

# TechTalk

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**MD** SPEAKS

**Anoop Pai Dhungat**  
Chairman & Managing Director

Dear Readers,

I am proud to announce that this year, Galaxy was the Gold Sponsor of the Dell Technologies Forum India which showcased a lot of emerging technologies and innovative products. As one of the premier partners of Dell, we have always been ahead of the curve in bringing the best and most relevant solutions to our customers. Our investments in building skills in new technologies enables us to use these in creating and implementing the best outcome based solutions for our clients. Do reach out to our subject matter experts on application and infrastructure engineering to understand how we can help you achieve your business objectives through technology.

This year a lot of climate related events have been wrecking havoc all around the world. From wildfires in the USA and Europe to drought in Europe and floods in parts of India, Australia and Pakistan, everything can be traced down to global warming or climate change. It is time that each of us takes some action in whatever little way we can to try and leave at least some place for the coming generations to live. At Galaxy, we try to do our bit by sponsoring and planting trees which have the potential to tackle the climate crisis to a certain extent. We are also looking to use renewable energy wherever possible to reduce carbon emissions. We would like to hear from you about any more practical things that can be done at an individual or corporate level that could help reverse the climate change that is happening. Surely, we owe it to our future generations.

Stay safe and happy reading.

*AP Dhungat*



# Future Is Now

## Japan's Bullet Train Will Take You to the Moon And Mars, Here's How

Humans might now be able to travel through space from one planet to another on a bullet train if Japan's plans of a revolutionary step in the space travel industry go well. Yes, you read that right! Space travel will no longer be limited to Sci-fi movies as the country known for its advanced technological ideas is all set to build a bullet train that will allow people to travel through space.

According to The Weather Channel India, Japan aims to build an artificial space habitat on Mars with an atmosphere like that of the Earth for humans to be able to live there. And it will not have any adverse effect on the atmosphere of Mars.

Researchers from Japan's Kyoto University in partnership with Kajima Construction are working on this project to take space travel to another level. A transportation system called 'Hexagon Space Track System' for the bullet train.

For long-distance travel, the Hexatrack will maintain a

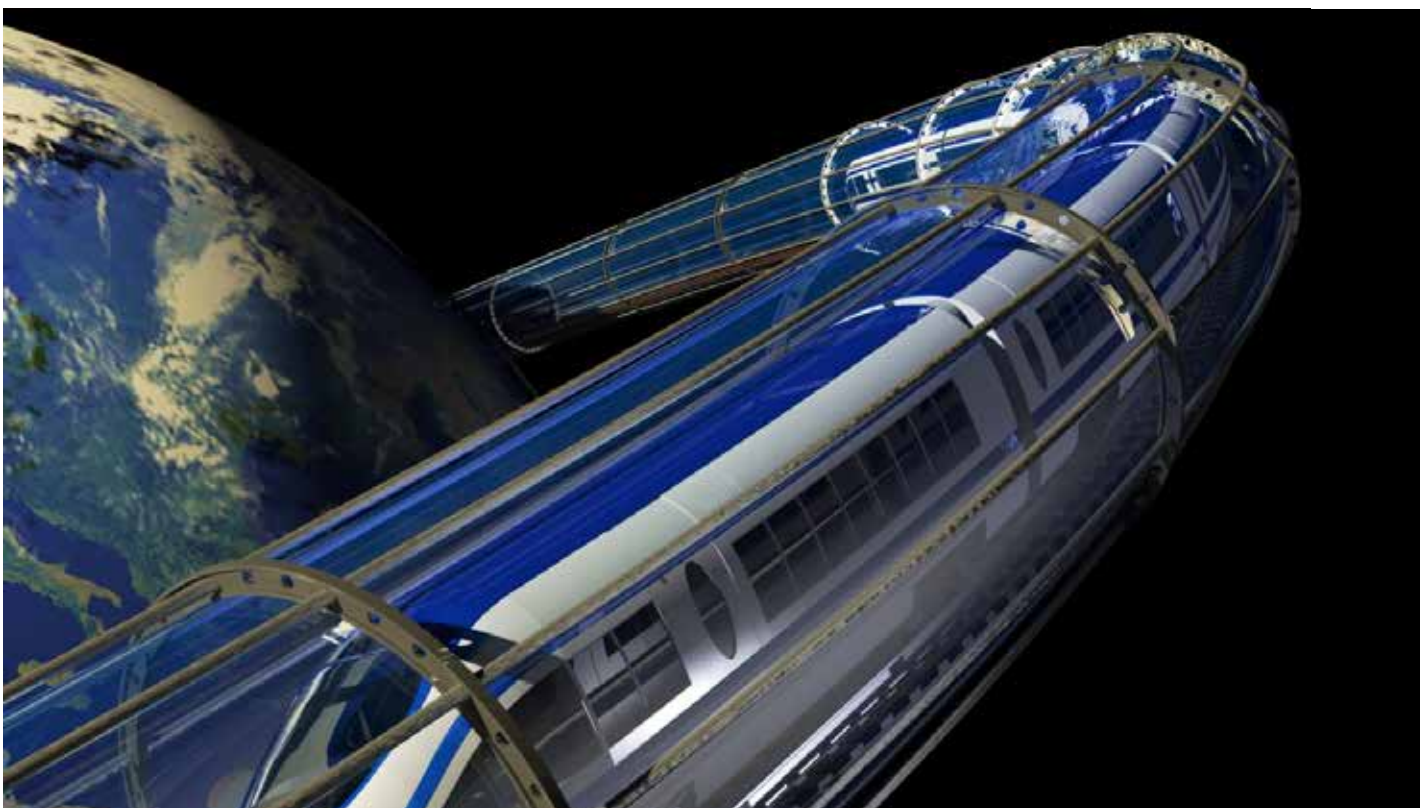
gravity of 1G (normal gravity of the Earth) to lessen the effects of extended exposure to low gravity.

The bullet trains are also said to have 'Hexacapsules' (hexagonal-shaped capsules) with a moving device in the middle. A mini capsule of a 15-metre radius will connect the Earth with the moon while a slightly bigger capsule of a 20-metre radius will be used to link the Earth with Mars.

The train station at the Moon will be called the Lunar station and it will be using a gateway satellite. The station at Mars on the other hand will be called the Mars station and it will be situated on the Martian satellite Phobos.

The plan might take 100 years to become a reality but the researchers are aiming to build a simplified prototype version of the Marsglass and Lunaglass by 2050, according to the Japanese newspaper The Asahi Shimbun.

Thanks to this project, our future generation will live the life we could only fantasise about while watching movies like Interstellar and The Martian.



## What is Kubernetes?

Kubernetes, often abbreviated as “K8s”, orchestrates containerized applications to run on a cluster of hosts. The K8s system automates the deployment and management of cloud native applications using on-premises infrastructure or public cloud platforms. It distributes application workloads across a Kubernetes cluster and automates dynamic container networking needs. Kubernetes also allocates storage and persistent volumes to running containers, provides automatic scaling, and works continuously to maintain the desired state of applications, providing resiliency.

### Kubernetes Architecture and How it Works?

Containers encapsulate an application in a form that's portable and easy to deploy. The Kubernetes architecture is designed to run containerized applications. A Kubernetes cluster consists of at least one control plane and at least one worker node (typically a physical or virtual server). The control plane has two main responsibilities. It exposes the Kubernetes API through the API server and manages the nodes that make up the cluster. The control plane makes decisions about cluster management and detects and responds to cluster events.

The smallest unit of execution for an application running in Kubernetes is the Kubernetes Pod, which consists of one or more containers. Kubernetes Pods run on worker nodes.

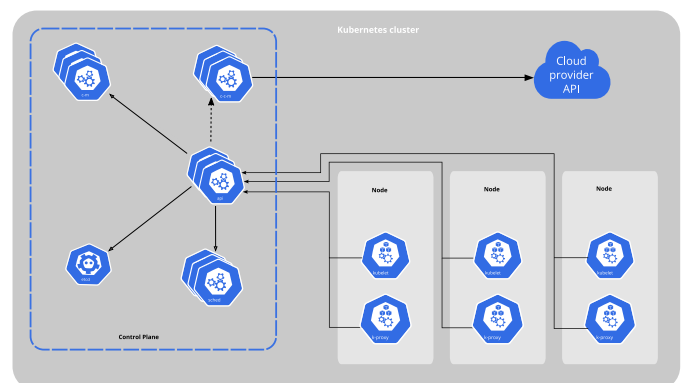
### Kubernetes Advantages

The Kubernetes platform has become popular because it provides a number of important advantages:

- ▶ **Portability:** Containers are portable across a range of environments from virtual environments to bare metal. Kubernetes is supported in all major public clouds, as a result, you can run containerized applications on K8s across many different environments.
- ▶ **Integration and extensibility:** Kubernetes is extensible to work with the solutions you already rely on, including logging, monitoring, and alerting services. The Kubernetes community is working on a variety of open source solutions complementary to

Kubernetes, creating a rich and fast-growing ecosystem.

- ▶ **Cost efficiency:** Kubernetes' inherent resource optimization, automated scaling, and flexibility to run workloads where they provide the most value means your IT spend is in your control.
- ▶ **Scalability:** Cloud native applications scale horizontally. Kubernetes uses “auto-scaling,” spinning up additional container instances and scaling out automatically in response to demand.
- ▶ **API-based:** The fundamental fabric of Kubernetes is its REST API. Everything in the Kubernetes environment can be controlled through programming.
- ▶ **Simplified CI/CD:** CI/CD is a DevOps practice that automates building, testing and deploying applications to production environments. Enterprises are integrating Kubernetes and CI/CD to create scalable CI/CD pipelines that adapt dynamically to load.



At Galaxy, we have Certified Kubernetes Administrators who can assist you with the planning, migration, containerisation and implementation of your applications on the Kubernetes platform.

<https://bit.ly/3CJnCCS>



### Regulations for Data Protection: The Impact on New Businesses, Start-ups, and Cyber Security

We live in a big data era where technology has made it easier and less expensive for businesses and governments to keep an eye on our lives. Technology is being used more and more to mediate relationships between citizens and governments as well as between citizens and large corporations, raising privacy and surveillance concerns even though India still does not have a data protection law.

The development and implementation of Aadhaar and Arogya Setu, as well as the government's numerous facial recognition tenders and CCTV projects, are where we have seen this most clearly. Big tech has also been using AI and big data to make judgments about us while largely avoiding any kind of accountability. Considering the Personal Data Protection (PDP) Bill, 2019 that is presently being discussed by the Joint Parliamentary Committee, it has become crucial to comprehend the legal and policy context surrounding the privacy and data protection debate in India.

We want to know how the amount of regulation and the nimbleness of new businesses relate to one another. Without establishing just and appropriate conditions for new businesses, the gap between the rich and the poor will only widen. Therefore, establishing equal playing conditions is essential for a sensible globalisation process.

Ignoring data protection laws is the biggest error new businesses can make in this area. There is a risk of significant loss of reputation among customers in addition to the risk of high fines. Each unique customer is frequently essential to the survival of small and medium-sized businesses. However, how will they be able to continue to exist while also abiding by the rules?

The Personal Data Protection Bill that India is proposing will have a significant impact on how technology firms and start-ups handle and store user data. Businesses will have the chance to comprehend the actual impact that the proposed Bill would have on their operations and policies.

#### Historical Background of Various Data Protection Approaches:

For the EU, the GDPR has established a single standard. But there are big differences between the American and European and Asian and India approaches when it comes to

data protection. Informational privacy is a component of personality protection, as well as reflecting one aspect of data protection. In contrast to the fact that honour was violated, this aspect of the protection of personality has a different meaning. Because the information is not required to be defamatory if someone wants it to remain confidential.

#### Economic size and the date of foundation must be considered when determining the degree of data protection.

Around the world, there are numerous new laws pertaining to privacy (and data protection). It is essential for the participants in the commercial world to take these regulations seriously. This is nothing less than a fundamental right that merits to be protected with the utmost diligence, especially in a digitised world, because they compel sole proprietors and businesses to exercise with care when processing personal data to guarantee the right to privacy and to protect everyone's private sphere.

Start-up businesses are typically small or medium-sized, and they frequently overlook privacy due to a lack of funds, a lack of time, or a dislike of dealing with the implementation of the new regulations. However, they must also follow the rules for protecting personal data. Due to this behaviour, a sizable risk is being assumed if they do not comply on time. The viability of almost all small and medium-sized start-up businesses can be threatened by impending fines and sanctions. Particularly, start-ups in the media industry, which routinely handle data from customers and process a variety of personal data, have a significant responsibility in the area of data protection and frequently find this to be insufficient or non-existent.

Entrepreneurs in heavily regulated industries like the banking industry, pharmaceutical industry, and automobile industry appear to be better prepared for the tightened data protection rules. These sectors take data protection more seriously and personal information is now used in these business operations and has strategic value. Particularly in the medical field, drug manufacturers created personalised treatments and paid according to each patient's response to a treatment, so they require additional personal information.

Large corporations have a greater responsibility because they are the custodians of these sensitive data. They must be able to accurately hold these by knowing which personal data they are storing where, why, and for how long.



## Special Focus

### **Businesses should be considered on a global and national scale.**

Solutions that are cost-effective and supportive of innovation should be developed to address the tension between data protection and data use. It entails both the development of new legal norms and the repeal of some existing legal regulations (deregulation). Starting businesses may experience significant change as a result of this. In this sense, there are numerous ways to create regulations, including the traditional legislative processes. Additionally, other methods of control can be used, such as branch-level self-regulation, codes of conduct, and good practises.

### **Cybersecurity's effect on start-ups and businesses**

Additionally, there are questions about whether most of these businesses have mastered this task given the infamously long delays in discovering cyberattacks. Most cyberattacks target businesses and brands. Because of this, business owners may face a serious threat from these highly skilled criminals.

Effective brand protection / IPR and Digital Data Storage and protection will become more important. This is also essential for newly established and old businesses. As a result, security measures must be implemented from the moment of foundation.

In the area of data protection, start-up businesses' research efforts are equally important. The pharmaceutical industry should primarily be thoroughly researched. If the combined data from open sources is safeguarded from unauthorised access by third parties, it is still available for use. However, the advancement of personalised medicine necessitates more thorough data.

For BFSI: A consumer group called Cashless Consumer is focusing on digital payments to increase consumer understanding of technology, produce and consume data, and use tools and technology to encrypt data while it is in transit and at rest to achieve the Data Protection Goal.

### **To safeguard the organisation, a minimum level of regulation should be implemented.**

The nature of the sector and activities, rather than the size of the business, determines how the data protection regulation is applied most frequently. Activities that put people's rights and freedoms in danger result in the application of stricter regulations. However, not all SMEs

may be subject to all the GDPR's requirements. For instance, businesses with fewer than 100 - 250 employees are typically exempt from keeping records of their processing activities. Naturally, this rule does not apply if processing personal data is a routine activity, endangers the rights and liberties of individuals, involves sensitive data, or involves criminal records.

Most national regulations include grace periods. Even so, most businesses won't be able to fully implement the new requirements by the deadline, and the framework places almost all businesses on the same operational basis. The rules apply to all businesses that handle, analyse, or provide goods or services to EU citizens. Whether the data is processed inside the EU or outside has no bearing. Any business that violates the rule risk receiving harsh fines.

### **Conclusion**

More than ever, the conflict between individual rights and commercial use is raising questions about personal data. A balance must be struck between the needs of businesses and privacy in order to address this tense relationship and create models that are appropriate for the realities of life.

Although the data protection principles (legitimacy, good faith, transparency, purpose limitation, data minimization, truthfulness, storage limitation, integrity and confidentiality, accountability) are abstract, they still apply to all organisations.

Internationally applicable regulations necessitate a significant amount of additional work and awareness on the part of the businesses. Any type of business, even start-ups, must develop and maintain substantial new structures and procedures to meet the demands of the updated international data protection regulations.

The regulation mandates stricter deletion arrangements, a more thorough examination of data protection risks, a data protection effect and influence assessment in the case of likely high risks, and an increased obligation to document and provide evidence.

Galaxy helps your organisation to stay in tune with the latest data protection laws. Talk to our experts and know more, email us at [marketing@goapl.com](mailto:marketing@goapl.com)



## Reliance Retail pilots grocery delivery service through new platform, app

Kolkata: Reliance Retail has started instant grocery delivery service through a new platform and app under the JioMart Express brand, with trials currently ongoing in Navi Mumbai. The company plans to expand the service by this calendar year end to more than 200 cities and towns where JioMart is currently operational, two industry executives said. With this, Reliance will compete against Tata-owned Bigbasket, Zomato-funded Blinkit, Swiggy's Instamart, Walmart-owned Flipkart Quick and Zepto.

Unlike some platforms like Blinkit and Zepto which are targeting ten-minute delivery of the order, JioMart Express is promising 90-minute delivery and no minimum order. All deliveries by JioMart Express will be fulfilled from Reliance Retail stores. The service covers groceries, personal care and home care products at present. Executives said Reliance is evaluating options to include other categories too, such as medicines and small electronic products like smartphones.

"JioMart Express will utilise Dunzo in the markets where it is strong, like the metros as well as its own delivery fleet," an executive said. Quick commerce is not new for Reliance Retail. It has been delivering orders in less than three hours placed through Reliance Digital online or app for small consumer electronics such as mobile phones and laptops. "However, order volumes are going to be much more frequent in grocery, and hence it would need a robust backend and delivery fleet for JioMart Express," the second executive said. According to researcher RedSeer, India's quick commerce market is set to grow 15 times by 2025, reaching close to \$5.5 billion.



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## Digital India Act likely to replace IT Act 2000

The Digital India Act will cover the entire digital ecosystem and will add compliance burden on BigTech while regulating content across OTT platforms.

As digital awakening sets in, India gets ready for a course correction to challenge the new tech-backed world order. Yes with this, the recent respite for the BigTech companies, following the withdrawal of Data Protection and Privacy Bill 2019, may soon be over as the Union government plans to push through the Digital India Act (DIA) in the Winter Session of the Parliament later this year.

The Digital India Act is likely to replace the two decades old IT Act 2000. The 2019 privacy bill was designed to protect Indian citizens and establish a data protection authority. The bill raised concerns among tech giants, which feared new compliance burdens with high data storage requirements.

The Union government cited over 81 amendments recommended by the parliamentary panel behind the withdrawal of Data Bill 2019 early this month.

The Union government highlighted the need for a new 'comprehensive legal framework' to take on the new age digital challenges. According to a recent report, the new digital regulatory framework around the Digital India Act (DIA) will cover the entire digital technology ecosystem with specific guidelines around child and women's safety, while making a tight rope walk for social media platforms including Twitter, Facebook and metaverse on compliance as well as digital crime issues.

The Digital India Act will also have more regulatory teeth to monitor content on OTT platforms including Netflix and Amazon and check spreading misinformation or inciting violence. The new set of rules are likely to criminalise deliberate misinformation and other cyber threats.

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