Mobility Technologies for Activity Assistance in E-commerce Supply Chain

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Abstract

Manual operations are a huge part of supply chain in India. As a supply chain company scales, following needs are the first to be addressed:
- Auto data capture and runtime data visibility for planning, reconciliation and issue resolution
- Process Improvement: Removing non-value-add & redundant activities, clubbing sub-activities
- Productivity and reliability improvement, efficiency improvement in value-add activities

Mobility solutions, ranging from Handheld Devices (HHDs) to voice-assistance to Augmented Reality (AR), can help achieve these goals. This case study describes how mobility technology solutions can help overcome data & manpower challenges present in scaling an ecommerce supply chain logistics operations in India, like at Flipkart. Through these solutions, we target design flexibility, reducing infrastructure and operational cost, improving operational efficiency. Mobility solutions integrate well with other automation technologies, and act as a stepping stone for end to end supply chain automation.

This case study further gives an in-detail analysis of
- the socio-economic challenges, in adopting mobility technologies, such as low wages, skills, english-proficiency etc of operator manpower
- natural progression of mobility technologies and the suitable time to adopt these in the industry; and
- appropriate strategies around cost-effective deployment & user-friendly device/application design to overcome above mentioned barriers

Keywords

Mobility, Supply Chain, HHDs, AR, Voice Assistance, Activity Assistance, Asset free operations

Biography

Deepak Pawar is currently working as Graduate Trainee in Automation Design department in Flipkart Internet Pvt Ltd and is involved in end-to-end supply chain automation for material handling and sortation. He has completed his Bachelor's and Master's in Technology from Indian Institute of Technology Kanpur in Aerospace Engineering.

Paras Arora is currently working as manager in Automation Design department in Flipkart Internet Pvt Ltd and is involved with end-to-end operational efficiency improvement, through automation, robotics and IOT. He has completed his masters through European Master in Advanced Robotics (EMARO), an Erasmus Mundus program jointly completed in Ecole Centrale de Nantes (France) and Warsaw University of Technology (Poland). His bachelor studies were in Mechanical Engineering from BITS Pilani, and has worked in robotics R&D and planning and Supply Chain processes across industries.

Swadesh Srivastava is currently Director of Automation Design at Flipkart. Prior to Flipkart, he has worked at leading technology companies like Intel, Lam Research and Apple in the US. He is a technology leader with diverse global experience across R&D, Product Development, Design & Operations in different industries such as ecommerce logistics, consumer electronics, semiconductors, high-tech equipment. He has a PhD from University of Minnesota and B.Tech from Indian Institute of Technology. Swadesh is also active in non-profit sector, playing executive & entrepreneurial roles.