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# Two Corporate Wiki Applications for Process Improvement

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**Abstract**

This work describes two deployments of wikis in a Brazilian mining company, in order to improve work process in a collaborative way. In the first case, a wiki was developed to replace a glossary as part of engineering standardization. In the second case, the purpose was to improve scripts used by help-desk attendants in a Shared Services Center (SSC). We found that, despite been a powerful tool, the deployment of a wiki needs a well defined target aligned to the strategy, a champion, good initial content, and constant training.

**Author Keywords**

Knowledge management; corporate wiki; glossary; help-desk; Vale.

**Introduction**

The use of corporate wikis is an under-explored subject. Although wikis are the subject of nearly 800 articles in first line journals between 2002 and 2012 (SCOPUS, 2012), the main focus of these is on learning and social networks. The use of wikis as a knowledge management (KM) tool within enterprises, aiming to add value to business processes, is not well documented.

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## Vale S/A

**Overview:** Vale is the second largest metals and mining company and one of the largest publicly traded companies in the world. Vale has a market capitalization of around US\$ 129 billion, with approximately 420,000 shareholders from all continents.

**Mission:** To transform natural resources into prosperity and sustainable development.

**Products:** Iron ore, coal, nickel, copper, fertilizers, energy, steel, and logistics.

**Presence:** Headquartered in Brazil, it operates in 38 countries and directly employs more than 126,000 people, as well as another 50,000 working on our ongoing projects.

Wikis were first implemented in 1995, by Ward Cunningham, in order to replace static Web pages by dynamic ones that could be edited online. Wikis become well know after the introduction of Wikipedia in 2001 (TAFT, 2006). Eleven years later, Wikipedia has become a major example of wiki power.

This work aims to present two wikis developed in 2010 and 2011 at the Brazilian mining company, Vale.

### Corporate Wikis

Wikis are used by many enterprises and corporations as part of Knowledge Management or collaboration. In a corporate environment they are usually more controlled than Wikipedia, and are often focused on productivity improvement. The main characteristics are often controlled access to its content (VERVILLE et al., 2011), and the codification of dispersed content based on employees experience (LYKOURNTZOU et al. 2010).

The challenges are often a lack of strategic alignment and a well defined problem the wiki is supposed to solve (STANDING and KINITI, 2011); a spreading of wikis and increasingly outdated content; and low levels of (voluntary) participation (DENCHEVA et al., 2009).

The advantages for companies which use wikis are improving collaboration in workflows, reuse of knowledge (MAJCHRZAK et al., 2006), and the potencial creation of competitive advantage (LYKOURNTZOU et al., 2010).

#### *Wikis at Vale S/A*

Since 2009, with the SharePoint 2007 deployment, Vale has an effective technological platform for collaboration and content management, and for communities of

practice, blogs and wikis. Several areas within the business began to use these tools in an uncontrolled way, beginning a spontaneous learning process.

Wikis were applied for many tasks, such as project management, acronym glossaries, document writing, procedure writing, and maintenance of help-desk scripts. These last two are described here as experiments in the application of a wiki in a corporate environment.

### Case 1 – Capital Project Glossary

Vale Capital Project Management is responsible for creating and maintaining a set of technical documents and models called Engineering Standardization System (ESS), containing 1,400 procedures and guides. Among these documents is one called "Glossary of Terms and Acronyms for Project Implementation", known as GU-E-400. The purpose of this document is to explain the terms present in the other ESS documents.

It was very difficult to keep such a glossary updated. At the time of the study, the document contained 322 terms and 80 acronyms covering 11 fields of knowledge, and was subject to a high number of requests for corrections and inclusions. Despite the high number of requests, the glossary had only been reviewed and updated three times between 2006 and 2011. It lacked terms employed in technical models and documents, superseded terms terms were still in the glossary; and technical models and documents began to contain divergent definitions. This factor decreased employees' trust in the glossary content.

To change this scenario, it was decided to look for a new tool. Three alternatives were compared: keep the





**Figure 3.** Scripts were organized in network folders (VALE, 2012)

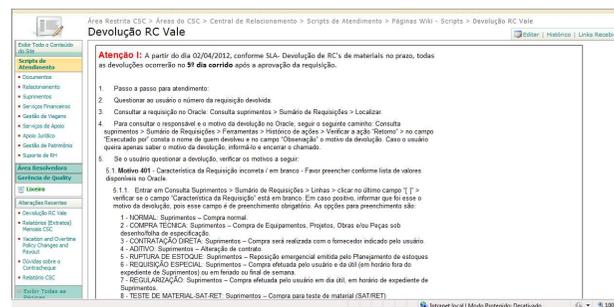
### SSC in numbers

- 1147 scripts
- 750 shared files
- 104 employees
- 25 macro-process

At the time, help centre scripts were made available as files stored in network folders (Figure 3). But there were two problems: the 104 attendants needed to remember the place of the script in order to retrieve the information required by the client; and it was difficult to update a script while someone else was using it. The solution devised was the use of wikis.

All stakeholders were interviewed (Center supervisors, attendants, clients, and specialists) to help the wiki design. The platform chosen was SharePoint, the same used for the SSC Portal, due to its native integration with MS Office and MS Outlook (e-mail). The design included some features such as notices, sorting (by process and client), and last script updates. A workflow for script approval was added before issue.

The main results of the script wiki were the decrease of e-mail exchange, more control on the access to scripts; and 35% improvement in the use of information tools (scripts, alignment e-mails, portals, etc.).



**Figure 4.** Script in a wiki format (VALE, 2012)

### Conclusion

Wikis are very useful for corporations due to their ease of use, availability, low complexity, and low implementation time. The flexibility of such tool allows several uses, helping spread collaboration practice, and fostering knowledge sharing. Both cases described here display positive results in a moderate collaboration situation (glossary) and in an intense one (help center).

It is important to highlight the need of stakeholders' commitment since the beginning, and to have a well defined purpose or problem to solve with the wiki. This was the case with both of these examples.

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