# Leveraging IIoT for OEM's and ODM's

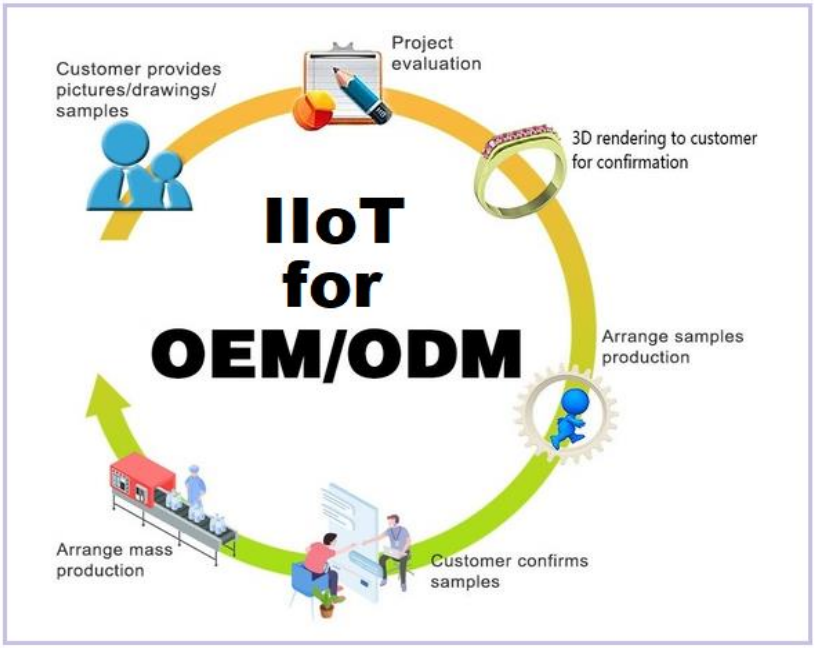
## Introduction

IIoT the catalyst for original equipment manufacturers (OEM) and original design manufacturers (ODM) manufacturers driving early demand of services, support extending the innovative research and design processes and platforms with end to end solutioning capabilities. These capabilities enable OEMs to compete more effectively with third-party service providers and captive, in-house maintenance services alike, while improving both top line growth and profit margins

IoT provides access to data that allows OEMs to extend the life of products and provide new services to customers. Both IoT players and OEM's together develop scalable, sustainable solutions and enhance the ecosystem capabilities this further helps to bring economies of scale which ultimately benefit the society in multi fold aspects and offers best service value proposition to their clients. With IIoT offerings a wide variety of tangible benefits for both consumer and industrial product manufacturers. IIoT enables OEMs to increase efficiencies, reduce warranty costs, extend uptime and schedule service before disruptions. It adds values to the solution and delivers connected, integrated and cost-effective system enhancing new business and revenue opportunities.

IoT brings paradigm shift in technology which creates opportunities for the creation of better products. we can help the industry transition from legacy to end-to-end automated systems. Products which can foster closer relationships with customers, create ancillary revenue streams and give manufacturers the real-time decision-making capability they need to improve products and operations and strengthen their competitiveness.

IIoT enables OEMs not only to monitor their devices, but also provide enhanced customer service experience, creates new business opportunities, get better ROI.



## OEM Market Segments

### a. Consumer Driven Market

The consumer OEM market segments offer products such as computing devices, wearables, home appliances etc. With adaptation of IoT enable
the consumer market to focus on the new opportunities and thereby creating revenue streams from connected devices and applications.

### b. Industries Driven Market

The industrial OEM market segment offers range of industrial products and control systems, ranging from construction and heavy equipment to medical devices and HVAC systems. With IoT adaptation we can adds values to the existing products and increase life of products by analysing data insights which we get from connected IoT systems.

## Implementation Challenges

### a. Integration OT and IT

IoT systems need to be able to connect to a variety of Edge devices with proprietary protocols and data formats. All the devices are needed to be connected into one network, it requires the use of protocol converters and gateways to integrate OT and IT devices and finally data is pushed to the cloud for storage and further analysis.

### b. Legacy support

Connecting to the wide variety of legacy or IoT-based devices requires a device-agnostic/network-agnostic platform that can accommodate the different protocols and PLCs used today and in the future.
Traditionally, industrial automation has been developed with proprietary and application-specific implementations however today we need to integrate and communicate with the legacy system to the external world and design connected solutions from them.

### c. Right IoT Platform

For OEMs seeking to go to market quickly and sustain a competitive market advantage, using a multi-dimensional IoT application development and deployment platform can help to jumpstart and shortcut the IoT product-development cycle. Proper selection of IoT platform will brings win-win situation for both OEM's and end customers.

### d. Security

Many of times when machines are connected to the Internet they get exposed over an open network. If they do not have the proper security the data collected from them being stolen or equipment from being hacked. Many systems are also not able to talk to the cloud or support bidirectional communications. Hence it become mandatory to implement secure connection or firewall while communication over the internet or outside world.

Each Edge device needs its own SSL certificate and security keys. The platform also needs to have mechanisms in place to be able to update SSL certificates over time. Furthermore, updating needs to be automated to reduce the need for time-consuming manual updating.

### e. Scaling

The key challenge in IoT deployments is operating at scale. Monitoring a single piece of equipment could entail communicating with tens or hundreds of sensors. Therefore, monitoring thousands of pieces of equipment requires a platform that can simplify the management of hundreds of thousands of nodes and also offer variety of services right from data collection, analytics, reporting and business insights. OEMs can deliver and manage custom applications at scale, it provides a means for them to monetize functionality

## Benefits of IoT adaptations

There are clear benefits to consumer & industrial OEMs that can leverage multiple types of IIoT solutions. It reduces product-development complexity and total cost of ownership, helping OEMs to bring products to market faster, maintain a competitive advantage and focus on their own core competencies to deliver enhanced customer experiences and many more

## Addressing the OEM's problem area

### a. Developing New business line

The service such as remote monitoring and troubleshooting could be sold at a premium to customers, even for equipment that had been deployed decades ago. In addition, the data collected enabled the manufacturer to improve overall machine reliability and decrease failure costs while at the same time increasing brand awareness and customer loyalty. OEMs, can engage the clients by delivering a smart connected IoT solution which can deliver substantial benefits and create a virtuous cycle by which the data collected from the connected devices by OEM gets back to develop new products or open up new revenue streams.

### b. Accelerate Solutioning to Market

IoT enables OEM's to accelerate the solutions to the market with the usage of IoT platform brings scalability, availability and flexibility and is security to the solution designed. In addition, specialised IoT partners already have the necessary infrastructure in place which can help get the IoT solution deployed faster. Also, OEM can realise the benefits of IoT in a shorter timeframe

In addition to improving engineering and design concepts, OEMs can leverage data from an IoT solution for heavy equipment to create different types of equipment, with less simulation and modelling required. Using the real data from existing infrastructure, the options for finding new designs or even new uses for equipment can lead to new markets and new product lines for an OEM. This presents a massive opportunity for the OEM to ensure that they stay ahead of the competition.

## c. Enrich customer experienced

IoT adaptation adds value for customers their motivation to create IoT solutions starts with reducing the costs of remote device support and maintenance, and they often look at how a connected device can generate new value for their enterprise through new services and business models.

By providing accurate updates to service technicians also smooths over the process of meeting compliance requirements for companies with service level agreements. The embedded IoT sensors not only help with the predictive servicing on machinery, but they also enable automatic reporting on asset health and communicate when thresholds have been reached. This feature dramatically improves the chances of meeting SLAs.

## d. Filling ROI Gaps

Making money from IoT requires a shift in the OEM's view of a device's lifecycle. This new perspective must embrace the real possibility of staying connected to devices even after the sale. Device connectivity doesn't have to be just a product feature but can be a stepping stone to a develop new type of OEM business model.

OEM's continuous engagement with end customer ensures obtaining first hand feedback from them which helps to improve the product life, increase performance and quality and also helps to mitigate risks. Which further ensures benefits such as building Smarter business model and providing economical solution.

## Conclusion

Many OEM visionaries struggle communicating the business benefits of IoT to internal stakeholders who believe that there is no money to be made in IoT. However, with the promise that IIoT will be with us up to next industrial revolution directs the OEMs to create value by using IoT solutions and product offerings to promote sustainable solutions in the market.

Rahul Chandrayan
chandrayan.rahul22@gmail.com