

Innovation

May Edition / 2021 Edition

HOW TO BE
INNOVATIVE

1.

EXPLORE NEW TECH.

Try out new
technologies and rejoice
the learning curve.

REINVENT THE WHEEL.

Recreate something.
Do something old in
a new way.

2.

EXPERIMENT NEW THINGS.

Get delved into a
new exciting idea.
Learn new skills.

3.

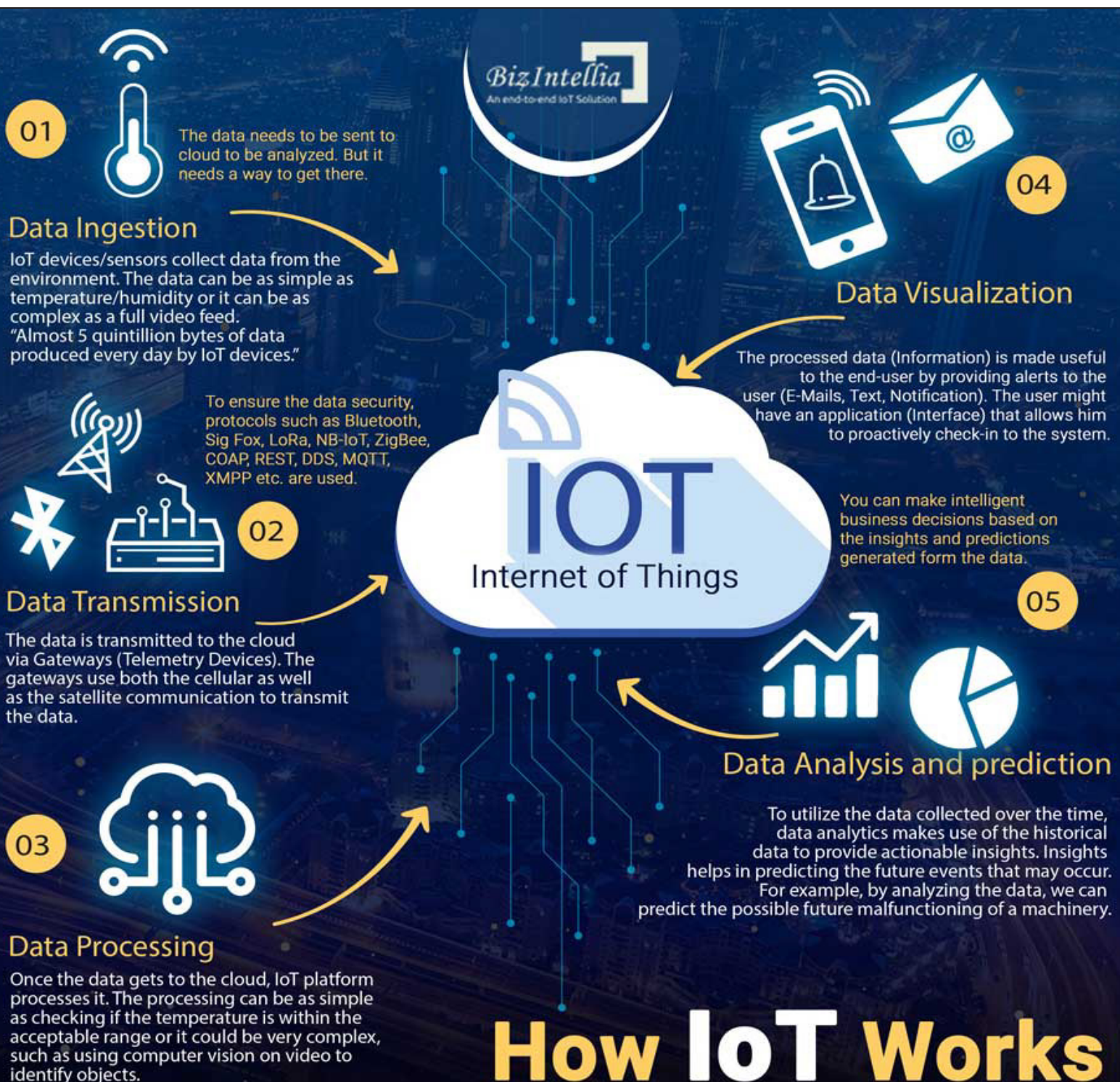


MIS540 /

INNOVATION THROUGH TECHNOLOGY

— “Knowledge is Power, we need to be aware of our rights and protect our privacy...”
 —Mack Jackson Jr.

by **Christine Baxter**
 Photo **Biz4Intellia**, 2021





INTERNET OF THINGS



Internet of Things (IoT) covers many aspects from cloud and edge computing to smart assistants and hyper-automation. It is a complex topic where connected IoT devices can provide businesses the data and information they need for streamlining workflows, analyzing usage patterns, making proactive decisions based on data insights, creating a more intelligent business model, and much more (Hosain, 2018).

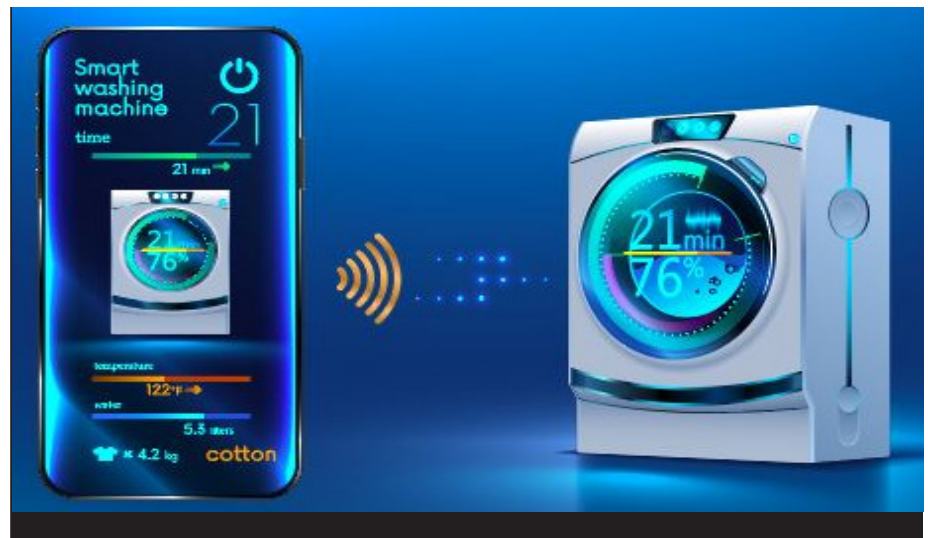
Since there are so many complexities associated with IoT, this article will stay focused on

the automation aspect. You might be wondering, like I was, what exactly is hyperautomation and what does it entail? According to the Top Strategic Technology Trends for 2021 eBook, it “...is a process where businesses automate as many business and IT processes as possible using tools like AI, machine learning, event-driven software, robotic process

automation, and other types of decision process and task automation tools.” (Burke & Panetta, 2020). In simple terms, IoT “...is the concept of basically connecting any device with an on and off switch to the Internet (and/or to each other)” (Morgan, 2014).



Consider your homelife for a moment, do you have a washing machine with Wi-Fi... one where notifications are sent to your phone when a cycle ends or one that knows your running low on laundry soap, so the washing machine places an order with Amazon Prime? I do have one of those machines and I love it! More to the point, this is a prime example of IoT and automation. The devices (washing machine and cell phone) with on and off switches/power buttons connected to the internet via Wi-Fi and then talked to each other through notifications. Switching to the business perspective, let us say that the sales department's won-a-contract event occurred so the sales representative set the contract's status field to closed. That status change was considered a trigger and once closed was the status,



an automated process was started, doing anything from sending an email to the Project Lead to kicking off creation of a project plan/approval process or some other automated business process. Data from the sales system for this transaction was also captured and used in subsequent processes. This is a perfect example of what they call machine-to-machine (M2M) communication as no human was involved after the status field was set to closed.

For some this is all very exciting; for others it is intimidating and worrisome. Due to the Covid pandemic this last year, companies/schools had

to embrace online meetings, classes, and work (Burke & Panetta, 2020). As a result, many workers and students who preferred the office or class setting not only had to learn this new-to-them technology but also become comfortable enough to use it daily. In my experience, when non-technical people hear the words automation or process automation, there are several thought processes that surface. Some may immediately start with worries of losing their jobs and being replaced by machines and others may feel overwhelmed with more change due to information

overload as technology itself is moving at a quick pace.

We are now in a time where digital acceleration is front and center, so businesses (and schools) need to fully embrace this concept and continually strive for digital operational excellence and resiliency. If they stay on this trajectory, Gartner believes organizations will lower their operation costs by 30% by the year 2024 (Gartner, 2021). Utilizing the

combination of the hyperautomation technologies with the redesigned, more efficient operation processes will be the boost needed to achieve this reduction in costs.

Gartner's research vice president, Fabrizio Biscotti, stated that "Hyperautomation has shifted from an opinion to a condition of survival" (Gartner, 2021) and Gartner itself is forecasting that digital transformation and automation needs

will drive opportunities for hyperautomation-enabling software, reaching nearly \$600 billion by 2022. This is where the process-agnostic software such as robotic process automation (RPA), low-code application platforms (LCAP), artificial intelligence (AI) and virtual assistant tools will be in high demand with double-digit growth through 2022 (see Table 1) (Gartner, 2021).

Table 1: Worldwide Forecast for Hyperautomation-Enabling Technologies (Millions of U.S. Dollars)

	2020	2021	2022
Process-Agnostic Software That Enables Hyperautomation	19,604	25,108	30,184
Other Software That Enables Hyperautomation	462,030	507,316	566,433
Total	481,635	532,424	596,616

Source: Gartner (April 2021)

All of this anticipated growth in the IoT markets will bring new challenges:

- Scaling for growth in the numbers of devices and applications.
- Providing effective security solutions for the content and solutions (as discussed in the previous chapter).
- Storing the data and providing rapid analysis for action.
- Deploying new wireless and wired connectivity technologies for the increased traffic.
- Managing the connectivity and device “subscriptions” for large numbers of devices.

Source: Hosain (2018)

Please note that the concepts of IoT (i.e., meanings, use cases, adoption) can be a bit confusing or even overwhelming so be sure to have a grounding in how IoT systems are secured, connected, how they communicate, how data is analyzed, and how it can have a positive impact on your company (Hosain, 2018). Within Hosain’s book, it states that there are currently no comprehensive standards and regulations in place for IoT from appropriate authorities due to the rapid growth in a short amount of time; however, that will most likely change once this innovative technology takes a stronger hold and becomes more mainstream for businesses. Finding a solution provider with an end-to-end mod-

ular technology platform that has the appropriate level of knowledge, experience, and needed technology to implement, accelerate, and optimize services is of vital importance (Hosain, 2018). Lastly, remember it is critical to assess the level of security implementations/configurations that are appropriate for different kinds of data and it is vital that the assessment is done early during the design of application and devices.

For a high-level summary, we have discussed many benefits of hyperautomation, and the technology needed to implement a successful IoT solution that, ultimately, allows businesses to expand revenue, decrease costs and advance business objectives in our connected economy. We also

touched on forecasting of hyperautomation-enabling technologies and provided recommendations on what to look for in a solution provider. The article concluded with discussing the criticality and timing of security assessments.

Note: This article just lightly touched on IoT and automation, please know The Internet of Things for Business, 3rd Edition book is very thorough and contains many useful and insightful details.

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“Don’t treat automation as a technology project; treat it as a business project,” says Rajeesh Khanna, CTO and Senior VP of IT Platform services at Aon plc.. “Technology is the differentiator.”

