

## How knowledge management is supporting Brazilian internationalisation

*Vale Mining's achievements would be impressive even for a multinational company in a developed country. They are phenomenal for a former government-owned company in Latin America that became private in 1998. Published at Inside Knowledge Magazine, september 2008.*

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Vale (formerly known as Companhia Vale do Rio Doce and pronounced "Vah-lee") is Brazil's largest privately held company with a market cap of US \$148bn (March, 2008) and revenues of US \$33.1bn (2007). For the last few years Vale has expanded at an incredible rate, transitioning from an iron ore exporter to a truly global diversified mining company.

After acquiring several companies – like Inco, a Canadian global player – Vale's businesses now include nickel, aluminium, copper, manganese and ferroalloys, besides iron ore and pellets. With operations in more than 30 countries, Vale made its way up from position 446 among the 500 largest companies in the world by market cap in 2002 to become the 24th biggest global player in 2008 (Fortune 500 & Bloomberg) and number one in total shareholder return (Bloomberg).

### HOW DID THEY DO IT?

Behind all these numbers, the heavyweight Brazilian global player is driven by people who face some significant challenges related to internationalisation as well as internal growth, such as:

- How to capture and disseminate knowledge between regions in a country with the dimensions of a continent, like Brazil?

- How to expand globally and make sure that the processes are being integrated efficiently?
- How to integrate new companies and hundreds of new employees everyday into the workforce and maintain the core cultural traces?
- How to deal with the growing complexity of work due to the growing number of simultaneous challenges, projects and interfaces?

In short: how to develop – in the company's own words – a "way of working and learning together" in a faster and more effective fashion?

### KNOWLEDGE MANAGEMENT AT VALE – THE GENESIS

The need for managing knowledge is not new at Vale. Even before the company began its privatisation and internationalisation process more than a decade ago, formal education processes – in the traditional training format – and informal learning initiatives – such as technical committees and taskforces – were supported to foster knowledge sharing and improve processes and results.

But with the new standards and challenges that Vale began to face after privatisation, knowledge management evolved from being an 'issue' to becoming a *priority*.



## Even before starting its accelerated internationalisation, Vale already faced a similar challenge.

The first strong sign of this evolution was the creation in 2003 of Valer, the corporate university of Vale. Valer owes its name to a play on words in Portuguese, mixing the meaning of the verb for 'creating value' or 'worth' to the name of the firm. This little pun is an eloquent expression of how Vale considers knowledge as a core element of its businesses.

The evolution of Valer brought the basis for better knowledge sharing founded on some key movements:

- Integration of education strategies and initiatives. With the creation of Valer, all the decentralised traditional training initiatives became integrated;
- New methods and media for education programmes. Employees could count on e-learning programmes that allowed self-instruction in technical skills and operational tasks;
- Participation of experts in the education process. For the first time in the company's history, experts came together from all units to elaborate the development maps and the technical tracks by which all the workforce should develop technical competencies and specialised skills;
- Multiplication of education agents. The previously existing technical instructors – with no education expertise – were assigned to become the knowledge multipliers of the technical tracks, and now they count on a specific training programme that made 'educators' out of them, a programme called 'educators from the railway'.\*

Initiatives like these, among others, opened the path to change how the employees dealt with knowledge. But things really began to happen when the new education programmes met business technical groups practices.

### **THE REGIONAL CHALLENGE: EDUCATION VS. LEARNING**

Even before starting its accelerated internationalisation, Vale already faced a similar challenge, namely integrating practice and promoting the flow of knowledge within and between regional units.

With facilities located in more than 30 cities in all regions of Brazil, it was not uncommon to hear surprise when describing some innovative solution that actually had been used for years in other regions; or to see managers complaining about simultaneous – and expensive – efforts being made to solve the same technical problem.

In that context, the 'educators from the railway' were then great knowledge disseminators, contributing to reducing the impact in the market of the lack of good specialised training. But whenever some of them had the opportunity to meet in one of the units, they instinctively tried to learn something from each other, discussing the challenges and experiences related to that new role of training people inside and outside the classrooms.

That was the flame that inspired the first structured knowledge management initiative at Vale: the

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creation of a community of practice dedicated to the 'educators from the railway' challenges. With a deep exploration of the educators' daily work and interaction opportunities, developed by a specialised consulting firm, Valer corporate university could decide that a community of practice – supported by face-to-face meetings and a virtual space – was the way to optimise knowledge sharing and creation amongst these professionals.

A pilot project was led by Valer, setting the standards for new communities of practice. With strong involvement in the key definitions of the community and frequent on-line and face-to-face interactions, participants not only played important roles in self-organisation of the discussions but helped bring out the results that confirmed the effectiveness of the method. In less than a year of activities, the 'educators from the railway' community improved quality of technical training and had positive contribution to productivity and safety indicators.

## THE GLOBAL CHALLENGE

The learning from this experience was one of the elements that stimulated Vale to adopt a more structured approach to KM. But it was not the only one. The year of 2007 brought a new impulse for the internationalisation of Vale: the acquisition of Canadian Inco. With a single movement, Vale became the second biggest player in the mining market and entered some new businesses.

The challenges are as big as the achievements: integrating key processes worldwide; disseminating key elements of organisational culture; optimising the use of knowledge to leverage excellence; and performance are only some of them. With internationalisation, structuring knowledge management became more important than ever. The strategic approach for that was planned in

three building stages: direction, foundations and evolution.

## A CLEAR DIRECTION

The challenge of managing knowledge in a structured form was faced with a clear sense of purpose at Vale. When managers in the front line of KM, education, IT and strategic planning teamed up to define the basis of KM strategy for the firm, they had a solid starting point.

They knew Vale was a big company with people who knew a lot about the mining business and operations. They knew it was a fast-growing company. They knew education programmes were part of daily work in every corner of the organisation. And they knew people at Vale were naturally relationship-oriented, working and learning with each other on a local basis. But this was not necessarily true in all units abroad. That helped them to establish some key drivers:

- Knowledge dissemination – considering the knowledge management cycle in which knowledge is created or identified, organised, shared and disseminated, and applied, the dissemination process was considered a priority for the first steps;
- Collaborative learning – approaching knowledge as an essential element of work and learning as an ongoing collaborative process is key in Vale's culture;
- Business orientation – aiming to contribute to the performance of current businesses, at first, and to foster business improvement and innovation in a more mature stage. KM at Vale is strongly oriented towards business results;
- Global mindset – "Vale is not a multinational company: it's a global company". Starting from this statement, KM is oriented to foster knowledge sharing, collaboration and organisational learning on a global basis, balancing local and international interaction.



## With internationalisation, structuring knowledge management became more important than ever.

### BUILDING THE FOUNDATIONS

The adoption of a structured approach for knowledge is not so easy even for companies already concerned about its importance. Besides, as in many Latin-American companies in general, the influence of personal interaction and relationships over the effectiveness of operational processes at Vale is significant. This cultural trace can be extremely useful in some contexts, but it means a lot of work when it comes to organising interaction practices and creating new ones – especially on an international basis.

Taking this in consideration, Vale adopted some simple but effective initiatives:

- Dissemination of KM concepts, methods and culture. Realising the growing importance of knowledge in our daily work is easy, but knowing how to use it in a better way is not so obvious. Aiming to create a fertile ground for KM initiatives, Vale started a series of meetings with business and operations managers, aiming to identify knowledge needs and to disseminate basic concepts about KM. At the same time, a whole new site on the intranet was developed to offer a more consistent view of the subject – including articles and references – as well as showing KM-related initiatives and practices already existing in the company. These ‘seeds’ were extremely useful in aligning concepts and expectations around KM issues and helped bring more mature demands from all areas of the organisation.
- Communities of practice and collaboration groups. Collaborative learning rapidly emerged as the strongest way to build, share and disseminate knowledge at Vale. After a pilot project, the team defined specific criteria to prioritise issues and subjects. So, it was possible to address process-specific themes that deserved more ‘critical mass’ before dissemination – and count on collaboration groups for exploration – and, on the other hand, what issues should be explored by communities of practice.
- Expert locators. One of the dreams of Vale’s experts was to connect to other experts – in the same or in related areas – to exchange ideas, experiences, cases and practices. Yellow-pages-like search engines are being implemented to facilitate this interaction.
- KM embedded in education processes. Learning and development programmes were already widespread at Vale and represented a natural opportunity for every professional interested in learning and sharing knowledge. What the KM team did was to identify existing opportunities in education processes for better knowledge organisation and dissemination, and to create specific practices that allowed business-oriented continued interaction and sharing between participants, even after education cycles.
- ‘Valer everywhere’. The goal of having Valer, the corporate university, in each and every unit, was synthesised in this expression. The creation of Valer Intelligence Centre, along with a new education management model and with some education packages, are some of the initiatives

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Vale started to accelerate globalisation of education processes.

- Global committees. Almost spontaneously, many process owners started to team up abroad to face the integration challenge. Combining face-to-face meetings and virtual collaboration spaces, the committees started not only process but also culture integration, rapidly exchanging practices and building significant knowledge for the company.
- Institutionalisation of KM. Along the way of building the first KM initiatives and projects, the definition of key responsibilities and processes were taken seriously by senior management. The formalisation of a KM position at Vale contributed to the recognition of KM as a relevant issue for the company.

But, of course, there are still some barriers to overcome. And one of the biggest ones is the idiom barrier. A significant amount of Vale's employees – and intellectual capital – is located in Brazil, but around 40 per cent live and work in other countries on all continents. What should be the language for all these people? How can we integrate information and technology platforms and systems?

English was adopted as the official language for top management level; the global communities and committees already used this idiom on a regular basis. But when it comes to regional teams and technical experts, a common idiom is still an exception. And that's a challenge yet to be solved.

## LEVERAGING THE POTENTIAL OF CoPs

Knowing that 'collaborative learning' was seen as the best way of creating conditions for knowledge sharing and building, Vale's business and KM leaders made their bets on communities of practice and collaboration groups. And it is working quite well. Key strategic subjects were selected, as well as specific technical issues, and pilot-projects were implemented.

Within the last year, six communities – two of them global – were created and monitored, and two more are under development. Involving around 500 professionals until May 2008, the dynamics created in these groups generated more than 1,300 interactions around key issues – simple accesses or files sharing not included. In this period, 811 discussions were held and 167 documents were shared. And many of these interactions would never have happened if it were not for the opportunity of having all these people looking aside for a while and exchanging some ideas – online and in the "real world".

This buzz certainly pleased the HR professionals: people from different regions and countries began to exchange information and experiences; many employees became more aware of the importance of self-development and training; and in many cases the opportunity of interacting with different groups and being recognised by their knowledge helped boost morale. But the 'business guys' are even happier. New challenges are being identified – and faced – faster, involving more experienced professionals than ever.

Some groups are more engaged in sharing practices that have already worked, hoping to see their work recognized and generating more value – or even being tested in different contexts. More and more professionals involved in operational tasks are increasingly seeking answers for their technical questions and proactively consulting colleagues from other regions to anticipate pitfalls and capture good practices before starting a new project.

And the simple exchange of documents, templates, articles and valuable contacts or references is making many of them real enthusiasts of knowledge sharing.

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## EVOLUTION: WHAT'S NEXT

Knowledge management at Vale does not just live in communities of practice and collaboration groups. A whole range of methods and practices is being developed and adopted so fast that the KM leaders can hardly follow the rhythm. But this is the challenge they were looking for and was being strongly demanded by the business leaders.

For facing this challenge and bringing increasingly relevant contributions to the organisation, a series of new methods are being piloted: knowledge transfer for professionals in career transition; good practices programmes; ideas managing initiatives; and knowledge innovation projects, amongst others. Knowledge management drivers for the future are clearly set, all of them with a global approach:

- Developing KM capabilities and skills – knowledge management must be more and more integrated to business processes, and not 'something that HR fellows can help us on'. This means being integrated in organisational and business strategy, and counting on competencies in each and every area and process;
- Contributing to the performance of current businesses – KM processes must be built from the understanding of business drivers and needs, and establish knowledge drivers for fostering business performance;
- Foster business improvement and innovation – in a more mature stage, KM must be able not only to improve existing performance, but to allow the organisation to learn from business environment, identify opportunities and develop new capabilities for facing them.

In a context where competition involves big players from developed countries, it's no small challenge. But neither is Vale's appetite for learning – and growing.

Internal education programme targeted to professionals that actuate as instructors in the company's railways operations. The programme aims to develop teaching competencies for the actuation of the instructors, and gave birth to a community of practice for knowledge and experiences exchange.

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