

Knowledge Exchange by Social Networking in a Globally Acting Company

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Building Technologies Division
Zug, Switzerland

iTEC08 Conference
Darmstadt, Germany
November 6th-7th, 2008

All Siemens Sectors and Divisions

Building Technologies Division as Target Audience

SIEMENS

Target Audience
~ 34,000 employees

Industry

Industry
Automation

Industry
Solutions

Motion
Control

Mobility

Osram
(Lighting)

Building
Technologies

Energy

Fossil Power
Generation

Renewable
Energy

Oil & Gas

Service
Rotating
Equipment

Power
Transmission

Power
Distribution

Healthcare

Imaging & IT

Workflow &
Solutions

Diagnostics

The Application: References@BT ...

The screenshot shows the References@BT web application interface. At the top, there's a Siemens logo and a navigation bar. The main content area is titled 'References@BT' and includes a search bar, a list of 'Latest Urgent Requests', 'What's new?', 'Latest Knowledge References', and 'Latest Discussions'. A sidebar on the left contains links for 'References@BT Homepage', 'Latest Knowledge', 'Browse Knowledge', 'Search Knowledge', 'Search Customers', 'Search Members', 'Configure new Alert', 'R&S Feed', 'Enter a new Knowledge Reference', 'Discussion Forums', 'Urgent Requests', 'Search Postings', 'FS+SES Project Archive', 'Browse Archive', 'Search Archive', and 'My Settings'. The bottom of the page includes a footer with copyright information and a login field.

- is a web platform for the global exchange of business-related knowledge, experiences and best-practices,
- is a social networking tool, which networks colleagues and animates them to communicate to each other,
- is intended for internal use (by Siemens members) only and thus available within the Siemens intranet,
- contains knowledge references (customer projects, solution/service concepts, etc.) and suitable documents,
- contains discussion forums (Urgent Requests, Solution Talk, etc.),
- considers its users as global community (~ 5,300 members located in 73 countries) supporting each other.

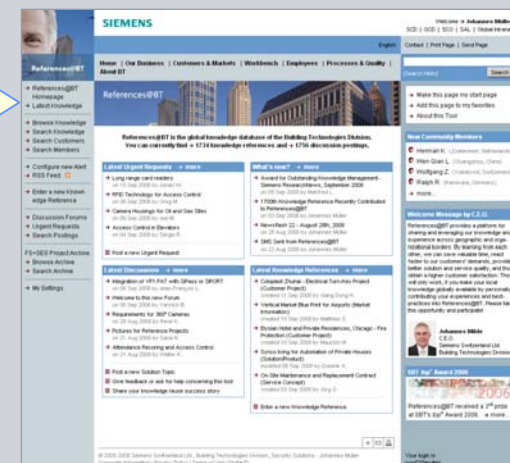
The Speaker's Responsibilities



Johannes Müller
Admin of References@BT

A lot of work and passion!

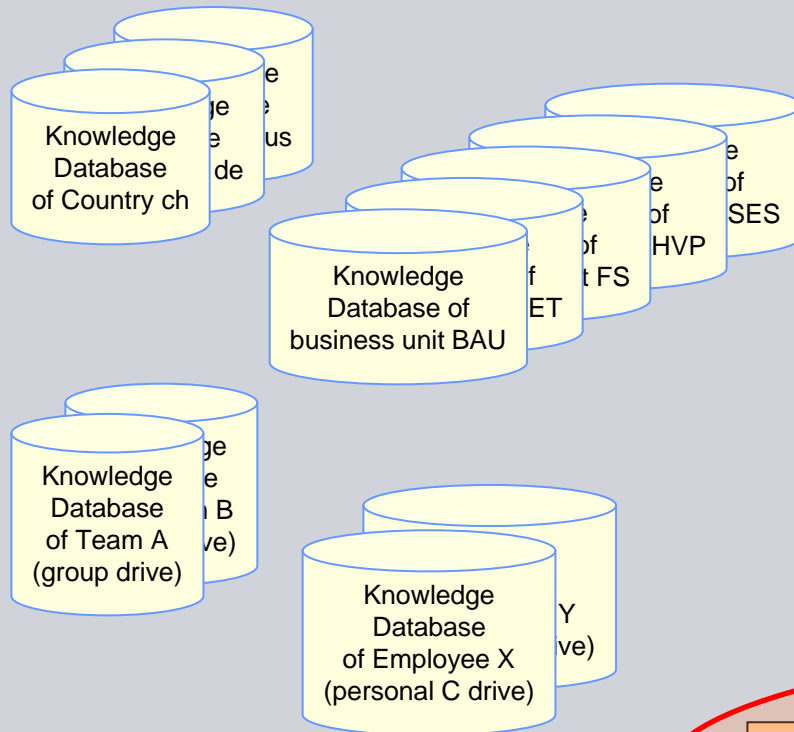
- **Application Management**
 - feature planning and definition
 - code programming (VBScript)
 - database design and maintenance
- **Content Management**
 - check new contributions
 - determination of the geographic position
 - uncover potential content
 - administer content structure and taxonomy
 - user data administration
- **Community Building**
 - community support ("Hotline")
 - frequent communication
 - incentive and reward system
 - presentation, training, lobbying, networking
- **General Knowledge Management (KM) Topics**
 - BT representative in the Siemens KM Community
 - networking with academic KM institutions



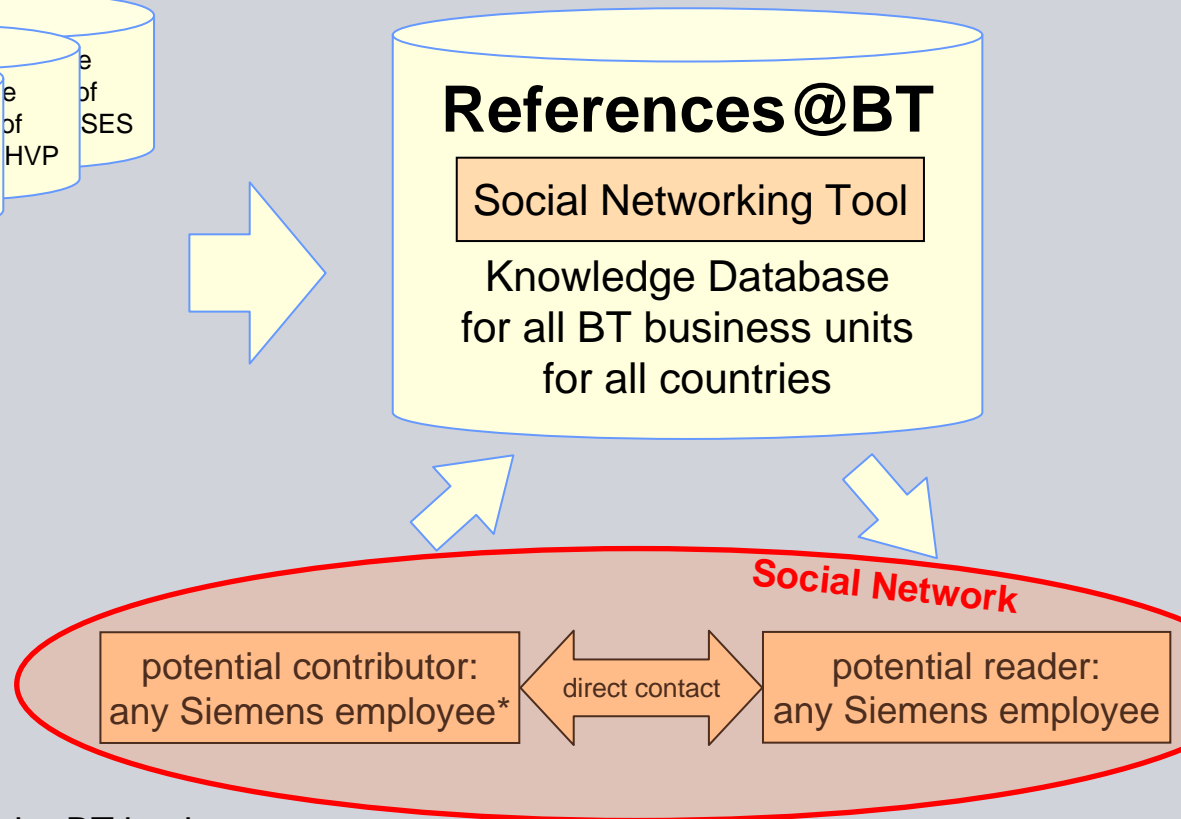
References@BT

Where do we want to go?

previous situation:



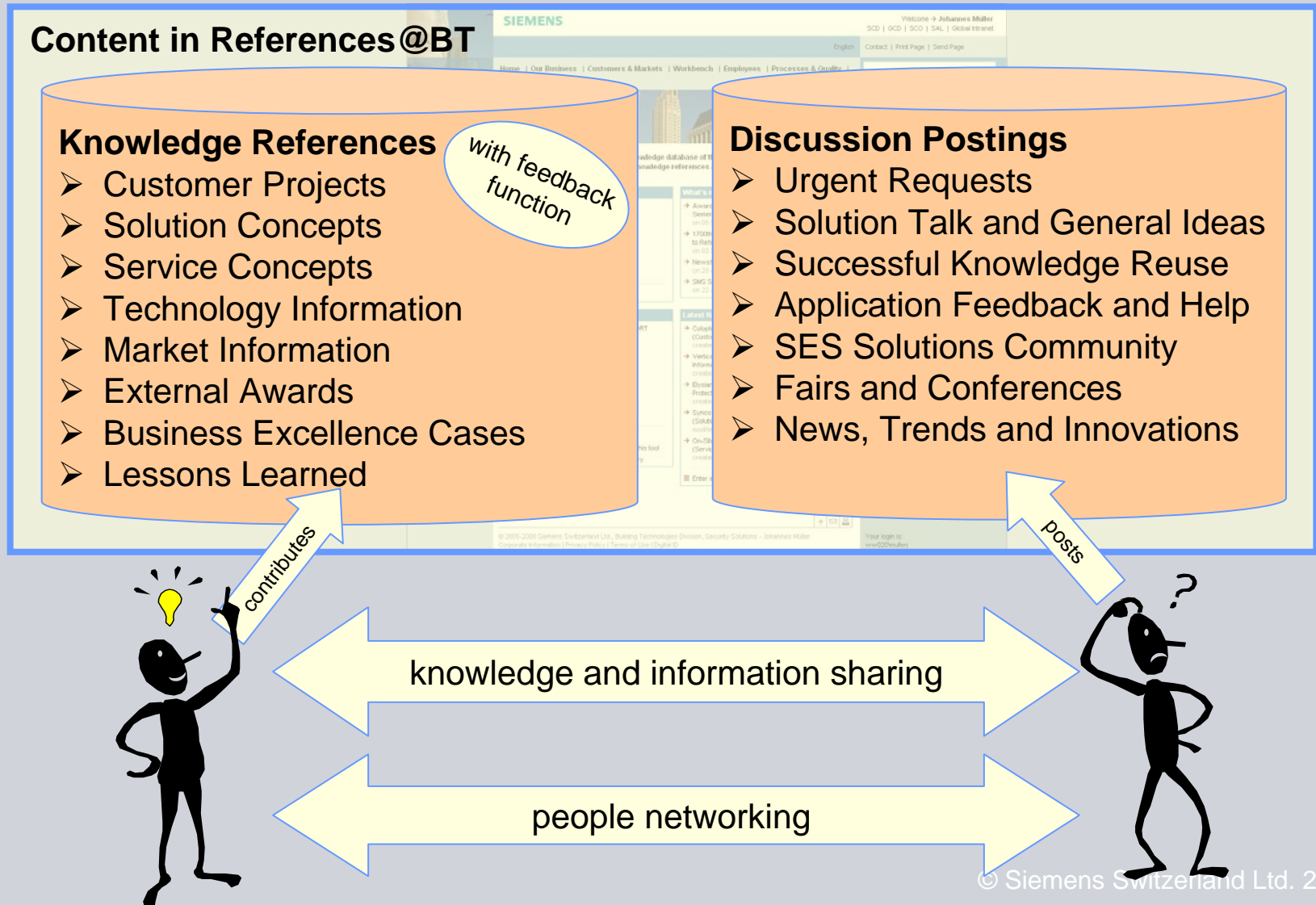
our intention:



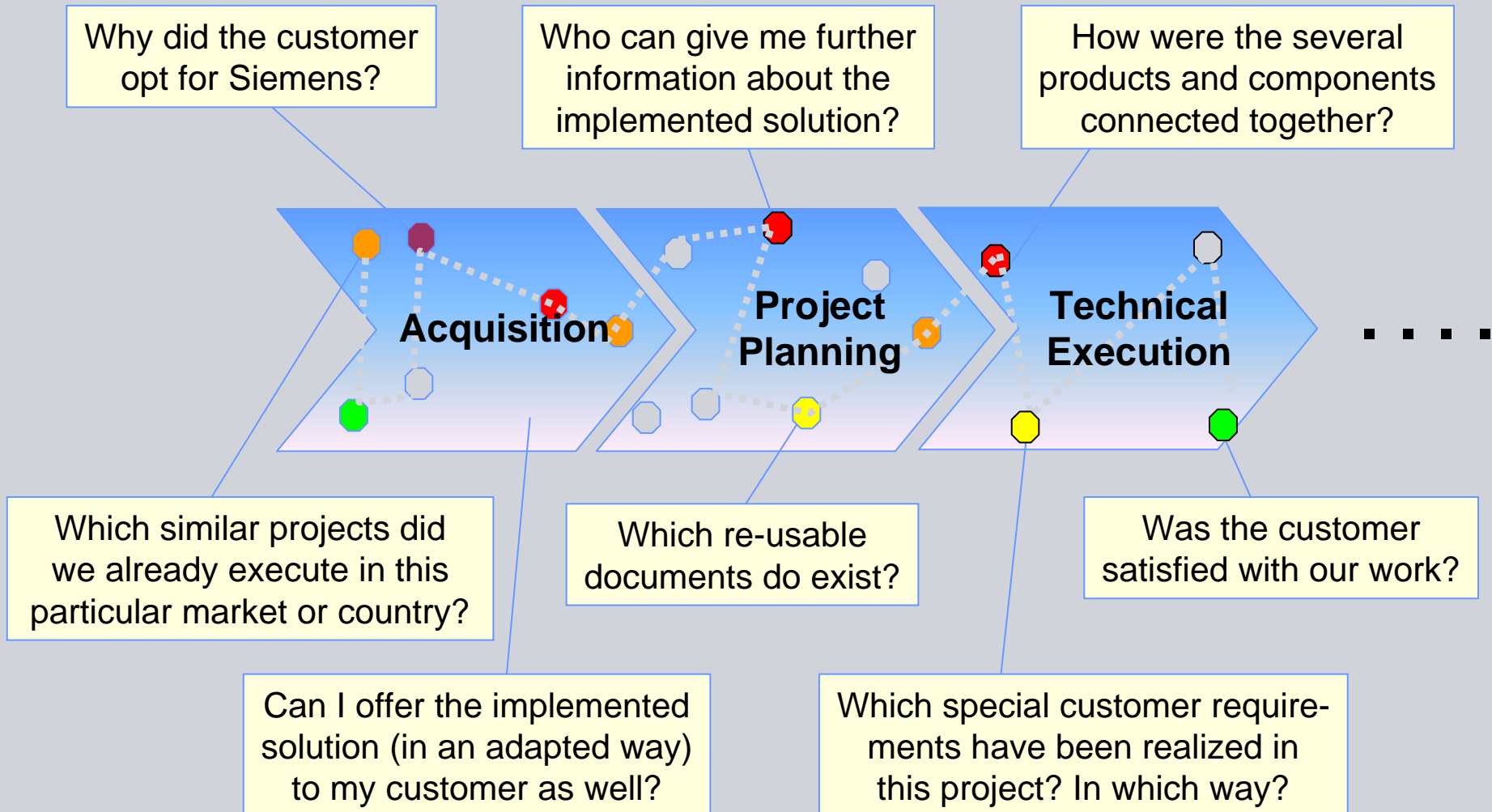
* if the contribution is related to the BT business

Content in References@BT

Networking both Knowledge and People

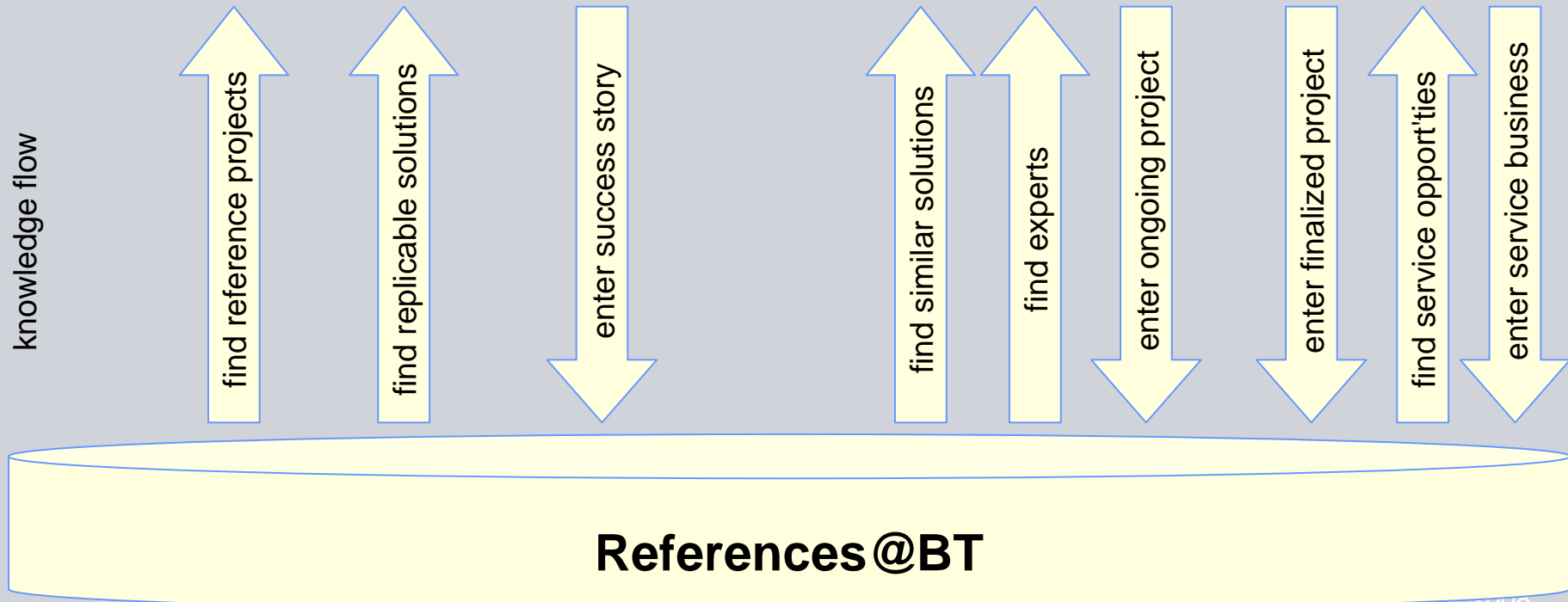
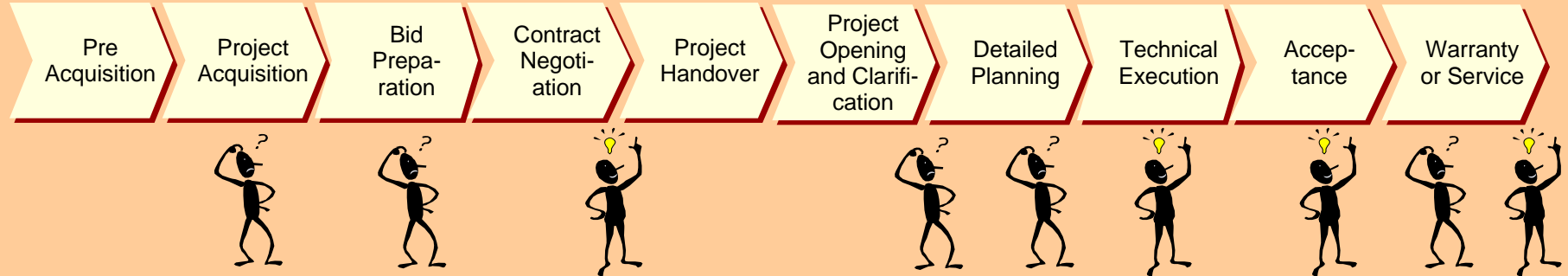


What's Interesting for a Reader of a Customer Project (Knowledge Reference)



Examples for Necessary Knowledge Transfer during the Customer Project Process

Project Phases according to PM@BT



How to Find a Knowledge Reference (1)

SIEMENS

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

English Contact | Print Page | Send Page

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

References@BT

→ References@BT Homepage
→ Latest Knowledge
→ **Search Knowledge**
→ Search Customers
→ Search Members

→ Configure new Alert
→ RSS Feed
→ Enter a new Knowledge Reference
→ Discussion Forums
→ Urgent Requests
→ Search Postings

FS+SES Project Archive
→ Browse Archive
→ Search Archive

→ My Settings

References@BT is the global knowledge database of the Building Technologies Division. You can currently find → 1734 knowledge references and → 1756 discussion postings.

Latest Urgent Requests → more

→ Long range card readers on 10 Sep 2008 by Johan W.
→ RFID Technology for Access Control on 06 Sep 2008 by Greg M.
→ Camera Housings for Oil and Gas Sites on 06 Sep 2008 by Joe M.
→ Access Control in Elevators on 04 Sep 2008 by Sérgio R.

Post a new Urgent Request

What's new? → more

→ Award for Outstanding Knowledge Management - Siemens ResearchNews, September 2008 on 05 Sep 2008 by Manfred L.
→ 1700th Knowledge Reference Recently Contributed to References@BT on 03 Sep 2008 by Johannes Müller
→ Newsflash 22 - August 28th, 2008 on 28 Aug 2008 by Johannes Müller
→ SMS Sent from References@BT on 22 Aug 2008 by Johannes Müller

Latest Knowledge References → more

→ Coloplast Zhuhi - Electrical Turn-Key Project (Customer Project) created 11 Sep 2008 by Xiang Dong H.
→ Vertical Market Blue Print for Airports (Market Information) created 10 Sep 2008 by Matthias S.
→ Elysian Hotel and Private Residences, Chicago - Fire Protection (Customer Project) created 10 Sep 2008 by Maurizio M.
→ Synco living for Automation of Private Houses (Solution/Product) modified 06 Sep 2008 by Dominik A.
→ On-Site Maintenance and Replacement Contract (Service Concept) created 03 Sep 2008 by Jörg G.

Enter a new Knowledge Reference

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References@BT

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→ Search Postings

FS+SES Project Archive
→ Browse Archive
→ Search Archive

→ My Settings

Search Knowledge References

Extended Search | Search non-English knowledge references

Reference Type: Customer Project (1456)
Discipline: Building Management System (395)
Building type / Vertical Market: all
Country: United States (154) | all states
Keyword: [?] info

List Contributions Clear

Hot Topics (What is interesting for other users?)
→ What's new? (new/modified within the last 14 days)
→ All Knowledge References (1668)
→ Search for Attachments
→ Search for Products
→ Search for Services

Other Knowledge Resources
→ SBT Monitor (competitor information)
→ SBT Wiki
→ iKnow (knowledge portal of BT U.S.)

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Your login is: www020müller

How to Find a Knowledge Reference (2)

SIEMENS

Welcome to Johannes Müller

SCD | GCD | SCO | SAL | Global Intranet

English

Contact | Print Page | Send Page

References@BT

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

→ References@BT Homepage

→ Latest Knowledge

→ Browse Knowledge

→ Search Knowledge

→ Search Customers

→ Search Members

→ Configure new Alert

→ RSS Feed

→ Enter a new Knowledge Reference

→ Discussion Forums

→ Urgent Requests

→ Search Postings

FS+SES Project Archive

→ Browse Archive

→ Search Archive

→ My Settings

List Knowledge References

Reference Type: Customer Project

Country: United States

Discipline: Building Management System

Status: can be forwarded or less restricted

View items: [modified] [created] within the last [7] [15] [30] [60] [90] [180] [360] [720] [1440] [all] days

Show: [all] [contributions related to modernization, renovation, and energy efficiency] [modernization] [renovation] [energy efficiency]

Sort by: [name] [country] [project value] [service value] [vertical market] [modernization] [renovation] [energy efficiency]

Display as: [list] [table]

Totally 17 knowledge references found.

Tahoe Center for Environmental Sciences - "Green" Building Automation

(Customer Project - Higher Education - United States - 2006)

This "green" building includes a sophisticated APOGEE® building automation system and additional environmentally friendly solutions. A cogeneration system that lowers energy consumption by two-thirds. (Value: US\$ 33,610,000)

Cuyahoga Metropolitan Housing, Cleveland - Performance Improvement

(Customer Project - Residential, Housing Society - United States - 2008)

Comprehensive rehabilitation of 208 scattered homes and 54 scattered town homes including new windows, new furnace and hot water tank, new lighting, water conservation devices and weatherization. Boiler replacement on seven CMHA sites, including... (Value: US\$ 33,610,000)

Willow School - Building Automation

(Customer Project - School, K-12 - United States - 2005)

The site originally contained an 1800's era house and barn. The house was converted into a school building and the barn became the mechanical room. Siemens BAS system is upgrading part of the school's curriculum to study how energy usage can be reduced... (Value: US\$ 500,000)

King County Elections Building - Wireless Building Automation

(Customer Project - Government, Public Administration - United States - 2007)

This project entailed a pneumatic to DDC upgrade for a three story, concrete building at King County International Airport (Boeing Field) in Seattle, WA. The project involved retrofitting controls on one rooftop air handling unit, 115 VAV Terminal ... (Value: US\$ 360,000)

Cruise Ship "The World" - Integration of Fidelio Cruise into Design Insight

(Customer Project - Ship - United States - 2007)

Fidelio Cruise Universal Interface (FCUI) to integrate Design Insight. Done via Citect API and a .NET component together with a SQL table to store data. (Value: US\$ 4,000)

Washington Nationals Baseball Stadium - Building Automation

(Customer Project - Sports Venue, Stadium, Arena - United States - 2008)

Siemens is installing multiple Mechanical Equipment Controllers for AHU's, chillers, VFD's, pumps and terminal units thru out the building. Insight Workstation along with 2 notebook PC will allow the customers to control and monitor the mechanical... (Value: US\$ 990,000)

Broad Run Water Reclamation Facility - Building Automation

(Customer Project - Water Treatment - United States - 2009)

Siemens has successfully completed a similar project at Alexandria Sanitation Authority. Same A&E firm (CH2M Hill) was awarded to design this facility. Siemens sales worked very closely with the principal engineer to implement what we learned from... (Value: US\$ 1,800,000)

New York Presbyterian Hospital - Building Automation

(Customer Project - Healthcare, Hospital - United States - 2004)

All of the hospital's critical systems multiple generators, mechanicals, critical operating room and isolation room equipment are integrated into Siemens' APOGEE system, giving the building staff the capability to see important diagnostic inform...

Time Warner Center - Building Automation

(Customer Project - Commercial Office - United States - 2003)

BMS system controls and monitors critical heating, ventilation and air-conditioning equipment and a chilled water plant that serves each of the center's tenants. Interface to the hotel management system allows the hotels chief engineer to view and ... (Value: US\$ 12,000,000)

745 Seventh Avenue, New York - Building Automation and Fire Safety

(Customer Project - Commercial Office - United States - 2002)

Siemens Building Management System used throughout the facility. The system responds to energy management routines, control and monitoring of HVAC systems and ensures proper ventilation. The data center critical environment is diverse and must be ... (Value: US\$ 5,000,000)

Times Square Tower - Building Automation and Fire Detection

(Customer Project - Commercial Office - United States - 2004)

Siemens worked closely as a Prime Contractor with the Construction Manager - Turner Construction throughout the project. System 600 APOGee Building Automation System is used throughout Times Square Tower to control and monitor critical equipment ...

View Geo Position

View Geo Position

Google Maps™

Google Earth™

The position can be displayed only for contributions with assigned geographic coordinates. For displaying the position in Google Earth™, you have to install this application locally on your PC.

Personal Subscription

Notify me of any Changes

You will receive a weekly e-mail with the latest contributions of this selection.

RSS Feed

It provides the latest 10 contributions of this selection for your feedreader.

Download

All contributions as CSV file

All contributions classified as "for internal use only" will not appear in the file.

Give Feedback

Give Feedback

View Geo Position

View Geo Position

Google Maps™

Google Earth™

Download

Create PowerPoint File

This creates a PowerPoint slide in the standard Siemens layout filled with the textual content from the database. Please consider that the resulting file needs some manual adaptation.

Site Picture

Site Picture

Customer Project: Tahoe Center for Environmental Sciences - "Green" Building Automation

Name

Reference Type

Customer Project

Site

Tahoe Center for Environmental Sciences, Incline Village, Nevada

Sierra Nevada College is a small liberal arts institution located on the northeast shore of Lake Tahoe in Incline Village, Nevada. The campus's Tahoe Center for Environmental Sciences opened its doors to students in August 2006 and houses a number of academic and research institutions, including: laboratories and a public education center for the University of California, Davis's Tahoe Environmental Research Center, the teaching laboratories and classrooms for Sierra Nevada College's Science Department, the Reno Academy for the Environment for the University of California, and office space for the Desert Research Institute.

Project Requirements

A Building Management System (BMS) was required for the Center's main energy systems.

- Solar water heating
- rainwater catchment,
- water filtration,
- co-generation/heat recovery,
- high-efficiency, condensing gas-fired hot-water boilers and evaporative cooling/humidification,
- thermal underground storage.

Solution/Service Description

This "green" building includes a sophisticated APOGEE® building automation system and additional environmentally friendly solutions.

A cogeneration system that lowers energy consumption by two-thirds and also reduces CO₂ emissions. In addition, integrated photovoltaic panels generate 30 kW of electricity. Natural sunlight provides pleasant lighting conditions in the interior of the building, with light shades up to nine meters wide breaking up the sun's rays and dispersing the light inside the building.

The building also provides suitable lighting. Whereas other buildings recirculate up to 85 percent of the air, the Tahoe Center for Environmental Sciences uses 100 percent fresh air. Filtered air from outside flows into the building through a large intake duct and then out again. And as soon as the carbon dioxide detectors measure elevated CO₂ levels, the building automation system starts running to draw in additional fresh air.

Customer Benefit

The Center was awarded LEED Platinum certification in 2007, having achieved a 60% energy savings over ASHRAE 90.1 and a 65% water savings over traditional automation systems. The innovative technologies and the environmentally friendly features in the building required an initial investment of approximately 7% more than standard construction costs. Yet, the Center will recoup the expense within 15 years of construction due to the durability of building materials and the significant energy and water savings. And, the cost savings will continue long into the future.

Discipline(s) and Size

- Building Management System
- Renewable Energy Systems

Status

[?] How to edit this Project?

Building Type / Vertical Market

University, Higher Education

Completion of Installation

2006

Customer

University of California

1 Shields Avenue, Davis, CA 95616, United States

Attached File(s)

tahoe-center-article-german.pdf (275 kByte)

tahoe-center-article.pdf (278 kByte)

tahoe-center-casesstudy.pdf (303 kByte)

Author

Rebecca Zopf, Erlangen, Germany

Contact Partner

Ari Kobi, Buffalo Grove IL, United States

Teri Vlasak, Buffalo Grove IL, United States

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November 6th+7th, 2008

References@BT, Joh

Example for 'Member Page': More than just Displaying Contact Data

The screenshot shows a Siemens member profile for Johannes Müller. The page includes a navigation bar with links like Home, Our Business, Customers & Markets, Workbench, Employees, Processes, and About BT. The profile section displays personal details such as Given Name (Johannes), Family Name (Müller), registration date (01 Feb 2005), last visit (11 Aug 2008), and location (Zug, Switzerland). It also shows contact information including phone numbers, fax, and email (j.mueller@siemens.com). A 'Send SMS' button is present. The profile mentions his role as Senior Manager Knowledge Management and his main task as Administration of References@BT. A section titled 'Experience in:' lists various technical skills. At the bottom, a link indicates he is the author of contact partner information, with statistics: 17 knowledge references, 6 feedbacks, and 137 postings. The page footer contains copyright information for Siemens Switzerland Ltd. and a login link.

Members at the same Location

Local Time

Send SMS

Portrait can be uploaded by the user voluntarily.


Personal Settings (visible on own page only)

Contact data imported from employee directory are always up-to-date.

'About me' text can be edited by the user voluntarily.

Link to Contributions

Example for Geographic Display in *Google Maps*: Customer Projects in the United States



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Welcome → **Johannes Müller**
SCD | GCD | SCO | SAL | Global Intranet

English

Contact | Print Page | Send Page

References@BT

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

Position of Sites according to Result List

→ References@BT Homepage
→ Latest Knowledge
→ Browse Knowledge
→ Search Knowledge
→ Search Customers
→ Search Members
→ Configure new Alert
→ RSS Feed
→ Enter a new Knowledge Reference
→ Discussion Forums
→ Urgent Requests
→ Search Postings
FS+SES Project Archive
→ Browse Archive
→ Search Archive
→ My Settings


[Search Hints] Search

→ Show Result List

Karte Satellit Hybrid

Tahoe Center for Environmental Sciences
Incline Village, NV, United States

Link to Project Description in References@BT



Reference Type: Customer Project
Country: United States

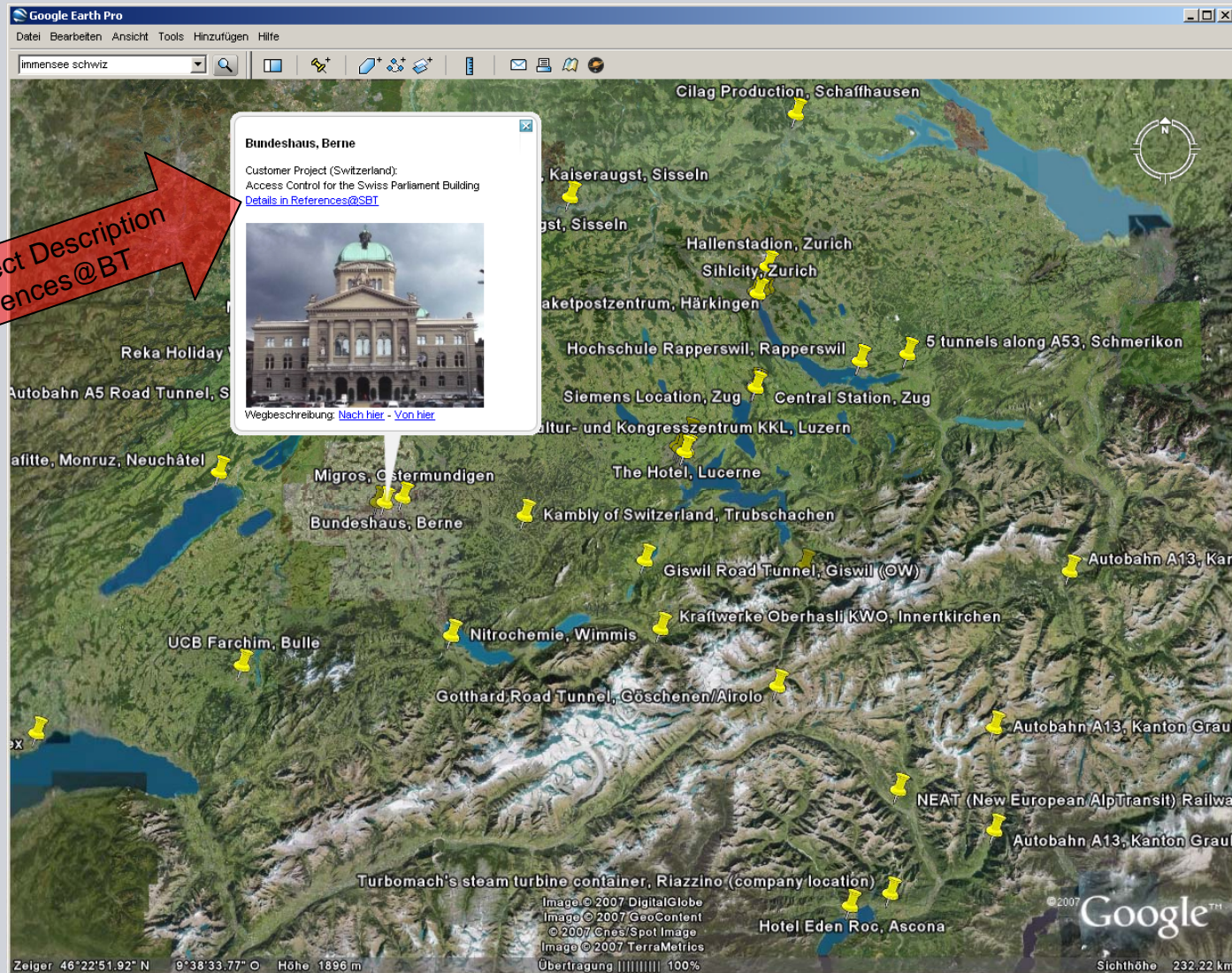
POWERED BY Google

500 Meilen
500 km

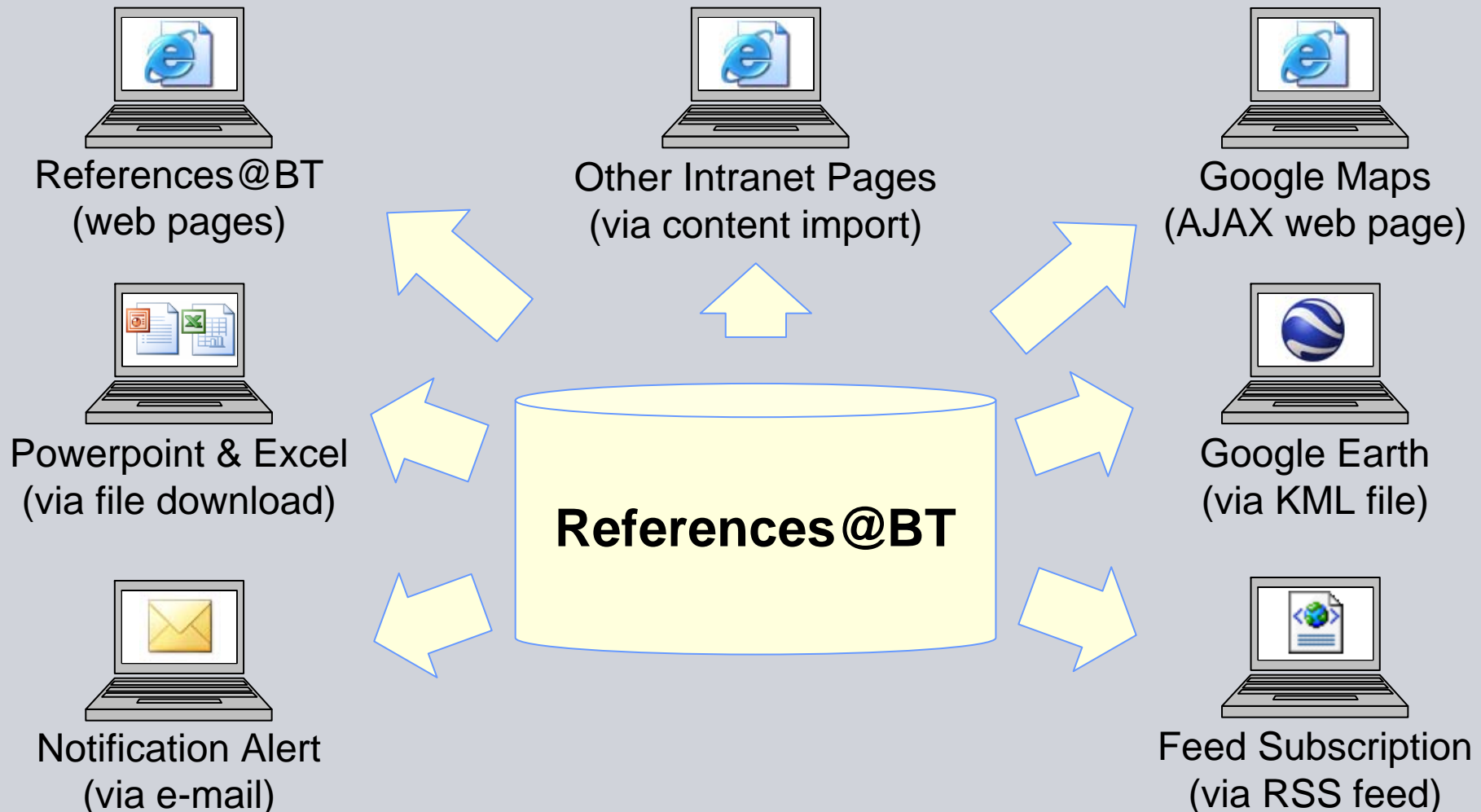
Kartendaten ©2008 LeadDog Consulting, Tele Atlas, Europa Technologies - Nutzungsbedingungen

Example for Geographic Display in *Google Earth*: Customer Projects in Switzerland

SIEMENS



Several Ways to Access the Content



How to Motivate the Authors to Contribute?

- Four temporary reward competitions have been performed until today:
 - Oct. 2005 - Jan. 2006, 4 months
 - June 2006 - Sep. 2006, 4 months
 - Jan. 2007 - July 2007, 7 months (announced beginning of March 2007)
 - Jan. 2008 - July 2008, 7 months (announced mid-February 2008)
- Awards handed over by BT top-management or regional management
- Frequent communication (intranet, employee magazine, etc.)
- Top-Management Support

The contribution activity during a period with incentive measure is about **1.5 times higher** compared to periods without incentive measure.

Long-term target: Knowledge exchange should be part of

- company culture,
- working routines and processes,
- business target agreements,
- annual bonus systems.

Statistics March – September 2008

	Mar 2008	Apr 2008	May 2008	Jun 2008	Jul 2008	Aug 2008	Sep 2008
page views	11,891	11,787	9,664	32,484	18,510	12,927	19,793
daily user authentications	2,729	2,661	2,277	6,509	4,834	3,698	4,503
authenticated users (different)	1,534	1,533	1,377	4,032	2,513	1,881	2,408
new user registrations	129	118	111	954	306	111	113
new knowledge references	23	23	28	31	60	22	59
new discussion postings	122	93	88	149	225	149	156

Total figures on October 6th, 2008:

1,754 knowledge references
 1,784 discussion postings
 5,251 registered community members
 located in 73 countries

Remark:

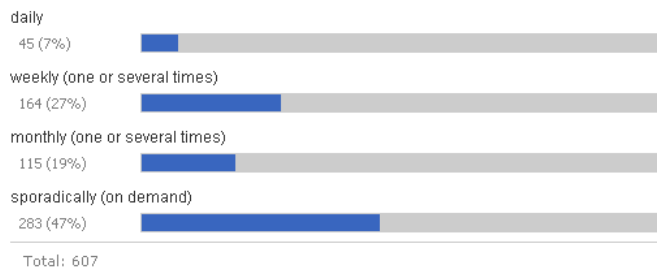
In mid-June, a promotion e-mail was sent to approx. 30,000 BT employees. This is the reason for this month's higher figures.

Some Selected User Feedbacks

- *I just want to thank you for getting this tool operational. This is going to be an extremely valuable tool and is something that we have needed for a long time (by a member of the BT marketing team, United States, October 2005).*
- *I think References@BT is a great idea! It will be particularly useful as we try and position cross-selling opportunities, and multi-business unit offerings to our customers (by a member of the Canadian BT management, October 2005).*
- *Big thanks to my colleague Thorsten for his information. I posted my question onto the discussion board and the following day had all the required information, including drawings and potential suppliers. Yesterday a problem, today a solution (by a British user, who quickly received a valuable answer on his urgent request from a colleague in Germany, September 2006).*
- *Sieht toll aus, unglaublich. Können Sie auch das Blaue vom Himmel runterprogrammieren? (by a very active Austrian user, who suggested a feature improvement, which was immediately implemented, January 2007).*

Use and Benefits according to the User Survey (September/October 2008)

2. How often do you use References@BT?

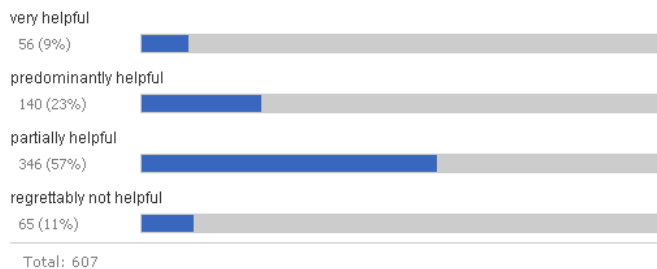


34% frequent users



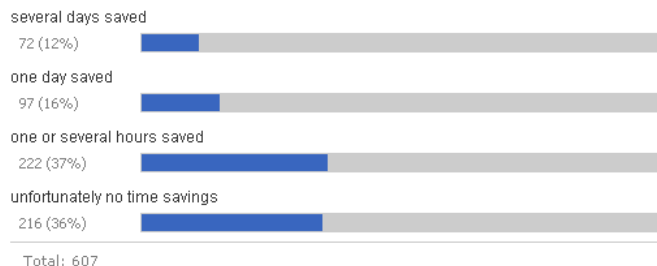
66% occasional users

8. Overall, how helpful is References@BT for your daily work?



more or less helpful for 89%

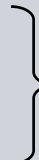
9. By (re-)using the information found in References@BT, how much working time did you save in the past 365 days (estimated)?



3 days

1 day

½ day



424 saved days per year
for 607 responders
(Ø 0.7 days per person per year)

Pro's and Con's of User Generated Content

Pro's* from subjective company perspective:

- Employees have the opportunity to publish personal experiences and implicit knowledge in an "uncensored" way. Thus the author him/herself can receive direct visibility.
- Implicit knowledge can be exchanged immediately over geographical and organizational borders and - after according adaptations - quickly re-used.
- The fast and direct knowledge flow helps to save precious time and to avoid additional work and already occurred mistakes.
- By commenting other authors' contributions, every community member can control and enhance the content quality.
- Intentional abuse is not usual, since every contribution clearly shows the author's name and contact data (and anonymous posting is not possible).

Con's* from subjective company perspective:

- Unverified opinions, which might differ from the "official" company position, can be published.
- Negative experiences, which might be undesirable for company-wide communication, can be published.
- There isn't any editorial release process, which is mandatory for the publication.
- The publication depends on the individual communication readiness and skills of the respective expert. (Are all experts willing and able to communicate their own know-how?)
- The language used in online media is more spontaneous and less formal. A post-processing is mostly necessary before the textual information can be forwarded.

* The allocation of the topics to Pro's and Con's can depend on the company culture.

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Lessons Learned

- Always focus on the user community (not on the application).
- Never stop to address, moderate and motivate the user community.
- Ensure continuous attention and support of the top-management.
- Provide a self-explanatory application with an intuitive usability and a state-of-the-art look-and-feel. Avoid bulky manuals and time-consuming trainings as preconditions for successful use.
- Provide multiple communication channels, e.g. several web entry points, discussion forums, RSS feeds, e-mail notification, download to Excel. Allow the users to interact with the application according to their personal preferences.
- Get contributions of colleagues directly involved with first-hand knowledge (e.g. execution of customer projects, implementation of solutions, carrying out of services). "Content that matters is king!"
- Let the users immediately benefit from the content found in the database. Make the content easy reusable in the users' daily work.

Publications about References@BT (formerly 'References@SBT')

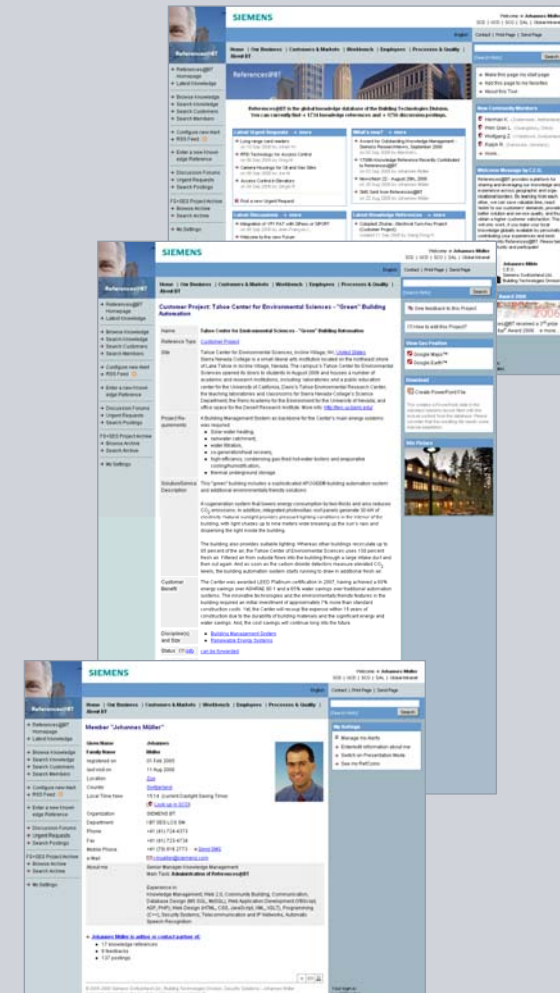


Global Exchange of Knowledge and Best-Practices in Siemens Building Technologies with 'References@SBT',
Author: Johannes Müller.

Proceedings of the '2007 International Conference on Knowledge Management' (Vienna, August 2007), World Scientific, ISBN-13: 978-981-277-058-5, pp. 55-64
(see: <http://www.mueller24.info/pub/07mue1.php>).

References@SBT – Globaler Wissensaustausch durch 'Social Networking' bei Siemens Building Technologies
(in German), Author: Johannes Müller.

Proceedings of the KnowTech 2007 (Frankfurt am Main, November 2007), ISBN-10: 3-88260-077-2, pp. 349-357
(see : <http://www.mueller24.info/pub/07mue2.php>).



Contact for Questions and Feedback

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