APJII
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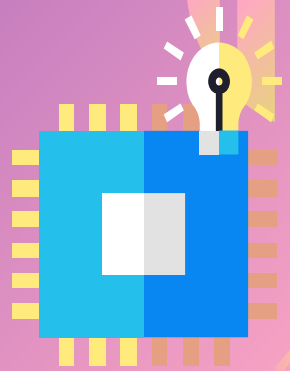
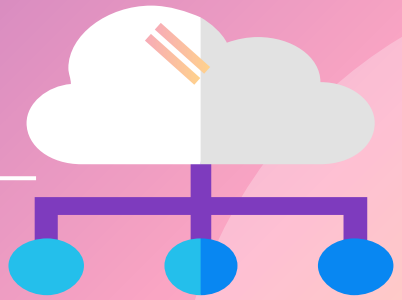
PENGURUS WILAYAH JAWA TIMUR

PENGENALAN INTERNET OF THINGS

SMK Dharma Bahari - Surabaya





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Daftar Bahasan

01 | Apa itu IoT?

02 | Konsep IoT

03 | Trend Revolusi Industri 4.0

04 | Peringkat Segmentasi IoT

05 | Penerapan IoT

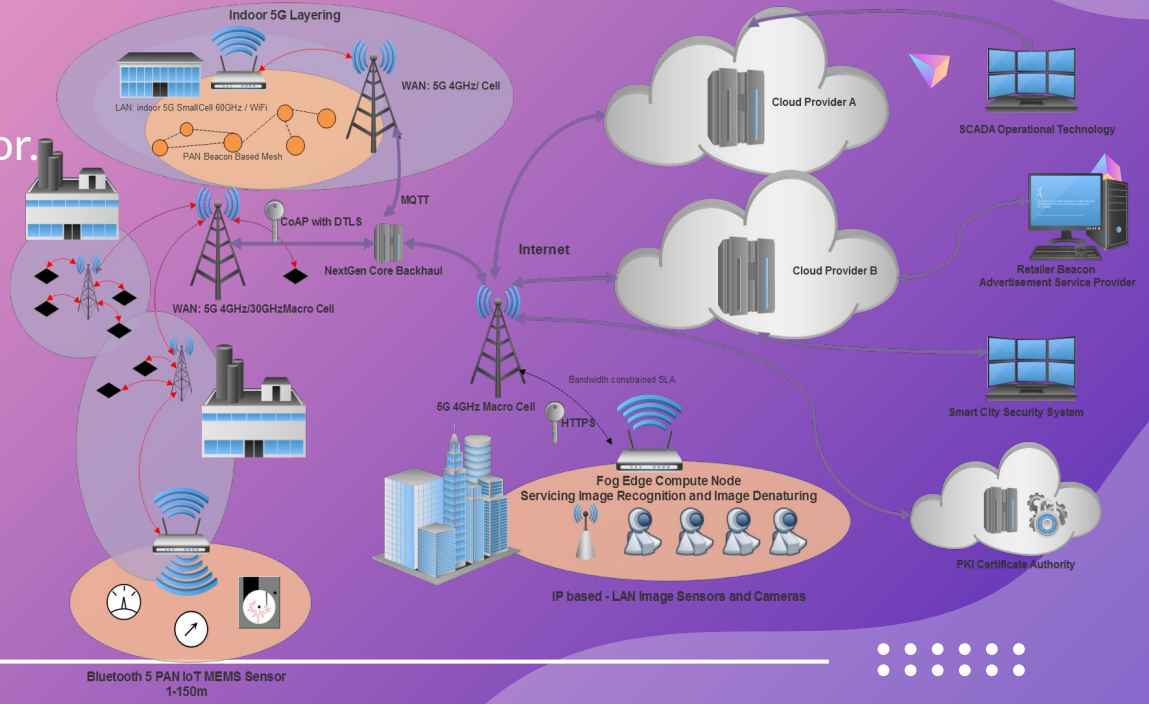
06 | Platform IoT

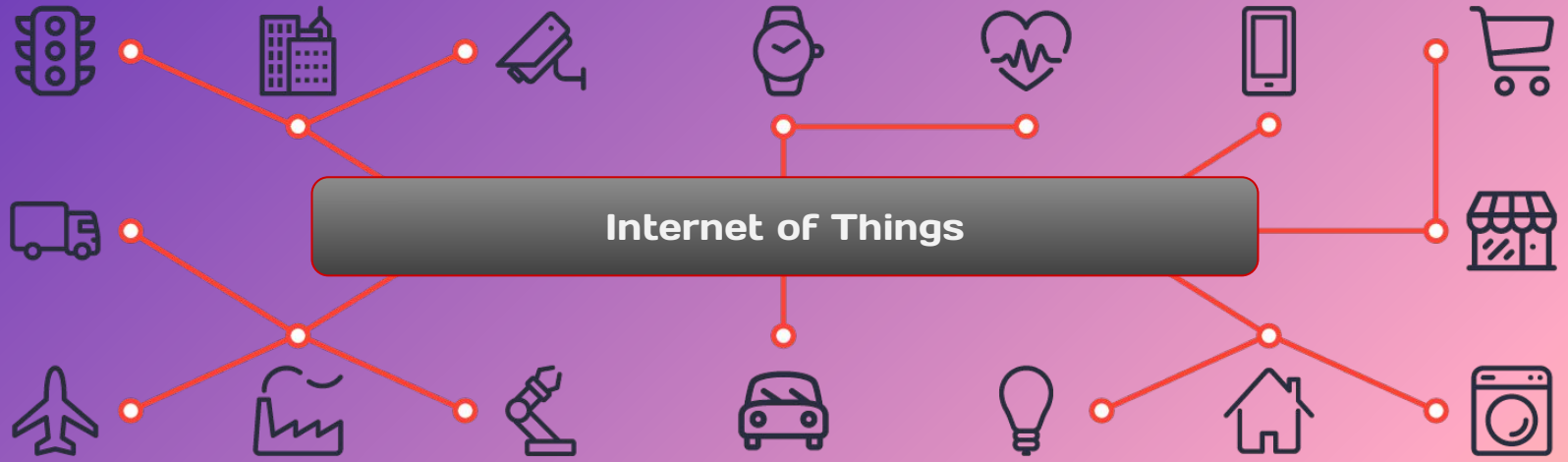
01

APA ITU IoT?

IoT

Internet of Things (IoT) adalah sebuah sistem yang terkoneksi dengan menggunakan internet dan terdapat sensor atau akuator.




Internet of Things

02

KONSEP IoT

Konsep IoT

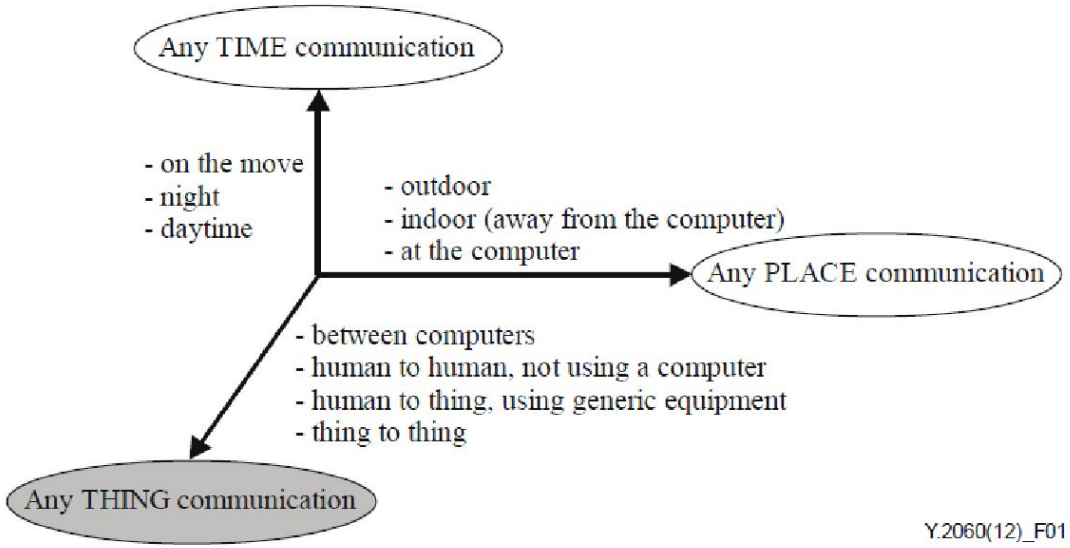
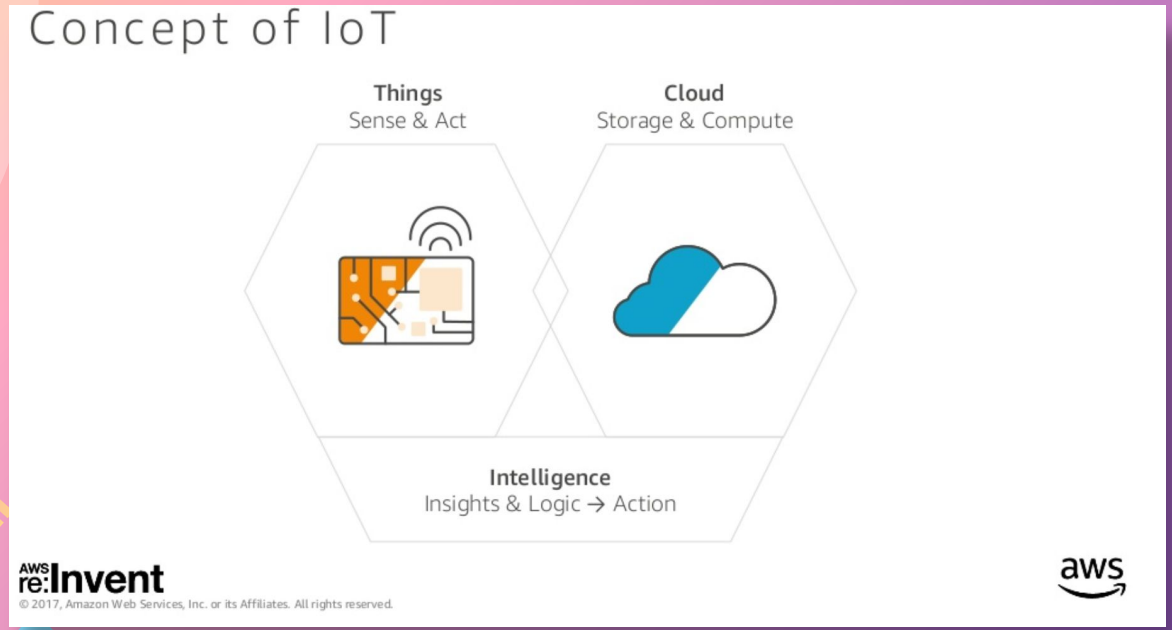


Figure 1 – The new dimension introduced in the Internet of things [b-ITU Report]

(sumber: ITU-T Y.4000/Y.2060 (06/2012))

Konsep IoT



Things:
Perangkat komputasi kecil untuk penginderaan dan aksi.

Cloud:
Server untuk komputasi dan penyimpanan

Intelegence:
Algoritma analisis data dan pengembilan keputusan dari data

(sumber: aws.amazon.com/iot/)

03

Trend Revolusi Industri 4.0

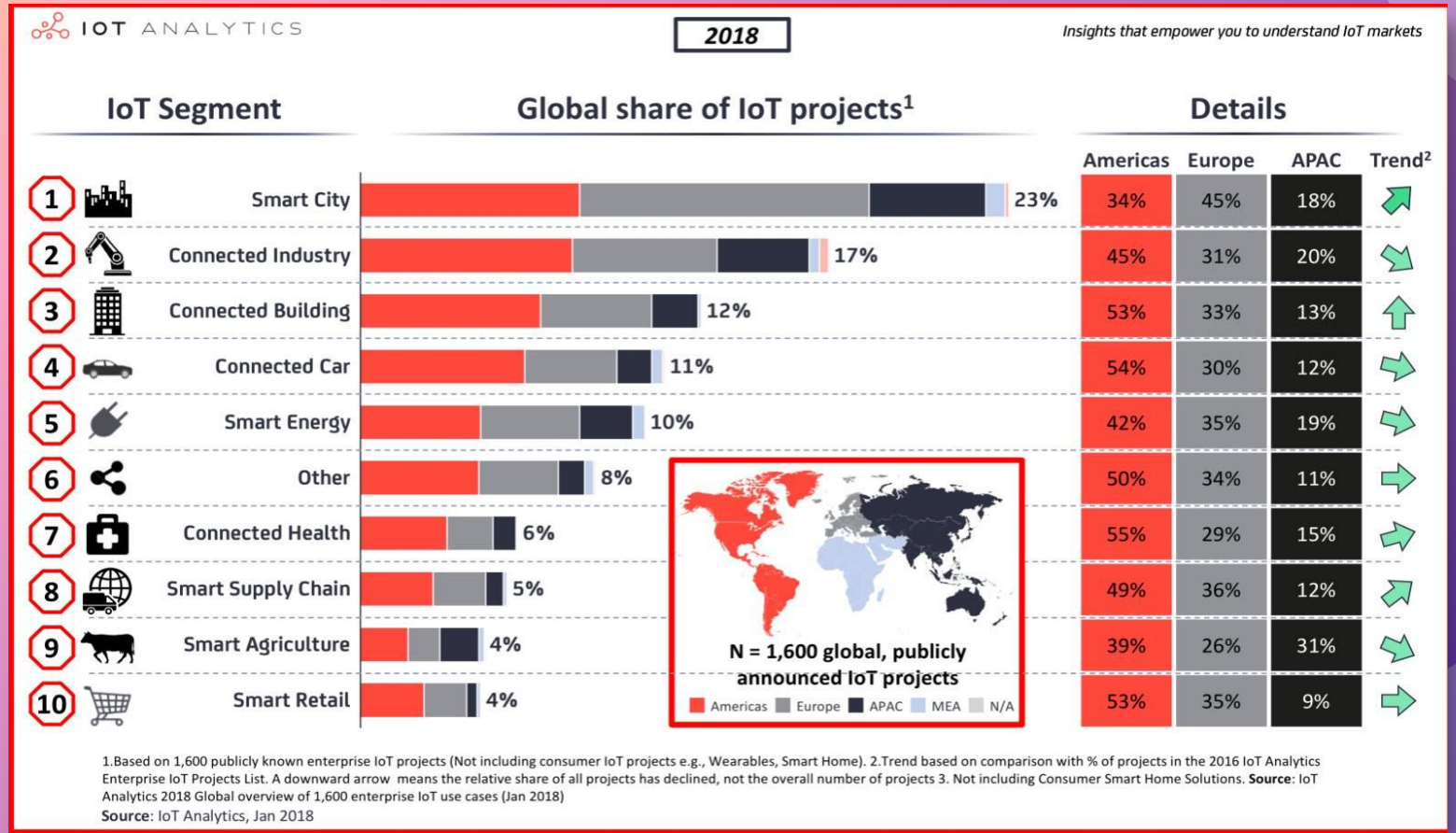
Trend Revolusi Industri 4.0

- **Revolusi industri 4.0** memiliki ciri adanya **transformasi digital** yang merubah cara organisasi beroperasi dan bekerja.

- **Transformasi digital** ini didukung dengan teknologi:
  - Cloud Computing
  - Artificial Intelligence (AI)
  - Internet of Things
  - Machine Learning
  - AR / VR

04
PERINGKAT SEGMENTASI IoT

Peringkat Segmentasi IoT



IOT ANALYTICS

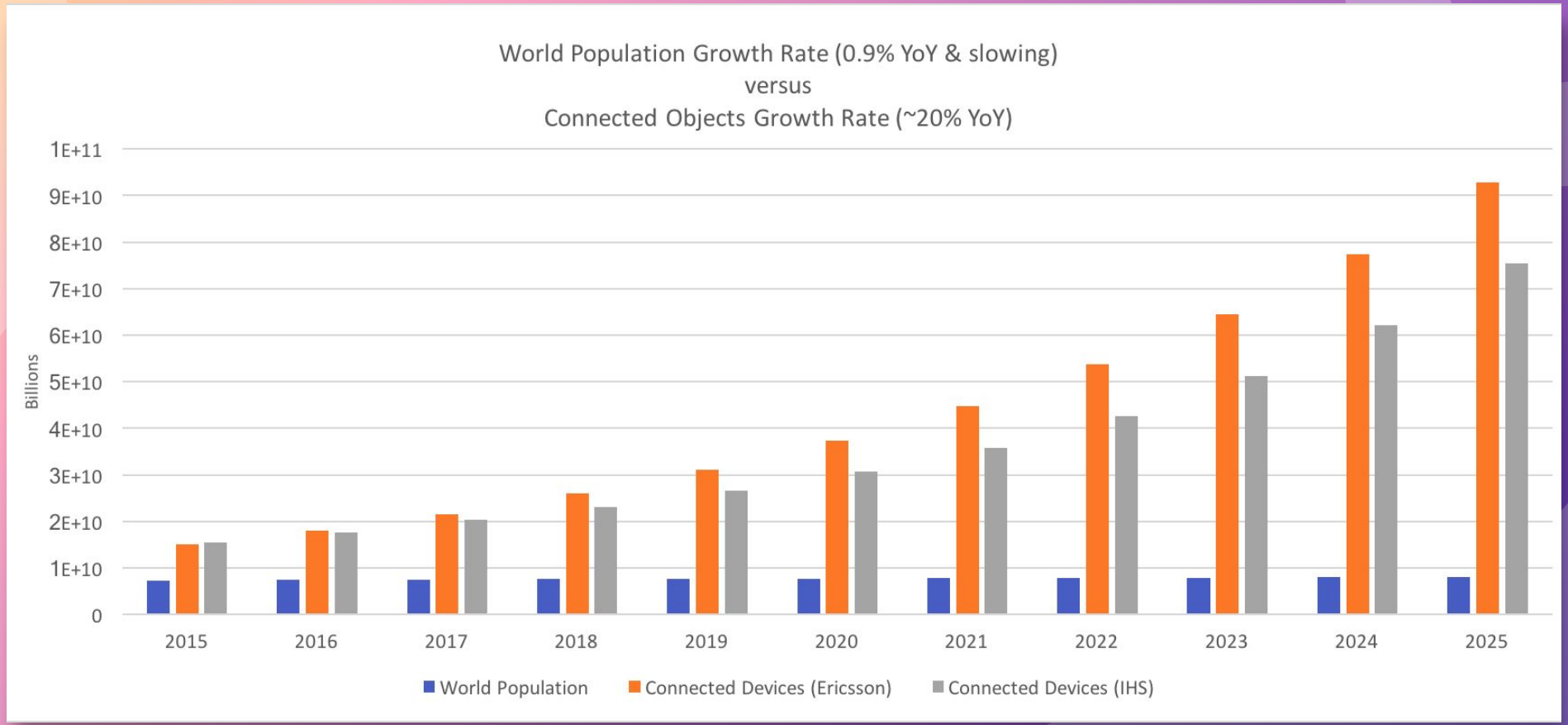
Your Global IoT Market Research Partner

10 IoT technology trends to watch in 2022

1. IoT is developing into a crucial technology for sustainability
2. The platform hype is moving from cloud to the edge
3. IIoT initiatives are transforming manufacturing
4. Cloud-Native applications are on the rise
5. Hyperautomation is transforming operations
6. AI is increasingly found at the (Thin) Edge
7. "Invisible AI" adoption is happening right under our noses
8. Immersive realities (VR/AR) are entering the enterprise environment
9. 5G is becoming "IoT ready"
10. Secure remote access of assets is growing in importance

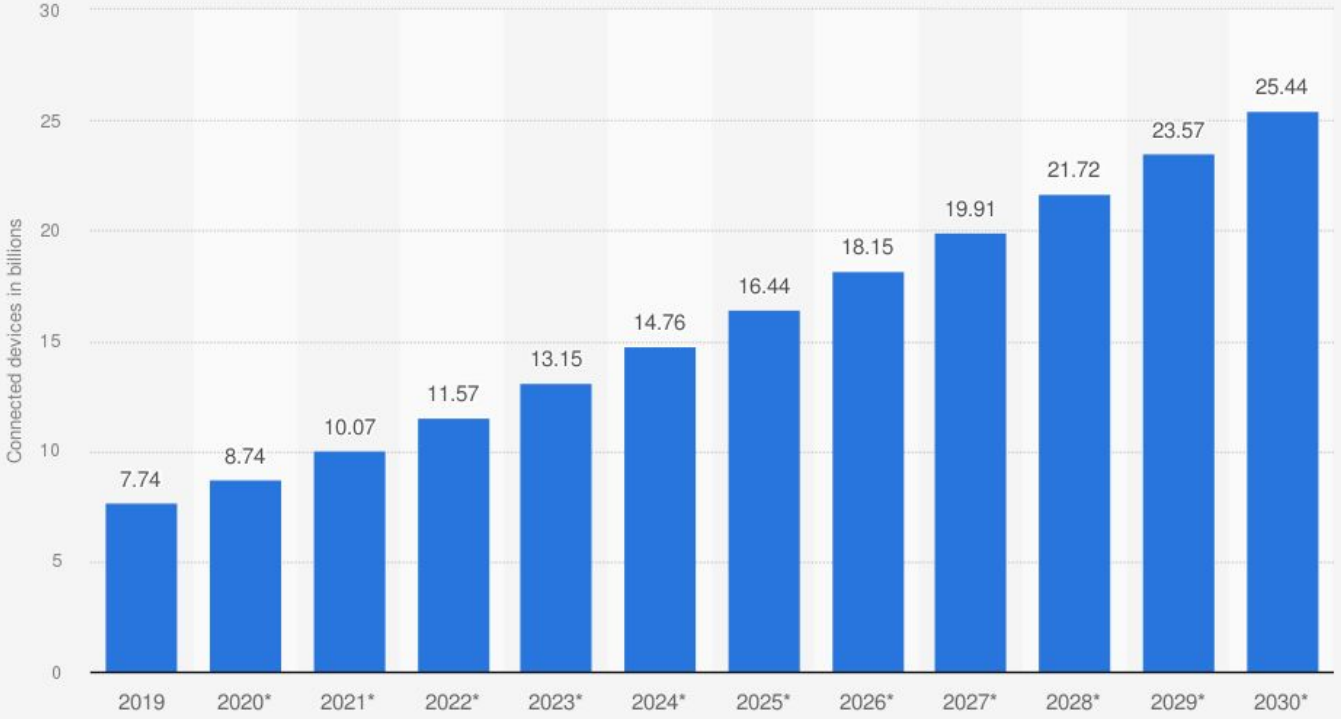
Source: IoT Analytics Research 2022. We welcome republishing but require source citation with link to the original post and company website.

(sumber: IoT Analytics)



(sumber: packtpub - IoT Architects)

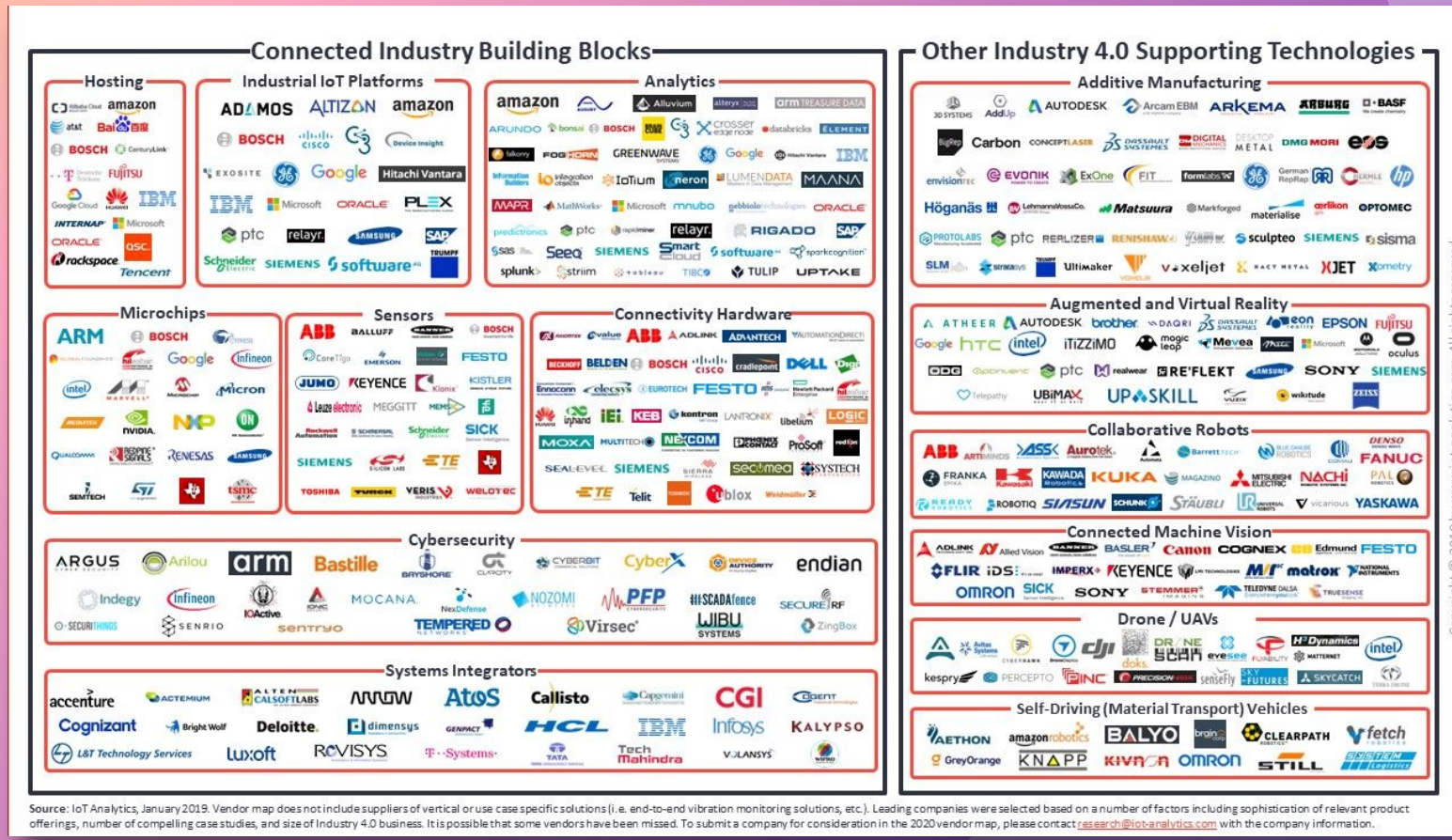
Number of Internet of Things (IoT) connected devices worldwide from 2019 to 2030 (in billions)



Source
Transforma Insights
© Statista 2021

Additional Information:
Worldwide; 2019 to 2020

Vendor IoT



Source: IoT Analytics, January 2019. Vendor map does not include suppliers of vertical or use case specific solutions (i.e. end-to-end vibration monitoring solutions, etc.). Leading companies were selected based on a number of factors including sophistication of relevant product offerings, number of compelling case studies, and size of Industry 4.0 business. It is possible that some vendors have been missed. To submit a company for consideration in the 2020 vendor map, please contact research@iot-analytics.com with the company information.

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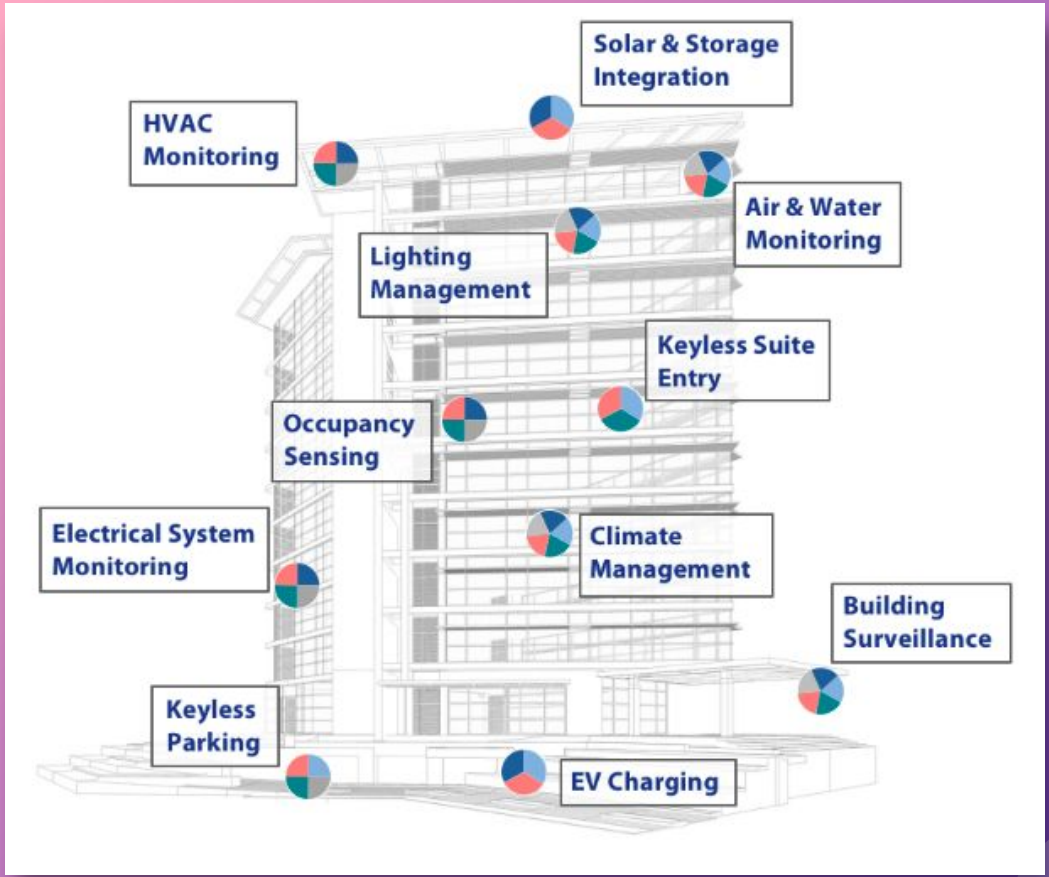
(sumber: IoT Analytics)

05
PENERAPAN IoT

SMART HOME

(sumber: researchgate)

SMART BUILDING



(sumber: gemvietnam/smartbuilding)

SMART CITY

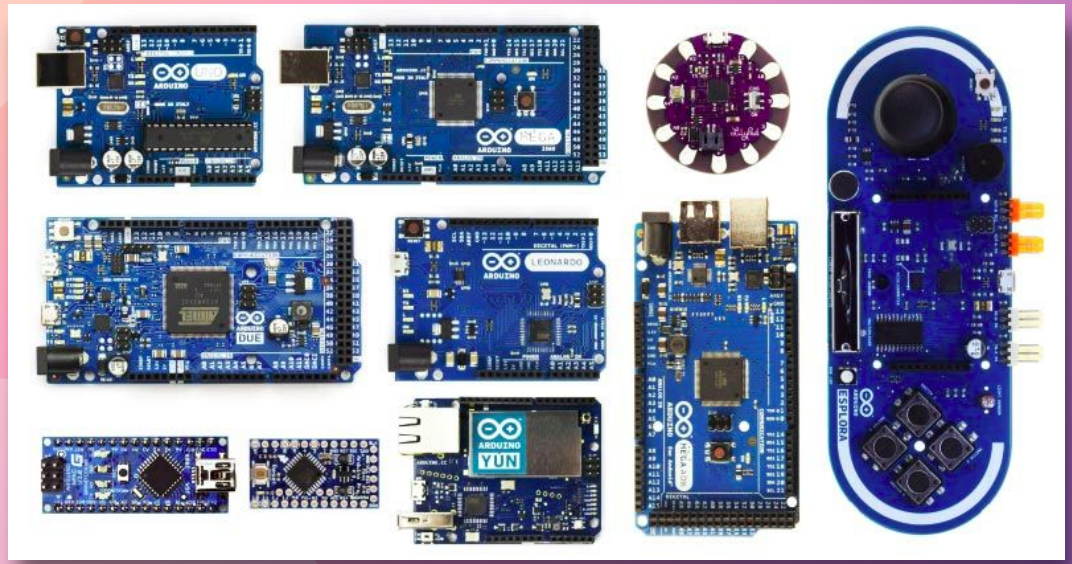
(sumber: selular.id)

05
PLATFORM
IoT

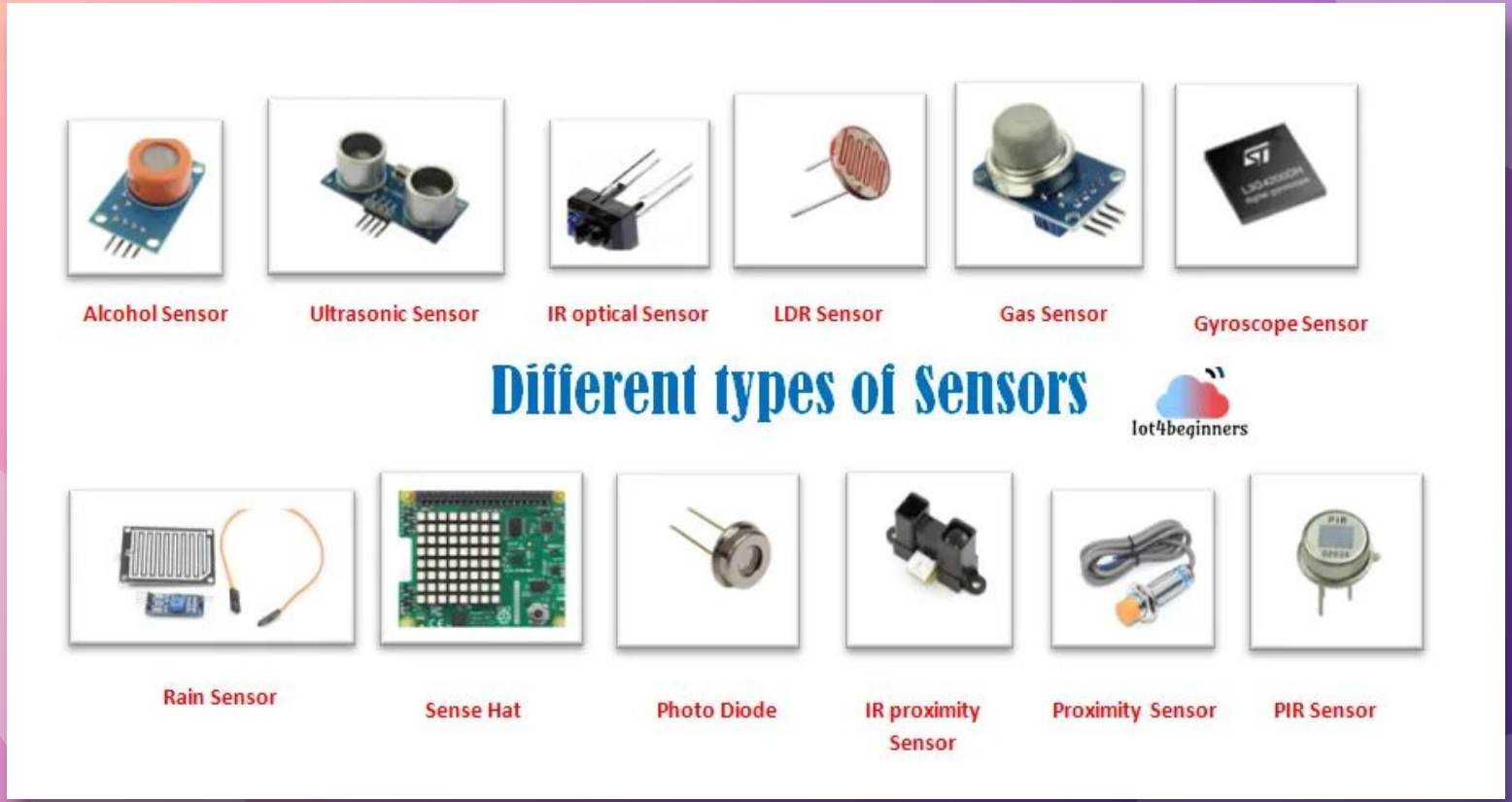
Hardware IoT

Perangkat keras yang digunakan dalam komponen IoT, antara lain: Mikrokontroler, Sensor dan Akuator.

Mikrokontroler



Sensor


Alcohol Sensor
Ultrasonic Sensor
IR optical Sensor
LDR Sensor
Gas Sensor
Gyroscope Sensor
Different types of Sensors
Iot4beginners
Rain Sensor
Sense Hat
Photo Diode
IR proximity Sensor
Proximity Sensor
PIR Sensor

Akuator

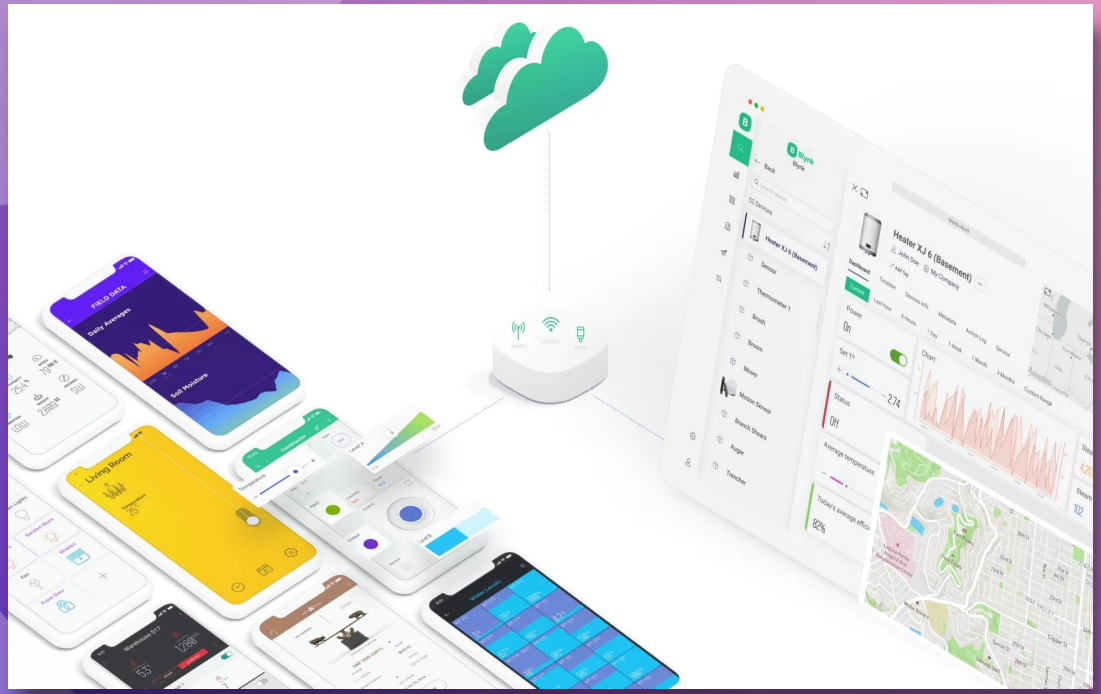
Software IoT

Perangkat lunak atau aplikasi yang digunakan untuk manajemen dan menampilan olah data IoT.

13,000

It's composed of hydrogen and helium

Blynk

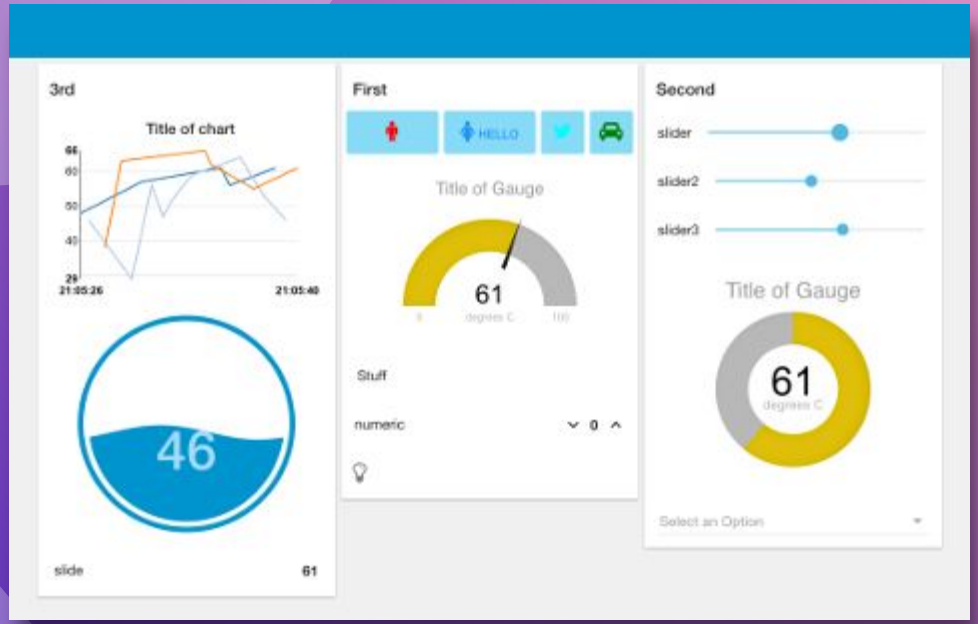


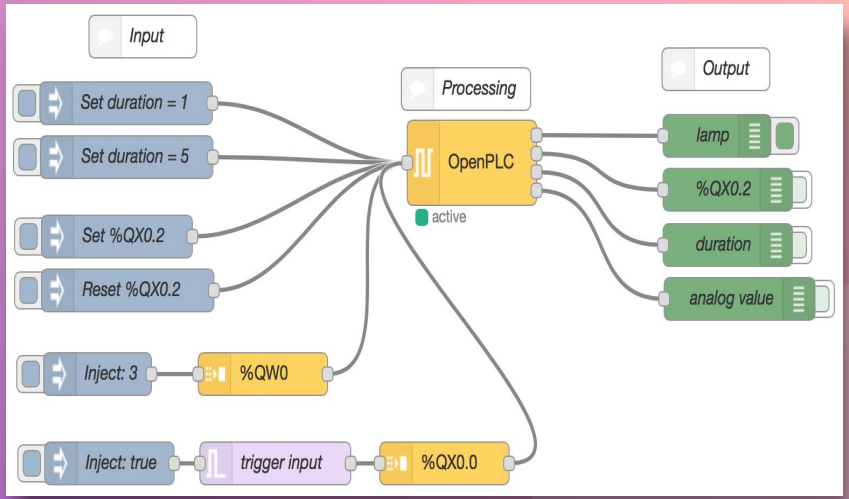
(sumber: Blynk)

Thingsboard

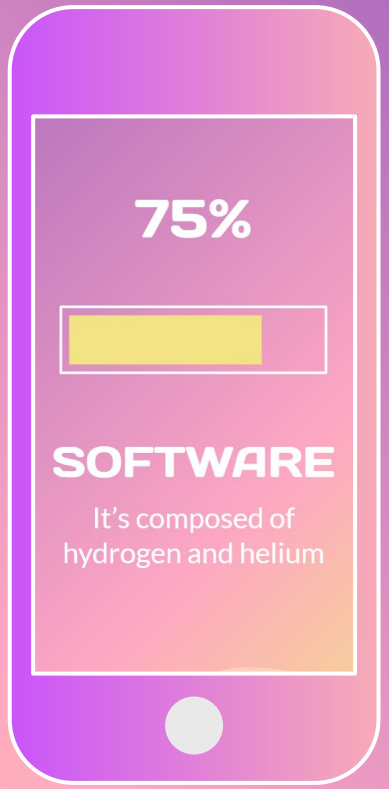
(sumber: thingsboard)

Node-Red





(sumber: Node-Red)



Contoh Penerapan IoT

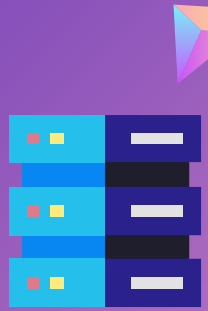
BARDI
29:59

TRACK
PRODUCT
INTERAC

THANKS!

DO YOU HAVE ANY QUESTIONS?

davidwahyuyu@gmail.com
dwp.my.id/



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