

The R&D Strategies for Developing Countries

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Abstract: The last two decades have seen many developing countries in the world formulating national Information and Communications Technology policies (Kunyenje & Chigona, 2016). There are many emerging technologies attracting their interest such as machine learning, big data, the block chain, autonomous vehicles, drones, software-defined security and brain-computer interfaces. These technologies create new opportunities and competitive advantages to developing countries in economic and social growth. However, high technology investment can be inefficient, expensive or high-risk. Besides, high technology is associated with needless features, long learning curves, and unpredictable results that make it difficult to develop and maintain (“<https://simplicable.com/new/low-tech-vs-high-tech>,” n.d.). Conversely, there are many examples that a basic, new and low-cost startup business idea can lead to great business success and high return on investment.

So, deciding to investigate a new technology, a cost-benefit analysis should be performed including the purpose and of the new technology, the cost of all process, the possible problems or risks involved, estimate all of the hardware, software and infrastructure costs involved, a timeline for implementing and gaining the new technology, sustainability of the new technology, and indicate its expected life-span.

In this conference presentation, we will evaluate how the most successful companies in the world balance their high-end and low-end technology investment. This provides useful insight into the decision of new technology research and investment for people, companies and countries.



Biography: Ali Nizam A was born in Fatih, İstanbul, Turkey in 1976. He received the B.S. degrees in electronic engineering from the Yıldız Technical University, İstanbul, in 1997, and the and M.S. and Ph.D. degree in electronical-biomedical engineering from İstanbul Technical University, İstanbul, in 2000 and 2009 respectively. From 1997 to 2011, he had worked at ISKI including software engineer, project manager and Management Information Systems Department manager. Since 2011, he has been an Assistant Professor with the Computer Engineering Department, Fatih Sultan Mehmet Vakif University, İstanbul, Turkey. He is the author of four books, one book chapter, and four articles. His research interests include software engineering, relational database concept and data science. He holds two patent applications. Dr. Nizam’s awards and honors include the TÜBA (Turkey Academy of Science), the University Text books Award Programme (TEÇEP) Best Original Book Award with Software Project Management Book.