

● **INTERVIEW: MUKESH RATHI, CIO, Dr Reddy's Laboratories**

AI/ML, analytics to play a vital role in drug development

Dr Reddy's Laboratories has embarked on a digitisation journey to make its processes agile and robust. It has created a data lake where all the data comes together in a meaningful way and the company is able to use this data for improving productivity. "We have also started piloting a digital platform to support cancer patients in their entire journey from diagnosis to recovery," says Mukesh Rathi, chief information officer, Dr Reddy's Laboratories, in a recent interaction with BV Mahalakshmi. Excerpts:

How are next-gen technologies like AI, ML and data analytics helping the pharma industry in faster drug development and discovery process?

While still nascent at an industry level, AI/ML and data analytics would play a bigger role in the drug development/discovery process across multiple dimensions—from active pharmaceutical ingredients (API) synthesis to formulation, IP landscape mapping and commercialisation strategy. The need has also created visibility to the hurdles that need to be overcome on that journey—and it bodes well for the industry in the long term. We are on an aggressive digitisation journey. This is helping us

make our processes agile and robust.

We truly believe that data is the most important asset and are constantly working on not just bringing together existing data, but also looking for sources of data we do not collect or generate today. Technology has enabled bringing in not just structured data but unstructured sources

like documents, reports, etc.

How is Big Data providing end-to-end support, from research to packaging to marketing?

Big Data comes naturally to digital-native firms but is a cultural and infrastructure shift for organisations in our industry. Our efforts and pilots in this direction are now showing early results in terms of cultural shifts towards importance, collection and utilisation of data for improving processes and decisions. We



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have already invested in the infrastructure to create a 'data lake' where all the data has started coming together. Just like in R&D, we are on a similar journey in manufacturing, supply chain and sales and marketing to digitise and harness the potential of data insights to create competitive advantage. We are working on many interesting use-cases that enable better yield and productivity on the shop floor. Similarly for better field effectiveness and customer engagement.

What are the requirements for improving automation in manufacturing and supply chain?

At Dr Reddy's, we are continuously looking at re-engineering and digitising our processes with three key levers—process elimination, process automation and process interlocks. This helps us to apply the principles of all data should be attributable, legible, contemporaneous, original and accurate (ALOCA) for data integrity. Today, most of our formulation plants run MES (manufacturing execution systems) and have electronic batch record, R&D labs use ELN (electronic lab notebooks), QC Labs use LIMS (laboratory information management systems) and generate electronic result of analysis, and we have DMS (document management system) that enables electronic availability and workflow of all documents. All of these are focused on simplifying processes and reducing scope for human error. We began this digitisation journey few years ago and have removed more than 70% paper from our plants. We are aspiring to have paperless shop-floor and labs across the organisation over the next two years.