

## BSL Industries, France: SME case 07

### BSL Industries



**This case illustrates the development of virtual services at every level of the production process of a company (commercial, planning, manufacturing, etc.). Beginning in 1993, in the framework of a national call for teleworking projects, the programme of virtualisation of the production process has enabled the company to come through an industry in crisis, the boilermaking industry. Combined with a policy of buying small companies about to go bankrupt, this programme has raised the added-value through an increase in productivity and a reduction of costs.**

#### 1. Name of Company

BSL Industries

#### 2. Company's Role, i.e. what business are they in?

BSL is a company in the boilermaking industry. BSL Industries is the number one European constructor of industrial equipment in stainless steel, nickel alloy, duplex alloy, special metal (titanium, zirconium, tantalum, etc.). The company produces equipment for heavy industry such as columns, reactors, flasks, condensers, etc.

#### 3. Distinctive features of the case, i.e. why was this case selected?

BSL chose to develop new skills by integrating virtual services at every level of its production process (commercial, studies, planning, manufacturing, quality control, technical support), in order to come through the current European boilermaking industry crisis, and preserve the 360 jobs that had been saved after the restructuring of the company.

The company took advantage of this new "savoir-faire" combined with the efficiency of the new organisation to exploit new markets by intervening in companies about to go bankrupt. In 4 years, 8 French and Belgian companies were integrated into or became associated with the group "BSL Industries". BSL Industries now has 12 companies of about 50 employees on average.

The next step for BSL was to develop the use of ICTs with two objectives:

- 1) To put right the companies recently integrated into the group, by using ICTs to interconnect the different skills of the group and integrating the production processes developed by BSL. These recoveries have allowed about 600 jobs to be preserved (excluding BSL).
- 2) To win new international markets. The "sales force" of the 12 businesses is today entirely networked.

BSL chose to implement decentralised management of computing. ICTs were introduced with the aim of stimulating exchanges of information between the different companies which make up the Group, and not with the intention of implementing centralised management of these new tools.

BSL is now therefore a group of networked SMEs not managed in a centralised way.

#### 4. Description of the initiative

Organisational and technical aspects:

The 1400 jobs are today dependent on the results obtained by the new organisation of work in BSL. The operation of the group is based on:

- ✓ Shared management of skills : each company has specialised and sometimes unique skills which can be useful to the other members of the group;
- ✓ A lot of possibilities of service exchanges between the companies of the group. Each company stays free to buy whatever it wants wherever it wants.
- ✓ Potential competition between the companies, concerning certain products, including calls for tenders or sub-contracting, without entailing negative effects (wastage, identical offers, etc.).

Operating in this way has been made possible only by:

- ✓ The integration in each company of the production process developed by BSL Industries;
- ✓ The implementation of a global information system. This system is mainly based on Internet/Intranet via PSTN. The use of leased lines or ISDN has not been necessary so far because of the low rate of information exchanged. Two reasons explain this situation:
  - 1) The initiative consists of setting up a network of decentralised entities and not a centralised system;
  - 2) Exchanges mainly concern e-mails and common office files.

Financial aspects:

BSL spends around 2 million FRF per year on the virtualisation of its production process. At the end of the initiative, the total investment cost will amount to 10 million FRF.

DATAR gave 800,000 FRF for the purchase of hardware and software in the framework of its call for teleworking projects in 1993.

The commercialisation process:

In the boiler-making industry, it is vital to get access to relevant information upstream from the decision-making process. It is thus very important to detect beforehand future equipment projects.

This system supposes:

- ✓ A world-wide presence: BSL Industries now has an export network based on agents (USA, Great Britain, Germany, India, etc.), permanent offices (Tokyo, Singapore, Shanghai) and international marketing men in the field.
- ✓ The setting up of a permanent link between the " sales force " and the technical skills of the group during the whole period of trade talks: standards for commercial and technical offers, as well as price calculation sheets, have been created. The sales force in the field can access this information on laptop computers equipped with Modem/fax.

The process of dimension calculation and resistance studies:  
 Since 1994 all computing tools (calculations and CAD) have been gradually interconnected. There is only one data entry now. The time for starting, checking and modifications is reduced.

Before	After
53 persons in Technical Management, Study Unit, Launch Unit  Profile : Draughtsmen, Project Managers, Engineers	43 persons  Profile : Project Managers and Engineers

The "Studies Unit" has moved on from the boilermaking draughtsman stage to the design and development of devices and boilermaking products.

The manufacturing planning process:

The time forecast for manufacture was decided before by reading the design charts for each component part. Since 1992 the assessment has been made based on synthetic formulae on the computer. A computer tool allows the provisional time to be calculated in a few minutes after the description data of the apparatus has been entered.

BEFORE	AFTER
4 people i.e. employees and technicians processed 500 estimates/year	2,5 people i.e. technicians process 700 estimates/year

The manufacturing process:

– The planning process

To ensure evening out of costs and sharing of industrial and human resources it is important to widen the production management base to include planning of business deals in order to allow inter-company exchanges. One of the reasons for the non-viability of a lot of companies in the boilermaking sector is the lack of extensive ranges of manufacturing equipment to meet the great diversity of products required, equipment which in itself is not profitable. On the other hand, when work is abundant businesses are quickly obliged to sub-contract.

In 1989 schedules were written by hand. Since 1995, the planning software package which has been installed has allowed costs to be evened out, critical operations to be decided, permanent updating and the integration of deals under negotiation.

- The production management process

Computer aided production management (CAPM-GPAO) allows the broadening of BSL Industries databases to the various businesses in the group in order to:

- ✓ Know the potential in hours and qualifications available on each site,

- ✓ Use standardised information and documents thus encouraging inter-company sub-contracting,
- ✓ Guide globally a business deal where several companies are concerned in the outcome.

– The manufacturing management process

In computer aided workshop management the working times of the different workshops are now entered during production with a bar code system. This entry of data allows:

- ✓ The workshop manager: to study his detailed schedule in relation to the general schedule of the work over 1 – 3 weeks, to simulate priority changes and study their effects;
- ✓ The accounts department: to know the times of the actual presence of the employees, to have information feedback, in real time, concerning production times (analytical accounting) and to make checks against the forecasts (permanent improvement in assessment tools).

The general management and group administration process:

- The business management process

The value of this process is based on exchanges of technical information and management meetings between project managers and people in charge of the various technical domains (studies, methods, production).

These exchanges of information mainly occur via e-mail or telephone for urgent cases. BSL is still considering the possibility of setting up videoconference systems. But it is not a priority necessary at the moment.

- The accounting management process

The various units are connected with the site at Thiais to have access to accounting expertise and to BSL Industries' accounting system software (general accounting, analytical accounting, financial consolidation).

## **5. What changes, if any, have taken place since the scheme started?**

At the start of the project, Internet and Intranet were just emerging. As soon as these technologies started to develop, the project adopted them.

BSL first planned to spend 10 million FRF over two years, but progress was less rapid than was planned, and thus it was about 2 million FRF per year.

It is also worthwhile pointing out that the project had first a centralising approach to the introduction of ICTs in the group and then rapidly chose to adopt a more pragmatic way, i.e. interconnection of the different sites to promote exchange of information between them.

The last step in the development of this initiative is underway: this addresses the buying procedure of the Group. This last step is a simple duplication of what has already been implemented in the Group. Here again, the objective is not to create a centralised process but to initiate exchanges of information between the different people who are in charge of buying within the companies of the Group.

This new facet of the initiative began with the organisation of actual meetings between the most important buyers of the Group in order to identify the interesting themes to be discussed and exchanged. Following this, bilateral exchanges on these themes have gradually started to occur. These exchanges take place on the Internet via e-mail.

When BSL has its web site (before the end of 1999), the information to emerge from these bilateral exchanges will be regularly updated under specific headings on the web site. The aim is to realise 20 % savings on buying.

## 6. Benefits of the initiative

The grouping of companies has permitted the enlargement of the group's sphere of skills. Each company has been able to preserve its own "key-resources".

The different benefits of the initiative are the following:

- ✓ Making the capacities developed by BSL Industries located in Thiais and Soisson (i.e. export marketing people, product managers, research unit, etc.) remotely accessible, thanks to a new organisation of production processes based on the use of ICTs;
- ✓ Having interactive relations with foreign clients by interconnecting marketing people with the different engineering and control units of the group;
- ✓ Saving time by teleworking, particularly by diminishing the number of journeys necessary by managers and engineers;
- ✓ The interconnection of these skills for international development has promoted the independence of the group, which is very important, because a situation of dependence is often fatal in this industry;
- ✓ The widening of the group's sphere of skills has permitted the number of potential markets to be multiplied;
- ✓ Interconnection, including at international level, has enable direct dealing with foreign customers.

## 7. Barriers to the initiative

At the beginning the project had to face some technical problems in setting up and interconnecting the different LANs.

There was no reluctance from the employees concerning the virtualisation of the processes. With the introduction of PCs at home, the former reluctance towards computing tools has completely vanished. Nonetheless, it has been noticed that technical employees of the Group do not often exchange information. More exchanges from the Study Units had been expected. This group of people does not seem to be very ready to exchange their "savoir-faire".

## 8. Impact of the initiative

### \_ The human impact

The development of integrating computing skills led to changes in jobs and to the creation of new roles in the commercial, technical logistics, quality control and maintenance units.

Jobs have been created or substituted through the introduction of virtual production (around 75 jobs have been suppressed in BSL via early retirements). These changes concern mainly employees, draughtsmen and technicians of administrative, studies and planning units. The new jobs that have been created for new roles compensate for the departures.

In the new organisation of the group, technical skills are located in the original sites (i.e. Thiais and Soisson). The roles created by most of the new intermediary services are concentrated in BSL Industries, the headquarters of the group (i.e. planning, manufacturing control, etc.).

### \_ The economic impact

The new policy implemented (i.e. the introduction of intermediary services based on ICTs) has raised the added-value through an increase in productivity and a reduction of costs. The new organisation of production, which was implemented over a 6-year period, enabled BSL to reduce costs and global time limits and to get ahead of its international competitors:

- ✓ Production costs have been reduced by 20% between 1992 and 1995 ;
- ✓ The sales directly concluded with foreign customers now represent more than 50% of the turnover. Most of the customers are located in newly developed Asian countries.

## 9. Lessons learned from the case study

BSL chose to operate on the basis of a structure made up of autonomous and scattered SMEs which co-operate within a large Group while keeping their independence. This approach corresponds to a current trend within certain large groups or in related industries such as foundry or mechanical engineering where several companies in the same region group together in a EEIG (European Economic Interest Group) for commercialisation. As far as BSL is concerned, the introduction of new ways of working enabled the survival of the small scattered organisations. According to the chairman of the group, the different SMEs would not have survived without this grouping and the introduction of ICTs. They permit the reactivity and flexibility that are necessary in the boilermaking industry where overloaded periods follow slack ones.

The introduction of new ways of working reduced the pressure of work a little, in particular regarding the cyclic nature of the boilermaking industry. This enabled SMEs of the Group to have more long-term objectives.

## 10. Expectations and Future Organisational Plans

In the near future, the objective is to finalise the ongoing projects that are not completed, e.g. the buying process, the setting up of the web site, etc.

In the longer term, the group could develop home-teleworking for engineers who live far away from their company. This part of the project is only at a very early stage.

Concerning technical infrastructures, if the rate of exchanged information rises in the years to come, the network could move from PSTN to RNIS, but at the moment PSTN is sufficient.

## 11. Contact Information

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