

# BUSINESS

## INTERNET OF THINGS (IOT)

*the trend technology that changed everything*

## CHALLENGES AND ACHIEVEMENTS

*exploring the 21st century entrepreneurship*

## IOT-BASED BUSINESS

*Success tips for you are here! learn how brilliant people gain benefits using IoT*

**BY VIOLETTE MAGAZINE**

TECHNICAL DIRECTOR

JAMES LEE SU KEY

**IOT BUSINESS OPPORTUNITIES AND CHALLENGES**



# BRIEF INTRODUCTION

*An entrepreneurship webinar with the topic of 'IoT Business Opportunities and Challenges' was conducted on 30th November 2020 by an entrepreneur of Antlysis Design Sdn Bhd, Mr James Lee Su Key. This webinar was organized by UTM Centre for Student Innovation and Technology Entrepreneurship (UTM XCITE) and Institute for Life-Ready-Graduate (UTM iLeaGue) on UTM XCITE facebook live from 11.00 am to 12.30 pm with an honorable moderator, Prof. Madya Dr. Abdul Rashid Bin Husain, the Director of UTM XCITE. Besides, this webinar focuses on how IoT could bring business opportunities, and what challenges need to be faced along the way to become a successful entrepreneur, based on Mr James's experience. The webinar begins with a brief introduction of Internet of Things (IoT) and ends with a Q&A session.*

## ABOUT SPEAKER

*Mr James is the Co-Founder of a company called Antlysis Design Sdn Bhd, working as a Technical Director. Previously, he worked in Intel Programmable Solution Group as a Hardware Designer, soon after he graduated in 2015. He also pursued his Master in Science (Electronics System Design Engineering) at USM in 2018. Mr James is not working alone on building this company. He is in the founding team of the company along with his partner, Mr Chin Han Zhong, Sales Director of Antlysis Design Sdn Bhd. Previously, Mr Chin worked in Schlumberger as Maintenance Engineering in Technology Lifecycle Management group. Proudly, both of them are the alumni of UTM, graduated in Bachelor of Engineering (Electronics - Mechatronics).*

# OUR TEAM



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**KONG JIA ROU**

*Editor in chief*

*The more that you read, the more things you will know, the more that you learn, the more places you'll go.*

**NAYLI NABIHAH BINTI JASNI**

*Executive director*

*Try not to become a man of success. Rather become a man of value.*



**MADINA SURAYA BINTI ZHARIN**

*Design editor*

*You don't have to be great to start, but you have to start to be great.*

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**FARAH IRDINA BINTI AHMAD BAHARUDIN**

*Managing editor*

*Just one small positive thought in the morning can change your whole day.*





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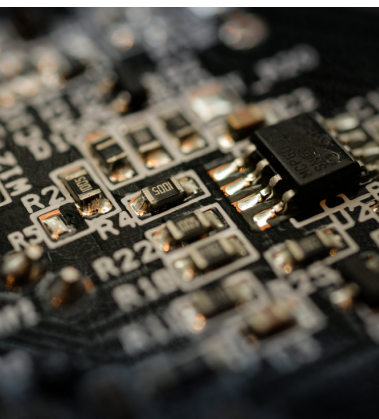
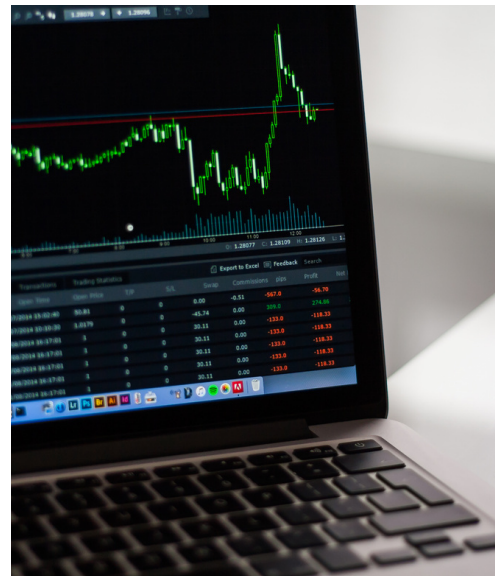
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*"The IoT is big news because it ups the ante: 'Reach out and touch somebody' is becoming 'reach out and touch everything'." — Parker Trewin, Senior Director of Content and Communications, Aria Systems*



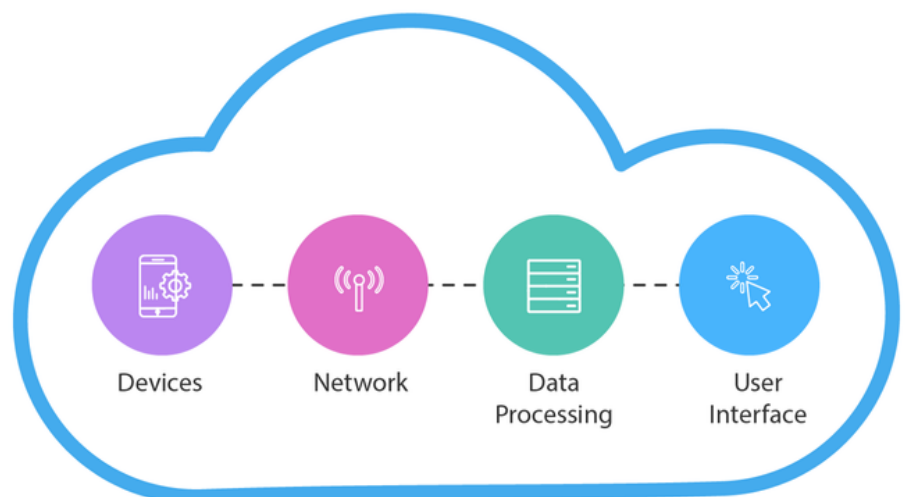
# WHAT IS IOT?

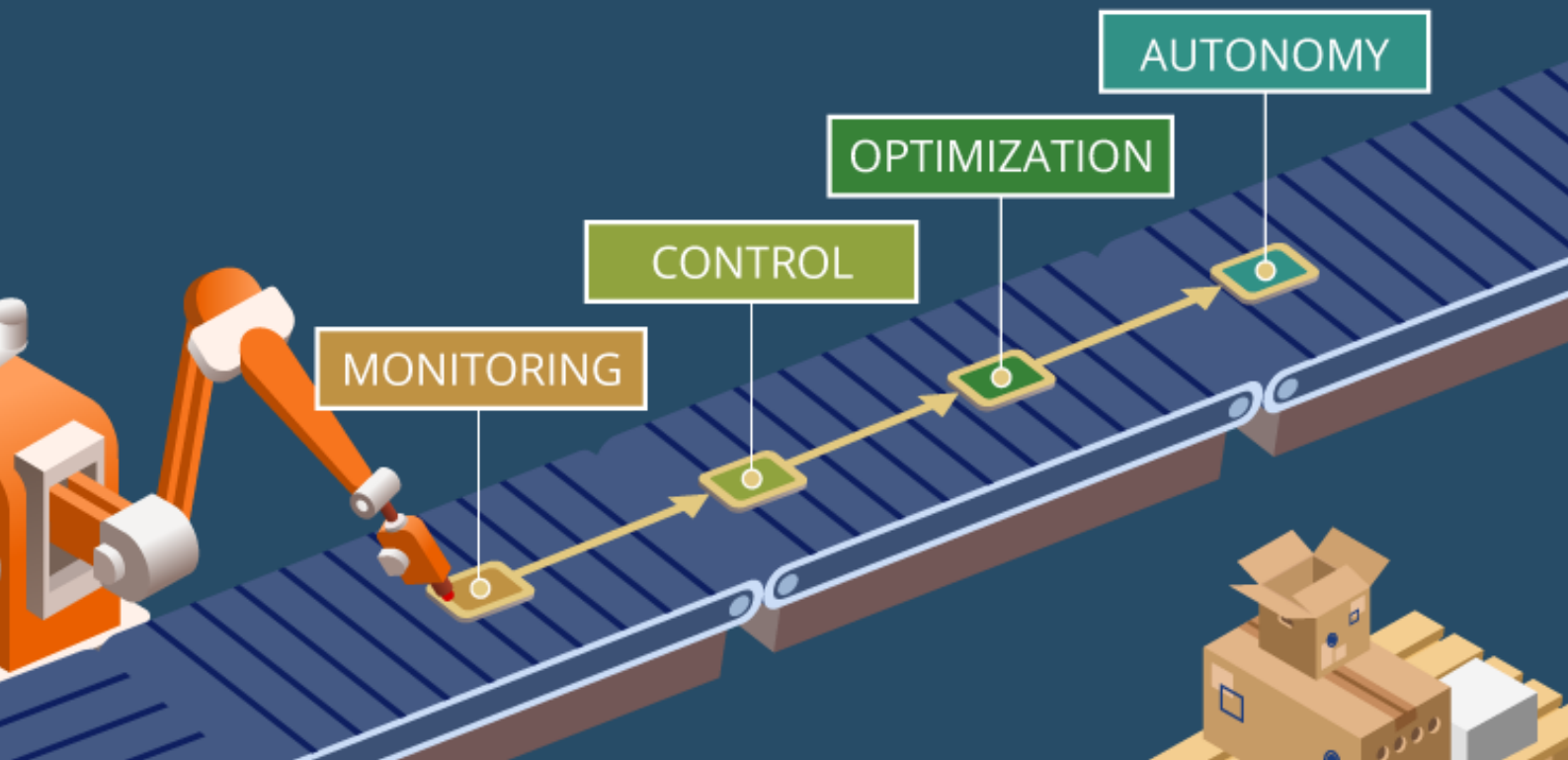
## DEFINITION

*IoT is a system that interrelates and integrate a lot of things such as computer devices, mechanical or digital machines, objects (eg. books, bottles, or any equipment), animals and people. Besides, IoT has the ability to transmit data over the network without requiring human-to-human or human-to-computer interaction, generally called as human intervention.*

## COMPONENTS OF IOT

*The major components of IoT consist of **five** elements which are **Things or Devices, Gateway, Cloud, Analytics and User Interface**. To begin, things or devices will be wired or wirelessly connected to the gateway. After that, the gateway will transfer the data to the cloud, where it will be analyzed by an analytics engine. This analytics engine will provide data insight to the user interface, allowing them to visualize and control the device. Generally, all of these are the full solutions of IoT systems.*





### WONDERING

# HOW MATURED IS THE IOT SYSTEM?

We can use a map called a '**Maturity Map**' to determine how mature a system is, or even to begin developing an IoT system. This map consists of **four** steps. Firstly is **Monitoring** the data. The real-time data is monitored and visualized to achieve awareness of the equipment or the environment. Generally, this is done to know what is the current status of the system, which could benefit on refining the business process later on. Secondly, **Control** the system by performing a remote control base, on business data collected. For instance, a smartphone as a remote control to switch on/off the lights at home. Thirdly, introduce the **Analytics** function in the system. Analytic engines could deliver insights, prediction, and optimization of the data. Besides, it can also detect the interrelation of every data. Lastly, the final aim is to **Automate** the business with trained intelligence. Therefore, all of these processes could produce a final objective of the whole IoT project.



# IMPORTANCE OF IOT TO BUSINESS



- **PROCESSES**

*Nowadays, monitoring all of the business processes requires man power which surely cannot be continuous for the while 24 hours each and every day.*

*With the helps of IoT not only, it can be functional in anytime throughout the day, it capable to increase the efficiency as less human error occurs.*

- **USER EXPERIENCE (UX)**

*With the use of IoT in human daily basis, the improvisation of the product or business can be tackled according to the customer behavior data or in simple words user experience.*

- **EFFICIENCY**

*By collecting the data from every aspects, the efficiency of the processes can be enhances*

- **INSIGHT**

*Obtained data can be powerful when it is studied meticulously. From this, it can trigger the generation of business insight along with polish up company's business strategies.*

- **DECISION**

*Realistically, every decision should be made from collected data. IoT can help business write better decision based on the data driven not experience.*

- **PRODUCTIVITY**

*Productivity will eventually increase linearly with the automated process*

# IOT BUSINESS VALUE CHAIN

*VARIOUS TYPES OF VALUE CHAIN CAN BE DISCOVERED THROUGH IOT*

1



## DEVICE PROVIDER

*Capable to provide edge devices, sensor nodes, gateways, communication module etc.*

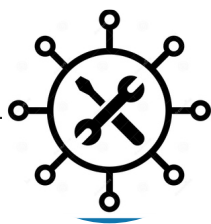


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## NETWORK PROVIDER

*Provide network services to the target market.  
Some of the services can include sim cards, 4G/5G, fixed IP and NB-IoT*

3



## PLATFORM PROVIDER

*Helps IoT business in maintaining their management services.  
Example services are API service and Data Storage service*



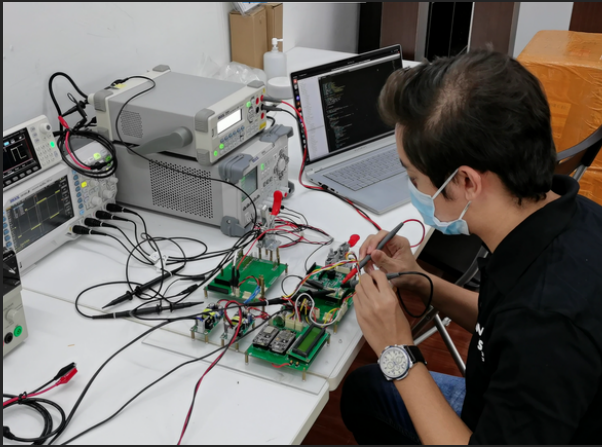
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## APPLICATION PROVIDER

*Focused on solution driven for the customer and the business itself.  
Some of these are visualization dashboard, control panel, data analytics and customized solution*



# BACKGROUND OF ANTLYSIS



*Antlysis Design is a Startup Company and also an IoT Solution Provider which focusing on Physical Data Harvesting and Analyse the data to provide better business insight and actual business performance to the client. We customized the IoT framework and embed hardware design as well as integrating several sensors to collect the physical data for a business. Antlysis believe that quantifiable physical experience are important to any business. It allows better decision and scientific approach on continuous improvement on the business.*

*Every company has their own business model and strategies. Antlysis Design run their business using Hardware-as-a-Service(HaaS). This business strategies use pay as per use concept, and therefore, provide customers a low upfront payment. Under this strategies, customers do not have to own their own hardware. They can get the asset from Antlysis.*

*Another business strategies applied is B2B2C which stands for business to business to consumer. As the name implies, Antlysis accesses its customers through the dealers, but interacts directly to the customers, under their own brand.*





## HISTORY OF ANTLYSIS

*Mr James claimed that a career should be built following one's passion. He found out that he was into embedded system, electronic software and projects related to technology that he done during his university years. In the beginning of his entrepreneurial story, he planned to venture in smart retail sector. He set up his office in his home. One day, he received a project on doing E-wallet payment integration in self-service laundry machine. On 2018, he successfully worked out the first version of laundry management system base on customer requirement with his team. He realised that this system could be replicated to other laundry operators. "So, I decided to continue enhancing the development of the system because this is similar to what I actually wanted to do."*

*Antlysis, an IoT based data harvesting company was founded since August 2018 specialized in IoT solution and web application development. Today, the company has a part-time worker, three full-time workers and three interns.*

*The name of the company, Antlysis is from the combination of the word "Ant" and the word "Analysis". The technical director of Antlysis, Mr James Lee Su Key said that they see their IoT devices as ants because ants are hardworking insects and they never lazy to collect food. "Our IoT devices work continuously to collect data, just like the ant.", said Mr James Lee Su Key.*



# LAUNDRO SMART

## THE SMART LAUNDRY SOLUTION

*Laundro Smart is the SMART way to manage your laundromats – get a complete end to end laundry room management solution. Enjoy better customer management and give your customers an easy access and a simple experience by using their own smartphone. Laundro Smart builds a customer's CRM system for you, allowing you to give a better service and ultimately gain better customer loyalty. Access the Laundro Smart application and the management dashboard, and upgrade your revenues stream, improve productivity and earn more money.*

**DEXTER**



# BENEFITS OF LAUNDRO SMART APPLICATION

## 1

### HIGHER REVENUES

*Offering an innovative, superior user experience and advanced services such as machine reservation, optional features and more. Enjoy ideal equipment and cash flow management for all your stores.*

## 2

### EASY PAYMENT

*Allow your customers to operate washers, dryers and other equipment directly from their smartphone. Customers can add funds to their account directly from their phone, using any popular electronic payment method available.*

## 3

### A SMART CRM

*Engage with your customers – we made it simpler to give better service and support. LaundroSmart CRM allows you to use predefined automated tools such as notifications, in-app support, easier refund process, etc.*

## 4

### SMART CUSTOMER APPLICATION

*Laundro Smart offers a user-friendly app, accessible and available anywhere and anytime. With an easy registration and identification through your customers' phone number, Laundro Smart is an easy to use – no hassle no fuss solution.*

## 5

### WORK WITH ALL BRANDS

*You are not limited to a certain manufacturer or brand when you use Laundro Smart. Maintain your flexibility – our software supports any generation of laundry equipment, any manufacturer or brand. Your room, your choice.*

## 6

### GAIN CONTROL

*Operate your room with full control. It allows for flexible room management: pricing, machine programs, machine control and more. Enjoy flexible prices without membership cards – change pricing and offer special discounts based on purchase history.*



# OBSTACLES THEY FACED

*"When you start living the life of your dreams, there will always be obstacles, doubters, mistakes and setbacks along the way. But with hard work, perseverance and self-belief there is no limit to what you can achieve." – Roy T. Bennett, The Light in the Heart*



## DEVICE CONNECTION

- *Device connectivity less stable*
- *Face frequent disconnection issue*

### SOLUTIONS

- *Develop in house tools to monitor the connections of the device*
- *Fix and improve the algorithm*

## SCALE UP SLOW

- *New system in the market*
- *Low acceptance rate*

### SOLUTIONS

- *Approached market leaders or laundry franchisors to try our system to boost up the market acceptance*

## 3RD PARTY MACHINE INTEGRATION

- *Integrate to the machines without able to access to the schematic diagram*

### SOLUTIONS

- *Use non-invasive integration method to collect data*
- *Use external sensor to read the data*

## UNATTRACTIVE BUSINESS MODEL

- *New system but high upfront payment, less laundry business owner is capable to invest*

### SOLUTIONS

- *Change our business model to HaaS*
- *Lower the upfront commitment for the customer*

**EVERY BUSINESS HAS A  
BEGINNING, AND OUR START  
WITH IDEAS TO TURN PHYSICAL  
WORLD INTO DIGITAL THROUGH  
SCIENTIFIC APPROACH AS WELL  
AS PROVIDE BUSINESS GAIN TO  
ALL CLIENTS IN THE PROCESS.**

**ANTLYSIS**