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A Shankar IAS Academy Initiative

Impact of Fourth Industrial revolution on India

Fourth Industrial Revolution has been emerging in recent times and its impact on India has to be explored.

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What is Fourth Industrial revolution?

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- It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.
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- It brings together digital technology and the physical world to create a new range of products and services.
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- The possibilities of billions of people connected by mobile devices, with unprecedented processing power, storage capacity, and access to knowledge, are unlimited.
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- And these possibilities will be multiplied by emerging technology breakthroughs in fields such as artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing.
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- The revolution is evolving at an exponential rather than a linear pace and it is disrupting almost every industry in every country.
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What is the case with India?

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- India is not a frontrunner in most of these areas.
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- But India started beginning to make their contribution to the emerging digital-physical world.
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- India heads the list of the Top 10 digital nations, according to the recently released Tholons Services Globalisation Index.
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- The rank reflects the country taking global leadership in the use of mobile data, Aadhaar's success in giving every resident a unique digital identity, and Rupay's rapid growth and acceptance when compared to the stodgy performance of global card companies like Visa and MasterCard.
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- The features of these platforms are low cost and massive scale, precisely the combination that defines most Indian markets.
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- Such platforms can be used to offer products and cloud-based services to citizens and consumers by governments and businesses.
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- The overwhelming majority of the 10 million businesses registered with the GST (goods and services tax) system don't have access to institutional credit.
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- The new technologies, data platforms like the GST Network and the Corporate Identification Number system, along with interventions like the Reserve Bank's support for a Public Credit Registry, make it possible to radically improve the transparency of the financial system.
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- This ensures small businesses without either a credit history or assets to offer as collateral can get credit on the basis of their cash flow.
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- The result could be transformative for millions of small businesses.
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- If cloud-based platforms can be put in the public space, new businesses could build on them, as Uber has done with the Global Positioning System (GPS).
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- The remarkable volunteer-driven Bengaluru firm iSpirt is working on a platform for medical application.
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- Businesses that build on such platforms that offer low cost and large scale could facilitate success in 4thIR in a way that India failed to achieve in earlier manufacturing avatars.
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- Digital-only banking is already a reality, while the cloud-based Zoho business software package offers small businesses affordable pay-as-you-go business software solutions that are precluded by the heavy upfront costs.
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What should be done?

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 - Countries like China kept Google at bay while developing its own Baidu search engine, and also kept out the international credit cards while pushing its own UnionPay.
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 - This could be due to the concern that lack of control of key data platforms could become a national vulnerability in conflict situations.
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 - This was also the reason for the major push towards data localisation as policy measure in India, despite US opposition.
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 - The development of the satellite-guided Navic system as an alternative to the US-promoted GPS is another result of such thinking.
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 - However, India should ensure that access to the domestic market be leveraged also in other areas like transportation, manufacturing etc., without losing efficiency.
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 - The Fourth Industrial Revolution may indeed have the potential to robotize humanity and thus to deprive us of our heart and soul.
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 - But the creativity, empathy, stewardship inherent in them can also lift humanity into a new collective and moral consciousness based on a shared sense of destiny.
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 - It is incumbent on the people and the government to make sure the latter prevails.

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Source: Business standard

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