MACHINE AUTHENTICATION

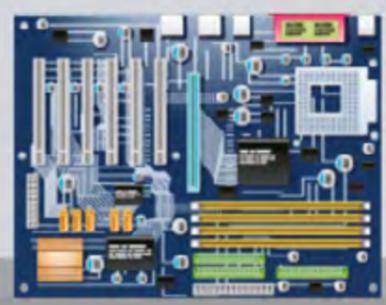## *FOR THE* SMART FACTORY

ELATEC

Single sign-on combines convenience with security

As the level of automation grows, factories are becoming increasingly complex and connected. At the same time, the demands on the efficiency and, above all, the security of processes are increasing. Manufacturing companies can meet these challenges with smooth and reliable machine authentication. A solution that combines login software with radio frequency identification (RFID) offers a high degree of convenience and security. This leaves the operation of the equipment in the hands of trained machine operators and minimizes the risk of incorrect operation with serious consequences.

In modern production operations, machines, robots and flexible manufacturing systems are increasingly connected via the Industrial Internet of Things (IIoT). In the context of these developments, it is particularly important to restrict access to machines and systems to trained and authorized employees.

In the event of unauthorized access to production systems, the security of personal and plant data is also at stake, and the door is wide open for industrial espionage. If unauthorized access leads to production errors or plant shutdowns, immense costs can be incurred due to non-fulfillment of orders or liability claims. In addition, there is the threat of considerable damage to the company's image.

Simply log in once: a secure authentication solution

Many companies still rely on traditional magnetic stripe cards, PIN pads, passwords and mechanical key switches to protect their assets and corporate networks from unauthorized access. Such solutions often fail to meet the necessary durability and security requirements. Most importantly, they are time-consuming for em-

ployees, as they have to repeatedly gain access by entering a PIN or password, for example. An ideal solution to these challenges is provided by systems that combine PC login software with RFID for user authentication and access control. Single sign-on is fast and convenient: the RFID reader is connected to or integrated into the machine and connected to the login software. For machine authentication with RFID, existing employee badges in the company can be used. The machine operator simply has to hold his employee ID card up to the reader. In conjunction with the login software, he immediately gains secure access to the systems and equipment that he is authorized to use. Authorization levels and periods can be defined individually. The prerequisite for using such a convenient and secure system for user authentication is a "universal" reader. Depending on the model, the readers from solution provider Elatec can read more than 60 card technologies and thus offer a high degree of flexibility – for both now and the future. This is because migration to other card technologies at a later date is possible without any problems.
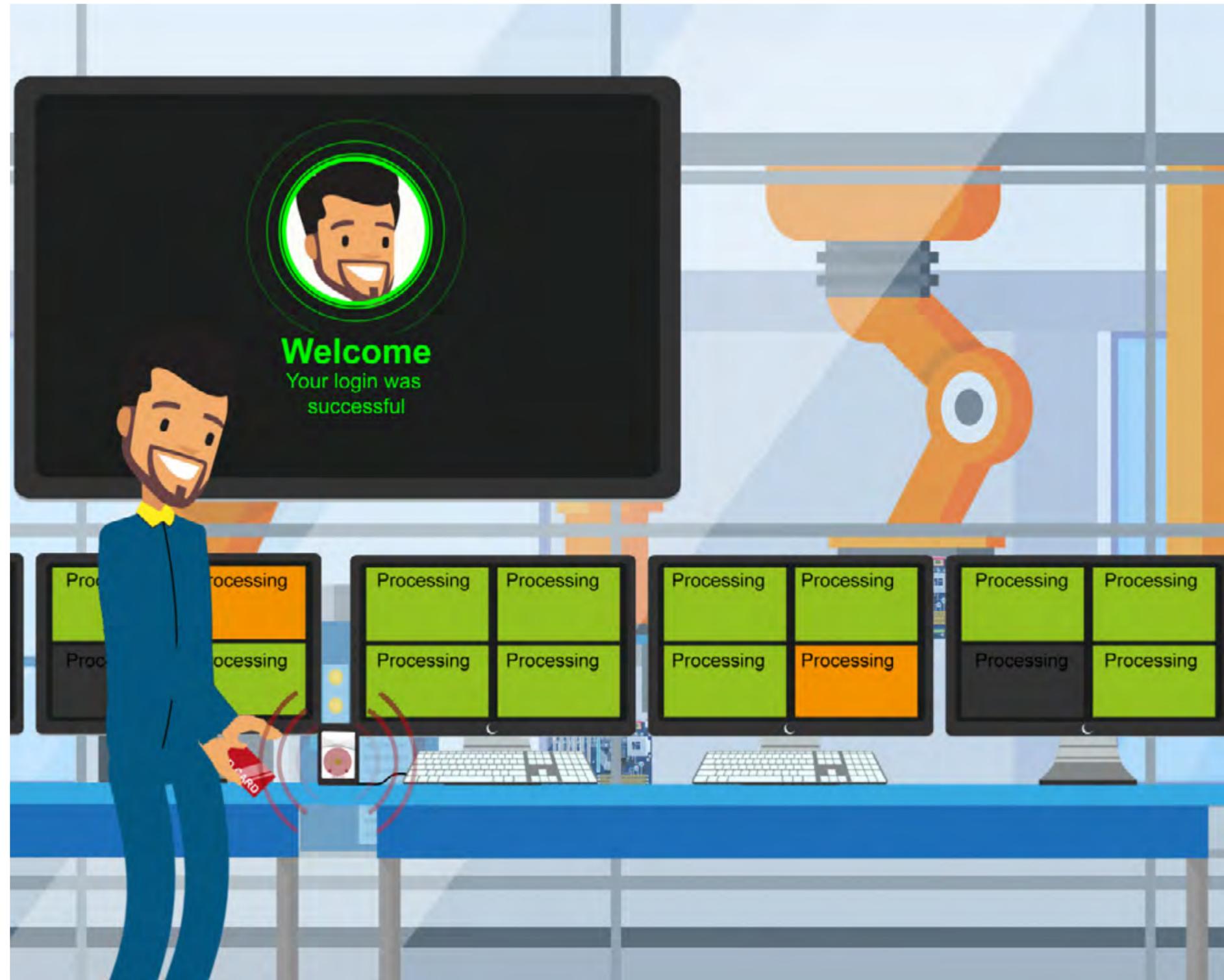
High resistance in industrial environments

Another advantage of an RFID solution for machine authentication is that RFID cards and readers are extremely resistant to dust, heat, dirt and general wear and tear. In factories where environmental conditions are particularly harsh, they ensure that machines can be enabled for operation without interference. In addition, machine authentication via RFID provides a high level of transparency in production: production managers always have an overview of who is using machines and systems and to what extent. In this way, optimization potential can be identified and exploited.

A customized solution for every requirement

Manufacturing companies cannot be lumped together. Depending on the size of the company or the products manufactured and the machines used for this purpose, a company must solve different challenges with a system for machine authentication. In addition, changes are the order of the day - for example, due to new processes or manufacturing methods. Solution providers such as Elatec specialize in developing and implementing a total solution for their customers that is tailored to their exact requirements while offering maximum flexibility—for example, by easily extending it to include applications such as access to lockers or kiosks as well as the management of the company fleet.

For further information, Elatec's whitepaper "User Authentication in Industrial Automation" is available for **download**.

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