

As Walmart fights Amazon, a lot rests on one man – Suresh Kumar

Kumar, in turn, is banking enormously on his 7,000 enggs in India

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In the 12 months ended June, Amazon outsold Walmart for the first time, the New York Times reported a week ago. It makes Amazon the biggest retail seller outside China (Alibaba is bigger than both Amazon and Walmart). It also marks the first time Walmart has been outsold since it became the biggest US retailer in 1990.

Amazon, whose sales also come from third-party sellers, was helped by the massive surge in online orders during the pandemic. Walmart's sales too grew sharply, but not as much as Amazon's. The difference between them could narrow as people once again step out to shop. But the dramatic changes happening in retail show that technology will be core to success. And at Walmart, the entire tech responsibility is that of Suresh Kumar, who came from Google to be the global CTO and chief development officer (CDO) of Walmart in July, 2019.

Kumar, a Tamilian who grew up in Bengaluru, did aerospace engineering at IIT Madras, and a PhD at Princeton University, US. Then followed a series of fabulous and varied roles at some of the biggest US companies – IBM, Amazon, Microsoft, and Google.

So, he's come to Walmart with exceptional credentials. And now,



WHAT A CV!
WORKED AT
IBM, AMAZON,
MICROSOFT,
GOOGLE,
WALMART

- Grew up in Hanumantha Nagar and Banashankari in Bengaluru
- Studied in Bangalore High School, Jayanagar
- Did BTech in aerospace engineering from IIT Madras
- Did PhD in control systems, from Princeton University, US
- Started his career in IBM as research staff member. Developed a C++ numerical simulation framework for use in design of electromechanical systems necessary for portable hard disk drives. Developed 2D and 3D visualisation programs for studying the effect of shock on portable systems. The work led to 5 patents
- After 7 years at IBM, worked at Amazon for almost 9 years (in software development and worldwide retail systems), Microsoft for nearly 4 years (in cloud infrastructure), and Google for a little over a year (in network advertising)
- **Walmart CTO & CDO since July 2019**

“My parents stressed on being a good person and valuing education. They often reminded me that material things can be taken away, but what you learn is going to stay with you forever.”

Walmart's India development centre is the foundation of our engineering excellence. We have teams here with deep domain competencies, developing enterprise solutions and tech products that are creating world-class experiences for our customers, suppliers, and associates.

My advice for the young tech talent and engineers in India is to be ready to adapt and switch gears in your professional journey.

What was common among the 5 companies I worked for

- 1** Technology is at the heart of all business and customer experience transformations, and technology capabilities grow exponentially.
- 2** Whether the companies were building new systems or transitioning from being successful in one area to another, they all began with the customer or end user in mind.
- 3** They all focused on the fundamentals – building for scale, organising for speed, and executing flawlessly.
- 4** Success is often driven by strong leaders who bring people together and rally teams to reinvent from within.

as Amazon presses ahead, many would be watching to see how successfully Kumar can tie together Walmart's global empire of physical retail and its rapidly growing online operations to create differentiated customer experiences.

In a conversation with Times Techies, Kumar said blending offline and online is hugely chal-

lenging, but therein also lies Walmart's biggest opportunity. Because customers will always want to shop in both modes. But, Kumar says, the customer does not like a silo, they don't want to switch experiences between the two.

Numerous factors contribute to the complexity. The supply

chains for ecommerce and stores may be different. Each may have different product/ service categories. Customers may have different habits when browsing online and when they are in the store. Kumar's challenge is to ensure his tech handles all these complexities in a way that makes the customer experience seamless.

Last year in the US, Walmart started merging Walmart.com and Walmart Grocery apps to begin building one app that makes it easy to shop for both fresh groceries and general merchandise. "This is a highly complex integration for many reasons, but one of the greatest is the need for logic that quickly understands each order and the different fulfilment requirements – fresh delivery from a store, and general merchandise from a fulfilment centre," Kumar says.

Machine learning (ML) will be one of the key enablers for both customer experience and backend optimisation. "We built an ML model for how we do markdowns at the end of a product life, or season. It's very difficult for human beings to figure out what is the right time to markdown, how much do you markdown. And it varies from location to location. We are really good at it now. This single thing has saved us multiple tens of millions of dollars. And it provided a much better customer experience because it was much more suited to the locality the customer was shopping at," Kumar says.

Walmart's 7,000 engineers in India – 45% of the global total – have been key to driving many such initiatives. They have delivered a contactless delivery solution, they did work to improve the discoverability of online products, they developed a solution to prevent overselling of products. They are working on an IoT platform that monitors real-time supply chain data, including the state of freezers.

"Our associates in India are critical to driving our tech vision. We will continue to invest in and take advantage of the talent in India," Kumar says.