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# Monetizing IoT Investments

Make sure your IoT projects yield results

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# Changing Products, Business Models, Economy and Organisations



System of Intelligence



## Inspector Drone can check out building facades

Tall Building Inspection

## AI to be used to tackle rat problem

A research laboratory and an innovative pest control solution

Rat Problem

## 11 critical sectors told to review cyber security

Move comes as Government Smart Nation project

New Threats

## Using AI to predict cancer risks

Up to a third of colorectal cancer patients may experience a recurrence of the illness, said Dr Ronnie Matthew.

To predict the risk of cancer recurrence and survivability, the colorectal surgeon at Singapore General Hospital (SGH) and his team conceptualised

Said Dr Matthew: "We have a huge data set here at SGH, since we have the largest department in Singapore for colorectal cancer, and we can make use of that"

Healthcare Risks

## Five-year road map to leverage tech for water system

Jose Hong

National water agency PUB launched a five-year road map yesterday to digitalise Singapore's water system in the light of

mediately as ways to boost efficiency and productivity. Similar to the agency's robot swans, the self-piloting boat will monitor the quality of water. It can "With desalination as a source of water for us, there is a need to monitor water from the sea more closely," said the PUB's chief information officer Michael Toh

PUB microbiologist Martin Tay said that if the sensor detects a sudden drop in larvae or eggs, it can alert the agency immediately to let it know that something is wrong. Dr Tay added that trained

sensors around reservoirs by 2020. PUB is also looking at installing a pre-emptive leak management

Infrastructure

## Data can be key in easing cost of living con



Elgin Toh

## Asean GDP could soar by US\$1 trillion as SMEs go digital

per cent and 1.8 per cent. Mr Chan said inflation is a bigger problem for retirees "because they generally have either fixed or no income and they are living on their savings".

He added that the Government is doing more for this group through help schemes like the Pioneer

Cost of Living

## He finds t

Boost may come by 2025 on trade, growth within region: Study

GDP

Life sciences grad, 22, has come up with software that accelerates analysis

Jose Hong



## Chatbots show the way in using tech to boost healthcare

Twenty innovative technologies enhance patient care were

Healthcare Delivery

## Tapping VR to ease anxiety

Once they slide on a headset, anxious patients who operated on will be to a calming and w

Anxiety Handling

## Plan to use AI to help emergency call operators

Working Models

## Venezuelan President alleges drone-based assassination attempt

CARACAS • Venezuelan President Nicolas Maduro said he was "more determined than ever" after he escaped an "assassination" attempt using an explosive-laden drone as he gave a speech during a Caracas military parade.

The government said seven soldiers were wounded in the alleged attack on Saturday, which was blamed on Colombia by Mr Maduro and later claimed by a

New Threats



# Rethinking Business Core

Visionary | Thoughtful | Creative

Car Making Business

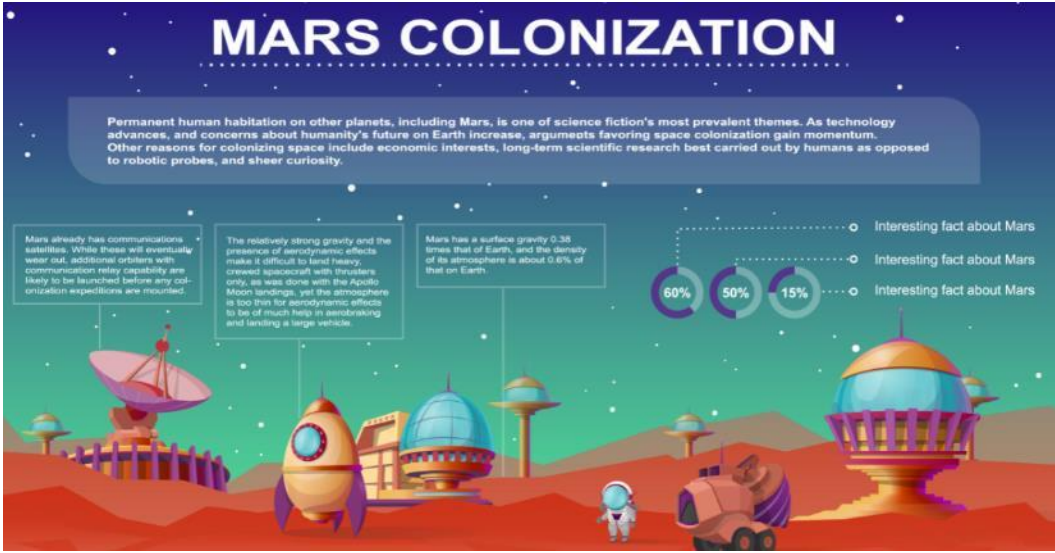
Mobility Business

Turbine Business

Power Generation Business

Tyre Selling Business

Tyre Usage Business



# Envision Future Environment

Price Goes Down



Wear New Competitive Gears



Demand Goes Up



Loom                      Industrial Engine                      Assembly Line                      IoT

# Justifying Investments : Will people pay 10 X ?

Smart Lock



Smart Pen



Smart Water Bottle



Are people paying for product innovation ?

**OR**

Company charging for IoT innovations ?



# Value Creation

Innovation	Make better products / processes
Invention	Make new products
Address new segments	Extend customer reach



Increase Operational Efficiency	Operate better
Increase Asset Utilisation	Support better

## Make Better Products

- Add more features than competitors
- Improve user experience
- Fix defects

Impact = X



## Make New Products

- Use IOT data and research
- Customers like it
- Competitor face challenge

Impact = 10 X



# Monetisation : Improve Operation Efficiency and Asset Utilisation

## Operational Efficiency

- IT improve management process efficiency
- IOT improve management process and engineering process efficiency
- Setup controls and exceptions



## Asset Utilisation

- Less unplanned breakdowns
- More predictive maintenance.

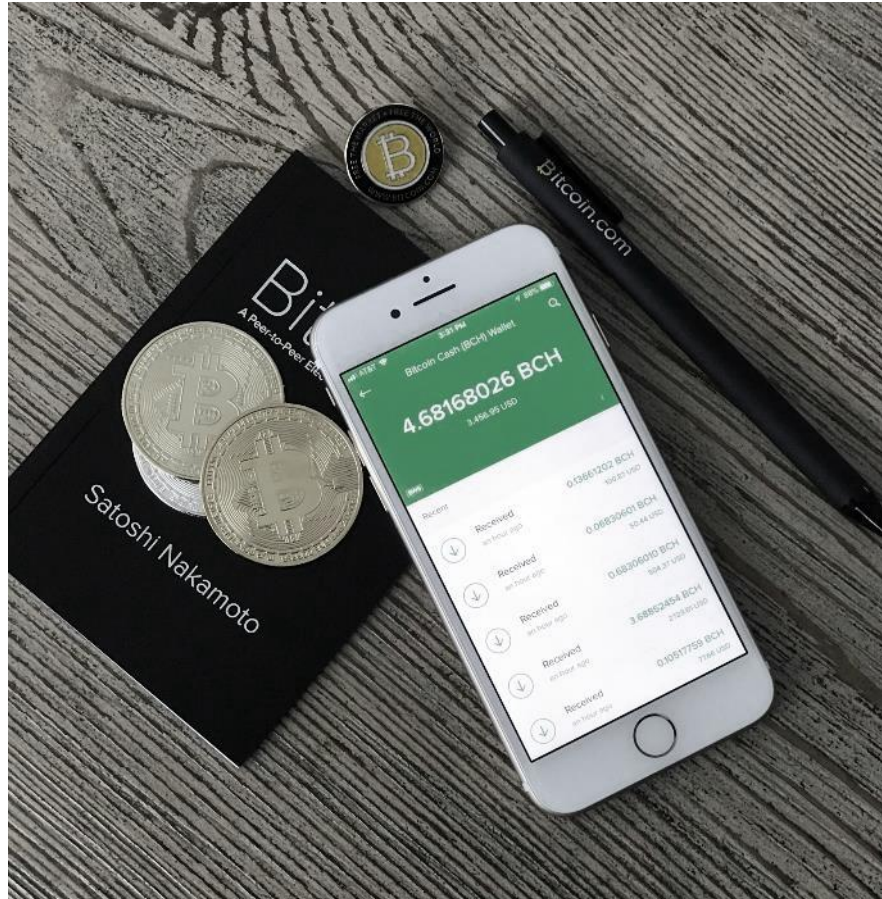
# Monetisation : B2B Models

	<b>Stage 1 Product Based</b>	<b>Stage 2 Service Based</b>	<b>Stage 2 Outcome Based</b>
1 Selling Model	product quantity.	Bill by usage.	Bill by outcome.
2 Sales Methodology	One time sales.	Project saving by usage based sales. Capex to Opex model.	Share success, share failures, result focus.
3 Competition	Product Feature and Price.	Service Pricing. Better relationship.	Business Model. Close relationship.
4 Maintenance	Fix with charges. Sell more spares.	Maintenance included. Extend asset life.	Maintenance Included. Ship robust product.
5 Customer – Supplier Relationship	<b>Good.</b>	<b>Better.</b>	<b>Best.</b>

After launching IOT Product, gradually move to Service and Outcome based model.

## Revenue

- Selling IoT products.
- Selling additional services.
- Selling data to advertisers, insurers & other companies.
- Changing selling models

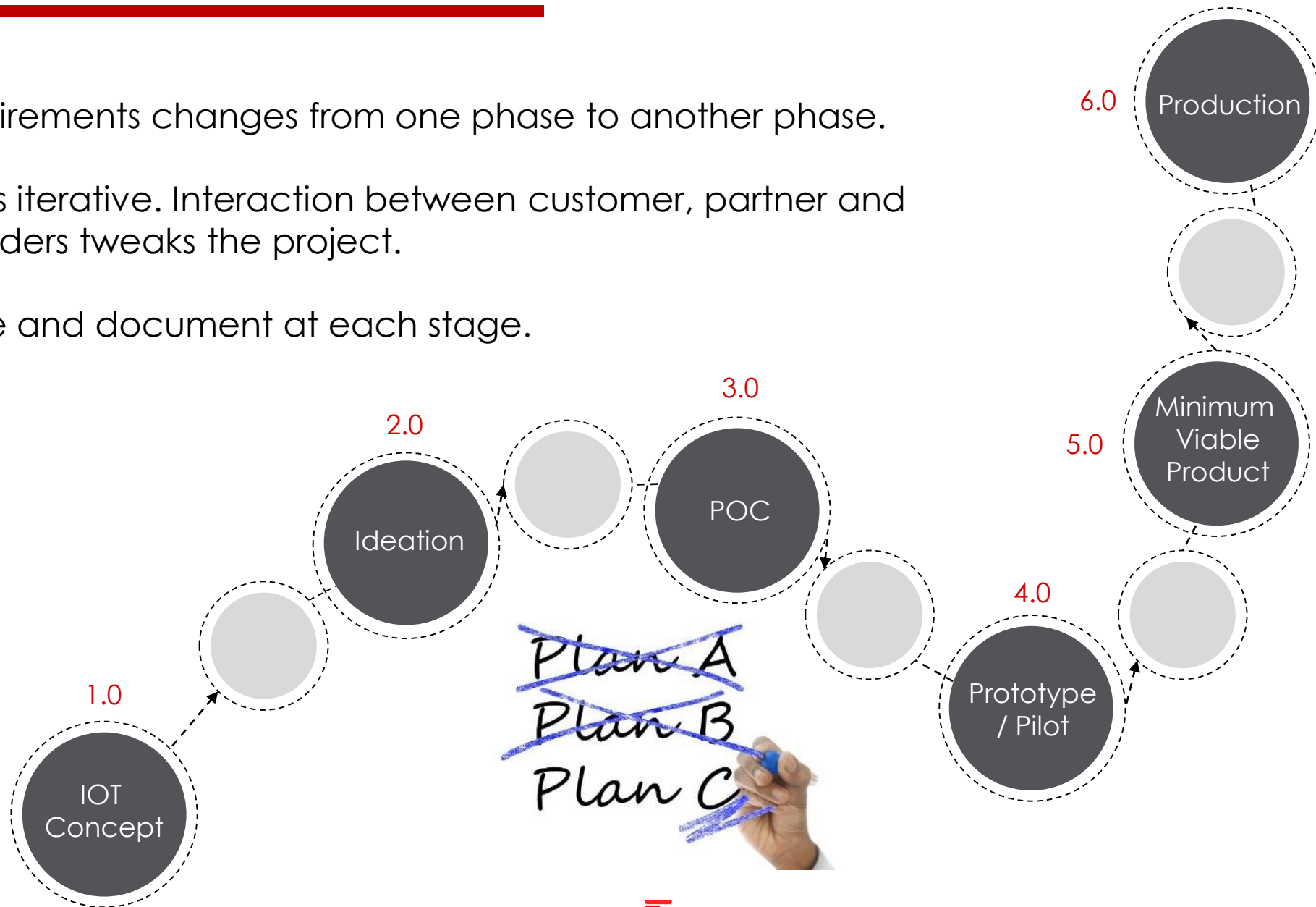


## Cost

- R & D Cost.
- Back End Infrastructure Cost.

# IoT Project Methodology

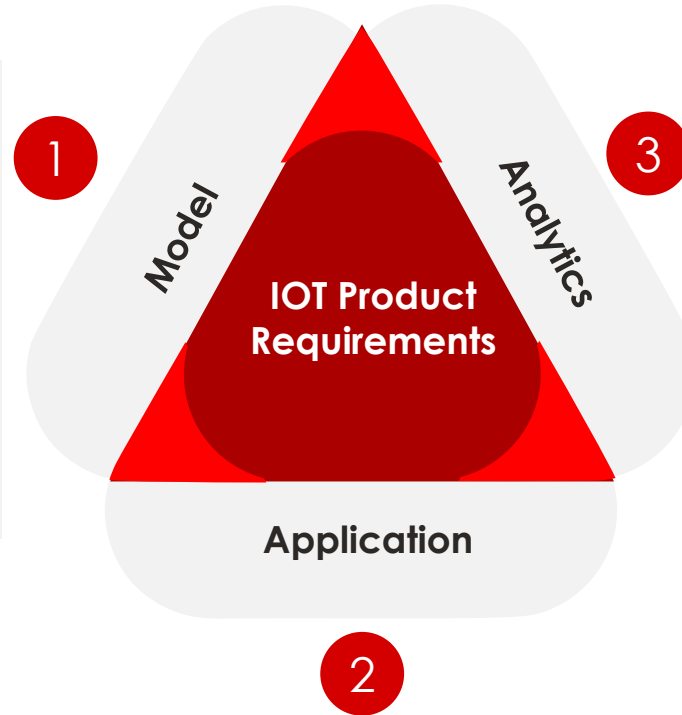
- IOT requirements changes from one phase to another phase.
- Project is iterative. Interaction between customer, partner and stakeholders tweaks the project.
- Evaluate and document at each stage.





# IoT Project Framework

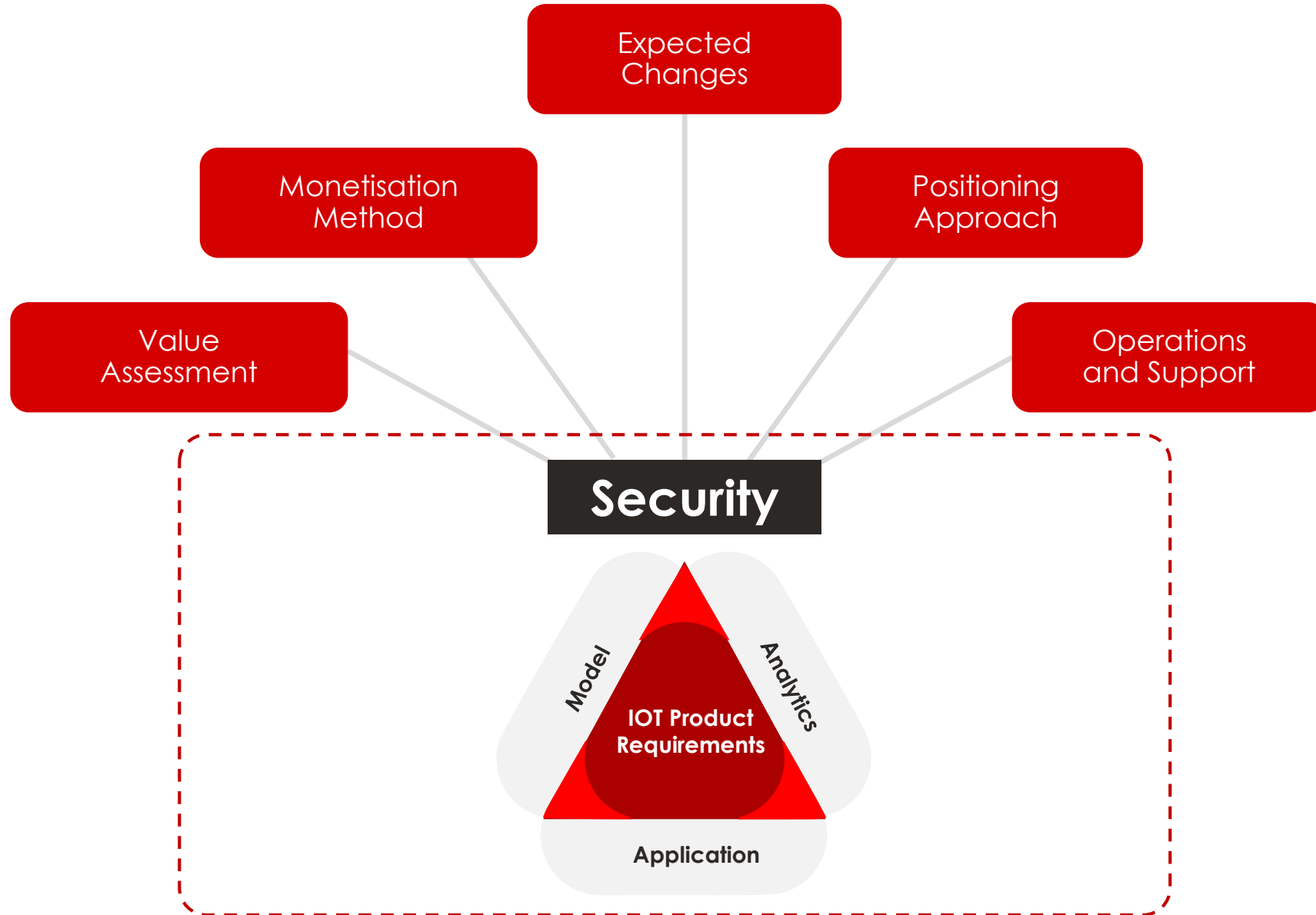
- What data do we need ?
  - Sensors.
  - Other systems.
  - Internet.



- Makes data valuable.
- Analytics and rules.
- Framework for decisions.
  - Past Insight.
  - Present Insight.
  - Future Prediction.

- Develop logic.
- Human interface with sensors & rules.
- Fine tune model and analytics.
- Provide interface to users and customers.

# IoT Project Execution Framework





ecosystem

# THANK YOU

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