee's personal network and the accessibility of the people consulted. Because of the time pressure during offer preparation, the quality of the information collected was not always optimal.

To give employees access to information outside their personal network, the SES management decided in 2004 to develop an intranet application with two major functions:

- To list suitable project references; and
- To provide tested solution modules that can be adapted.

To reach this goal, a dedicated full-time position for knowledge management was established. In January 2005, Johannes Müller, one of the authors of this case study, took over this position as Senior Manager Knowledge Management within SES. Initially, the target audience of the new application was this one business unit. However, within the first year of operation its focus widened to include the entire Building Technologies Division.

Today, References+ is a comprehensive intranet-based knowledge management platform available to all employees. References+ is not just a state-of-the-art IT tool, but also a community of approximately 9,200 registered members from more than 70 countries. All employees who have access to the Siemens intranet can actively use References+. Besides the Building Technologies Division (IC BT), several Siemens units joined as new communities, all of them having specially optimised content structure and metadata and – on the staff side – a dedicated part-time ‘Content and Community Manager’, who drives and promotes knowledge management within the respective unit. In 2012, employees of the Smart Grid Division (IC SG) have also started to use References+ as a community platform for knowledge sharing and networking. The global roll-out is currently being performed.

Ongoing roll-out of References+ within the Smart Grid Division

The Smart Grid Division was established with the new Infrastructure and Cities Sector in October 2011. The new Division needed an internal platform that would help colleagues from around the world to easily share knowledge with each other. After looking internally at what other divisions in Siemens were using for internal knowledge sharing, and

briefly looking externally, the decision was made to use References+. The reasons for choosing the platform were:

- It had already been successfully used at the Building Technologies Division for several years and a top Siemens Smart Grid manager had previously worked at Building Technologies and had seen this success first hand;
- Excellent support was offered to support the roll-out;
- The platform had state-of-the-art features; and
- The IT solution proved to be very cost-effective.

What has been key to the roll-out process within Smart Grid? The simple answer is: people. The technology is only a small part of the equation. In short, the platform's state-of-the-art features satisfy most employees' needs. Looking beyond the key features of the platform, the ingredients for success in the roll-out have been based around people:

- Executive support by 'The King' – At least one top manager needs to give their support for the roll-out across a division.
- Platform support by 'The Guide' – Johannes Müller from the Building Technologies Division is the owner and very active community administrator for the platform and he constantly supported the Smart Grid Division throughout the whole process.
- Project led by 'The Roll-outer' – Through the support of top management, Jaren Krchnavi (co-author of this case study) was given the time it takes to communicate the platform internally through face-to-face meetings, webinars, creating widgets on the intranet, news releases, and, most recently, by starting a contest to gain more members and project contributions.
- Listen to the needs of 'The Workers' – The platform was slightly modified to take into consideration the needs of the employees in the Smart Grid Division.
- Search for 'The Supporters' – Motivate and empower those who support the platform to help it succeed.
- Convince 'The Naysayers' – There will always be people within an organisation who do not like change so it is important to be prepared to actively defend your ideas and project.

It would be nice to be able to report that we were able to celebrate the successful roll-out of the platform and then sit back and enjoy the benefits. Unfortunately, Web 2.0 platforms do not work that way. To keep the momentum going within the Smart Grid Division, References+ will continue to need community administering, further communication, further adaptations to the ever changing business requirements, and further management support. Thus there is no end, just the beginning of the next exciting chapter.

References+ application and content structure

The primary goal of References+ is to make the core business knowledge – and the associated knowledge holders – available more quickly within the company. From the outset, no attempt was made to provide a knowledge base that is ‘complete’ in scope and content. Instead, References+ is more of a social networking tool designed to connect employees across organisational, hierarchical, and geographic boundaries, and to stimulate direct communication. It is desirable that knowledge transfer be initiated in the IT application (e.g. by posting a query in a discussion forum) but that it continues in a bilateral communication channel (e-mail, phone, or face-to-face meeting). Figure 1 shows the principle of the social networking approach employed by References+.

The key components of the knowledge management platform are comprehensive functions to search posts by free-text queries and metadata,

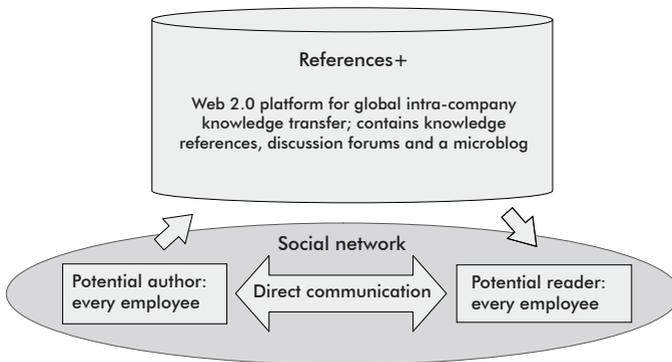


Figure 1: Principle of the social networking approach employed by References+: Once knowledge givers and takers have found each other in the application, they can bilaterally exchange this implicit knowledge.

to subscribe to new or modified contributions via email notifications and RSS feeds, as well as social networking features. The platform's structured content includes knowledge references, discussion forums, and micro blog postings, as described in the following:

Knowledge references

These are structured information objects containing multiple text, number, and metadata fields. Among other things, they describe customer projects, product and solution modules, services, internal process improvements, and lessons learned. Similar to customer reviews on the internet, each user can post feedback about a knowledge reference that is visible to all other readers. As was the case in the previous 'Com ShareNet' application,² the feedback contains an optional rating on a scale of 0 to 5 (depicted by the number of stars) in addition to a textual comment. This allows the community to comment on and rate the quality of the contributions.

Discussion forums

These allow users to exchange information asynchronously about technological or functional topics. For example, in the very popular Urgent Requests forum they can ask business-related questions about products, interfaces, compatibilities, customers, contacts etc. Due to their high priority, Urgent Requests from References+ can also be displayed in other intra-company community platforms such as *TechnoWeb*³ and *Community4Competence*,⁴ with users being able to specify on an individual basis if their requests should be forwarded or not. This increases the potential audience of such requests and the probability of receiving useful answers. These other systems use an RSS feed provided by References+ to import the relevant content.

Micro blogging

Micro blogging is similar to Twitter, Yammer, Socialcast, Chatter, or comparable tools. It supports open communication and social networking about topics relevant to the core business. An in-depth evaluation of this microblogging service can be found in the article 'Enterprise Microblogging for Advanced Knowledge Sharing: The References@BT Case Study'.⁵

Member pages

These pages can be customised by community members as desired. A member page is essentially similar to a profile page on other social networking platforms (such as LinkedIn). It displays the user's name, organisation, place of work, phone numbers, e-mail address, an optional 'About Me' text field, and an optional photo. Most user data is synchronised regularly with the Siemens employee directory, eliminating the need for manual updates. If desired, the 'About Me' field can be used to enter personal information relevant for the business, such as title, field of work, and expertise. In addition, the user's presence status from Microsoft Communicator (an instant messaging service

SIEMENS

Welcome → Johannes Müller
 SCD | GCD | SOC | SAL | Global Intranet

English | Contact | Print Page | Send Page

Home | Our Business | Customers & Markets | Workbench | Employees | Processes & Quality | About BT

References+ is the community platform focusing all colleagues in IC BT and IC LMV LV. You can find → 2418 knowledge references, → 7125 forum postings and → 5692 blog postings.

References+ → more

→ Light source for square readers AR6182-xx on 08 Jan 2010 by Jürgen Postepojan
 → Project Partner in Spain on 07 Jan 2010 by Jean-Pierre Pettou
 → Accurate people counting on 06 Jan 2010 by Christian Maag
 → Sinterco FS20 on 22 Dec 2009 by Akbar Syed

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 This post is meant for everybody working in the documentation groups. Be an ideal th... on 08 Jan 2010 by Ramesh Ramamurthy

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 → FM@BT Train the Trainer Sessions on 22 Dec 2009 by Oliver Moser
 → FM@Siemens Certification and Personnel Development on 22 Dec 2009 by Oliver Moser
 → Change Management Process for PMCT Roll-out on 22 Dec 2009 by Maurizio Pedrazzini

Give feedback or ask for help concerning this tool
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 Contribute anything, which starts you laughing

Latest Knowledge References → more

→ SES Value Package: Surveillance SiteQ (SolutionProduct) 安全安全 modified 07 Jan 2010 by Peter Siphout
 → Palacio de Justicia de Vitoria - Total Building Solution (Customer Project) created 05 Jan 2010 by Antonio Ruiz Racanero
 → PMCT - Project Management and Controlling Tool (Business Excellence Case) modified 05 Jan 2010 by Felix Meyer
 → Parador de Alcalá de Henares - Total Building Solution (Customer Project) created 04 Jan 2010 by Antonio Ruiz Racanero
 → German Parliament, Berlin - Maintenance of Voice Alarm Systems (Customer Project) created 04 Jan 2010 by Gero Arndt

Enter a new Knowledge Reference

What's new? → more

→ Contribution of a New Knowledge Reference modified 17 Feb 2012
 → RSS Feeds Providing Latest Contributions modified 10 Feb 2012
 → References@BT Becomes References+ modified 09 Feb 2012

Welcome Message by C.E.O.

References+ provides a platform for sharing and leveraging our knowledge and experience across geographic and organizational borders. By learning from each other, we can save valuable time, react faster to our customers' demands, provide better solution and service quality, and thus obtain a higher customer satisfaction. This will only work, if you make your local knowledge globally available by personally contributing your experiences and best practices into References+. Please take this opportunity and participate!

Johannes Milde
 C.E.O.
 Siemens Switzerland Ltd.
 Building Technologies Division

Your login as: ww002mullerj

© 2005-2012 Siemens Switzerland Ltd., Building Technologies Division - Johannes Müller
 The content of this intranet page is for internal use only, if not classified in a different way.
 Corporate Information | Privacy Policy | Terms of Use | Digital ID

Figure 2: References+ homepage with welcome message from the Division CEO to stimulate active platform use and the addition of posts.

used by Siemens) is shown as a colored sphere. When this icon is green, the user is logged into the company network and has performed an activity on his or her computer within the last few minutes.

The use of References+ is entirely voluntary; currently there are no business processes that force employees to use this service. To integrate the platform into the users' workflows, a number of measures were agreed upon within the company:

- Prominently placed welcome messages by the CEO of the Building Technologies Division and the CFO of the Smart Grid Division on the References+ homepage to stimulate the sharing of knowledge and the associated positive effects for the company;
- Community manager activities, such as individually encouraging employees to create or revise posts, adding contact information for problems and improvements, conducting training sessions, highlighting particularly active authors or particularly valuable contributions, addressing suitable multipliers, etc.;
- Regular communication through the References+ Newsflash, e-mailed to all community members every two to three months, and by publishing interesting news elsewhere on the intranet and in the employee magazine; and
- Incorporating posts on special topics into other intranet pages to reach users outside of References+ and to motivate them to contribute

Motivation and incentives

To increase the number of contributions and to enlarge the user community, several contests of limited duration were held as incentive measures in the initial phase after introducing References+. During a predetermined period of time, users were awarded RefCoins for adding new contributions. These were collected in the user's personal point account. The most active authors, i.e. those with the most RefCoins, were eligible to win prizes. These prizes, together with a certificate signed by the CEO, were handed out in person by the winner's immediate supervisor. Photos of users receiving their prizes were subsequently published on the intranet and in the employee magazine. The acknowledgement and appreciation from management, together with the

publication of the names of the winners, had a much greater motivating effect than simply giving out prizes would have had.

The last of these contests ended in September 2009. Apart from the recent Smart Grid contest in October 2012, no other extrinsic motivation and incentivising measures have been used since then.

Instead, more emphasis has been placed on intrinsic motivating factors⁶:

- Providing specific value added through high-quality content (first-hand knowledge) and special system features;
- Having fun while using the application;
- Composing answers based on the desire to help, and achieving visibility;
- Stronger focus on the community spirit; and
- Networking mechanisms similar to other established social media platforms.

Evaluation and performance measurement

Since the development of References+, many aspects have been evaluated repeatedly and as pragmatically as possible in order to measure the benefits of the platform and its contribution to the success of the company. To this end, efforts are ongoing to log access and posting statistics, conduct online user surveys to determine the subjectively perceived benefit of References+, and to interview users who are particularly active on the platform. Another important aspect is to document success stories for References+.

The latest user survey was conducted in September 2011. It focused primarily on the value added for the company resulting from the (re)use of information found in References+ during the previous 365 days. (For example, one question was: 'How much working time did you save in the previous 365 days by using information found in References+?'). A total of 1,479 community members responded to this survey. Their answers were aggregated for purposes of illustration. The values listed below are the accumulated estimates provided by the survey participants:

- 731 working days saved per year;
- €190,000 in costs saved per year (in addition to the working time);
- €5.3m additional revenue generated per year; and
- 361 newly acquired customers in the preceding year.

Assuming that a significantly higher number of people than the 1,479 survey participants actually use References+, the economic value added of this knowledge management initiative is likely to be much higher.

Conclusion – What can we learn from the use of References+?

As this case study has shown, using Web 2.0 platforms for knowledge management can generate significant benefit for companies. However, before this point is reached, many obstacles need to be overcome. The challenges presented by the introduction of such a solution should not be underestimated.

When the platform now known as References+ was introduced in 2005, it became evident that defining a clearly delineated business case was essential in attracting initial users to what is now a highly viral platform. The first recognised business case was to provide support for sales and project management teams by collecting reference projects and solution modules.

Over time, the content and functional scope of References+ gradually expanded to include discussion forums and micro-blogging. In essence, the platform started out as a smaller, more limited system and evolved from the bottom up.

In addition to adapting the platform to meet the growing community's requirements, success was also dependent on having a Community Manager who enhances and promotes the platform. The Community Manager must be able to maintain a high level of enthusiasm for knowledge sharing among employees by continuously motivating them to use the platform and encouraging them to create their own contributions.

About Siemens AG

Siemens AG is a global leader in electronics and electrical engineering, operating in the fields of industry, energy, and healthcare, as well as providing infrastructure solutions, primarily for cities and metropolitan areas. The company is the world's largest provider of environmental technologies. At the end of September 2012, Siemens had around 370,000 employees worldwide on the basis of continuing operations.⁷

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