Project 2 (P2) at Company 2

Company n°2 is a big player in the area of health products and devices. In France, it is established on six sites that manufacture dedicated products. The studied site encompasses two facilities, one dedicated to the production of health products and one at some kilometres from the first one, dedicated to packaging. This situation caused many difficulties in terms of production flow but also of human resources management. The main site concentrated production with qualified workers but also management teams whereas the second site concentrated packaging activities with workers without qualification at all. Moreover, the company was gaining market share with one of its new products that include a variety of components according to the type of illness that requires to have zero-defect packaging. Packaging activity used to perform by 14 workers in an entirely handily way. It followed the "one person, one batch, one table" pattern, and operators repeated the same tasks for eight hours a day, leaving little time for continuous improvement and personal initiative. The packaging was a task that was neither ergonomic, nor rewarding, and unattractive in the company. Against this background, the modernisation consisted of automating part of the production line by installing custom-made robots and had to meet several objectives: a reduction in kit preparation costs (with a reduction in handling errors in the kits but also a reduction in labour costs), an increase in production, and an improvement in the working conditions of the operators. A building was built and the lines were designed in close collaboration with a technology provider located near the factory. To carry out this digital transformation, the company quickly structured around a project group, organising in particular around significant human resources. The person who developed this project had several functions: she was responsible for managing a packaging line but also for the overall management of the project, listening to the expectations of the industrial director and the needs of the operators. The project also generated full-time positions; for example, one person worked on the quality control of the line, detached from the quality department for one year. A significant part of the work was designed in close collaboration with a technology provider, a company specialised in the production of customised robots for the industry. This latter came on-site to observe the operators and their work tasks to adapt the machines to the workstations and the reality of the field. It designed the architecture of the line so that the machines are as ergonomic as possible (height-adjustable positions, least traumatic movements, etc.). They worked on maintenance aspects, with particular attention paid to troubleshooting and logistics so that batch changes and batch counts are facilitated. The industrial organisation of the company and the organisation of work in the packaging shop floor were radically changed. The project's objectives in terms of production volume were achieved. The structure of the teams has evolved with the project, the work is now organised around a line of 50 operators, divided into 2 shifts and rotating in two shifts. The shop floor manager supervises a line operator, logistics specialists (5 in number), maintenance technicians, and people working in manual packaging (4 in each team). Decision-making by the supervisors is simpler than before and is made more quickly. Manual positions have been retained for the smaller batches, which means that the operators no longer work alone but in pairs on these positions. This change in manual jobs has been very well perceived by the operators and, in general, the jobs are more cross-functional and lead to more interaction between the people working on the line. Although the people interviewed have reported that they were satisfied with the transformation, it has not been easy at all. Operators have gone from purely manual tasks to activities that required a very high level of skill development in a fairly short time, with routine interaction on the machines. They estimate that it would have taken them 8 to 10 months to familiarise with the new equipment and the new work organisation, compared with 2 months of initial training. The line driver coordinates all the people, assigns them to the different blocks, makes batch starts, authorises the line to start or stop, supports an operator when he encounters difficulties on his workstation, provides training for operators who need it. The job of the operators has been profoundly

transformed: they supply the machines with cones, bottles or cartridges according to the blocks, check the labelling of the products, carry out "picking" work which consists of picking up products from the stock to bring them to the line. The packaging operators are responsible for first-level maintenance on the machine and must be very reactive to maintenance problems to act as quickly as possible. They change tasks regularly and are required to monitor the machines. The logisticians ensure the supply of the stations, the temperature readings and the inventory of the products, the sampling and they receive the batches. In addition to their evolution to new tasks, they have had to adapt to their new environment: they have experienced greater noise pollution than before because of the machines, or in some cases a difficult working environment, when they have to work in the fridge for half a day. Operators are much more polyvalent, moving from one machine to another, with greater variability in tasks. They have to understand the machine, read and collect information on screens, memorise data, be more autonomous and reactive according to the information to be transmitted, carry out first level maintenance on the machines, or even control some of the lines. In addition to technical skills, the operators have acquired "soft skills", including animation skills: they supervise daily 5-minute meetings in which they explain the problems they encountered on their workstation the day before, the tasks to be carried out and the safety to be implemented. This increase in skills is perceived positively by the operators, who are satisfied with the line and their new missions, the versatility of their activities and the new responsibilities they have. The project is a big success for the company that has capitalized on the feedbacks and spread them within the firm. As mentioned for company n°1, it is impossible to determine whether the profit has increased. Nevertheless, indirectly, jobs are more attractive because more technical and rewarding according to the interviewees. Besides, it allowed recruiting more young people and developing new jobs.