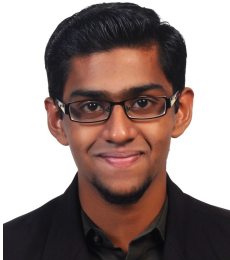






SECP 1513 – Sect. 04  
TECHNOLOGY AND INFORMATION SYSTEM

**ASSIGNMENT 1 : Technology Information System and Fourth Industrial Revolution**

**LECTURER :** Mr Hairudin Abdul Majid  
**DUE DATE :** 13/11/2021  
**GROUP LEADER'S CONTACT NUMBER :** 017-843 1867

<b>GROUP MEMBERS</b>	 AHMED SHUKUR BIN JALALUDIN (Group Leader)	 ABDUL AZIM BIN ANUAR VEERA	 CARMEN TEY YE YAO	 MOHAMAD SYAFIQ FIRDAUS BIN ABDUL AZIZ	 LOH WEI HUAN
<b>MATRIC NUMBERS</b>	A21EC0007	A21EC0001	A21EC0018	A21EC0055	A21EC0048

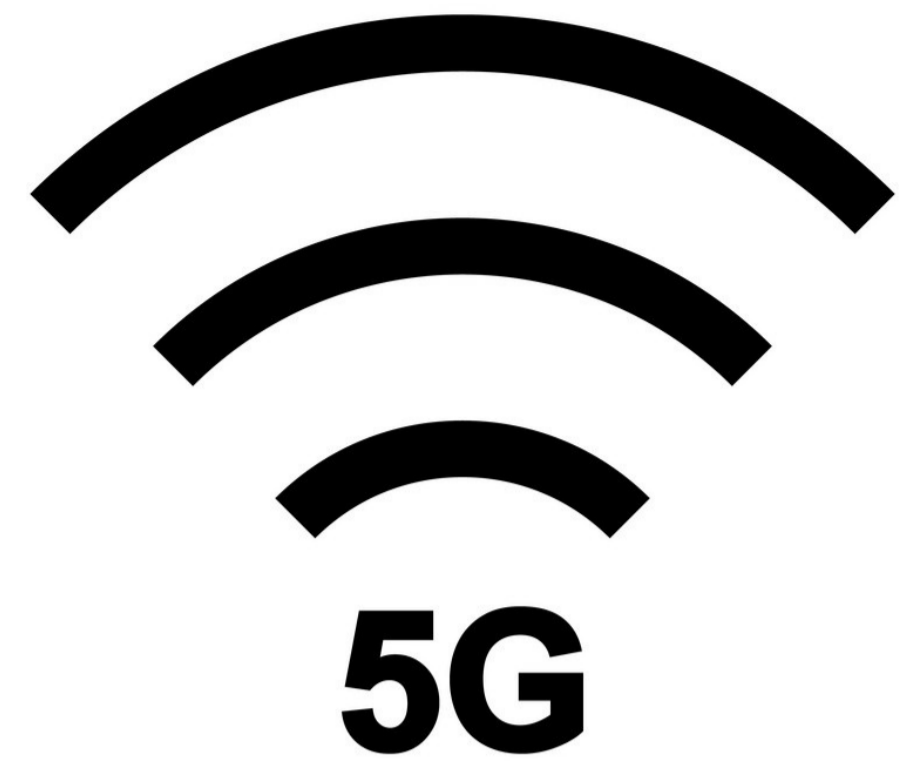


# IR 4.0

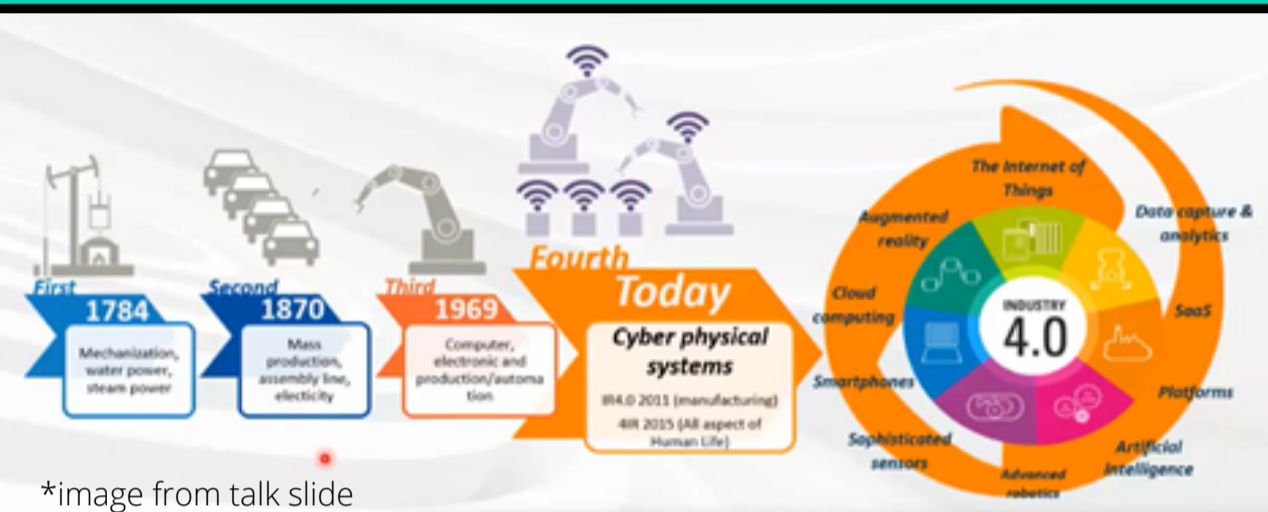
# INDUSTRY TALK 1

## SUMMARY

- Support the development of 4.0 IR in a data centre, cloud service, and Internet of Things to create a digital Malaysia that includes digital government, digital economy, and digital society.
- Cloud/digital, smart cities, and 5G will be the adoption areas for 4.0 IR.
- Across many industries, market forces are driving digital change.



<https://www.vectorstock.com/royalty-free-vector/5g-icon-with-wifi-sign-vector-27908740>

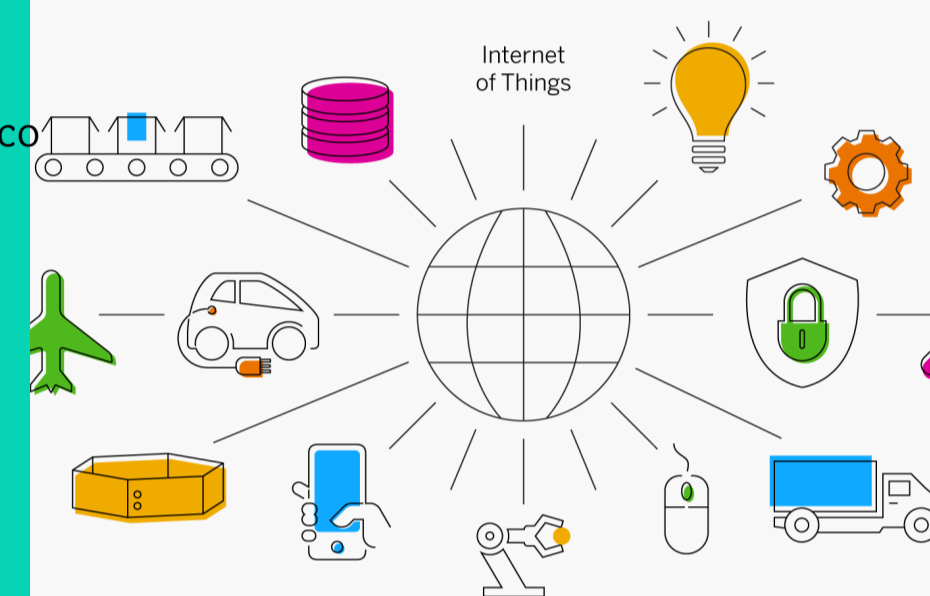


\*image from talk slide

It shows how the changes from the first IR to 4.0 IR

## INTRODUCTION

- IT infrastructure, enterprise/consumer apps, television services, telco services, payment, transportation, gaming, music, education, and other digital entrepreneurs are all being digitised.
- Transformation outcomes include a new business model, a differentiated value proposition to compete, improved customer experience, and operational efficiency.
- A solid digital infrastructure foundation is required for successful digital transformation.



<https://mechomotive.com/explain-briefly-about-internet-of-things-iot/>

## CONTENT OF TALK

- With a mobile and connected workforce, 4IR can improve execution performance.
- Smart city technology adapts and responds to citizen needs intuitively.
- Managing logistic performance and efficiency with a smart fleet with the 4IR digital solution
- 4IR- a smart manufacturing solution for increasing production output, speeding up sales transactions, and managing overall manufacturing performance.
- 4IR- SWIMS (Smart Water Integrated Management System) provides entire visibility for the water industry, reduces water usage, increases water revenue, and provides central monitoring and analytical data visualization through a single platform.
- Provide 5G with many usages like enhanced mobile broadband(eMBB), massive machine-type communications(mMTC), Ultra-reliable and low latency communications(uRLLC)



<https://insights.regenesys.net/the-fifth-industrial-revolution-5ir/>

## REFLECTION



<https://www.e-zigurat.com/innovation-school/blog/what-do-the-next-five-years-hold-for-the-iot/>

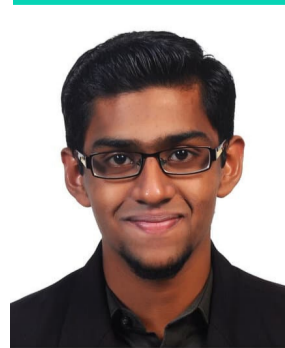
- 4.0 IR, in my opinion, may assist us in making our tasks smoother. As students, learning techniques that are using technology are relatively new to us, enabling us to transfer content at a faster rate. We can obtain a wide range of information just with our fingers.
- For society, the development of 4.0 IR can increase the quality of life by encouraging people to take more advantage of their daily lives as a result of technology's contributions. Following that, all of society's difficulties have been readily overcome by allowing individuals to connect among each other. Then there's the fact that technology allows us to access more new useful sources for maintaining a healthy lifestyle. Finally, we must be grateful for the availability of the 4.0 IR.



AZIM  
A21EC0001



CARMEN  
A21EC0018



SHUKUR  
A21EC0007



SYAFIQ  
A21ECO055



WEI HUAN  
A21EC0048

# IR 4.0 TALK 2



(image from talk slide)

## EXECUTIVE SUMMARY

- This talk has provided us some fundamental cybersecurity knowledge in IR 4.0.
- We learned about the importance role of cybersecurity played in IR 4.0.
- students be able to know the role of different cybersecurity services provided by Cybersecurity Malaysia such as
  - CyberCSI (crime scene investigation)
  - CyberGuru
  - MyCERT
  - CyberSAFE
- challenges faced by Malaysia moving to IR 4.0.
- suggestions were provided by the speaker and provide some ideas on leading Malaysia towards IR 4.0.



(image from talk slide)



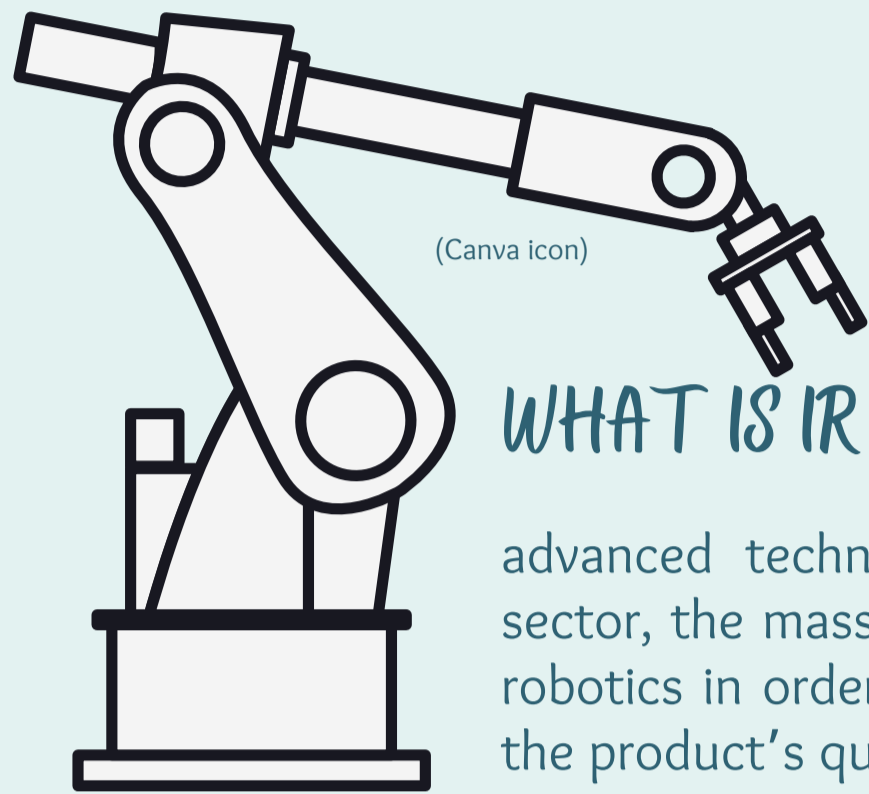
(image from talk slide)



(image from talk slide)



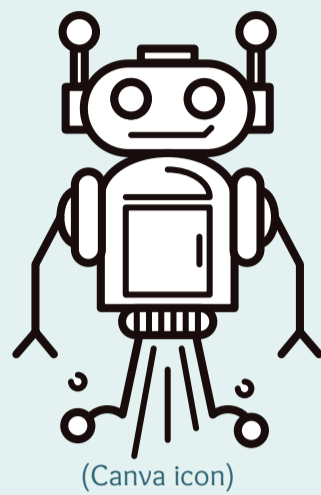
(image from talk slide)



(Canva icon)

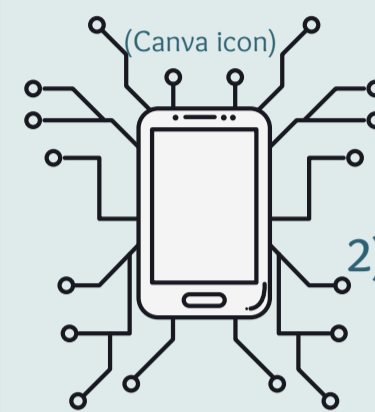
## WHAT IS IR 4.0?

advanced technologies and digitalize the industry sector, the massive labour power can be replaced by robotics in order to increase efficiency and maintain the product's quality simultaneously



(Canva icon)

## WHY MALAYSIA HAVE TO MOVE TO IR 4.0?



(Canva icon)

1) New technologies are discovered

2) Global production lines are changing and evolving

3) Customer behaviors and demands on the product specs

4) Produce high quality workers to maximize production with high quality.



(Canva icon)

## ISSUES & CHALLENGES FACED BY MALAYSIA

Costly investment

Low digital adoption in SME

Lack of infrastructure

Poor quality of local products

Less practices provided

Shortage of experts and research



(Canva icon)

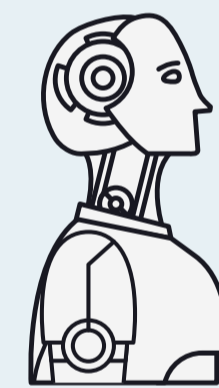


(Canva icon)

Provide upskill training and program to produce high-skilled workers

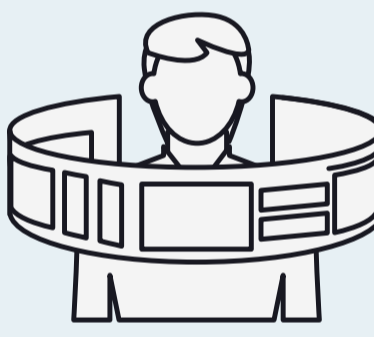
Develop process procedures that is globally accepted

## WHAT IS CYBERSECURITY MALAYSIA'S ROLE?



(Canva icon)

Provide upskill training and program to produce high-skilled workers



(Canva icon)

1) Attract investor to develop in Malaysia

## HOW TO TACKLE THE ISSUES AND CHALLENGES?

3) Create an ecosystem that is suitable for IR 4.0

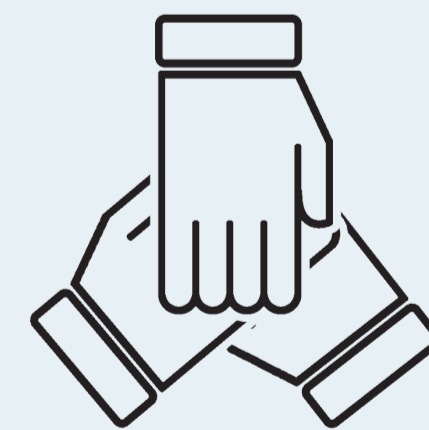
- Having collaboration with a lot of companies
- SME inclusion



(Canva icon)

2) Transform Malaysia's industry capabilities in all aspects

- enhanced production
- increase high-skilled jobs opportunity



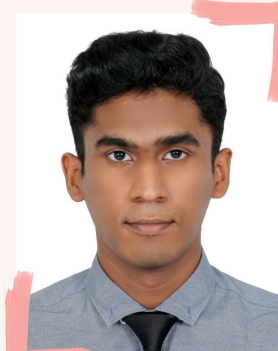
(Canva icon)

- upskilling workers
- funding support

## REFLECTION

Through this talk, we have realize Malaysia having high potential to enter industrial revolution 4.0 (IR 4.0). We believe that IR 4.0 will drive us massive benefits to our society. However, there are still have a lot of improvements that need to implement by the young generations to lead Malaysia towards IR 4.0. This opportunity definitely will prepare outstanding workers and help our country to have a better future. IR 4.0 will also impact our life beneficially such as services, road safety, healthcare and more. The services that provided to consumer will be faster and efficient by the advanced technology. In addition, humans will more reliable to smart technologies for helping us carry out some daily tasks.

## GROUP MEMBERS



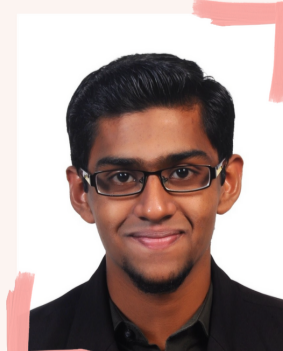
AZIM  
A21EC0001



SYAFIQ  
A21EC0055



CARMEN  
A21EC0018



SHUKUR  
A21EC0007



WEI HUAN  
A21EC0048

# ADDITIVE MANUFACTURING

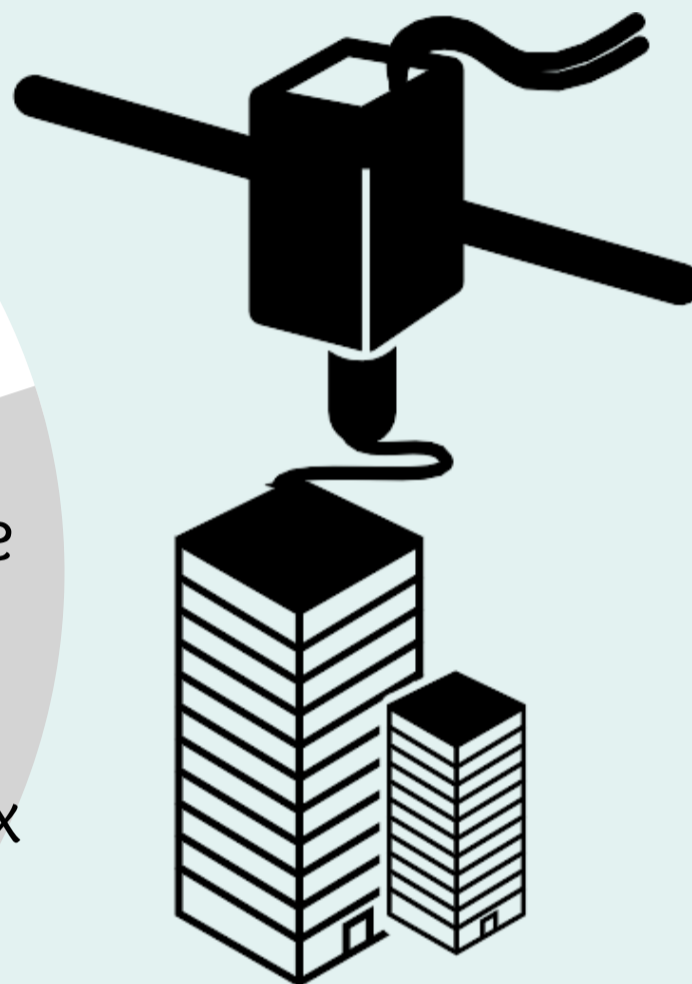
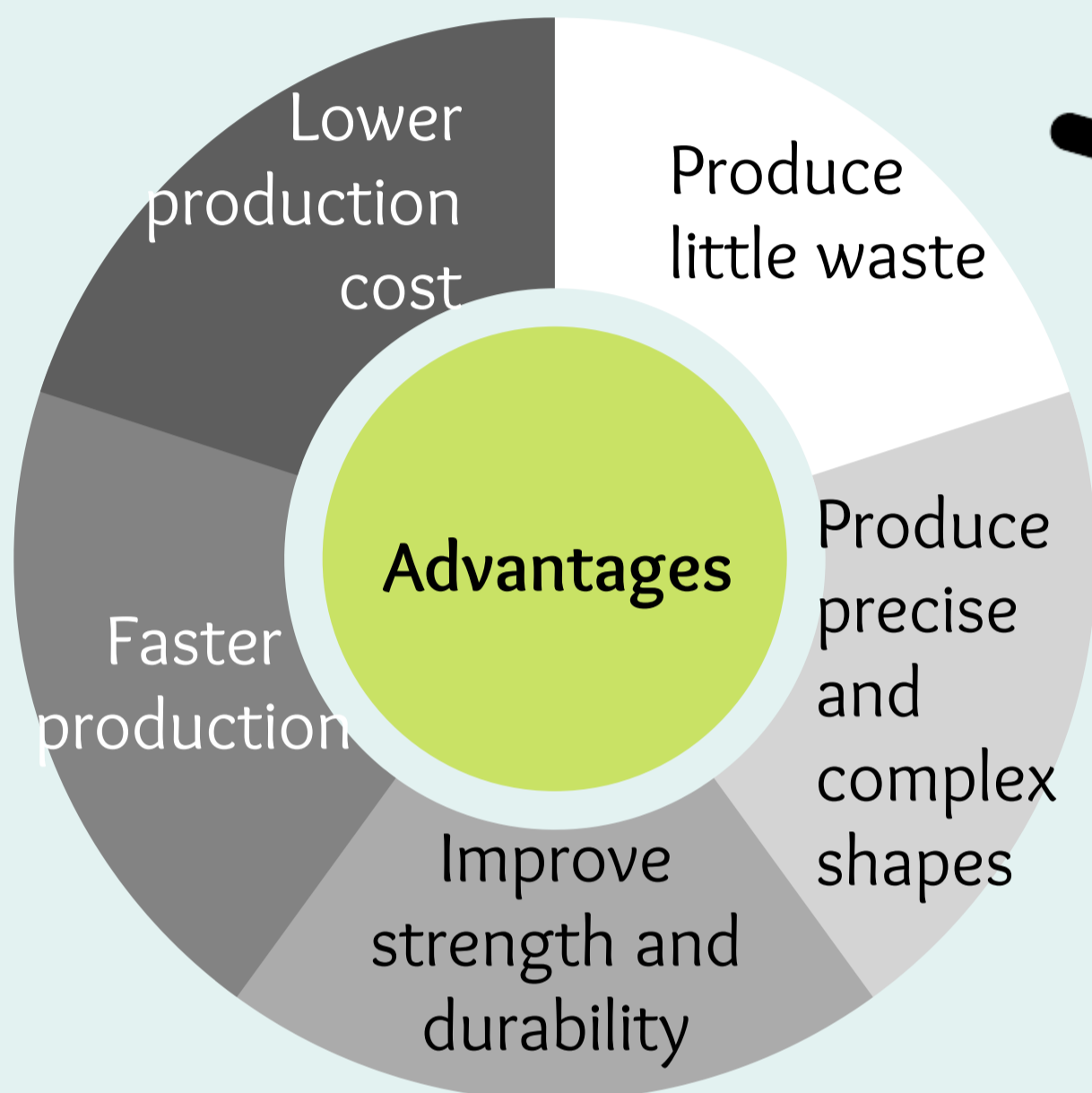
## INTRODUCTION

Additive manufacturing a.k.a 3D printing is a computer controlled process that creates 3D objects by depositing materials, typically in layers.

<https://www.twi-global.com/technical-knowledge/faqs/what-is-additive-manufacturing#WhereisAMused>

## DESCRIPTION

- Uses 3D object scanners or computer aided design (CAD)
- Built layer by layer



[https://www.flaticon.com/free-icon/3d-printer-printing\\_44252](https://www.flaticon.com/free-icon/3d-printer-printing_44252)

## EXAMPLES

- Lightweight engine
- Aircraft parts
- International Space Station (ISS) spare parts



Aerospace

<https://www.cleanpng.com/png-airplane-icon-a5-computer-icons-flight-airplane-1186462/>

- Prototypes
- Preproduction sample and tools
- Customized parts



Automotive

[https://pngtree.com/freepng/vector-car-icon\\_3989845.html](https://pngtree.com/freepng/vector-car-icon_3989845.html)

- Tissue and organs bioprinting
- Prosthetics
- Implants



Medical

[https://pngtree.com/freepng/vector-medical-icon\\_3989751.html](https://pngtree.com/freepng/vector-medical-icon_3989751.html)

- Produce house parts
- House in Russia built in 24 hours



Housing

[https://www.flaticon.com/free-icon/home\\_25694](https://www.flaticon.com/free-icon/home_25694)

<https://www.3dcastor.com/post/the-best-applications-of-3d-printing-in-the-aerospace-industry>  
<https://cprimestudios.com/blog/how-3d-printing-used-automotive-industry>  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4189697/>  
<https://techcrunch.com/2018/05/08/how-3d-printing-is-revolutionizing-the-housing-industry/>

## REFLECTION

Additive manufacturing is on its way to become the main and preferred method dominating most of the industries which will benefit humankind from the perspective of time, cost and durability all the while reducing the industrial waste which may help to reduce the impact of pollution to the environment.



[https://www.pngitem.com/middle/ibTRih\\_reading-vector-thinking-transparent-clipart-free-download-man/](https://www.pngitem.com/middle/ibTRih_reading-vector-thinking-transparent-clipart-free-download-man/)



Ahmed Shukur  
A21EC0007



Carmen Tey Ye Yao  
A21EC0018



Mohamad Syafiq  
A21EC0055



Loh Wei Huan  
A21EC0048



Abdul Azim  
A21EC0001