



BOT-CONTROLLED BORDERS

WHAT PORTS COULD LOOK LIKE



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detection

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The ports and borders sector looks to be growing. A recent Straits Times article titled noted the increase in parcel clearance in Singapore in 2016; over 40% compared to 2014. Separately, visitor arrivals in the country have peaked to 16.4 million in 2016, recording a 7.7% year-on-year growth. Assuming this upward trajectory continues, it would mean busier years ahead for Singaporean customs.

But as is inevitable with growth, there will be issues that need to be addressed. We have seen reports that it is now tougher for clearance authorities to detect contraband items such as drugs and cigarettes in ports and port terminals. Meanwhile, we have to also take into account how modern authorities are increasingly pressured by government, media and society to maintain consistent vigilance on all fronts.

According to a report by Singapore's Immigration & Checkpoints Authority (ICA) Annual Statistics that was released in 2016, while the number of contraband cases detected at local checkpoints has decreased by 8% from 2015 to 2016,

smugglers are constantly coming up with new and novel ways to conceal forbidden materials and evade detection. In addition, personnel working in the ports and borders sector are known to work long hours coupled with graveyard shifts. How then can the industry tackle these issues without exhausting the talent pool and leaving the industry prone to error?

AI IN PORTS AND BORDERS

One way to solve the issues at hand would be to deploy artificial intelligence (AI), one of the highly discussed emerging technologies today. Wired to be intelligent and to replicate human efforts, AI has proven to be useful in dramatically reducing the amount of time and effort required for time-consuming tasks, and its usage is set to increase further.

By 2018, there might be a rise of AI that can mimic human conversations in terms of how we speak and listen, and approximately 20% of business content might come from AI, such as writing shareholder reports, legal documents and press releases. It is also predicted that AI

could power up to as much as a staggering 85% of all customer service interactions by 2020.

To that end, it is unsurprising that AI has been applied in the ports and borders industry: the main objective of doing so is to improve working efficiency but without compromising on security.

The Port of Rotterdam has tested an AI system which scans through a fraction of containers for illicit content, with the goal of speeding up the inspection process. At Gongbei Port of Entry, the border between China and Macau, AI has been deployed to help cover various functions such as answering passenger queries in as many as 28 different languages and perform facial recognition to help detect potential security threats.

Given that AI usage is proliferating, it is worthwhile for the ports and borders industry to consider investing in AI to help improve port productivity and efficiency.

AI CAN BRING OUT THE BEST

AI addresses some of the deep-rooted challenges in the industry, one of which



is the long working hours the industry is notorious for. A survey by Infosys on 1,600 business and IT executives saw that 55% see AI as helping to create and improve products, services and business models, as well as give quicker access to such existing products and services. Half of the respondents felt that AI could solve their problems faster and two-thirds of them believe that AI will 'bring out the best' in their employees. Most respondents are also positive that AI will enable displaced employees to take on higher-value work.

Implementing AI at work could also mean lesser costs accumulated in the long run. Aside from cost cutting benefits, AI also has the potential of expanding an organisation's capabilities such as its business acumen and efficiency.

From the same Infosys survey, respondents that had already adopted AI mentioned that they expect their overall revenues to increase by at least 39% in the following three years. Organisations that had experienced faster growth in revenue over the last three years were seen to be more advanced in AI maturity and adoption.

HUMAN COMPONENT STILL KEY

However, there are still some key dependencies to be considered when considering the implementation of AI. The ports and borders industry is a volatile one and terrorism continues to be one of the key threats to the industry, among many others.

Even though technology upgrades and simulation exercises can be done, security and threats cannot always be easily predicted. Similar to how smugglers are coming up with new ways to evade detection, terrorists could also

adopt similar tactics to try to smuggle in dangerous goods such as weapons or explosives into a given country.

During times like these, machines would need to have the flexibility that humans have to react to unforeseen circumstances. In that regard, the example of Uber's self-driving car which crashed during a test drive in March, 2017 in Arizona doesn't exactly inspire confidence- yet.

Due to the sensitive nature of the work, checkpoints cannot be fully automated and will continue to require human vigilance and interaction to manage unforeseen circumstances. To that end, it is important that technology enablers like Smiths Detection focus on not only product development, but also in delivering expert advice to military and security personnel to better equip them in addressing their day-to-day challenges.

As incredible an enabler as AI is, it is still limited in what it can do compared to human abilities, which have the major ability of being instantaneously reactive. As such, instead of looking to replace human beings, it would be best solution all round to have AI implemented as a complement to human labour, aiming for it to take on the more routine aspects of the human's job. Employees can then take on more elevated capacities by retraining themselves. In this way, the pursuit of efficiency will not come at the cost of valuable human talent.

REFERENCES

<http://bit.ly/2rsXR59>

ABOUT THE AUTHOR

Timothy S. Norton has over 30 years of experience in Product Development, DevOps & Market Development as well as Innovation Intelligence, with a unique blend of business acumen and technical savvy. Throughout his career, he has demonstrated an unwavering commitment to enhancing the customer experience and implementing continuous improvements in solutions to drive significant value back to the customer. His passion for delivering increased business value and driving operational excellence hasn't gone unnoticed, as evidenced by his momentous career successes within the security operations market.

ABOUT THE ORGANISATION

Smiths Detection, part of Smiths Group, is a global leader in threat detection and screening technologies for military, air transportation, homeland security and emergency response markets. Our experience and history across more than 40 years at the frontline, enables us to provide unrivalled levels of expertise to detect and identify constantly changing chemical, radiological, nuclear and explosive threats, as well as weapons, dangerous goods, contraband and narcotics. Our goal is simple – to provide security, peace of mind and freedom of movement upon which the world depends.

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