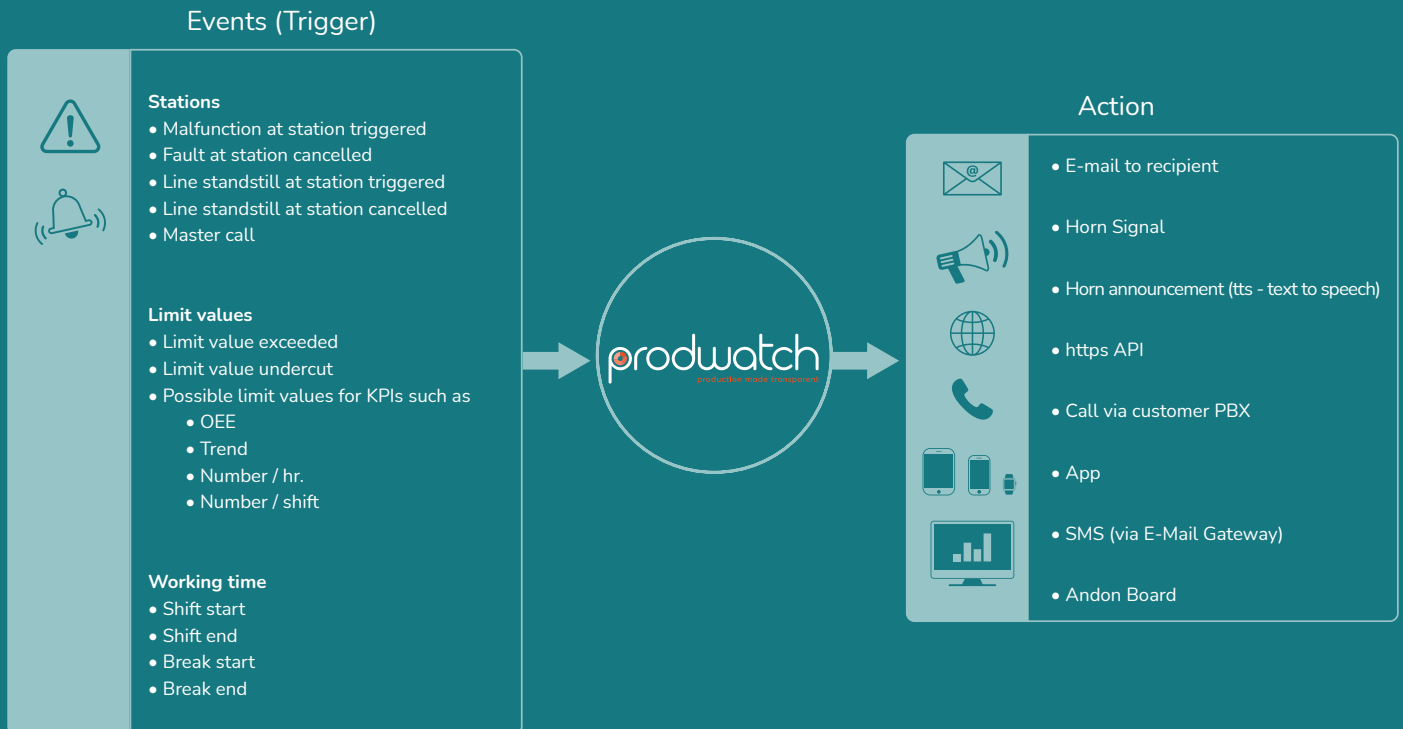




Alarm management in production

Communicate shutdowns quickly and
alert the right people

Communicate and respond quickly to unplanned downtime



In many production environments, machine downtimes or material requirements at workstations are still reported „on demand“. In practice, this means that the individual production employees run to the production manager and inform him of the malfunction. The production manager then usually goes with the employee to the workstation and looks at the situation on site. A decision is then made on how to proceed or which other departments, such as maintenance or materials management, should be called in. By then, valuable minutes have already passed during which

production is at a standstill. This time can be significantly reduced by using innovative, digital tools. The Alarm&Escalation module of the prodwatch software does exactly that by enabling production employees to report abnormalities or production interruptions to the production manager or directly to individual departments such as materials management or maintenance via touch terminals or push-buttons. This means that production interruptions can be responded to quickly and production can be resumed more quickly.



Input of malfunctions at the workstations for quick reporting of problems or downtimes

Digital alarm systems, also known as Andon systems, essentially consist of an input unit at the workstations. This can be implemented via touch terminals, tablets, smartwatches or buttons. The employee at the workstation is thus given the opportunity to react to production faults without having to run to the production manager. The time from notification to fault clearance is thus massively reduced.

If a malfunction occurs in the production process, the employee selects a previously defined error reason via a touch panel. The reasons for the fault can be freely defined by the production manager, and it

makes sense to define categories of faults. These can be, for example, plant malfunctions or material requirements. Once the reason for the fault has been selected, the production employee sends this fault to the system, where it is then processed further.

Fault signals from machines can also be linked. Many machines already output the status in the machine controls. These controls can be connected to the prodwatch system via protocol converters. This also allows you to include machine malfunctions in such an alarm system.



Display of faults in the production halls for transparent production

The current error messages of all workstations can be displayed on so-called Andon boards in the production area. These are large displays that are mounted publicly and clearly visible in the production area. A visual fault display is also provided at the respective workstation either on the touch terminal or via another display device such as stack lights, i.e. traffic lights that indicate the status of the station in color. This means that every employee can always see whether there is a malfunction, where it is located and that the malfunction is already known. Even the production manager can see directly when walking through the assembly hall which station has a malfunction and can react immediately.



Fast response through Alerting tools

Quick notification of production interruptions is of no use if the right people, who can remedy such an interruption, are unaware of it. Therefore, in addition to the pure display of malfunctions on andon boards, the touch panels of the workstations and other visual devices such as traffic lights, attention should also be drawn to production interruptions via alarms. With prodwatch andon, these can be distributed throughout the company via various communication channels:



Phone calls

Many production managers or employees have mobile phones that are carried at all times. These can be smartphones but also mobile DECT phones. This infrastructure can be used to communicate any faults that occur via calls to these devices



E-mail and SMS alerts

The smartphone is a good way to distribute alerts for many employees in manufacturing, as it is permanently worn on the body. Email and SMS alerts can be used to distribute entered trouble messages to the right places in the company



Smartwatches

Smartwatches can also be used to receive faults. All persons in the company who are to be alerted are equipped with one and thus wear the messages directly on their wrist.



Acoustic notification of malfunctions

A malfunction can be communicated quickly and effectively via voice announcements and message tones on the shop floor or in the individual production offices.



Acknowledge faults and make them evaluable

Acknowledgements of faults can also be entered at the input terminals. If the fault has been rectified by the alarmed person, it can thus be acknowledged at the corresponding workstation by entering a password. After that, the message is no longer displayed and is considered to be completed.

By measuring the length of the fault, entering the reasons for the fault or free text to describe the fault in more detail, a comprehensive collection of data is created. This can be used to analyze which errors occur at which workstations and how long it takes to correct them. Based on this data, it is then possible to optimize production processes to avoid the errors.





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We at apronic have been allowed to implement many alarming applications at our customers. Therefore, we have a comprehensive know-how of what is possible and how it can be implemented. In numerous projects, a wealth of experience has grown that has been incorporated into the standard software for assembly digitization prodwatch. This offers you a comprehensive toolbox for all described applications around alarming.

We look forward to your call and to being able to bring you to new peak performances of your production in an exciting project!

