



EMCC case studies

Change in the knowledge-intensive business services sector: Mandriva

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Company facts

Mandriva is the only European-based Global Linux computer operating system editor. The French company edits and manages the Mandriva Linux System, recognised as being one of the most complete and easiest to use of the Linux operating systems. The company offers a complete range of software products and services to individuals in over 150 countries through dedicated distribution links and an online shop – Mandrivastore.com.

The company, originally known as Mandrakesoft, was set up in 1998 when Linux was starting to gain user influence worldwide. It was formed by three founding directors, Jacques Le Marois, Gaël Duval and Frédéric Bastok, all of whom had considerable experience both within the software sector and in the Linux community. They set up the company in response to the perceived growing need for an effective distribution, installation and availability of user-friendly services for Linux. From this point on, Mandriva developed rapidly and has steadily increased its range of services and products.

Mandriva is based in Paris and has a current annual turnover of €5.45 million. The company employs about 130 people in France, Brazil and the USA, with 50 people employed in the Paris office and almost the same number of people in Brazil, following an acquisition of the Brazilian company Connectiva in 2005. It sees major business opportunities in Brazil, Russia, India and China, collectively known as the BRIC countries, and recognises strong potential for joint ventures in those countries. These joint ventures are part of the company's global strategy for virtual business and the promotion of Mandriva's interests (and that of the Linux community), as well as increasing business efficiency.

Text Box 1: *The Linux system and community*

Linux, also known as GNU/Linux, is a Unix-like computer operating system (OS). It is one of the most prominent examples of open source development and free software; unlike proprietary operating systems such as Microsoft Windows or Apple Mac OS, all of its underlying source code is available to the public to freely use, modify, and redistribute it. Small and medium-sized enterprises (SMEs) currently represent the largest proportion within the Linux community, which embraces an important number of users, customers, contributors, distributors, sellers and promoters worldwide. Thousands of people contribute to the development of software packages globally. Linux has its own philosophy and values and forms a dynamic online community.

In recent years, Linux has gained the support of major corporations such as IBM, Sun Microsystems, Hewlett-Packard and Novell by being used in servers; meanwhile, Linux is also gaining popularity in the desktop market. It is currently used in systems ranging from supercomputers to mobile phones. People who advocate for Linux as well as analysts attribute its success to its low cost, security, reliability and freedom from vendor lock-in. Other advantages include its user-friendliness and its simplicity in terms of packages and services available to the consumer and user. Distributions are created for many different purposes, including computer architecture support, localisation for a specific region or language, real-time applications and embedded systems; many deliberately include free software only in their software packages.

Mandriva and the Linux community

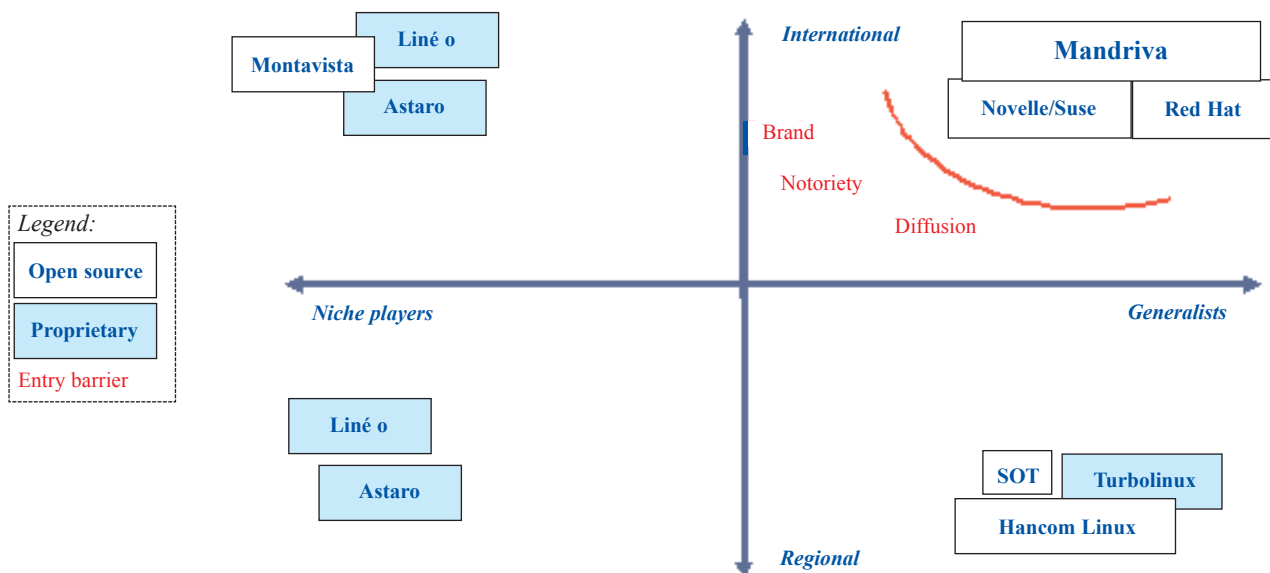
The 'General Public License' (GPL) endorsed by Linux allows Mandriva to customise its products and work on its own terms but also necessitates providing added value for the Linux community. Mandriva's membership of the Linux community means that a large part of research and development (R&D) is undertaken by the community as a whole. The company therefore shares the R&D budget with the rest of the community, which amounts to over one million US dollars. Like thousands of SMEs and individual users worldwide, Mandriva contributes to the development of software packages for the Linux community. As compatibility with other IT systems and hardware is vital for the company's

ability to sell products across the network and to break into new markets, managing the Linux network is thus of crucial importance.

It is however necessary to balance a sustainable business model with the needs of the Linux community. The source code of the operating system is freely available to users but Mandriva considers that its packages and services should be charged for while complying with the GPL rules. Mandriva is a private company with responsibility to its shareholders to increase the value of the company and pay its employees. However, it also seeks to give back added value to the Linux community through the joint development of new software products and promoting the Linux system among potential new clients, both corporate and individual users.

Mandriva’s management admits that although disagreements arise, in general this balance works; the company’s staff share this view. Employees are generally very enthusiastic about working with open source development and free software, and feel a strong sense of solidarity with the Linux community. However, they also remain loyal to Mandriva and to developing the company’s own products and global reputation.

Figure 1: Mandriva – global market positioning



Notes: International player (78% revenues outside France, 140 countries, 68 languages); open source (code and development model); generalist (desktop and server); market locked on price and innovation.

Source: Mandriva 2006

Market dynamics and company services

Products

Mandriva produces a wide range of software products for both corporate and individual users. The company asserts that issues such as interoperability, security, scalability and openness are some of the key requirements that today’s organisations are expecting from information technology (IT) infrastructure applications. Examples of these products for individuals include:

- desktop technology such as ‘Mandriva 2006’, which offers Linux to cover a wide array of computing requirements, like applications for office use, multimedia, internet and servers;

- powerpacks for desktops and servers, offering, for example, security-reinforced network applications, simplified data-sharing tools, as well as facilities for client follow-up, collaborative teamwork, customised advertising and promotion (mainly over the internet) and allowing for simple IT management;
- educational software;
- hardware and software products, guaranteeing full mobility.

For its corporate customers, Mandriva offers products relating to servers, desktop technology, security and clustering. Examples of these products include:

- corporate server applications based on Linux;
- Linux-based software packages for corporate desktop applications;
- a multi network firewall (MNF);
- high performance computing (HPC) solutions, offering cluster-oriented tools for businesses and research laboratories, such as crash simulations, seismic modelling, acoustics and risk analysis;
- IT assets management through Mandriva Pulse (see Text Box 2).

Services

Mandriva provides a wide range of IT-based business support services, including consultancy, system maintenance, training and solutions. These services are being continually developed with a growing focus on consultancy aspects, particularly with regard to the corporate sector. All of Mandriva's services are interlinked and seek to provide business customers with a complete overall company package. Both staff and strategic development policies have thus been redesigned to enhance these corporate services and contribute to the growth of the company.

Consultancy

At the heart of Mandriva's consultancy service strategies to businesses are a focus on security, customisation, embedding solutions and deployment. The company team of security experts can help develop an effective network architecture that ensures both external and internal system security. With the internet's rapid growth in recent years and the ever-increasing number of fast internet connections, such as DSL or cable, security has become a vital concern for all companies. Mandriva can help select computer applications that best fit the specific objectives of a business, in addition to offering a range of training courses to such businesses to help facilitate the implementation of solutions.

Since Linux is an open source (providing source code for free) operating system, it is possible to customise its many features as often as necessary. Mandriva's engineers can thus create customised systems, designed specifically to meet clients' exact requirements. The same engineers (assisted by partners if needed) who create and produce the Mandriva Linux system offer their experience and vast technical knowledge to design a custom-made Linux solution for customers. Mandriva provides the required expertise in Linux to ensure the success of any migration project. Traditionally, organisations have mainly used Linux on servers, but they are beginning to discover the many benefits of deploying Linux across a large computer population for desktop use.

Business support and maintenance

Mandriva's business support and maintenance services are linked to their consultancy services. This includes a dedicated call centre which deals with a range of software issues and user problems experienced by individuals as well as the larger clients. The company also offers technological surveys of IT systems and software validation, access to their laboratories to reproduce complex incidents reported by customers and bug tracking systems. A range of Mandriva consultants,

technical experts and staff who work at the call centre provide these services. Membership of the Mandriva ‘Corporate Club’ (see supplier and customer relationships section) also guarantees additional maintenance services to fulfil the additional needs of businesses.

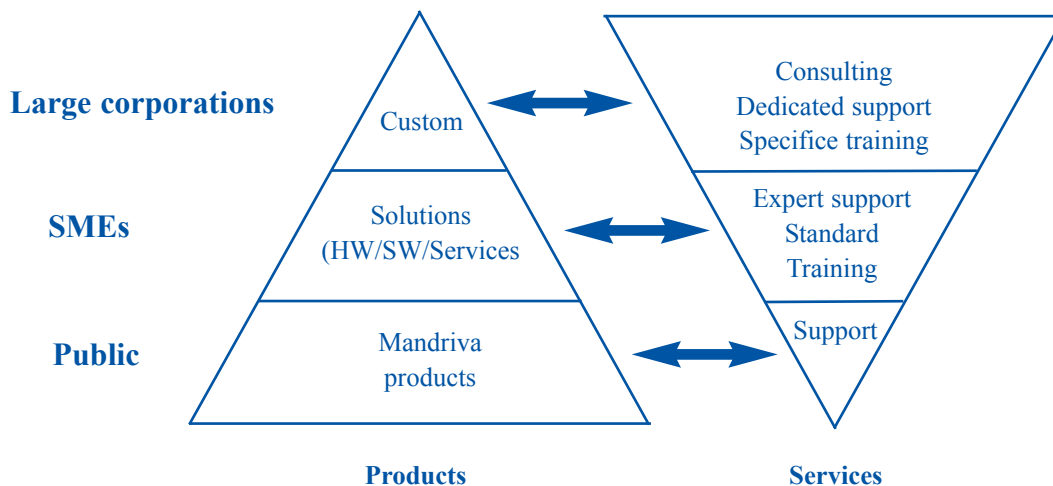
Training

Mandriva operates what it considers to be a unique vendor-neutral approach in training its clients in SMEs or larger businesses. The company provides the clients with generic training in Linux applications, developing an adaptable skill-set across the workforce for computer literacy on any open source platform, such as Samba and Apache as well as Linux. The up-to-date material supplied by the company ensures that clients can be immediately operational in the products purchased. Mandriva also provides a hands-on curriculum for additional client training needs and links its training and consultancy services in order to offer clients a complete support package.

Solutions

The objective of enterprise resource planning (ERP) applications is to provide a unified interface for integrating various business aspects such as accounting, inventory management, sales, marketing, logistics, and customer relationship management. Mandriva and its partners provide a comprehensive range of solutions enabling enterprises to focus on improving core business processes, reducing costs and influencing the power of open source ERP.

Figure 2: Mandriva products and services



Note: HW = Hardware, SW = Software.

Source: Mandriva, 2006

Customer relationships and business partnerships

Mandriva provides products and services for individual users, SMEs and, increasingly, for corporate clients. It therefore has developed different relationships with each target market.

Individual users

To develop its base of individual users, Mandriva offers free software downloads and encourages users to buy further software through retail stores or their online shop. Mandriva’s call centres offer individual user support, from installation of products to code correction, including configuration, performance improvement, software maintenance and technological survey.

Small and medium-sized enterprises

The use of Linux in embedded systems is growing significantly. Due to its open source architecture, Linux offers a high degree of flexibility regarding the customisation of specific products for different companies.

As a consequence, the number of qualified professionals working in the area of embedded Linux systems is growing rapidly. Mandriva therefore offers SMEs a wide range of embedded services and product solutions, including project development consulting. The company delivers a variety of consultancy services with a complete range of products and services geared towards the needs of individual businesses.

Corporate clients

Mandriva has initiated and set up a 'Corporate Club' which currently has 15 paying members. The Mandriva Corporate Club allows business users to manage their IT infrastructure and efficiently deploy Mandriva enterprise software products. Mandriva ensures support services for these software products over a five-year period as part of the corporate contracts that the company develops with its clients. Mandriva promotes its Corporate Club as a convenient and financially stable means of deploying a secure network for servers and desktops of its client companies.

Education

Mandriva also offers services and software solutions to the academic and education sectors. Its Linux Academia programme is a simple answer to the technology needs of universities, other educational institutions and research centres. The programme is an economical IT system which allows for site-wide deployment of Mandriva Linux; it covers the main Mandriva Linux release distributed for a one-year period.

Commercial partnerships

Mandriva has also set up a variety of commercial partnerships, aimed at enhancing its services for customers and promoting its products in other markets. Mandriva works with both large multinationals such as Hewlett-Packard (HP) and Intel as well as a range of SMEs who develop hardware products. The Mandriva Original Equipment Manufacturer (OEM) programme has been set up to bring to Mandriva's OEM partners everything they need to make their customers successful. With this programme, Mandriva helps these OEMs to provide their customers with a complete and attractive Linux platform. By joining the Mandriva OEM programme, the OEMs not only have access to discounted Mandriva products, but they also benefit from several other services provided by Mandriva.

Distribution partnership programme

Mandriva's Distribution Partnership Programme with wholesalers and retailers offers a wide selection of products, services and support, both technical and commercial. The programme aims to build new networks for consumers and providers alike by transforming the relationship into a win-win cooperation for both parties. Mandriva and its value added reseller (VAR) partners continuously create value and develop commercial opportunities.

The VAR sales and distribution partners are generally divided into groups such as 'Certified Resellers' who are part of Mandriva's sales network and 'Certified Distributors' who are wholesalers and retailers with a high sales volume, such as FNAC (the largest French retailer of cultural and consumer electronics products) and Carrefour (the international supermarket group). Mandriva also works closely with groups such as Mandriva Technology Certified Resellers (primarily SMEs) on the basis of developing technological products for a global or product-specific specification.

Human resources

Recruitment and staff development

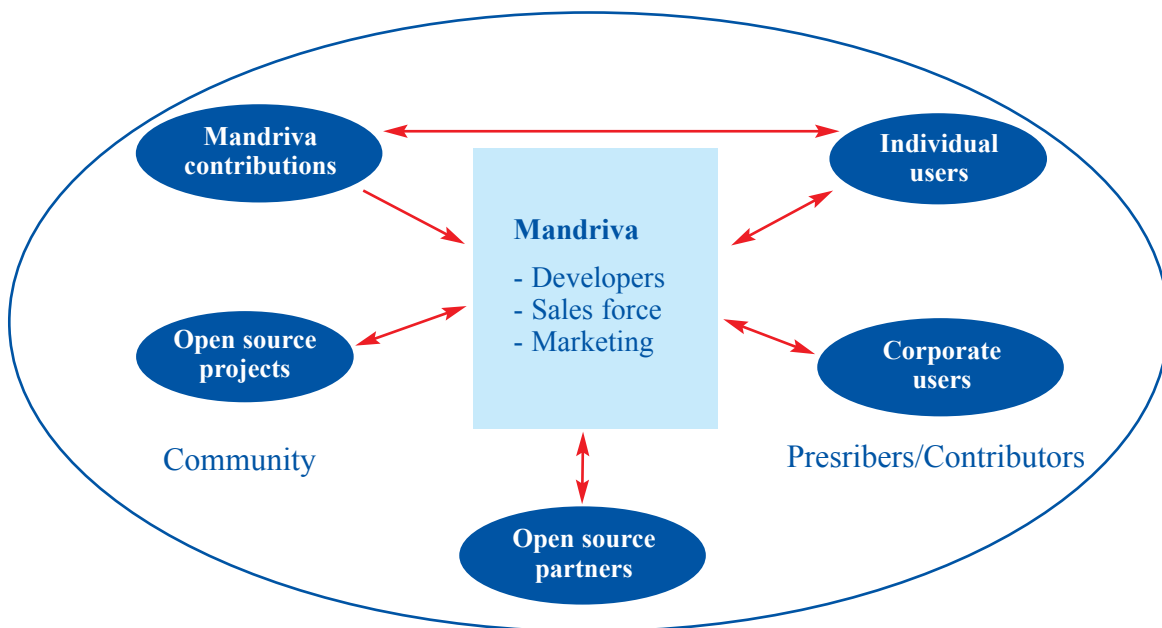
Since its establishment in 1998, Mandriva has grown quickly and currently employs over 50 people in the Paris office working in various business areas, such as marketing, services and consultancy, strategy and software development. A key element of the company's rapid expansion has been the continuity with regard to staff development, training and recruitment policies. The engineering team has largely stayed together since 1998; this allows the company to offer the services of an experienced IT team that ensures a cohesive delivery of products and services to clients.

The core staff play a key role in the successful development and sustainability of any company. Mandriva recognises that and invests in the future of these employees, thus improving employees' loyalty to the company while also encouraging the development and delivery of quality software products. The company therefore usually fast-tracks students from high school or higher education colleges, such as Software Engineers holding a Bachelor of Applied Computing (BAC) or Finance Administration graduates, and offers traineeships after which a majority of such trainees are offered permanent jobs with Mandriva.

Mandriva is one of the only companies offering career opportunities for graduates within the field of Linux systems, which allows the company to encourage high quality trainees to join its workforce. The Linux community and software attracts a wide range of devotees who are equally as enthusiastic and partisan about open source software.

Some staff members have stated that they were enthusiastic Linux users from the beginning and that Mandriva had given them the opportunity to contribute to the development and adaptation of the software. Other employees have the possibility to participate and contribute from the collaborative development platform and through other aspects of the Linux community.

Figure 3: Mandriva – the extended company



Source: Mandriva 2006

Linux community culture

The Linux community philosophy influences Mandriva's human resources (HR) policy, in particular with regard to the core engineering team. The majority of applicants for software engineering positions at Mandriva are already familiar with Linux technology and thus integrate easily into the company. In general, they are also enthusiastic about Linux's potential benefits and underlying philosophy. Most employees therefore contribute to software development and strategy from the start, which develops a sense of purpose and belonging within the company. As they already understand and use company products, they are familiar with the development and progress of Mandriva's products. This is considered helpful in the integration process of new staff.

Training challenges

The HR manager stated that Mandriva would like to invest more time in staff training but, as with many SMEs, the limited time available during working hours as well as cost considerations are currently preventing this from progressing on a company-wide basis. Nevertheless, Mandriva encourages self-training among employees within the company environment in order to keep up to date with technological developments.

The constant technological advances in the software sector require continuous individual progress; the workers thus have to be keen to develop their own skills in order to enhance their knowledge and future employability. The company's management promotes self-training for all employees on a continuous basis in order to establish a high level of responsiveness to change within the company.

Staff role in product development

Suggestions for new products or acquiring knowledge relating to developments in Linux or compatible systems are also encouraged from employees through regular meetings among staff; Mandriva's employees have generally welcomed this approach. According to the company's employees, communications within the company work well, and they can put forward their ideas about potential new products or services and then discuss and develop those with management.

Rewards

Mandriva's workforce is encouraged to remain aware of the changing nature of the corporate needs and strategies of the company. To motivate staff, the company pays out commissions on sales and offers most employees stock options when they join the company on a full-time basis. Both management and staff deemed such financial rewards necessary to foster a sense of belonging to the company among staff and motivation to develop new business lines and products for the company.

The company has also put in place a standard integration procedure to introduce new trainees and employees to its products, ethos and strategies. In terms of communications, regular inter-company forums take place as well as monthly meetings involving all staff. The 'top down/bottom up' approach to communications within Mandriva also involves developing and maintaining strategies and relations with the Linux community. With regard to supervision and efficiency, management prefers to have employees work closer to the company's home country; however, the company's costs in Brazil amount to only a third of those incurred by having the main office in France which explains why Mandriva has outsourced some of its activities.

Company culture

Management and staff emphasise that the company's culture is more multinational and open due to its membership of the Linux community. The company culture changed, however, when the business focus moved to the corporate market which has different demands and needs to that of the individual consumer and SME markets. The increase in service demand, such as consultancy services, has required that Mandriva appoints experienced staff in the corporate sector, both in sales and in the development of new products and services.

Mandriva awards employees standard full-time contracts on commencement of employment, which is not a legal requirement, but it is a normal policy for Mandriva. Trainees are usually employed on six-month internships and would be offered a job in the company at the end of their internship, providing they have met initial expectations. Many workers who eventually leave the company move on to jobs in areas such as financial administration, software development and design.

Poaching does exist between software companies as does spontaneous offers from businesses in other sectors; however, there is usually little that Mandriva considers it can do to counteract such job offers to its employees. The company prefers to concentrate on the positive aspects of such experiences in relation to company and staff development.

The possibility for flexible work arrangements depends on the departments within the company; typically, programmers are able to benefit most from such work arrangements. So far, although most staff would have access to computers and online facilities, working from home is not an integral part of the company's culture.

Growth strategy

Mandriva sees its key growth areas in the corporate sector with an increased focus on consultancy services and software engineering solutions. The consultancy services cover business areas such as network security, migration and system deployment along with IT training, enterprise development through IT solutions and new software development like the 'Pulse project'.

Text Box 2: Pulse project

Mandriva Pulse is the first open source comprehensive management solution that uses Linux to deploy, manage and maintain Linux and Microsoft Windows resources, including individual workstations and servers. By using automated and intelligent scenarios, administrators are in a position to get centralised control over IT assets, which allows for remote management, as well as inventory and software management. Mandriva Pulse is the industry-leading technology for large Linux desktop roll-out projects.

Two main markets exist for Mandriva in these areas of business: the corporate market and the individual user market.

Individual user market

Advantages of the individual user market include:

- the fact that Mandriva software is easy to use;
- the straightforward sales and communication channels;
- the fact that individual users are a retail source;
- the partnership agreements with OEM which link Mandriva to hardware manufacturers that embed the company's products in their systems.

At present, the company calculates that this market spreads over 150 countries covering 70 different languages. In order to meet the individual user market's challenges, Mandriva works closely with the Linux community. This market currently represents almost 30% of Mandriva's business output.

Corporate market

The corporate market focuses on private enterprises which are targeted through dedicated sales teams in France, Brazil and the USA, as well as in other parts of the world. Mandriva builds revenue from the main services on offer to the corporate sector, such as consultancy, maintenance and cost reduction solutions for companies. In all of these markets, the company faces tough competition.

In addition, Mandriva develops new software which is directed at both the corporate and individual markets, such as Pulse (see Text Box 2). At a corporate level however, Pulse still requires further strategy development and investment as it has a longer marketability. Mandriva works with the Linux community to develop, build and translate open source based projects, models and goods for the global market.

Table 1: *Mandriva main lines of revenue*

| | |
|--------------------------|--|
| Retail (15%) | <ul style="list-style-type: none"> • FNAC • Carrefour • O'Reilly Media |
| Royalties (28%) | <ul style="list-style-type: none"> • Hardware OEMs • Independent Software Vendors (ISVs), OEMs |
| E-commerce (25%) | <ul style="list-style-type: none"> • Mandriva online store • Third-party applications |
| Services (8%) | <ul style="list-style-type: none"> • Support services • Training • Consultancy services |
| Club subscriptions (24%) | <ul style="list-style-type: none"> • Mandriva Club • Corporate Club • Mandriva Online |

Dual strategy

Mandriva's overall growth strategy is thus twofold; the company targets the national and international level of both the individual user market and the corporate market. Such a double focus means that the company has developed two distinct product lines and therefore two different sales strategies. There is a certain relationship between the two in terms of continued software development and their links to the Linux community.

The main difference between the two strategies, however, is that the corporate strategy is based on selling products to SMEs, the government and its associated agencies and organisations. This is a 'bigger sell' and, therefore, a longer, more patient business strategy is required. Moreover, Mandriva provides consultancy services to help large organisations 'migrate' their IT systems to Mandriva products, which necessitates considerable human resources and time. Nonetheless, the company realises the long-term benefits of this business area.

At an individual user level, the main challenge for Mandriva is to continuously encourage all IT users to become Linux customers. The supply and continued development of free software is a key challenge for Mandriva and the Linux community due to their commitment to open source technology. As Mandriva's Chief Executive Officer (CEO), François Bancilhon, points out, the company is however a limited company with responsibilities to develop revenue streams. In this regard, it continues to offer a wide range of traditional software services, such as IT consultancy, user support and training in addition to product and service providers.

Mandriva's deliberate refocusing towards the corporate market with its specific needs has led to the creation of a 'Corporate Club'. To date, the company's corporate services are concentrated in France as it is part of an ongoing company strategy to develop its domestic markets with support services in France, Latin America and the USA where its representatives and partners are based.

The company considers it extremely important at political, social and cultural levels to remain based in France. Mandriva believes that it would not be able to provide such personalised services from other countries due to a need for regular client meetings and other related events. Operations are concentrated in Paris with no concrete regional dimension apart from promotional activities and sales throughout the entire country.

Mandriva also places great emphasis on strategic alliances with other companies such as HP and Intel. Within the company's markets, it is crucial to ensure hardware and software compatibility in order to remain competitive and to sell its products. In the past, Mandriva's primary strategy had been to sell its products through retail stores; however, this is now considered to be a weak and potentially receding market.

The company therefore devotes more attention and strategies towards e-commerce which is a highly active market. This is achieved through the company website and partnerships with hardware manufacturers to embed Mandriva products within their IT systems; as a result, Mandriva will receive a percentage for each system sold. As this represents a worldwide market, the company's products are available in numerous languages to meet potential demand and ensure compatibility and user-friendliness in a global market.

Overall, the corporate market seeks to reduce business costs and problem-solving IT support, both of which are key drivers of Mandriva's future business. Another key driver to increase the company's business activities is the willingness of customers to break away from closed source software. Further factors that influence Mandriva's growth strategy include the promotion of the company's independence as an IT systems vendor and its flexibility to customise software packages to the clients' needs. New products like Pulse can help the company achieve this objective.

Competition

Mandriva was created several years after its direct competitors, such as Novell/Suse and Red Hat. The company thus immediately focused on a very aggressive marketing strategy and began offering free downloads and CDs of Linux-based applications. In 1999, the company generated up to 99% of its revenue from its retail activities and originally established itself in the desktop market, focusing mainly on individual users. However, with its current online platform, international partnerships through the Linux community and OEM links with computer manufacturers such as HP and Intel, Mandriva is currently focusing on business consolidation and on a longer-term corporate strategy.

Mandriva continues its aggressive marketing strategy as an individual company and as part of the Linux distribution service. One of the key company objectives is to convert users into customers through its marketing strategy and by applying that of the Linux community. All Linux customers appear to be internet users; the company has therefore set up an individual users' club in addition to the corporate club for larger Mandriva clients. Other areas of the marketing strategy relate to the installation and configuration of IT as well as products and services.

Marketing challenges

Marketing strategies are developed around the products that Mandriva sells and promotes and are focused on two distinct markets, including OEM and direct sales along with initiatives aimed at 'club' members. In terms of gaining new business, Mandriva has developed strategies inviting potential clients who already work with open source technology along with potential new clients to promotional activities, such as conferences and product launches.

This process depends on corporate credibility. Therefore, Mandriva often publicises its success stories with well-known clients and partners in order to promote its products and create brand awareness, confidence and longevity as well as simplicity in a rapidly changing market place. The company also advertises its products and services through industry magazines and publications.

The company follows a global strategy in addition to a French one and pays particular attention to the Latin American and US markets. However, the BRIC countries are considered to offer an increasingly attractive market. The translation of the company website into 17 languages is part of its promotional activity; this process also includes tailoring services to the respective markets and aiming for a cultural 'fit' within those markets. Overall, this strategy revolves around customer confidence, trust and reputation; therefore, local knowledge and cultural understanding are key elements in the progression and growth of Mandriva, both nationally and internationally.

Additional aspects of marketing include developing close links with schools and colleges and offering free introductory software to entice individual users. The Linux community and its products develop and change extremely quickly in terms of current trends; therefore, they must be responsive to change at all levels, such as in product development, marketing, strategic and distribution partnerships and with regard to the regulatory environment.

Mandriva's relatively small size and flexibility is thus considered vital in terms of delivering services to consumers especially given the dominance of giant software companies in certain parts of the sector. This mobility along with flexible partnerships with other members of the Linux community and hardware producers allow Mandriva to develop leading edge software and to promote it to the markets even if the company does not have the extensive resources of larger companies. This strategy is backed up by a concentration on 'intelligent placement' of products and the staggered launch of products, as well as working with other partners where necessary in different countries.

Future challenges

According to the CEO, Mr Bancelhon, future global challenges for Mandriva include the continuing uncertainty over technology patents and digital management rights, and the consolidation of power and influence in giant multinational companies such as Microsoft. Moreover, the future of open software which is freely accessible for everybody is causing a major debate in the sector and its future availability seems unclear. As a result, important questions arise as to which countries and organisations will be developing and building the next generation of computers. The outcome of such questions will have geopolitical consequences. Mandriva will thus have to continue to position itself within these potential future markets as the company is currently doing in the BRIC countries.

The refocusing on the corporate market also carries associated risks and challenges for the future of the company. In this market, Mandriva faces extremely tough and dynamic competitors which are also market leaders in their fields of business. The company therefore has to promote its own strengths while seeking to gain market shares through strategic partnerships and promotion of Linux as well as of the company itself. The selling cycle to corporate customers takes longer which necessitates supporting capital, and increased branding and marketing compared with selling software to individual users. In addition, the spirit and solidarity of open source software is not as strong in the corporate market as it is in the individual user market; consequently, this also represents a cultural challenge for Mandriva to overcome.

Some enterprises view Linux as a 'new' technology, which means one that will cost money to install and complicate their business processes. Mandriva must overcome this traditional resistance to change in companies of moving away from the established or recognised products that they are used to. Mandriva has to convince potential clients of the low cost involved and user-friendliness of its open source products as benefits while also offering flexible, tailored services for all products. However, Mandriva is aware of the issue that many companies are currently cost shy in terms of IT systems' development and tend to believe they can do everything themselves.

Issues also prevail in the French market particularly in relation to government and public sector contracts which must be overcome. The majority of public tenders state that services to be provided have to be operated through Microsoft Windows which can discourage a lot of companies from considering migrating to other competitors. At national level, the legislation regarding the 35-hour working week and vacation pay are the most contentious issues. The 35-hour week is considered to be a particular issue as far as software development is concerned and continues to affect the company's productivity and ability to compete in a global market.

Mandriva's senior management believes, however, that there are enough potential customers who use and value Linux to warrant the risks they are undertaking in terms of refocusing the business. They consider that there is a clear market for Mandriva to continue expanding into, and there is not necessarily a need to currently promote their products to Windows users only. Mandriva remains highly flexible in terms of licenses and selling solutions, and is responsive to the needs of clients. New projects such as Pulse provide evidence that Mandriva is fighting back in terms of its competitive strategy and long-term goals.