

WIEF Foundation presents



9TH WIEF GLOBAL DISCOURSE 4IR: Seizing Possibilities for The Future

30 October 2019
Radisson Blu Dhaka Water Garden,
Dhaka, Bangladesh

Organiser



Joint Organiser

SEACO
South East Asian Co-operation
FOUNDATION

First let us take a quick glance at the previous industrial revolutions

The First Industrial Revolution

Revolution started by the steam engine developed by James Watt in 1760

Based principally on the principle of Physics namely

Heat is Motion and Motion is Heat

Heat \longleftrightarrow Motion



- Led to mechanization of Textile Manufacturing and steam power.
- Production of machines and devices that mechanized production.
- Economic development in England (1760- 1840)

Second Industrial Revolution

Began with advances in electricity : An accidental observation of
Oersted in 1820

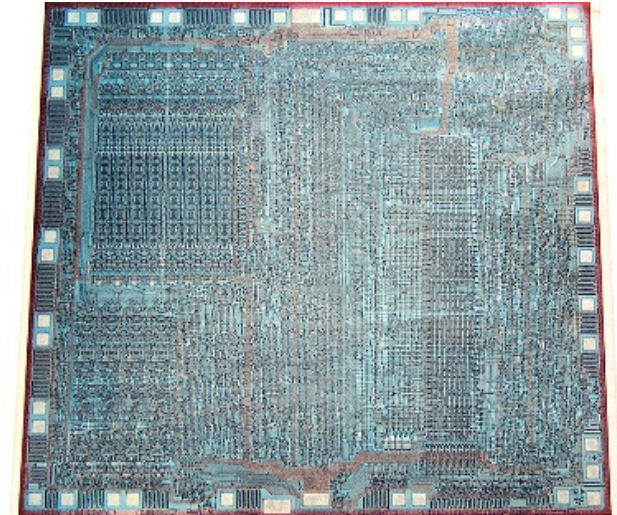
- Steel production
- Automobiles (Introduction of the assembly line in car industry by Henry Ford)
- The second industrial revolution began in mid nineteenth century and continued until World War I in 1918
- Discoveries in advances of electricity led to communication technology
- 1866 First underground telegraph cable
- 10 years later, Graham Bell invented the telephone
- Late 1800's : Thomas Edison invented the incandescent light bulb

ELECTRIFICATION OF THE WORLD BEGAN

Third Industrial Revolution

Appeared in the second half in the twentieth century and was marked by

- Invention of the transistor (1948)
- Rise of electronics and information technology
- Bio technology



chip Hall of Fame Zilog Z80 Microprocessor-IEEE Spectrum

In industry , high levels of production occurred because of two major inventions : Automations (Programmable logic controllers PLC) and Robots

Fourth Industrial Revolution

- Rooted in a new type of technology namely digitalization.
- Genesis from internet
- The story of CERN (Centro Europeo Recherche Nucleare)
- Birth of WWW : Tim Bernard Lee
- Spread of Telecommunication

Disruptive Technologies of the Fourth Industrial Revolution

- IoT (Internet of things invented 20 years ago, first connected to computers and then to phones)
- IoT development allows one to integrate the internet into every aspect of one's home, office, factory or shop with devices that connect each other on the internet.
- AI (Artificial Intelligence)
- VR (Virtual realities which have started ruling the actual realities of the world)

Etc .

- **The Fourth industrial revolution which is basically a product of the third industrial revolution have started changing the way people live, work and think**

BIG QUESTIONS

- Where are we now? Do we have “**Smart Cities**” created by the fourth industrial revolution?
- What do we do with the fourth industrial revolution?
- During the first and second industrial revolutions we were a British colony
- The Third industrial revolution began almost with the division of British India into two independent states : India and Pakistan
- Later, after the independence of Bangladesh we missed the digital revolution and became end users of it.
- Now the big questions which we have to address :
 1. Are our people fully aware of the pros and cons of the fourth industrial revolutions?
 2. How prepared are we to reap benefits from this revolution?
 3. What should be our role in the fourth industrial revolution?

Shall we be end users only and act as operators of technologies?

Or

Shall we be participating in the technologies and use them for development ?

These answers must come from all the relevant players and stake holders before we can fully exploit the 4th industrial revolution for national development.

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THANK YOU

- M. Shamsheer Ali -