

## REPORT REPRINT

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# LTI builds out an artificial intelligence and automation portfolio in Mosaic

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The Indian-heritage IT services company has made AI and machine learning central to its Mosaic platform. Can it compete against its larger peers for a share of the AI windfall?

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Every major Indian-heritage IT services company offers a machine-learning platform or has one in development. LTI, formerly known as L&T Infotech, is pushing its Mosaic AI platform as part of its overall automation message, ranging from script and robotic process automation (RPA) to true machine learning.

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## THE 451 TAKE

LTI understands that artificial intelligence - and machine learning, in particular - is part of a continuum of automation, ranging from RPA to AI. After all, the history of the software industry is one of automating repetitive human processes, with AI at the sharp end of the spear. The quantity and quality of data, plus industry knowledge, generally make the difference in machine learning. LTI certainly has the latter, particularly in manufacturing, banking and insurance.

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## CONTEXT

LTI is a spinoff from India's engineering, construction, manufacturing and financial services conglomerate Larsen & Toubro. The company - founded in 1997 - went public on the National Stock Exchange of India and Bombay Stock Exchange in July 2016. CEO Sanjay Jalona joined as CEO in August 2015 after 15 years at Infosys.

The company reported fiscal year 2017 (through March 31) revenue of \$969m, up 9.3% percent on fiscal 2016. It derived 69% of its revenue from the US, consistent with the prior year. Banking and financial services represented its biggest segment with 26% of revenue, followed by auto and aircraft manufacturing with 22%, and insurance with 21%.

## PRODUCTS

Mosaic AI is part of the Mosaic family of products, which also includes Mosaic Automation, Mosaic Decisions, Mosaic Experience and Mosaic Things. This report focuses mainly on Mosaic AI, which includes:

- Service Management and Digital Command.
- Intelligent Advisors.
- BackOffice AI Process Assistants.
- Augmented Reality & AI.

Putting those into context, Service Management is mainly concerned with automating ticketing processes for helpdesks; Intelligent Advisors are chatbots or bots with personal assistants, such as Amazon Echo or Google Home; BackOffice AI Process Assistants are used mainly in financial services for anti-money-laundering, know-your-customer (KYC) and other types of due diligence processes; and Augmented Reality & AI, while having multiple applications, is used mainly in the oil & gas industry to do things such as help lay pipelines below the ground. Mosaic AI came to market in late 2016, and most customers are currently in pilot mode.

## USE CASES

LTI believes it can save its customers a lot of time and money with regard to customer onboarding in banking. Citing a large bank in Asia, where onboarding can take two to three days when customers have to come into a branch, the company has managed to get it down to about two hours using Mosaic AI. For example, machine-learning-driven chatbots can make sure the customer knows what they need to have to hand to complete the onboarding process, then the bank can accept uploaded documents, use optical character recognition (OCR) to analyze and help verify the documents (with humans only intervening to handle exceptions), and then generate a customized welcome kit for the customer.

In a different banking scenario, Mosaic AI can speed the KYC due diligence process using a combination of RPA (Mosaic Automation), natural language processing (NLP), and machine learning to analyze reports and extract relevant content from them before going on to produce a final report on the customer. All that would've previously been done by humans conducting the searches and extracting the information.

Mosaic AI can be used to help speed the introduction of new models in car manufacturing. For example, car makers test cars thoroughly prior to launch using the test laboratories. Issues that affect turnaround time include availability of lab resources, and the collection and analysis of diagnostic data from the cars. Mosaic can be used to stream the data from the cars in real time. With cars connected to the internet, their location can be known at any time, and Mosaic helps schedule the testing of other cars to ensure minimum downtime and help the launch process run more smoothly. LTI claimed a 25% improvement in turnaround time.

In trade finance, large volumes of unstructured documents need to be scanned and read by analysts to identify data for transaction processing and to identify names. This can be done automatically using Mosaic AI's OCR and NLP technology.

## TECHNOLOGY

Underneath the various packaged applications is the platform itself, which includes a number of machine-learning engines, such as speech to text and image recognition, all wrapped in a microservices architecture – some are open source, some are written by LTI, plus domain-specific vocabularies. It includes various points of integration to enterprise applications such as Oracle, Salesforce and SAP; data sources and other machine-learning ecosystems, such as Google, IBM Watson and Microsoft Cortana; and cloud platforms, such as AWS and Microsoft Azure.

## COMPETITION

LTI faces stiff competition, most directly from its fellow Indian IT outsourcing and services peers, such as HCL Technologies, Infosys, TCS, Tech Mahindra and Wipro. In the US, Europe and other areas of Asia-Pacific, it faces competition from Accenture, Capgemini, CSC, Fujitsu, Dimension Data, NEC, IBM and Hewlett Packard Enterprise.

Specifically related to machine learning, IBM Watson, Infosys NIA, TCS's Ignio and Wipro's Holmes are all directly competitive AI stacks with various advantages and disadvantages, often centered on the vertical market use cases at which they excel. Almost all are being used to automate IT ticketing processes, which is the low-hanging fruit for AI and RPA-driven automation.

## SWOT ANALYSIS

### STRENGTHS

LTI has built and assembled a machine-learning platform to address a cross-section of business problems with some quick-to-realize benefits for the customer. In combining it with the other Mosaic automation products, it is addressing the continuum automation from RPA to machine learning that customers seem to be demanding.

### WEAKNESSES

It's fairly early in terms of customer adoption. Like many of its peers, named references for AI are thin on the ground for LTI. We would like to think it's because customers see its use as a competitive advantage at this point.

### OPPORTUNITIES

The opportunities for machine-learning-driven automation span vertical industries and almost every business process. We expect LTI to focus on verticals such as banking, insurance, manufacturing, and energy and utilities.

### THREATS

LTI's larger competitors have all built, bought, or assembled competitive AI and machine-learning stacks to address the same issues LTI is addressing. The differentiator may prove to be how well each one understands the vertical industry and the processes within it.