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Andreas Burner, SmartStream

Artificial intelligence in the back office – it's now or never

As the amount of complex data continues to increase financial institutions increasingly find back offices buckling under the strain. Andreas Burner, Chief Innovations Officer at SmartStream and head of their Innovations Lab believes AI could be the solution helping banks become more efficient by streamlining processes and making greater use of their operations.

A vast amount of data flows through financial institutions, and as the volume variety and speed of this data continues to grow so does its complexity. Too many back offices are hindered by ageing IT systems and inefficient manual processes that prevent firms from gaining a clear understanding of their data or exercising sufficient control. As a result, firms are plagued by what are actually avoidable operational losses, while also suffering from a lack of insight into the data that deprives them from fully understanding the information it can provide and restricting the profitability they can realise from it.

To further compound the banks' data operational challenges, they now have to contend with the increase in digital payments, which is now an almost mandatory service offering due to the pandemic. Banks' are under increasingly mounting pressure to increase processing speeds which need to be almost instant which is all but impossible without a transformation of middle and back office processes.

Skills dependency is another issue for the financial sector. Important operational knowledge is often lost when staff retire, leave or are promoted, and tools are required to prevent this loss of corporate intelligence, and to create resilience against such disruptions. Freeing back office staff from repetitive, low value processing activities, so they can be better utilised and redeployed to carry out higher value tasks, such as exception management, is essential.

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At SmartStream's Innovations Lab, we believe that new technologies, such as AI and machine learning, have a pivotal role to play in helping banks overcome the operational obstacles they face. These innovations are ideally suited to handling large, complex volumes of data. They can detect subtle patterns in data, the human eye could never spot, facilitating deeper understanding. This could revolutionise slow back office processes by helping firms process far greater volumes much faster. These technologies are potentially transformative, giving banks the power to turn the torrent of data

that is currently a burden into a valuable asset is a true paradigm shift.

In recent years, SmartStream has made huge strides in creating sophisticated, AI-enabled solutions that can revolutionise the way firms manage and reconcile data. Our systems combine multi-year operational experience with AI to deliver actionable information. They drive up automation levels, helping banks to improve service levels, stem operational losses, achieve superior margin management, and carry out more accurate data analysis. Our AI solutions are already in use and have proven their value by to creating cost-efficiency benefits.

Three years ago, SmartStream, which has a long track record of investing in research and development, launched its Innovations Lab. The purpose of the Lab is to build AI and machine learning solutions designed to solve specific business problems of our customers. We collaborate with Tier 1 banks to identify high value business cases where AI can create proven cost and efficiency benefits.

The Innovations Lab also provides a great deal of reassurance to firms about the use of AI, helping them overcome any qualms they may have. By running proof-of-concept projects in partnership with the banks, using our AI technology in combination their data and processes, firms are able to see for themselves the tangible results AI can bring.

Alongside these collaborations, we have developed a highly advanced, easy-to-use, AI-based application, SmartStream Air. This solution has a truly transformative impact on the onboarding and processing of reconciliations, reducing tasks which have traditionally taken weeks or months to a matter of seconds. SmartStream Air requires no training or configuration. Users simply upload raw data to the application, in any structured format, and it then matches the information, using unsupervised AI. Transactions can be streamed into the application in real-time, which can be imperative when speed is essential, as is the case with digital payments. Using SmartStream Air, firms reconcile complex data sets rapidly and accurately while driving up processing speeds. Additionally, SmartStream Air reduces skills dependency, e.g. configurational skills.

SmartStream has also developed an 'observational learning' component, Affinity, that learns from the manual matching behaviours of human users. Affinity is part of SmartStream Air, and it is being embedded across our existing solution suite, including the technologies used by our managed services arm.

A recent project, carried out in collaboration with a Tier 1 bank entailed the integration of Affinity with the bank's TLM Reconciliations Premium platform. The bank had high automation levels and excellent match rates but they wanted to tackle a residual pool of matching that had to be done manually. Affinity was used to analyse this remaining group of complex cases, reducing the final percentage of data that needed to be matched manually and created potential savings. For large firms like this shaving off that last percent of manual matching can add up to a savings in the millions.

Additionally, by learning from the matching activities of skilled operational staff, Affinity preserves vital corporate intelligence, preventing it from being lost or disrupted by events such as staff absence or holidays. Its ability to learn rapidly from human users also frees up staff to concentrate on higher value tasks.

In summary, there is a pressing need to overhaul back offices with their ageing, fragmented IT systems and inefficient manual processes. Innovative technologies such as AI and machine learning are already proving their effectiveness and are here to stay as they are set to shape the back office of the future. Yet while financial institutions undoubtedly understand the impact these technologies are having, the industry still remains cautious, and the pace of adoption is slow when compared to other industries. Banks can, however, no longer afford to stand still if they want to remain relevant in a highly competitive market. Given that reliable, powerful AI and machine learning solutions are now available, we believe that the financial industry must embrace innovation with confidence if they are to reap the benefits it can bring. ■