Sensor Technology

Embracing Efficiency in a Global Market

SICK
Sensor Intelligence.

www.sick.com.au

Introduction

Manufacturing is an evolving industry operating under the duel pressures of rapid technological advancements and an increasingly globalised market. Manufacturers are facing demands to increase their output, widen their distribution and minimise costs and waste, all while trying to incorporate new technologies into their operations that will help them keep pace with the rest of the industry.

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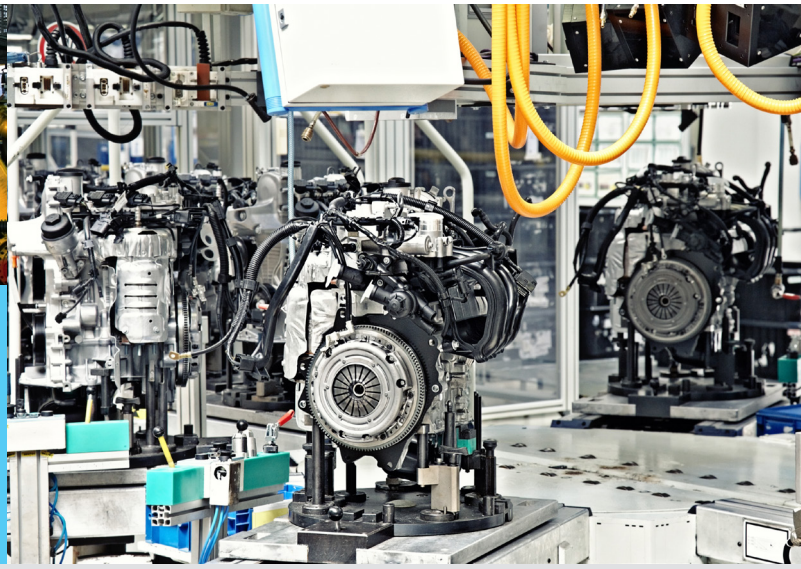


Industry Challenges

Recent decades have seen a vast decline in local production with widespread closures and downsizing of local factories – a trend headlined most recently by Ford's impending closure in 2016 [1] and the imminent shedding of 12% of Holden's workforce [2]. Toyota has also recently announced plans to cut 100 jobs and reduce production from 470 cars a day to 450 [3]. A major factor in these struggles has been the high Australian dollar. According to the Wall Street Journal, "a strong dollar makes it cheaper for rivals to import competing products from overseas, while pushing up costs for locally sourced labor and equipment" [4].

Companies also face the growing challenge of matching the output of international competitors who are likely working with cheaper labour and inputs, and are less remote than Australia. One way that companies have been tackling this issue is by adopting automated 'lights out' manufacturing processes, which adds a 'third shift' to operations and uses automation technology to accept, process and produce orders out of hours. This allows companies to secure larger contracts and deliver them in shorter time frames and with a smaller budget [5].

Many manufacturers expect automation technologies to help them maintain a competitive advantage and those that choose to embrace automation – and manage to implement new systems effectively – give themselves a chance of surviving in the modern manufacturing marketplace. With the proliferation and variety of automation technology available, manufacturers can be understandably daunted when deciding which products are best suited to their needs.

SICK Sensor Technology

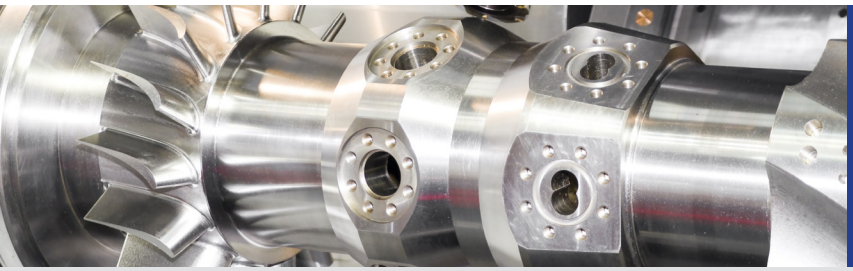
Advances in sensor technology have made it possible for manufacturing processes to be automated while ensuring high quality production with minimal errors. Sensors in particular are experiencing strong demand, with the overall demand for sensors rising faster than for industrial automation in general [6]. This is because the wide-ranging applications of sensors make them useful for isolated manufacturing functions as well as part of an integrated, fully-automated process.

SICK is a market leader in sensor technology, with over 6000 employees and 50 subsidiaries worldwide.

Their range of sensors is extensive, catering to all possible needs. Their product range includes industrial sensors; scanners; detection and ranging technology; fluid and motion control sensors; registration sensors; automated light grids; smart cameras; safety switches and controllers; analysers; and gas flow measurement.

Prospective customers can apply to SICK with their requirements. If a solution cannot be found within the existing product range, SICK will take the initiative to develop new solutions for large-scale clients – scenarios are sent off to SICK headquarters in Germany where possible variants are examined.

Once a new system is designed and settled upon, it is brought to the technical innovation centre at the Australian head office to be tested by application engineers. Customers are subsequently invited to the centre to familiarise themselves with the system and proof test it for themselves. This approach affords customers a unique confidence in the product they are investing in.



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Implementation/Commissioning

When it comes to the installation and commissioning of new systems, customers are afforded the freedom to personally install it themselves, provided they have the requisite knowledge and means to do so.

However, SICK also provide specific training for how to install the equipment in keeping with regulatory and legal requirements as well as any prevailing local OH&S standards.

SICK LifeTime Services ensures that the safety and productivity of systems are maintained. SICK will tend to installed sensors periodically over the life-cycle of the product and an updated or retro-fit system will be offered when the existing one is nearing the end of its use.

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[2] Australian Manufacturing, "Government intervention needed in car industry says AMWU president":
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[4] Kelly, Ross, "GM cuts jobs at Holden unit in Australia", Wall Street Journal, 8 April 2013:
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