



---

## CONCEPTUAL STUDY OF CURRENT AND NEW TRENDS IN BUSINESS DEVELOPMENT

---

**Dr. Hindurao V. Sankpal**

*Assit. Prof, Department of Economics, Rajarshi Shahu Arts and Commerce College  
, Rukadi-Dist Kolhapur  
Email- hinduraosankpal@yahoo.in*

---

### **Abstract**

The current and new developments in business development is required for any business organization to earn the profit and brand name. This paper highlights on the various new technology used and advances in business process. The field has evolved due to the convergence of multiple technologies, including ubiquitous computing, commodity sensors, increasingly powerful embedded systems, and machine learning. Traditional fields of embedded systems, wireless sensor networks, control systems, automation (including home and building automation), independently and collectively enable the Internet of things. In the consumer market, IoT technology is most synonymous with products pertaining to the concept of the "smart home", including devices and appliances (such as lighting fixtures, thermostats, home security systems and cameras, and other home appliances) that support one or more common ecosystems, and can be controlled via devices associated with that ecosystem, such as smartphones and smart speakers. The IoT can also be used in healthcare systems. There are a number of concerns about the risks in the growth of IoT technologies and products, especially in the areas of privacy and security, and consequently, industry and governmental moves to address these concerns have begun, including the development of international and local standards, guidelines, and regulatory frameworks.

**Keywords-** Current trend , Buisness , Internet , Network , Security , IOT, Farmework , Technolgy

### **Introduction**

The Internet of Things is an emerging topic of technical, social, and economic significance. Consumer products, durable goods, cars and trucks, industrial and utility components, sensors, and other everyday objects are being combined with

Internet connectivity and powerful data analytic capabilities that promise to transform the way we work, live, and play. Projections for the impact of IoT on the Internet and economy are impressive, with some anticipating as many as 100 billion connected IoT devices and a global economic impact of more than \$11 trillion by 2025. At the same time, however, the Internet of Things raises significant challenges that could stand in the way of realizing its potential benefits. Attention-grabbing headlines about the hacking of Internet-connected devices, surveillance concerns, and privacy fears already have captured public attention. Technical challenges remain and new policy, legal and development challenges are emerging.

### **IoT Definitions**

The term Internet of Things generally refers to scenarios where network connectivity and computing capability extends to objects, sensors and everyday items not normally considered computers, allowing these devices to generate, exchange and consume data with minimal human intervention. There is, however, no single, universal definition.

### **Enabling Technologies**

The concept of combining computers, sensors, and networks to monitor and control devices has existed for decades. The recent confluence of several technology market trends, however, is bringing the Internet of Things closer to widespread reality.

### **Connectivity Models**

IoT implementations use different technical communications models, each with its own characteristics. Four common communications models described by the Internet Architecture Board include: Device-to-Device, Device-to-Cloud, Device-to-Gateway, and Back-End Data-Sharing. These models highlight the flexibility in the ways that IoT devices can connect and provide value to the user.

### **Transformational Potential**

If the projections and trends towards IoT become reality, it may force a shift in thinking about the implications and issues in a world where the most common interaction with the Internet comes from passive engagement with

**Dr. Hindurao V. Sankpal**

connected objects rather than active engagement with content. The potential realization of this outcome – a “hyperconnected world” — is testament to the general-purpose nature of the Internet architecture itself, which does not place inherent limitations on the applications or services that can make use of the technology.

### **IoT Explained in Brief :-**

A complete IoT system integrates four distinct components: sensors/devices, connectivity, data processing, and a user interface. Below I will briefly explain each component and what it does.

#### **Sensors/Devices**

First, sensors or devices collect data from their environment. This could be as simple as a temperature reading or as complex as a full video feed. I use “sensors/devices,” because multiple sensors can be bundled together or sensors can be part of a device that does more than just sense things. For example, your phone is a device that has multiple sensors (camera, accelerometer, GPS, etc), but your phone is not *just* a sensor. However, whether it’s a standalone sensor or a full device, in this first step data is being collected from the environment *by* something.

#### **Connectivity**

The sensors/devices can be connected to the cloud through a variety of methods including: cellular, satellite, WiFi, Bluetooth, low-power wide-area networks (LPWAN), or connecting directly to the internet via ethernet. Each option has tradeoffs between power consumption, range and bandwidth (here’s a simple explanation). Choosing which connectivity option is best comes down to the specific IoT application, but they all accomplish the same task: getting data to the cloud.

#### **Data Processing**

This could be very simple, such as checking that the temperature reading is within an acceptable range. Or it could also be very complex, such as using computer vision on video to identify objects (such as intruders in your house).

**Dr. Hindurao V. Sankpal**

But what happens when the temperature is too high or if there *is* an intruder in your house? That's where the user comes in.

### **User Interface**

Next, the information is made useful to the end-user in some way. This could be via an alert to the user (email, text, notification, etc). For example, a text alert when the temperature is too high in the company's cold storage. Also, a user might have an interface that allows them to proactively check in on the system. For example, a user might want to check the video feeds in their house via a phone app or a web browser.

However, it's not always a one-way street. Depending on the IoT application, the user may also be able to perform an action and affect the system. For example, the user might remotely adjust the temperature in the cold storage via an app on their phone. And some actions are performed automatically.

### **IoT Applications – Industrial Automation**

1. Factory Digitalization.
2. Product flow Monitoring.
3. Inventory Management.
4. Safety and Security.
5. Quality Control.
6. Packaging optimization.
7. Logistics and Supply Chain Optimization.

### **Smart home**

Smart Home clearly stands out, ranking as highest Internet of Things application on all measured channels. More than 60,000 people currently search for the term "Smart Home" each month. This is not a surprise. The IoT Analytics company database for Smart Home includes 256 companies and startups. More companies are active in smart home than any other application in the field of IoT.

### **Wearables**

Wearables remains a hot topic too. As consumers await the release of Apple's new smart watch in April 2015, there are plenty of other wearable

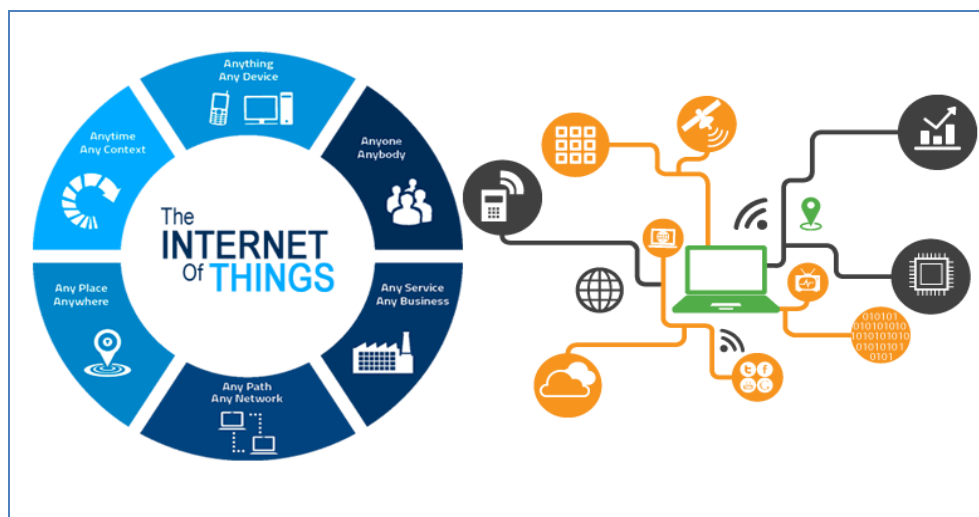
**Dr. Hindurao V. Sankpal**

innovations to be excited about: like the Sony Smart B Trainer, the Myo gesture control, or LookSee bracelet. Of all the IoT startups, wearables maker Jawbone is probably the one with the biggest funding to date. It stands at more than half a billion dollars!

### Smart City

Smart city spans a wide variety of use cases, from traffic management to water distribution, to waste management, urban security and environmental monitoring. Its popularity is fueled by the fact that many Smart City solutions promise to alleviate real pains of people living in cities these days.

IoT solutions in the area of Smart City solve traffic congestion problems, reduce noise and pollution and help make cities safer. Major cities are nowadays very keen to implement the applications of IOT at various level.



**Source:** <https://www.google.com/search?q=Internet+of+Things+for+Business+Dev>

### Smart grids

Smart grids is a special one. A future smart grid promises to use information about the behaviors of electricity suppliers and consumers in an automated fashion to improve the efficiency, reliability, and economics of electricity. 41,000 monthly Google searches highlights the concept's popularity.

However, the lack of tweets (Just 100 per month) shows that people don't have much to say about it.

**Dr. Hindurao V. Sankpal**

**Industrial internet**

The industrial internet is also one of the special Internet of Things applications. While many market researches such as Gartner or Cisco see the industrial internet as the IoT concept with the highest overall potential, its popularity currently doesn't reach the masses like smart home or wearables do. The industrial internet however has a lot going for it. The industrial internet gets the biggest push of people on Twitter (~1,700 tweets per month) compared to other non-consumer-oriented IoT concepts.

**Connected car**

The connected car is coming up slowly. Owing to the fact that the development cycles in the automotive industry typically take 2-4 years, we haven't seen much buzz around the connected car yet. But it seems we are getting there. Most large auto makers as well as some brave startups are working on connected car solutions.

And if the BMWs and Fords of this world don't present the next generation internet connected car soon, other well-known giants will: Google, Microsoft, and Apple have all announced connected car platforms.

**Connected Health (Digital health/Telehealth/Telemedicine)**

Connected health remains the sleeping giant of the Internet of Things applications. The concept of a connected health care system and smart medical devices bears enormous potential (see our analysis of market segments), not just for companies also for the well-being of people in general. Yet, Connected Health has not reached the masses yet.

Prominent use cases and large-scale startup successes are still to be seen. Might 2015 bring the breakthrough?

**Smart retail**

Proximity-based advertising as a subset of smart retail is starting to take off. But the popularity ranking shows that it is still a niche segment. One LinkedIn post per month is nothing compared to 430 for smart home.

**Dr. Hindurao V. Sankpal**

**Smart supply chain**

Supply chains have been getting smarter for some years already. Solutions for tracking goods while they are on the road, or getting suppliers to exchange inventory information have been on the market for years. So while it is perfectly logic that the topic will get a new push with the Internet of Things, it seems that so far its popularity remains limited.

**Smart farming**

Smart farming is an often overlooked business-case for the internet of Things because it does not really fit into the well-known categories such as health, mobility, or industrial.

However, due to the remoteness of farming operations and the large number of livestock that could be monitored the Internet of Things could revolutionize the way farmers work. But this idea has not yet reached large-scale attention.

**Internet of Things for Business Development**

The Business in present days has become very dynamic in nature at all the levels of activities of the business. The Use of IOT at maximum levels of activities is increasing day by day.

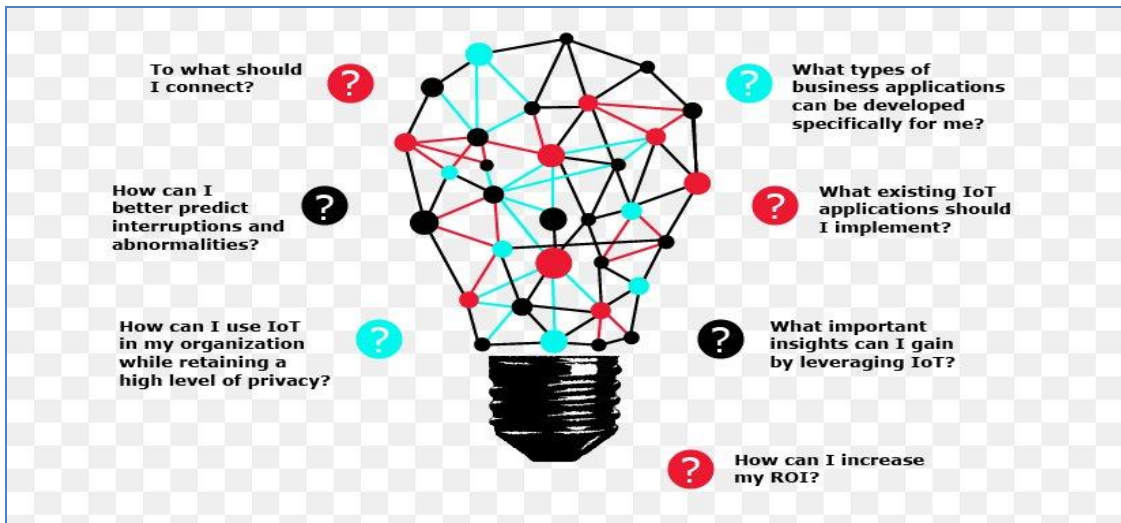
Following are the major areas and disciplines in which IOT is used for the development of the business as a whole.

1. Consistant Growth
2. Increase in Profitability
3. Increase in Comptition
4. Wide Applications
5. Customer Reach
6. Good administration
7. Maximization of use of Resources

All the activities are now having IOT applications various hardware , tools , software and various levels of management . The various experts are required to manage and maintain the systems of IOT to make it more functional.

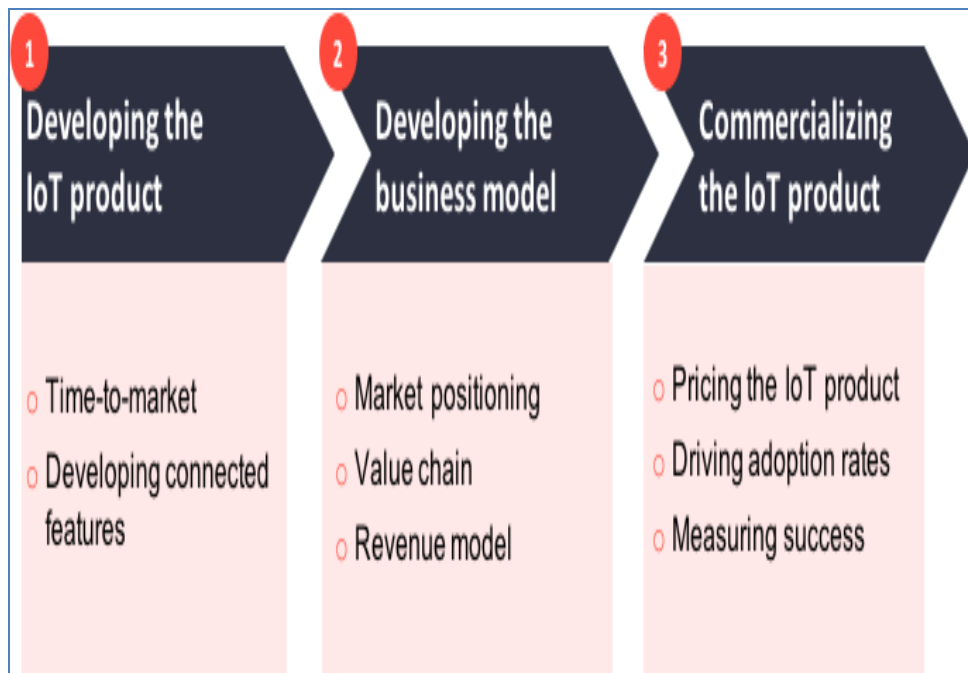
**Dr. Hindurao V. Sankpal**

**IOT Marketing Strategy.**



Source :- <https://www.google.com/search?q=Interne>

**IOT Successful Business Model :-**

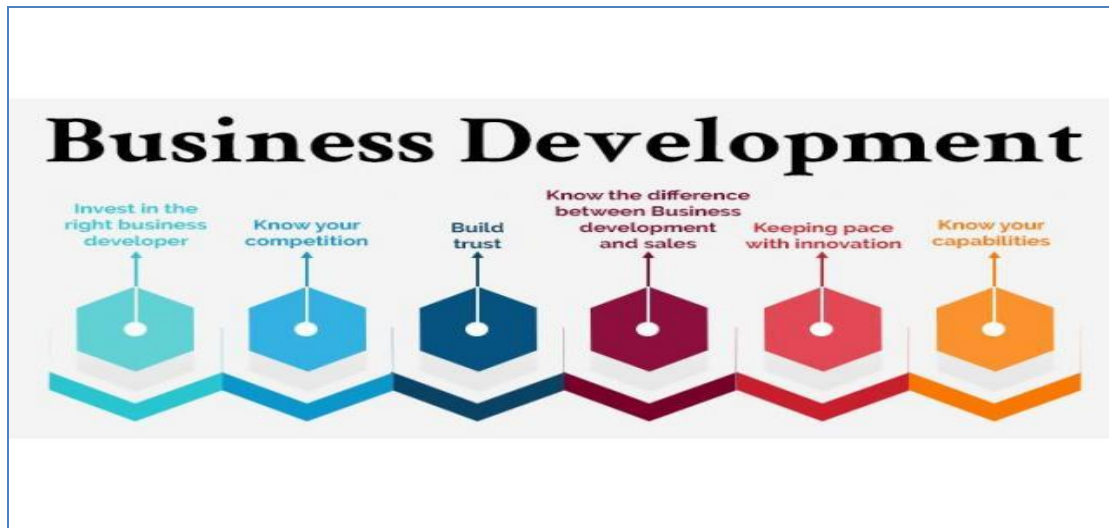


Source :- <https://www.google.com/search?q=Int>

All steps are required for successful business the step onw is developing the IOT product , time to market , developing connected features . Second stage is developing the business model which involves market positioning , value chain and revenue model, Third stage involves pricing the IOT product , driving adoption rates and last to measure the success.

**Dr. Hindurao V. Sankpal**



**Business Development Services:-**

Source :- <https://www.google.com/search>

The Business development services are having following major steps namely Invest in the right business developer , know your competition , build trust , find the difference between business development and sales , keeping pace with innovation and also know your capabilities .

**Limitations of IOT in Business Development:-**

1. Security and privacy. Keeping the data gathered and transmitted by IoT devices safe is
2. challenging, as they evolve and expand in use.
3. Technical complexity in IOT Implementation.
4. Reliable Connectivity and power dependence.
5. Integration of devices at all the levels.
6. Time-consuming and expensive to implement.

**Conclusion :-**

The main part in any business organisation is its technology and advancement in use of current technology for its operations . The IOT is new technology for various applications the above paper is decent contribution in creating the awareness amongst the stakeholders of the IOT and also to the business organisations to go for implementation of IOT systems in the business organisations. Considering the explosion of IoT-connected devices, perhaps you're wondering, "How does IoT affect business?" The short answer is, "In every

**Dr. Hindurao V. Sankpal**

way.”Accessibility to big data sets, along with the autonomous collection and exchange of data, means that it is becoming easier to gain insights into things like customer behaviors and product performance. IoT also facilitates the continuous optimization of business processes and even impacts employee engagement and performance. In certain industries, IoT in business can instruct systems to autonomously execute transactions in supply chains when certain conditions have been met. The overall performance of the business activities .

**Acknowledgement :-**

Author thanks all the friends and staff members for motivating me to study this topic . All the references used and endorsed herewith in the paper .

**References :-**

1. Acharjya, D.P.; Geetha, M.K., eds. (2017). Internet of Things: Novel Advances and Envisioned Applications. Springer. p. 311-312.
2. Phillips, Julien R. (1983). "Enhancing the effectiveness of organizational change management". Human Resource Management. Pp 22 -25.:
3. Rowland, C.; Goodman, E.; Charlier, M.; et al., eds. (2015). Designing Connected Products: UX for the Consumer Internet of Things. O'Reilly Media. p. 720.
4. Thomas, Jayant; Traukina, Alena (2018). Industrial Internet Application Development: Simplify IIoT development using the elasticity of Public Cloud and Native Cloud Services. Packt Publishing. Pp 87-89.
5. Website References :-[www.wikipedia.com](http://www.wikipedia.com)  
<https://searchcio.techtarget.com/definition/tqm-management> ,  
<https://en.wikipedia.org/wiki/total>