WHEN ROBOTS PROCESS COMPLAINTS

The clerical assistant is history. Machines can even deal with issues raised by bank and insurance clients or airline passengers. And because they are intelligent, they can gradually acquire the skills required to handle complicated matters.

By Rüdiger Köhn   Munich, May 15

And every day the tide of data floods the mailbox. One of the biggest British car insurance companies receives 2,000 emails alone every day about claims, changes of address, new insurance applications or policy inquiries. Four fifths of them are read and processed immediately, assigned to one of 30 categories and prioritized according to order of importance. It is more important to settle claims of existing customers than to obtain new addresses. The post is not sorted by a person but a robot takes care of the document management which has actually been the case for many years.

 But now the digital revolution has broken out in order to cope with floods of letters, faxes and emails – the robots are now also handling these. People with private health insurance may be the forerunners. They send medical bills by email, sometimes via an app – and have their out-of-pocket expenses reimbursed more quickly. The digital upheaval is advancing at the British car insurance company which wishes to remain anonymous. The robots have become intelligent and they are learning. Through the use of algorithms, they are picking up complex processes otherwise carried out by clerical assistants. They are no longer searching for keywords but are in fact capable of understanding context and can even detect mood and disposition as they read correspondence. The system comes from Swiss Post Solutions (SPS) and has been tested in live conditions by the British company which became a customer at the end of 2016 and the first reference customer.

"It is no longer a matter of sorting and distributing post," said Jörg Vollmer, "but it is a matter of analyzing and processing documents." The Chairman of the Board at SPS, who is also a Member of the Board of Swiss Post, the Swiss equivalent of Deutsche Post DHL, maintains that the physical world of document processing is merging with the digital world. With the SPS platform and thanks to artificial intelligence, the machines can do jobs which were once the preserve of human beings.

Robots are concluding lease contracts extending to 50 pages. The client of a mortgage lender writes a letter requesting the premature clearance of a loan whereupon the intelligent automation tool immediately detects the subject "prepayment penalty" although the term does not come up in the letter at all. This goes far beyond anything offered by Swiss Post in the past, taking care of the classic outsourced processing of invoices for about half of the 30 DAX companies, for example.

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The systems with artificial intelligence used by Swiss Post read and filter relevant data from digitally generated letters and faxes or from emails. It is no longer a matter of reading "structured data" in specific positions on invoices, bank transfer slips or application forms. The intelligent machines can distinguish "unstructured data", gleaning information from unscripted covering letters with complicated content.

The range of possible applications extends far beyond the functions used at banks and insurance companies which appear predisposed to be customers. SPS handles administrative matters for Virgin Trains in Great Britain, dealing with complaints about delays and the necessary compensation payments for the relevant passengers. Many communications are received by email so they are already in electronic format. The majority of complaints written to the Deutsche Bahn railways by customers come in by post which makes the process more complicated. This does not, however, constitute a confirmation on the part of Vollmer that Deutsche Bahn, known for its frequent delays, is a customer of Swiss Post. There is a similar level of interest in the potential use at airlines where passengers can also claim compensation payments for delayed flights. Swiss Post is gathering initial experiences with the luggage complaints system of Air France which has, until now, only been automated on a small scale. SPS has the advantage in this case of being able to handle processes in 30 languages. Platforms are also being developed for customers from telecommunications, media, trade and energy supply. Software solutions like optical character recognition (OCR) are a prerequisite for these platforms. They can filter out the information. "This is the key to the door leading to efficient administration," said Vollmer. This will allow machines to take over jobs which have hitherto been done manually and individually. This is called robotic process automation (RPA). "Everything will hinge on artificial intelligence and robotics in order to cope with documents in future," added Vollmer.

It is a sensitive subject, however. Customers do not want to be mentioned by name. Is it just the fear of glitches with a technology which has only just reached commercial viability? Or is there not also a worry of sparking a discussion about the loss of jobs and the threat of mass unemployment? The time required for health insurance companies to process claims for reimbursement of medical expenses can be halved from 30 minutes to 15 minutes and therefore so can the personnel costs. Human workers will still be needed, however, to solve complex individual problems. But the robot can also learn in these cases thanks to algorithms. "The software watches how the administrator handles the case," explained the SPS boss. He does not see it as a conflict but as teamwork between man and machine. About a third of the cases recorded at insurance companies will still be processed individually with the new model. Swiss Post started testing artificial intelligence in document management two years ago. Since the launch of the commercial phase, SPS has gained a dozen customers. There are more projects in the pipeline. An instruction has just come in from a German legal protection insurance company. And yet Vollmer pointed out that the use of artificial intelligence is at an early stage and it will take many more years to break into the mainstream.

"There is still a huge amount of paper," said Vollmer. He estimates that classic paperwork accounts for three quarters of the work in the banking and insurance sector alone. SPS still prints out 1.5 billion pages every year for its customers by way of account statements, bills and insurance policies. In the electronic age with online banking and online insurance, a billion hard copies come in by post. It is sometimes a complicated world, with customers filling out applications and forms on the Internet and then having to print them out in order to sign them and post them to the insurance company which, in turn, scans them to turn them back into electronic records. Staff have to file medical bills which have been photographed and sent to health insurance companies via an app. "The whole procedure is simply out of step with the times," continued Vollmer, lamenting the system.

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All the greater his pleasure then that SPS has just won a large American insurance company over to artificially intelligent document management which already receives 20 million of its annual tally of 35 million documents electronically. His delight is palpable because Vollmer beat his rival American bidder Xerox. Indeed, SPS is not the only provider, although it is one of the few, which are far advanced in the development of autonomous robots. The Bavarian insurance group *Versicherungskammer Bayern* uses the IBM Watson supercomputer software solution, for example, in order to process incoming post, faxes and emails and to assign them to staff in a priority classification system. Postal companies are already on the way to automated document management. They offer a combination of analog and digital processes although the proportion of physical work is still relatively high. But Vollmer forecasts that "in the long run everyone will follow the trend towards artificial intelligence".

The pressure is growing. The classic postal business is receding in importance. In their bid to diversify and compensate for lost business many years ago, postal groups discovered the document management market which is estimated to be worth 32 billion dollars. Having acquired the American Williams Lea Group (1.83 billion dollars in sales revenue) in 2006, Deutsche Post DHL is in second place behind Iron Mountain of the United States (3 billion dollars) according to a 2015 ranking of providers of document management services and is number one in Europe. SPS is ranked fourth in the world and third in Europe. The early deployment of artificial intelligence can bring major competitive advantages. IBM, Hewlett Packard, the American publishing group R.R. Donnelley and Arvato of Bertelsmann are operating in the market. Others entering the market in a sideways move in a bid to safeguard their existence with new business models include the copier group Xerox and imaging specialists Canon and Ricoh. They are in direct competition with SPS in robotic process automation.

"It may be a small market," said Vollmer, "but the growth rates are enormous." With sales revenues of 520 million euro, the SPS arm accounts for just under 8 percent of the consolidated sales of Swiss Post of 7.6 billion euro. The sales figures could rise to 1 billion euro by 2020 according to a confident Vollmer, who is not ruling out the possibility that 10 years from now Swiss Post Solutions could be the biggest division in the Swiss Post corporate group.

Lost luggage? *Machines will soon be taking receipt of your complaints.*

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