LABELLING AND SCANNING

AIS DRAMATICALLY IMPROVED EFFICIENCIES FOR BANTA GLOBAL TURNKEY

Banta Global Turnkey's Limerick-based operation provides kit assembly and preparation for Dell Ireland. As Dell's business continues to expand and with increased pressure to keep costs to a minimum, any investment in new equipment and production capacity is placed under the highest scrutiny. This is where AIS expertise and experience came into play.

AIS began supplying Automated Print & Apply systems to Banta Global Turnkey back in 2001, when concerns were raised in the company over the reliability and maintenance service offered by their previous supplier. Since the formation of the company in 1998, AIS have always put technical support to the forefront of any business deal and on the back of the reputation that had been established with other customers, Banta Global Turnkey were convinced that AIS were the best option available.

Over the past number of years, AIS have only enhanced their reputation of quality service by continually meeting and exceeding the high standards expected from Banta Global Turnkey. Over the years AIS have established themselves in Banta Global Turnkey as a true "Solution Provider" within the AutoID field. As the high standards imposed by Dell Ireland continued to rise, AIS were able to provide Banta Global Turnkey with customised solutions, such as, automated barcode verification and comparison equipment. Earlier this year, AIS were on hand to tackle one of Banta Global Turnkey's biggest challenges to date; dramatically increase capacity and where possible to increase efficiency.

Banta Global Turnkey were in a position where they needed to install new production lines but were faced with 2 choices; continue with their existing line configuration or investigate how the equipment they would choose would help them in their goal of improved efficiencies. As Banta use barcodes for 100% verification of kit assembly, Banta engineer, Declan Gaffney decided to look at this as a good place to increase efficiency.

"*The equipment we had been using in the kitting areas of the production lines had been in place quite a while and whilst it seemed to be relatively good, there were issues regarding performance on small codes, ease of maintenance and operator ergonomics*" said Declan after initial observations on the line and also getting feedback from technicians and operators.

As AIS were already familiar with the processes in Banta Global Turnkey, they were immediately able to offer alternatives to the equipment in place. Then choices facing AIS now was to decide if they should continue use the same type of equipment or look at the possibility of introducing new technology.

After initial project meetings in AIS and also consultation with Datalogic, it was decided to look at an alternative to the overhead, oscillating mirror, laser-scanning solution already in use and progress to a CMOS sensor imaging system. The Datalogic Matrix 2045MP, 1.3 Mega Pixel imager was chosen as the ideal device for the high intensity component scanning aspect of the process. This was the key part of the process as every individual component going into each kit is scanned and verified prior to the kit being allowed to continue along the conveyor to the next station.

As Datalogic's only Quality Partner in Ireland, AIS were also keen to show the advantages of moving to Datalogic for all scanning requirements at each point in the process, as at that time, equipment form 3 individual manufacturers were being used and this provided its own problems to the support staff. Each scanning point also used an automated "Kit ID" scanner to identify the kit to Banta Global Turnkey's own internal Production Monitoring Software System and also an "Employee Badge" scanner to provide accountability.

"*While we had no major difficulties with the existing equipment in these areas, we were fully open to the prospect of testing out new equipment. One advantage that we did see straight away, was the fact that we could replace a customised hand scanner, with an off-the-shelf automated scanner at a reduced cost and without the need to modify and interfere with manufacturer warranties*" said Declan in relation to the TC1100 scanner proposed by AIS to scan the employee badge using a remote trigger.

After agreeing on the appropriate equipment for the job, AIS set about preparing a Trial System to be installed on Banta's Production floor. The challenge was to provide a complete scanning station that could be installed in Banta without compromising or interfering with either existing systems or production.

"*Despite our confidence in the proposed solution, we were also acutely aware of the negative impact that we could potentially impose on Banta's production rates should the AIS solution not go according to plan. With this in mind, our engineers designed a mounting bracket and communications interface that would allow us to install and connect our solution with approximately 30 seconds down-time at the station*" said Simon Smyth, Managing Director of AIS, "*This also set Banta Global Turnkey's minds at ease, as the existing system could be re-instated just as quickly should the need arise*".

After the AIS solution was installed, AIS engineers remained on site to provide assistance and training to the operators and also to be in a position to fine tune the configurations based on the experiences you only get from a "live environment". Positive reaction was almost immediate from the operators on the line, who found the solution much more ergonomic and also noticed that response times from the scanners were better than they had been used to, particularly on small codes. The flexibility and intelligence of the scanners also allowed us to predefine the barcodes to be read and to have the scanner ignore any other barcodes that appeared on the items to be scanned, meaning the operators were not trying to cover codes as they were presenting items To ensure that the system was fully tested and put through its paces to highest level of scrutiny;the production plans were amended to ensure the most difficult reading scenarios were passed through the testzone" the readers coped admirably with absolutely no negative impact on production rates and with growing enthusiasm from the operators.

Having passed the technical trial with flying colours, the conversation switched to the financial considerations of the proposed new solution.

"*This was where the Quality Partner relationship that AIS enjoy with Datalogic proved hugely beneficial as it allowed us to provide a very competitive proposal to Banta Global Turnkey*" said Simon Smyth. When all components of the project were taken into consideration, the finished solution represented a saving of approximately 25% over the previous solutions used by Banta Global Turnkey. "*This was a nice surprise for us*" said Declan Gaffney, "*not only were we in a position to increase throughput on the production lines, but we were also introducing cost-savings. This was a win-win situation for us*".

In August 2005, Banta Global Turnkey began the process of installing 3 new production lines in their Limerick plant and each of these would be fully kitted out with scanning and labelling solutions from AIS. The final solution involved the installation of two ALTech ALCode print & apply systems per line, each incorporating Zebra PAX print engines, multiple Datalogic DS2100 automated Track Code scanners, multiple Datalogic TC1100 Employee Badge scanners, multiple Datalogic Matrix 2045MP Component Scanners and also an AIS Custom Designed Barcode verification and comparison system based on the AIS VPM2 micro-controller and Datalogic Barcode readers.

All installation, configuration and technical training was carried out by AIS engineers and all relevant documentation and manuals were presented in hard and soft copy format to ensure the project would be a success. Despite the significant amount of time required to carry out this installation, AIS engineers ensured that all milestones and deadlines set out in the project plan were met and the implementation went as smoothly as could be expected in a project of this size.

"AIS have a long history of implementing industrial labelling and scanning solutions and that experience stood to us with this project" said Noel McKearney, Technical Manager of AIS. *"Over the years we have installed systems in almost every environment and we are well aware of all the pitfalls that can be encountered and this allows us to plan ahead and be able to deal with problems as they arise"*.

The installation work was completed on all 3 lines in September and they were ready for production. The finished lines only further enhanced the enthusiasm for the new equipment as the lines were much more operator-friendly than before. The scanners were located at around shoulder height as opposed to the overhead system previously in place and this meant that the work area was much more open and bright and created a significantly more pleasant working environment.

Commenting on the finished solution, Declan Gaffney noted, "*When we initially began to investigate this project we had 2 main goals; improved capacity and improved efficiency. Both of these goals have been achieved with the AIS solution and we have the added bonuses of reduced cost on the hardware, significantly improved ergonomics for the operators and we have also future-proofed our investment by installing equipment that allows us to read both conventional linear barcodes and also the option of using 2-Dimensional codes in the future*"

He went on to say "*Now that the system has been in place for a period of time we have a measured increase in efficiencies on the lines, scanning times for all components going into the kits have been reduced and in the case of physically small barcodes there is a huge reduction in the time taken to scan these items*".

The careful planning and the diligence of both AIS and the Engineering Department in Banta Global Turnkey have meant that the project has been a huge success for both Banta Global Turnkey and AIS.