



ALLIANCE UNIVERSITY

Private University established in Karnataka State by Act No. 14 of 2009
Recognized by the University Grants Commission of India, New Delhi

Celebrating

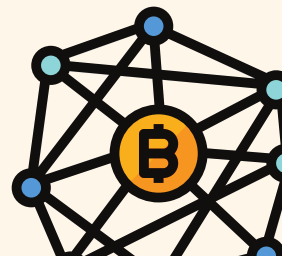
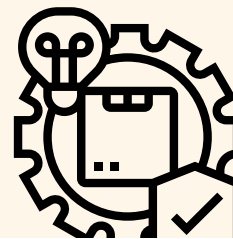
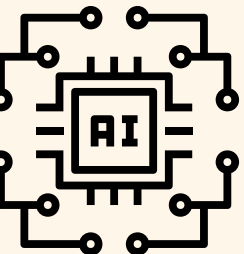
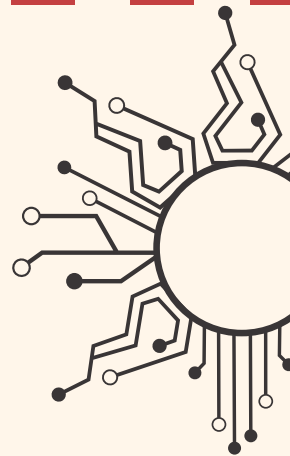
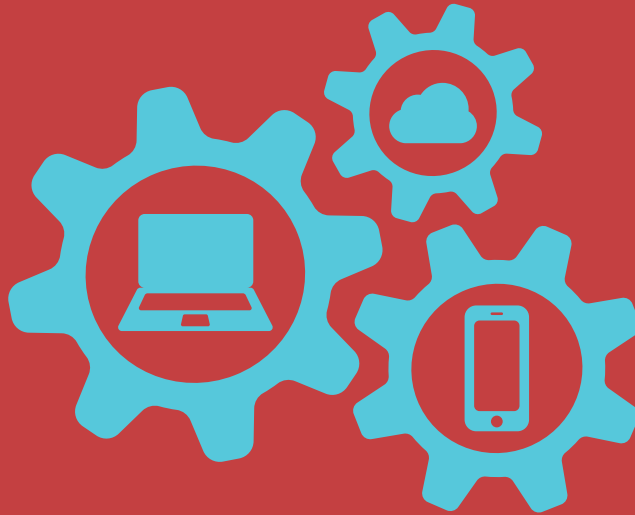
25
SILVER JUBILEE

years
of Alliance Education



PRAXEIS NEWSLETTER

OCTOBER
2022



DIGITAL INVENTORY AND BLOCKCHAIN

By Anirudh Rao



Before we jump into what is digital inventory and how is it going to revolutionize today's system let's first look at the traditional inventory system and then compare exactly what can the digital inventory offer. The traditional system captures order placement, shipping, and payment details. Data entry tools entail either spreadsheets or paper. As a result, traditional stock management is a time-consuming manual process that creates room for human error. As it offers less accurate data, the conventional stock management approach is unreliable. Now coming to the part where we answer what is digital inventory and how is it going to make a difference.

A **digital inventory system** records data automatically, enabling a business to supervise inventory control. It can, therefore, simplify decision-making on inventory allocation, stock replenishment, and proper tracking of stock in every distribution center. The use of modern technology to manage inventory makes it possible for a business to sell across different platforms. While at it, a company can provide consistent customer experiences and reduce inventory carrying costs. There is less risk of accumulating dead stock or overspending as the company can identify the amount of inventory it needs to store to meet the demand. Now covering the next obvious question i.e., what exactly is a blockchain?

Blockchain is a shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a business network. An *asset* can be tangible (a house, car, cash, land) or intangible (intellectual property, patents, copyrights, branding). Virtually anything of value can be tracked and traded on a blockchain network, reducing risk and cutting costs for all involved.

Why blockchain is important: Business runs on information. The faster it's received and the more accurate it is, the better. Blockchain is ideal for delivering that information because it provides immediate, shared and completely transparent information stored on an immutable ledger that can be accessed only by permission network members. A blockchain network can track orders, payments, accounts, production, and much more. And because members share a single view of the truth, you can see all details of a transaction end to end, giving you greater confidence, as well as new efficiencies and opportunities

How blockchain works?

- **As each transaction occurs, it is recorded as a “block” of data**

Those transactions show the movement of an asset that can be tangible (a product) or intangible (intellectual). The data block can record the information of your choice: who, what, when, where, how much and even the condition — such as the temperature of a food shipment.

- **Each block is connected to the ones before and after it**

These blocks form a chain of data as an asset moves from place to place or ownership changes hands. The blocks confirm the exact time and sequence of transactions, and the blocks link securely together to prevent any block from being altered or a block being inserted between two existing blocks.

- **Transactions are blocked together in an irreversible chain: a blockchain**

Each additional block strengthens the verification of the previous block and hence the entire blockchain. This renders the blockchain tamper-evident, delivering the key strength of immutability. This removes the possibility of tampering by a malicious actor — and builds a ledger of transactions you and other network members can trust.

After we have understood the basics now we shall dwell deeper into how blockchain can build upon this tech

Supply chains today are increasingly complex and fragile, subject to unforeseen disruptions and growing costs. Visibility is limited as goods move from the supplier’s supplier to the customer’s customer, and transactions are often still paper-based. In virtually any industry, blockchain can transform the supply chain by providing a trusted and controlled way to share data for near real-time visibility. Blockchain technology allows companies to build their blockchain-enabled collaboration and data-sharing ecosystem with their supply chain partners—to the benefit of all.

With blockchain, you can: **Build a better supply chain**

- Track the physical flow of goods across companies for new speed to insight
- Combine data that are typically siloed to leverage new business drivers
- Automate processes across companies to reach next-generation supply chain efficiency

To conclude, the application of digital inventory when combined with blockchain finds its applications in supply chain management wherein supply is interoperable and flexible, this technology solution keeps implementation costs low, avoids lock-in, and ensures scalability



DIGITAL INVENTORY MANAGEMENT

By Soumik



Any business that sells products needs a reliable method for inventory management. With bar codes, point-of-sale software and warehouse tracking, computerized inventory management systems make it easy for businesses to stay updated consistently. As with any new system implementation, business owners should consider the advantages and disadvantages of using a computerized inventory system before writing a check. Some disadvantages of Digital Inventory Management.

- **Prone to system crash:**

The possibility of a system crash remains one of the main concerns for every computerized system. A corrupted hard drive, power failures as well as other technical problems may result in the loss of the information needed. At the very least, business operations are hindered as they cannot get access to the data they need. Business owners must constantly back up data to safeguard against system failure.

- **At high risk for malicious hacking:**

Cybercriminals or hackers are constantly looking for various ways to obtain information about the company or the customer. An inventory platform linked to point-of-sale systems and accounting is indeed a valuable resource to be hacked into in the search of significant financial data or personal information of the suppliers or consumers. Nevertheless, this potential problem can still be counteracted by updating security systems and antivirus software.

- **Manual or physical auditing is reduced:**

Because everything is digital, time-consuming manual evaluations of inventories are convenient to forego. It may seem that it is no longer necessary once the computers do their work. But even so, routine manual audits should still be continued to detect losses like breakage or spoilage. The audits also help the business owners to investigate possible internal fraud and computerized inventory system manipulation.

- **Complexity, System Vulnerability, and Additional Expenses:**

This is not to say that rolling out an online inventory management system will be without hitches. For, you must consider the human side of adapting the new technology. The software might seem alien to staff members who are used to the manual route, and it may take some time for them to incorporate it into their daily routine. Try to account for extra work hours that will be spent training your staff on proper use of the system.

Lastly, the cost may be something for fledgling retailers to balk at. As such, investing in a new online inventory management system is a probably a matter of good timing. Roll out the software once your business has hit important growth milestones or if it's anticipating expansion in the near future. That way, the upgrade will pay itself off sooner than later.

DIGITAL INVENTORY, ITS APPLICATIONS IN INDUSTRIES ALONG WITH BENEFITS AND DRAWBACKS

By Paulomi Nandi



Digital inventory management allows you to track inventory with powerful, yet simple software. A digital inventory management system makes it easy to keep tabs on how much food you have in stock, offering you many benefits including increased efficiency and a decreased workload. Digital inventories are databases of the digital twins in a company's possession. They are both catalogs of parts and, in a sense, repositories of the parts themselves. A digital inventory can replace or partially replace a physical inventory. A digital twin is a virtual model designed to accurately reflect a physical object. Applications being, in different industries have taken different steps to modulate this technology in live.

1. Real Estate Industry:

Digital inventory management enables you to manage many units, floors, buildings and even complexes remotely. Using advanced mobile applications with extensive features, you no longer need to be physically present to manage your Real Estate inventory. Real Estate developers move large amounts of inventory regularly while doing business with customers. To keep better track of these inventory-related transactions, an inventory management tool can be a game-changer.

Now, with the use of an analytics tool within your CRM, you can view and analyze data in real-time related to your business activity. It simplifies the process of keeping track and accounting for your inventory. Not only this, but it allows you to obtain valuable statistics about how your business is performing. This opens the doors to you being able to identify trends and take advantage of shifts in the market.

Features:

- Block And Book Properties
- Avoiding Excess Stock
- Eliminating The Chances of Overselling
- Seamless Payment Schedules
- Negotiation Management
- Accounting Integration
- Wiser Business Decisions

1. Logistics Companies assistance:

Blume Global is a supply chain management company, based on USA mainly create geofence in the ports and harbors, rail, and road for accessible logistics supply. Blume Global, a provider of true end-to-end supply chain visibility technology solutions, has acquired LiveSource, a multi-enterprise supply chain business network for complex manufactures. With the acquisition, Blume will provide complete, end-to-end supply chain visibility, extending the standard definition of visibility beyond the transportation of goods.

Advantages of digital inventory:

- Improved logistics
- Reducing costs.
- A digital inventory allows a company to reduce its storage or warehousing footprint.
- Another advantage of warehouse digitalization is its ability to safeguard against supply and demand fluctuations.
- Digital inventory leads to on-demand production — making parts only when needed — and this has its own benefits.
- This simplified on-demand production can be considered a form of lean or agile manufacturing.



Disadvantage of Digital Inventory:

- One disadvantage of using a fully digital inventory is an increase in lead times.
- Other risks include potential fluctuations in material prices (additive manufacturing powders, injection molding pellets, etc.)
- Potential manufacturing hardware or software obsolescence.

NATIONAL LOGISTICS POLICY: A GAME CHANGER FOR THE INDIAN ECONOMY

By Kunal Kothari and Pavan



India currently spends around 13-14% of GDP for the logistics cost while USA and UK spend around 7% and 8% of their respective GDPs. Logistics costs are the costs associated with the packaging, transporting and storing of goods and services. Since India's independence in 1947, the transportation industry has hardly caught the eyes of the policymakers, as a result of which there has been no proper and inclusive framework for logistics in the country.

On September 17, 2022, PM Modi launched the National Logistics Policy(NLP) which was aimed to streamline processes involved around logistics and generating skilled employees besides reduction of overall logistics cost. He further states that to gain a competitive edge at a global level, India should aim to bring the logistics cost down to single-digit. The policy is in-line with the Prime Minister's GatiShakti national master plan that was launched to build robust infrastructure, fill the missing gaps in logistics, and draw more investments into the country.

The logistics market of India is valued at around \$200 Billion. Even though of its huge size, the market is fragmented and no single government authority directly supervises its operations. It involves over 200 shipping agencies, 20 government agencies, 40 partner government agencies, 500 certifications and over 10000 commodities. With NPL in place, India could position itself as a global trendsetter in paperless and digital logistics ecosystem.

The primary areas aimed by the NLP 2022 are- digitization, process re-engineering and multi-modal transportation. These areas will be addressed by implementing the 4 features of the policy, which are:

1. Unified Logistics Interface Platform (ULIP)

A platform in the logistics industry that aims to simplify logistics processes, improving efficiency and bringing in transparency and thus reducing logistics time and cost. Since its launch, 13 organisations have signed NDA to access the platform. ULIP has a dedicated and independent portal to process data requests faster and smoother. It provides direct as well as indirect benefits like inventory management, consignment tracking and cargo movement thereby allowing stakeholders for better and efficient decision making and planning.

2. Integration of Digital System (IDS)

A system that will bring ministries of railways, roads, aviation, and waterways data onto one platform. All the departments will have their original data integrated with IDS which will allow for safer, faster and economical logistics services. Producers and manufacturers would be able to compare costs and benefits of each of the channels through the portal and would even get suggested routes for the cargo shipments

3. Ease of Logistics (ELOG)

Under the Federation of Indian Export Organisations(FIEO), ELOG is India's first online marketplace to facilitate EXIM logistics. It seeks to bring service seekers and service providers at the same place to analyse the various options and finalize business. It provides with details of logistics requirements on Pan India basis to be fulfilled by logistics service providers.

4. System Improvement Group (SIG)

A group formed to advise the government on alterations to be made to the laws relating to logistics and how to ameliorate the cargo movement in the country. It includes members from department of commerce, ministry of housing, department of revenue and other related institutions.

Over and above, the e-handbook on the policy gives insight into the standardisation of the warehousing sector. The 4 features comprises integrated digital logistics systems, standardisation of physical assets, benchmarking service standards, human resource development, capacity building, development of logistics parks, etc. The government will also offer management courses around Logistics and Supply Chain for the sector's growth. Furthermore, establishing multi-modal logistics parks (MMLPs) in crucial markets will improve first- and last-mile connectivity.

The mega policy vision is a way forward to a transformative approach for the country's logistics sector. The NLP, in conjunction with the Gati Shakti Program, the Sagarmala and Bharatmala (waterways and roadways) schemes, the Dedicated Freight Corridors, etc., can be path-breaking. The policy aims to bring a modal shift in logistics and reduce the current over-dependence on roads with over 60% against 25% globally. The global dependence on railways is 60%, whereas India's is just 30%. Similarly, waterways have only a 5% share in the modal mix.

The country's economic growth largely relies on trade, and to boost the same, the focus on efficient infrastructure for the movement of goods is virtually important. The current infrastructure and policy cannot match the pace that is required from India to grow exponentially in the coming years. The policy prioritising robust infrastructure will bring cost minimisation, boosting exports and eventually adding to the country's growth. India is right on the path to emerging as the next big economy in the world.



SHOULD ALL THE STORES' INVENTORY BE DIGITAL?

By Sayan Chatterjee



Keeping inventory from time past has been a major financial decision taken by businesses. An inventory is a list of cash going in and out of a business. From the early men who used tally, market women who keep their records in tiny notebooks to owners of big companies that have it all digitized, everyone is keeping inventory. However, by comparing results, we can gauge the efficiency of the traditional and digital systems. How much cash flow does Dangote want to account for in cash books and ledgers? Not to mention the shift of businesses grossly into the online space. There was a need for a better system. The invention of the internet and the introduction of E-commerce had exponentially increased business for brick & mortar and Mom and Pop shops.

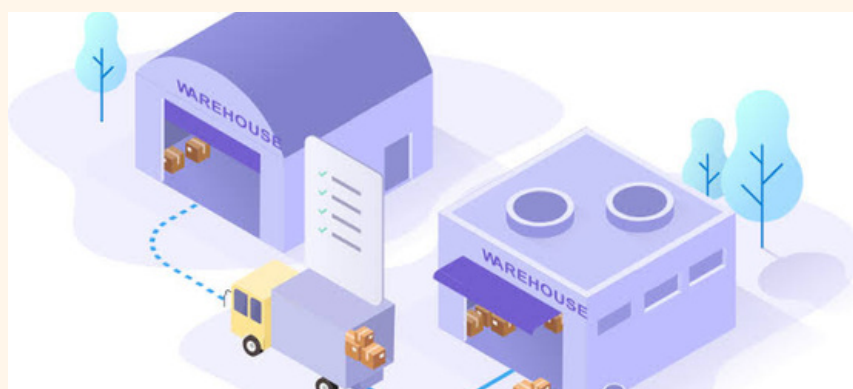
How can digital systems help improve inventory-related decisions?

The adoption of a digital inventory management system puts the store owner in an advantaged position. This simply means better decisions, better management, and happier customers. Now, decision-makers know how their inventory is performing as it progresses further down the supply chain owing to inventory management technology. From this, important steps that would scale the business and cause exponential growth can be taken. As opposed to the traditional system of inventory keeping, the digital system uses software equipped with the capacity to track shipments, identify patterns and fulfill orders efficiently. It's pretty similar to Salesforce automation; which is to automate some of the most crucial but repetitive business processes.

Now, companies can potentially scale, reduce risk, and enable new efficiencies that satisfy every stakeholder, from the factory floor to the customer's door.

Real-time digital inventory management

Real-time digital inventory management is an automated way of keeping records of sales and expenses, as they occur. It is an instantaneous, virtual, record-keeping space that helps to keep track of cash flow as it goes on in a business. With Real-time digital inventory management, a business owner can never be caught off-guard. Expenses can be tracked, goods in stock or out of stock can be checked, helps with proper scheduling of deliveries, to mention but a few benefits. Examples of real-time digital inventory management include the use of barcode scanners and digital inventory management software to keep track of cash flow in a business at any instant.



Why Retailers Should Use Digital Inventory Management Software?

The use of a digital inventory management system can help shippers gain control and visibility into existing inventory and plan for future inventory needs. To guarantee success, Warehouse Managers should follow these tips:

- Track the movement of inventory through multiple channels
- Monitor inventory in all stages of the supply chain from manufacturing to returns, explains Andy Henderson via General Electric
- Use big data for simulations and modeling to understand inventory flow in brick-and-mortar
- Gain real-time visibility into inventory, especially perishable inventory, automated technologies, such as Radio-frequency Identification (RFID) and the Internet of Things.

Conclusion

Traditional methodologies for managing inventory are inefficient in e-commerce. The reason being that they are controlled by humans and are extremely time-consuming. In the same vein, they're bound to be inaccurate, and with inconsistencies. Although fears over the "Retail Apocalypse" continue to exist, retailers can leverage the power of the e-commerce revolution. Likewise, they can leverage the power of digital inventory management styles to ensure brick-and-mortar success.



Follow

LinkedIn



FOLLOW US

Instagram