# INDUSTRIAL TRANSFORMATION

Group-1

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INTRODUCTION
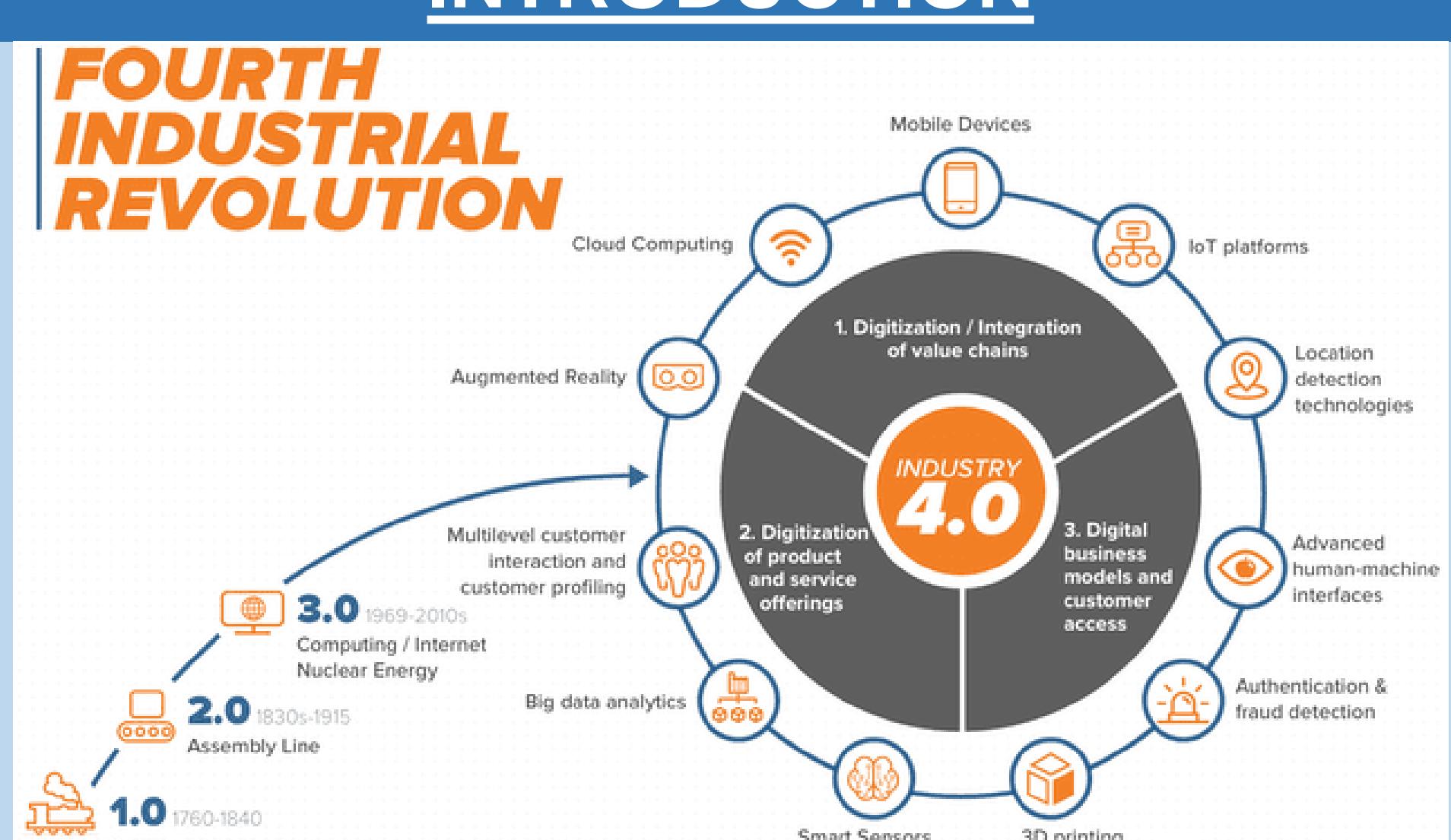
The Fourth Industrial Revolution (or Industry 4.0) is the ongoing automation of traditional manufacturing and industrial practices, using modern smart technology. Large-scale machine-to-machine communication (M2M) and the internet of things (IoT) are integrated for increased automation, improved communication and self-monitoring, and production of smart machines that can analyze and diagnose issues without the need for human intervention.

ABOUT PREVIOUS INDUSTRIAL REVOLUTIONS

• FIRST INDUSTRIAL REVOLUTION
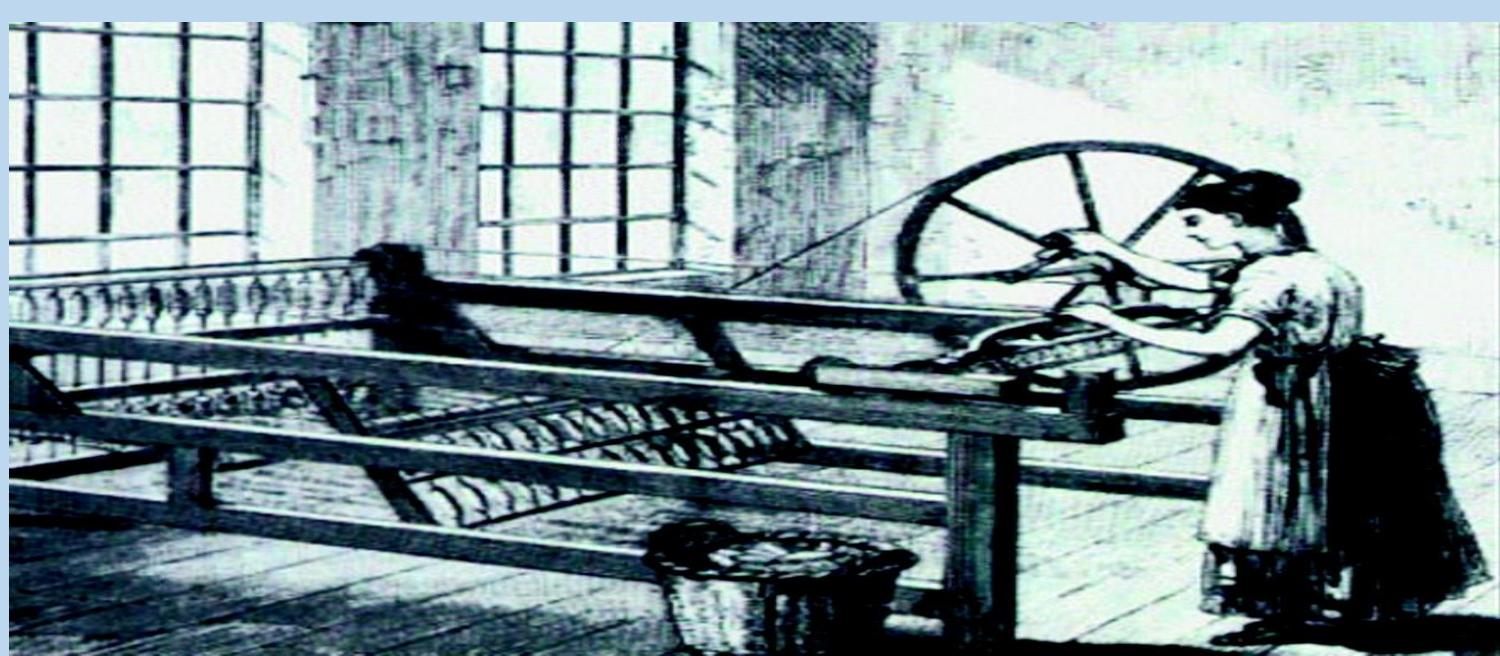
Figure 1: 1st industrial revolution

The biggest change that came was mechanization as inventions such as steam engine came to be which provided mechanical power through steam

• SECOND INDUTRIAL REVOLUTION
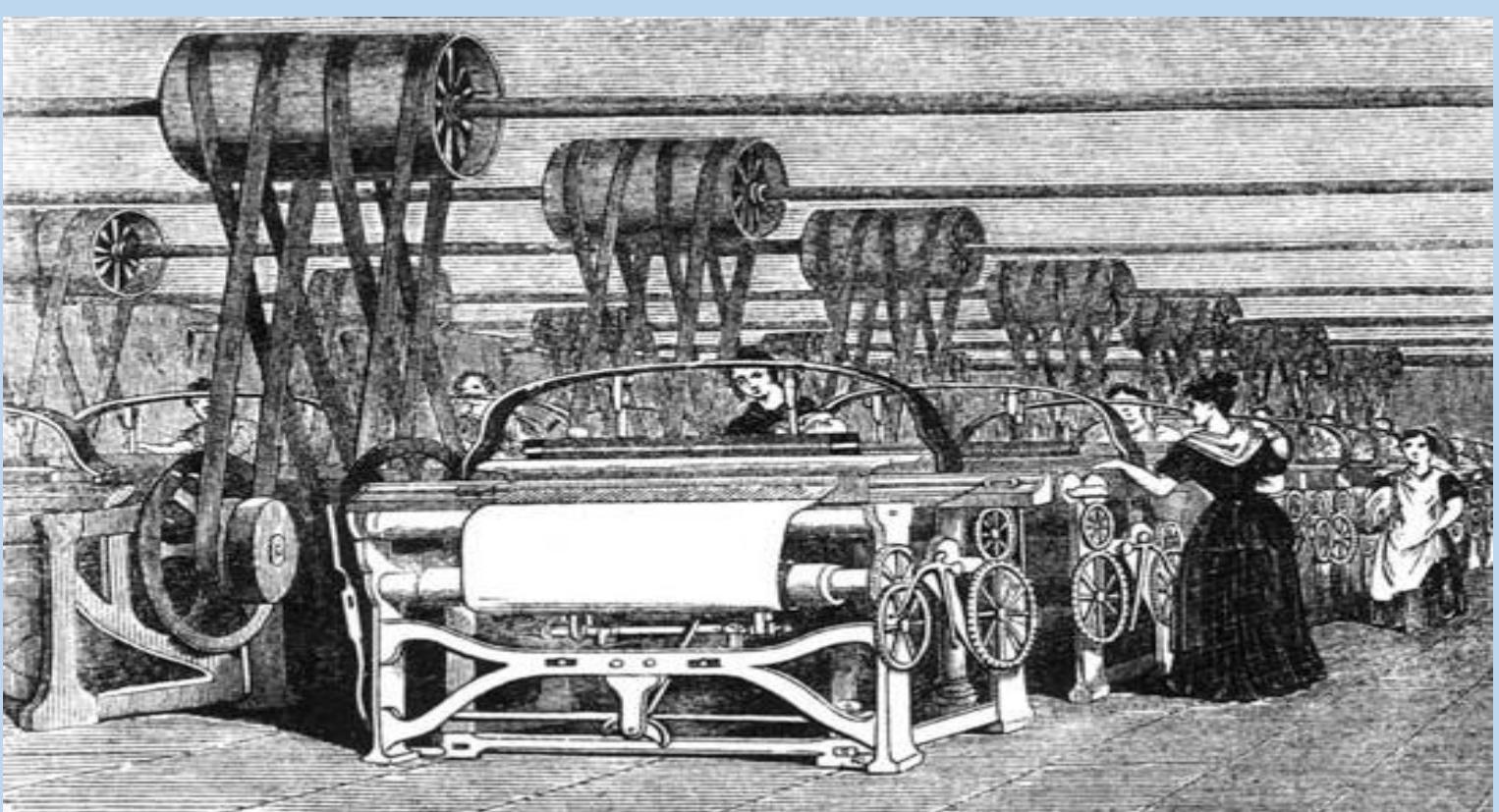
Figure 2: 2nd industrial revolution

We saw the emergence of a new source of energy such as electricity, gas and oil as well as mass production of steel.

• THIRD INDUTRIAL REVOLUTION

Figure 3: 3rd industrial revolution

We saw the emergence of Nuclear Energy during this era. New technologies such as electronics, telecommunications and computers were developed.

WHAT 4th INDUSTRIAL REVOLUTION BROUGHT

The 4th Industrial Revolution diminished the boundaries between physical, digital and biological worlds. It is a combination of AI, Autonomous robot, Simulation, System integration, Industrial internet of things, Cybersecurity, Cloud Computing, Additive manufacturing, Augmented reality and Big data analytics
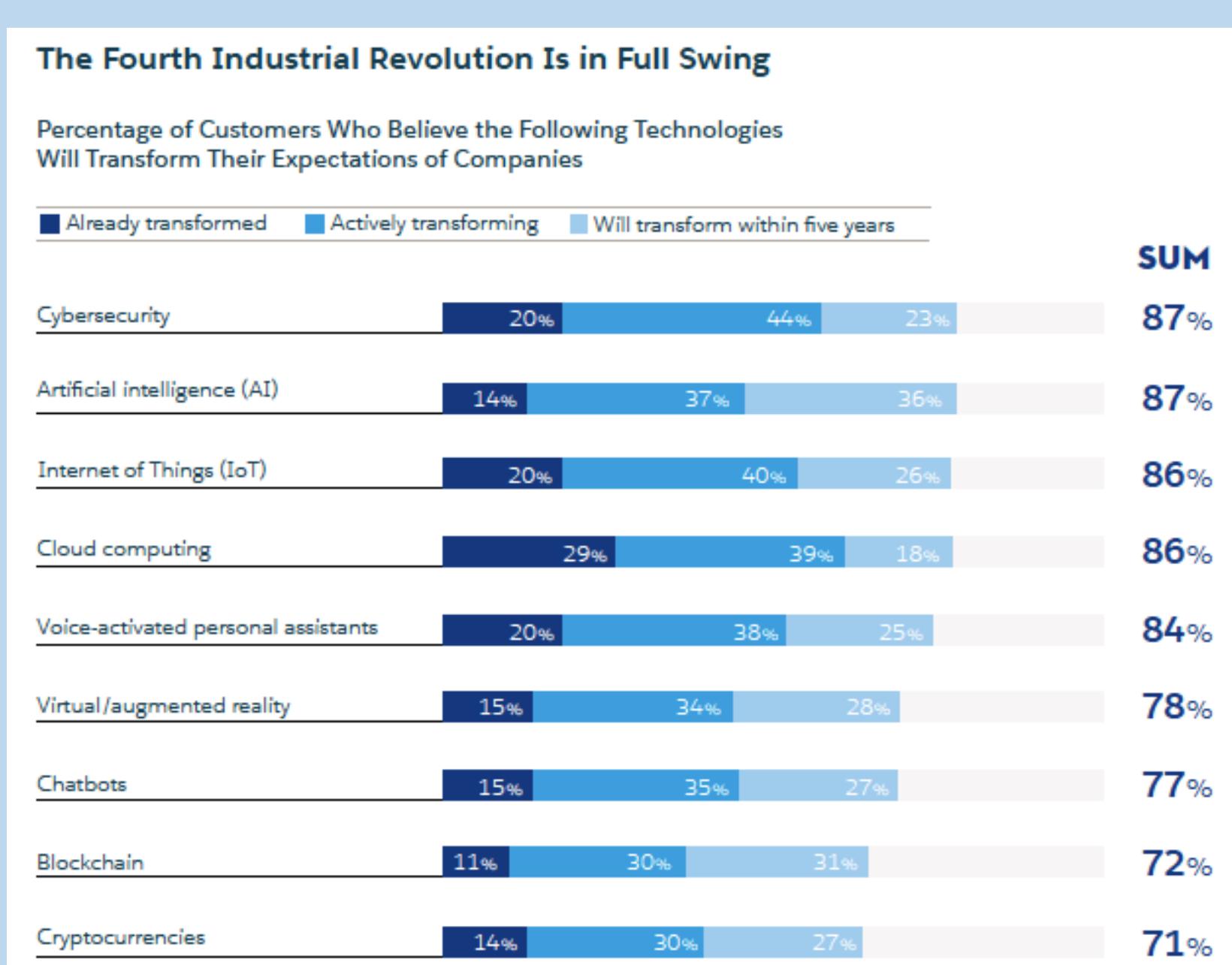
Some of the popular applications of 4th IR are:

1. Commerce 4.0 such as Online shopping

2. Smart homes

3. Data centers for faster internet were developed and 5g was also developed.

4. Education 4.0 such as having the option to learn virtually and platforms to connect with faculty and course mates.

5. Augmented reality

Some of the jobs 4th IR brought:

- 3D printing technician
- Computer vision engineer
- Ethical hacker
- Machine learning engineer

SUMMARY

To summarize, 4th Industrial Revolution revolutionized various technologies to make people's lives easier and introduced various jobs. However, due to the sudden boom in technology, it has also made many people jobless and questions were also raised that it has provided less control over our privacy. Thus, we need to try to direct it towards a future that reflects our common objectives.

CONCLUSION

The fourth industrial revolution is different from the previous three. This is because machines and artificial intelligence play a significant role in enhancing productivity and wealth creation, which directly changes and challenges the role of human beings. The fourth industrial revolution will also intensify globalization. Therefore, technology will become much more significant, because regions and societies that cope positively with the technological impact of the fourth industrial revolution will have a better economic and social future. As history shows, every Industrial revolution has led to improvement of life quality.

REFLECTION

Our team was fascinated and satisfied of the presentation on industrial revolution. This talk improved our knowledge and expanded our minds to new information's regarding industrial revolutions. We would like to thank the host and the person who gave the speech for delivery of a clear and detailed talk on the 4th industrial revolution.