



IVC Software & Cameras Enhance Downtime Analysis

Manufacturing downtime - a costly problem

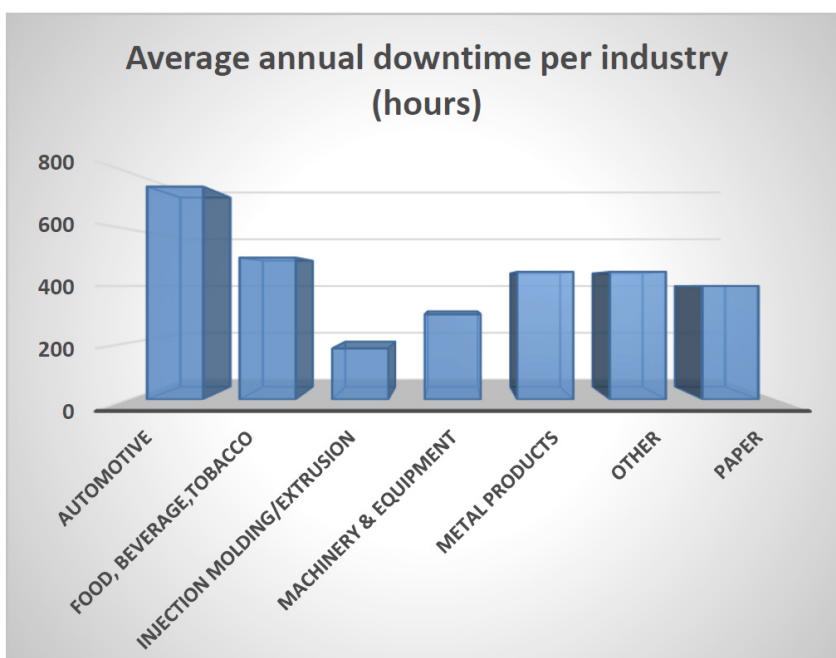
Every year manufacturers worldwide lose billions of dollars due to disruptions and failures on automated product lines. These downtime costs fall into two categories – tangible and intangible. Tangible costs include the loss of production, capacity, direct labor, inventory, and product. Intangible costs are the ripple effect of these losses and may include diminished responsiveness to customer and market demands, decreased customer goodwill, increased machine and

personnel stress, and reduced capacity to implement innovation. Even with the best preventative and predictive maintenance practices, unplanned equipment downtime and process anomalies are inevitable. The key to minimizing losses associated with process upsets is to quickly identify the root cause(s). To do this effectively, plant managers need data and they need it quickly.

IVC's Longwatch Software provides a unique solution

As manufacturing processes become more complex, finding the root causes of manufacturing upsets can be time-consuming and difficult. Many manufacturers choose to deploy expensive portable video systems with marginal success. These systems are difficult to set up and calibrate on targeted areas. Discreetly connecting specific process event triggers to cameras and recorded video is not a straightforward process. Fixed video solutions tend to be ineffective due to the difficulty of using playback tools as stove pipe solutions that are not integrated into the existing manufacturing systems.

IVC's Longwatch Video Historian software provides exactly the right solution to link stored process events collected by the SCADA/PLC system, to saved video clips from associated cameras. The Longwatch GUI presents synchronized process and video data that can be easily displayed on engineers' workstations, or integrated directly into downtime reports.



Source: https://www.emaint.com/works/manufacturing_downtime_infographic/

Increasing complexity of manufacturing processes along with increased manufacturing output has led to ballooning downtime costs.



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Yogurt producer tackles the problem

To provide better downtime analysis, one of the world's leading food processors implemented an IVC video solution at a yogurt production and packaging plant. The facility includes six packaging lines that use high-speed robots for picking and packing. IVC worked with the plant engineers to install three fixed, high-definition cameras at each packing location. The Longwatch software is configured to provide five web-based viewing clients. The Video Historian software is configured to integrate downtime data from the Oracle system used by the plant, which entails

mapping event timestamp and unit names with cameras and recorded video clip timestamps. Additionally, the Longwatch Console Recorder software is configured to record the ACP client workstations used by line operators. The time-stamped HMI screen recordings of these workstations can also be synchronized and displayed on the Longwatch GUI alongside camera video. This enables plant managers to not only see what was happening on the line during an event, but what the operator was seeing and doing on his HMI screen at the time.



IVC's HD cameras and Longwatch software are key components of a system implemented by a leading yogurt manufacturer to mitigate downtime costs.



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Timely downtime data = increased productivity

Once installed, the system began to immediately pay dividends. Within one day, a complete history of the packing line was recorded. The camera and Console Recorder video clips were quickly mapped to downtime events. Macros were added to the morning downtime event report

(Excel spreadsheet) to provide hyperlinks directly to the video segments related to the events listed in the report. This provided the customer tremendous insight into the root causes of the day's down events, many of which could be addressed immediately. The ease of use of the IVC solution allows the customer to quickly see and address problems, as well as easily share data across their organization.

External SQL downtime record

Single click to playback event

Multiple tab support for separate SQL queries

Equipment tags linked to cameras

Cameras and consoles by production area

Multiple camera synchronization frame by frame nudge

Console recording and playback to analyze operator UI during event

ID	EventDate	Type	Comments	AbbrStatus	AbbrPriority
580	Fri Nov 17 2017	Adv	Area 2 - Input 800	HI	MED
587	Fri Nov 17 2017	Adv	Area 1 - Input 800	HI	MED
586	Fri Nov 17 2017	Adv	Area 1 - Bunk Rate	HI	MED
585	Fri Nov 17 2017	Adv	Area 2 - Bunk Rate	HI	MED
584	Fri Nov 17 2017	FILLER2_OUT	Area 2 - Out Flw	HI	MED
583	Fri Nov 17 2017	FILLER2_IN	Area 2 - Input Fl	HI	MED
582	Fri Nov 17 2017	TEMP181	Area 1 - Oven T	LO	LO
581	Fri Nov 17 2017	FILLER2_OUT	Area 2 - Output	HI	HI
580	Fri Nov 17 2017	FILLER2_IN	Area 2 - Input Fl	HI	MED

IVC's Longwatch Video Historian platform provides the ability to synchronize recorded SCADA data with recorded video from process monitoring cameras and operator consoles recorded by Console Recorder.



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About IVC

Headquartered in Newton, MA, IVC delivers a broad range of IP-based video systems to industrial, commercial and public safety applications. Their standards-based software, which delivers quality video to PCs and other client devices over a network, is designed to be scalable and easily integrate with third party software. A key strength of IVC is its ability to develop cameras, enclosures, and software to meet demanding customer requirements.

For more information:



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IVC offers a broad line of cameras that are well suited for industrial manufacturing environments. This includes stainless steel products that are ideal for pharmaceutical and food processing.

If temperature data is critical to your process analysis, IVC's radiometric thermal cameras are designed to provide this information directly to your SCADA or DCS system via MODBUS or OPC.

