EXPRESS DATA
Positive Networks

Tomorrow's Technology Today

Making Big Data Connections

OEE and Productivity

Client Details

Name	Major UK Retailer
Production Type	Abattoir Lines
No of Lines	16

Executive Summary

Having been approached by a major UK retailer in the UK to assist in their continued pursuit of improved productivity, we engaged our "10 Steps to Productivity" and set about a detailed project scope to deliver the required results. Translated into monetary terms this has resulted in a £9,000.00 per week increase in net profit.

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Improvement Summary

1. 8% increase in productivity through reduced knife waiting times.
2. Lamb Line breakdown times reduced from 35 minutes a day to zero.
3. A measurable saving of £9,000 per week and an overall increase in productivity.

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Project Scope

Multiple production lines, across the United Kingdom, where productivity, reliability and performance across sites were a clear concern for the business.

The need was to quickly identify where information was either collected manually or missing entirely, with the objectives of automating data collection and identifying the six big reasons for loss of productivity.

This information was subsequently presented in a format whereby management, operations and line staff were able to analyse, view and take appropriate action.

Express Data installed sixteen main XL800 systems in the abattoir situated at the end of each line. Using this method of deployment, meant that the entire production line staff were all engaged and had sight of the boards, rather than just a proportion.

In a challenging environment the system was installed on each of the following sections within the abattoir.
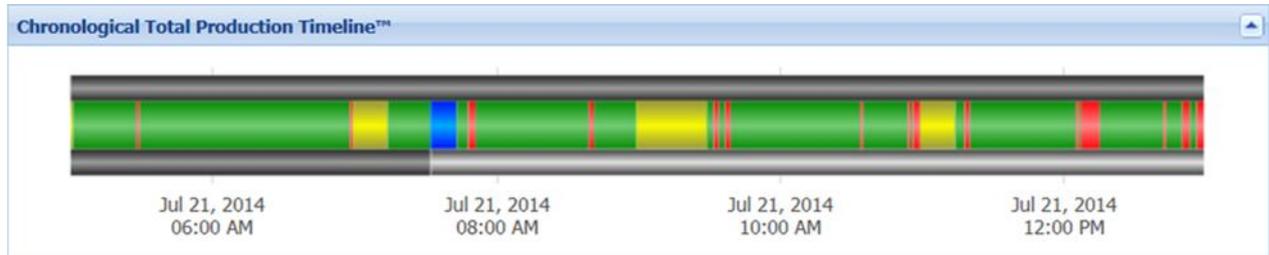
- Primal Cutting Pork Boning
- Pork Packing MultiVac
- Pork CryoVac Packing
- Large Spider
- Small Spider
- Hind Quarter Beef Boning
- Fore Line Beef Boning
- Beef Line V95 CryoVac

- Pig Abattoir
- Beef Abattoir
- Pork Curing MultiVac
- Pork CryoVac Packing
- Curing 2 Pujolas
- Beef Dispatch 1
- Pork Dispatch 1
- Pork Dispatch 2

After an initial period of testing it was found that in many instances targets had either been set too high or too low, so revised targets were put in place and uploaded to the system.

A period of four weeks was used to establish a baseline for improvement, where all sections of the OEE formula were monitored and recorded both by shift and by product.

Taken as part of the DRM (Daily Review Meeting) process, this information was translated into a series of actions designed to improve productivity.

This graphical representation is what you will see when you start to analyse the XL800 dashboard. Green shows the line running, red down, yellow standby and blue setup.

Chronological Total Production Timeline™

| Jul 21, 2014 06:00 AM | Jul 21, 2014 08:00 AM | Jul 21, 2014 10:00 AM | Jul 21, 2014 12:00 PM |

The top grey bar indicates a period of one day whilst the lower grey bar shows two specific products separated by the blue bar indicating a period of setup.

Timeline Events

View Type: Grouped View
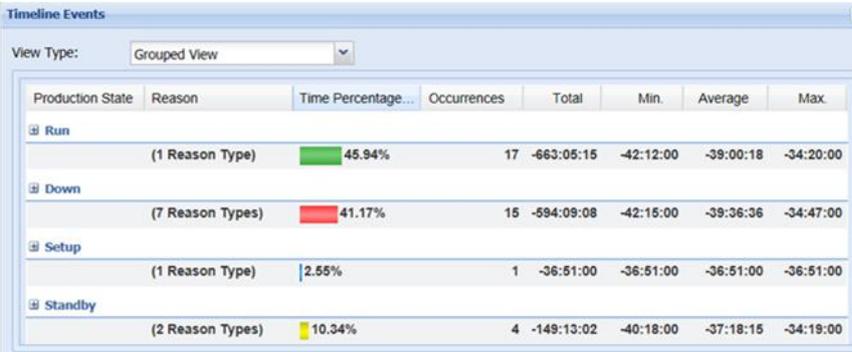
Production State	Reason	Time Percentage...	Occurrences	Total	Min.	Average	Max.
⊞ Run							
	(1 Reason Type)	45.94%	17	-663:05:15	-42:12:00	-39:00:18	-34:20:00
⊞ Down							
	(7 Reason Types)	41.17%	15	-594:09:08	-42:15:00	-39:36:36	-34:47:00
⊞ Setup							
	(1 Reason Type)	2.55%	1	-36:51:00	-36:51:00	-36:51:00	-36:51:00
⊞ Standby							
	(2 Reason Types)	10.34%	4	-149:13:02	-40:18:00	-37:18:15	-34:19:00

By using the XL800 to focus on the six main reason for loss of productivity it was swiftly established what the biggest causes of lost production were.

It quickly became clear that the reasons for lost production / downtime had never been recorded accurately in the past. With the implementation of XL800 system recording of downtime became not only accurate but also consistent.

Having examined the six main reasons for lost productivity the following issues were identified and resolved:

Fore and hind quarter beef boning

Having set the break times into the system to the appropriate duration, it was found that on average these times were being exceeded by a period of at least 15 minutes per break. Once the line did not return to a run state after these breaks, the system correctly recorded this time as "downtime".

The XL800 showed that the reason for this lost time was due to the operatives waiting in line to be issued with clean knives prior to their return to the line. Once a new system of issuing knives was implemented it meant that a near 10% increase in productivity on an eight hour shift was achieved.

Pig abattoir, primal cutting pork boning and pork MultiVac

On evaluating the big six in the pork department, it was found that the lines were stopped completely when an unidentified or unnoticed abscess on an animal had burst on the line. This caused the entire line to be closed for an unforeseen deep clean. With this knowledge, further training was delivered to the staff in the abattoir and a program of scheduled review meetings with farmers was put into place.

As with the beef lines the same knife issue procedures that were implemented soon saw a near 10% increase in productivity on an eight hour shift in the pig area.

Serious issues were rapidly found with the Pork MultiVac and packing lines which could be "waiting" and "down" for nearly four hours per day due to lack of product. Working more closely with planning and scheduling these times were quickly reduced.

The results from the XL800 identified the biggest losses, adding value to the DRM. Subsequently corrective measures were put in place to reduce these downtimes in the pork department. Overall labour losses reduced from £9,500 per week to an average of £500 per week.

Lamb Lines

Using a feature of the XL800 to generate barcodes, representing the various reasons for downtime, the stoppage times were identified as coming from a certain section of the line where it had been jamming and tripping out. Working with Engineering and the machine manufacturer's breakdown times were substantially reduced. Downtime on the lamb lines was reduced from an average of 35 minutes a day to a staggering zero.

Improvement Summary

1.   8% increase in productivity through reduced knife waiting times.

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