Abstract

Automation/Information Technology is responsible for engendering a more productive and competitive enterprise, by creating a highly flexible operation that quickly responds to changing market demands. Without state-of-the-art technologies, companies will not only fall behind competitors around the world but may even find their mere survival severely threatened. Over the past decade, regional organizations like many industrial companies in developing countries, have not been able to acquire/adopt “new-age” technologies feasibly, due to the problems of high cost, ease of access and upgrades and re-skilling of the labour force to effectively manage and operate such technology. However, technology itself has evolved to the point where these barriers are no longer obstacles they once were, including to small operations and its benefits are available to all.

Part 1 of this paper traces the development of manufacturing and the application of technologies to automate disparate fragments of its process. However, to optimise the benefits, these diverse technologies must be integrated which is essential to informing the organisation. This paper illustrates some of the technological changes that should be harnessed by organisations within the region in order to facilitate more viable approaches to providing a flexible and cost-effective integrated solution. Part 2 of this paper investigates comparatively emerging methodologies and approaches that can improve the feasibility of “new-age” technologies.