

CASE STUDY Turnround at the Preston plant¹³

Introduction

'Before the crisis, production monitoring was done to please the client, not for problem-solving. Data readouts were brought to production meetings and we would all look at them, but none of us were looking behind the data.' (Chief Operating Officer (COO), Preston plant)

The Preston plant was located in Preston, Vancouver. Precision-coated papers for specialist printing uses accounted for the majority of the plant's output. The plant used state-of-the-art coating machines that allowed very precise coatings to be Applied to bought-in rolls of paper. After coating, the coated rolls were cut into standard sizes.

The curl problem

In the spring of 2008, Hewlett-Packard (the plant's main customer) informed the plant of problems it had encountered with paper curling under conditions of low humidity. There had been no customer complaints. HP's own personnel had noticed the problem, but they took the problem seriously. Over the next eight months the plant's Production staff worked to isolate the cause of the problem and improve systems that monitored processing metrics. By January 2009 the process was producing acceptable product, yet it had not been a good year for the plant. Although volumes were buoyant, the plant was making a loss of around \$10 million a year. In October 2008, Tom Branton was appointed as COO.

Slipping out of control

Although the curl problem was solved, productivity, scrap and re-work levels were poor. In response to this, operations managers increased the speed of the line in order to raise productivity. *'Looking back, changes were made without any proper discipline, there was no real concept of control and the process was allowed to drift. Our culture said, "If it's within specification then it's OK", and we were very diligent in making sure that the product which was shipped was in specification. However, Hewlett-Packard gets "process data" which enables them to see exactly what is happening right inside your operation. We were also getting all the data but none of it was being internalized. By contrast, HP has a "capability mentality". They say, "You might be capable of making this product but we are thinking two or three product generations forward and asking ourselves, do we want to invest in this relationship for the future?"'* (Tom Branton). The spring of 2009 was eventful. First, Hewlett-Packard asked the plant to carry out preliminary work for a new paper to supply its next generation of printers, known as the Viper project. Second, the plant was acquired by the Rendall Group, who was not impressed by what they found. The plant had been making a loss for two years and had incurred HP's disapproval over the curl issue. They made it clear that, if the plant did not get the Viper contract, its future looked bleak. Meanwhile, in the plant, the chief concern was plant productivity, but also HP was starting to make complaints about quality levels. Yet HP's attitude caused bewilderment in the production team. *'When HP asked questions about our process the operations guys would say, "Look we're making roll after roll of paper, it's within specification and we've got 97 per cent up-time. What's the problem?"'* (COO, Preston Plant). But it was not until summer that the full extent of HP's disquiet was made clear. *'I will never forget that day in June of 2009. I was with HP in Chicago and during the meeting one of their engineers handed me some of the process data that we had to supply with every batch of product, and said, "Here's your latest data. We think you're out of control and you don't know that you're out of control and we think that HP is looking at this data more than you are." He was absolutely right.'* (Tom Branton)

The crisis

Tom immediately set about the task of bringing the plant back under control. They first of all decided to go back to the conditions which the monitoring system indicated had prevailed in January, when the curl problem had been solved and before productivity pressures had caused the process to be adjusted. At the same time, production worked on ways of implementing unambiguous 'shut-down rules' which would indicate to operators when a line should be halted if they were in doubt about operating quality.

'At one point in May of 2009 we had to throw away 64 jumbo rolls of out-of-specification product. That's over \$400,000 of product scrapped in one run. That was because operators had been afraid to shut the line down. Either that or they had tried to tweak the line while it was running to get rid of the defect. The shut-down system says, "We are not going to operate when we are not in a state of control." Prior to that, our operators just couldn't win. If they failed to keep the process running we would say, "You've got to keep productivity up." If they kept the machines running but had quality problems as a result, we criticized them for making garbage. Now you get into far more trouble for violating process procedures than for not meeting productivity targets. We did two further things. First, each production team started holding daily reviews of processing data and some "first pass" analysis of the data. Second, one day a month we brought all three shifts together, looked at the processing data and debated the implications of production data. Some people got nervous because we were not producing anything. But for the first time you got operators from the three shifts, together with the production team, talking about operating issues. We also invited HP up to attend these meetings. Remember these weren't staged meetings; it was the first time these guys had met together and there was plenty of heated discussion, all of which the Hewlett-Packard representatives witnessed.' (Engineer, Preston plant)

In spite of the changes, morale on the shop floor was good. At last something positive was happening. By September 2009 the process was coming under control, the efficiency of the plant was improving, as was its outgoing quality level, its on-time delivery and its responsiveness to customer orders and its inventory levels. Yet the Preston team did not have time to enjoy their emerging success. In September of 2009 Hewlett-Packard announced that the plant would not get the Viper project because of their discomfort about quality levels, and Rendall formally made their decision on the future of the plant. *'We lost 10 million dollars in 2009. We had also lost the Viper project. It was no surprise when they made the decision to shut the plant down. I told the senior Management team that we would announce it, in April of 2010. The irony was that we knew that we had already turned the corner. It would take perhaps three or four months, but we were convinced that we would become profitable.'* (Tom Branton)

Convincing the rest of the world

Notwithstanding the closure decision, the Management team in Preston set about the task of convincing both HP and Rendall that the plant could be viable. They figured it would take three things. First, it was vital that they continue to improve quality. Second, costs had to be brought down further. Third, the plant had to create a portfolio of new product ideas.

Improving quality further involved establishing full statistical process analysis into the process monitoring system. It also meant establishing quality consciousness and problem-solving tools throughout the plant. *'We had people out there, technologists and managers, who saw themselves as concerned with investment projects rather than the processes that were affected. But taking time out and discussing process performance and improvement, we got used to discussing the basic capabilities that we needed to improve.'* (Tom Branton)

Working on cost reduction was inevitably going to be painful. The first task was to get an understanding of what should be an appropriate level of operating costs.

'We went through a zero-based assessment to decide what ideal processes would look like. By the way, in hindsight, cutting numbers had a greater impact on cost than the payroll saving figures seem to suggest. If you really understand your process, when you cut people it cuts complexity and makes things clearer to understand. Although most staff had not been told of the closure decision, they were left in no doubt that the plant had its back to the wall. We were careful to be very transparent. We made sure that everyone knew whether they would be affected or not. I did lots of walking around explaining the company's position. There were tensions and some negative reactions from the people who had to leave. Yet most accepted the business logic of what we were doing.' (Tom Branton)

By December of 2009 there were 40 per cent fewer people in the plant than 2 months earlier. All departments were affected. Surprisingly the quality department shrank more than most, moving from 22 people down to 9. *'When the plant was considering downsizing they asked me, "How can we run a lab with 6 technicians?" Remember that at this time we had 22 technicians. I said, "Easy. We get production to make good product in the first place, and then we don't have to control all the garbage.'*" (Quality Manager, Preston plant)

Several new product ideas were investigated, including some that were only possible because of the plant's enhanced capability. The most important of these became known as 'Ecowrap', a recyclable protective wrap aimed at the Japanese market. It was technically difficult, but the plant's new capabilities allowed it to develop appropriate coatings at a cost that made the product attractive.

Out of the crisis

In spite of their trauma in the fall, the plant's Management team faced Christmas of 2009 with increasing satisfaction, if not optimism, for the plant's future. In December they made an operational profit for the first time for over two years. By spring of 2010 even HP, at a corporate level, were starting to look more favourably on the Preston plant. More significantly, HP had asked the plant to start work on trials for a new product – 'heavyweight' paper. April 2010 was a good month for the plant. It had chalked up three months of profitability and HP formally gave the heavyweight ink-jet paper contract to Preston, and were generally more upbeat about the future. At the end of April, Rendall reversed their decision to close the plant.

The future

The year 2010 was a profitable one for the plant, by the end of which they had captured 75 per cent of Hewlett-Packard's US-printing-paper business and were being asked to work on several other large projects. *'Hewlett-Packard now seems very keen to work with us. It has helped us with our own suppliers also. We have already given considerable assistance to our main paper supplier to improve their own internal process control procedures. Recently we were in a meeting with people from all different parts of HP. There was all kinds of confidential information going around. But you could never tell that there was an outsider (us) in the room. They were having arguments amongst themselves about certain issues and no one could have been there without feeling that basically we were a part of that company. In the past they've always been very close with some information. Basically the change is all down to their new-found trust in our capabilities.'* (Tom Branton)