



BLOCKCHAIN

SUPPLY CHAIN MANAGEMENT

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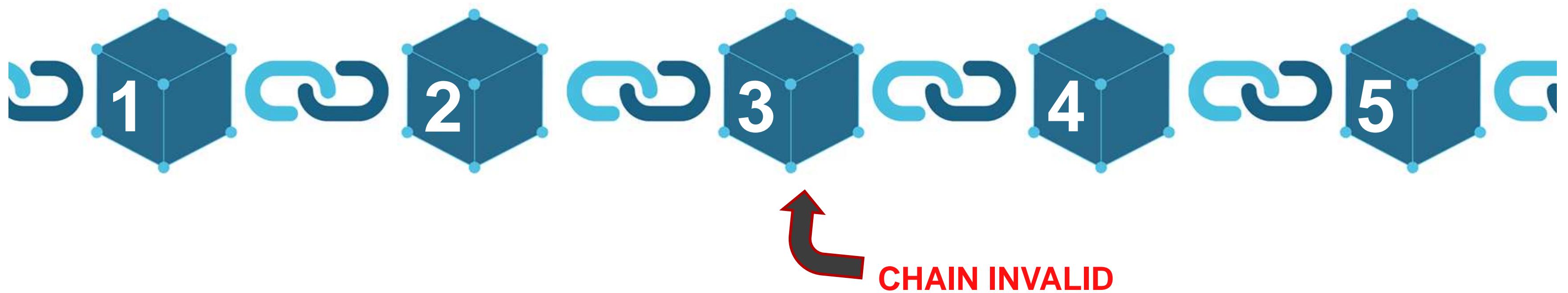
FUTURE OF SUPPLYCHAIN MANAGEMENT



BLOCKCHAIN TECHNOLOGY

SECTION 1 BLOCKCHAIN

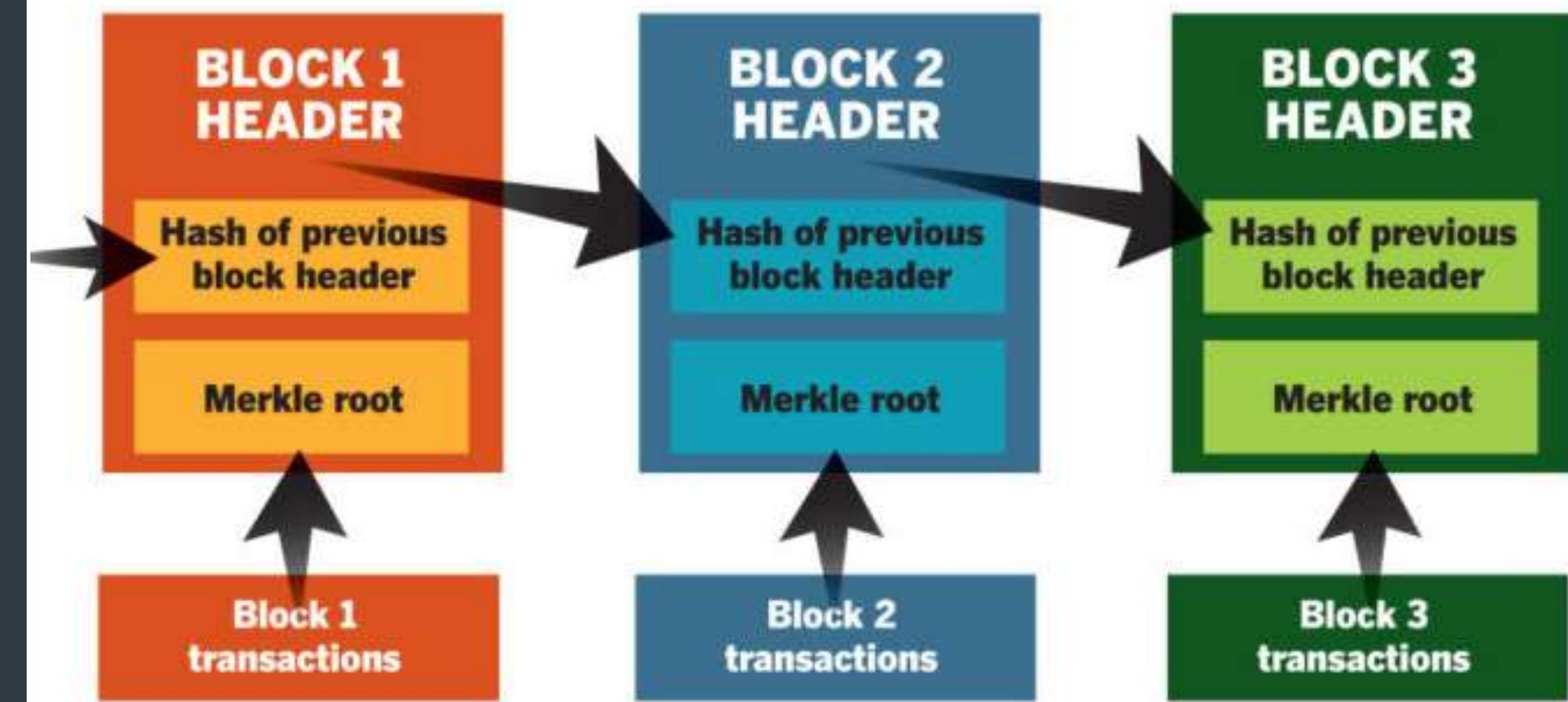
BLOCKCHAIN



BLOCK ANATOMY

THE INSIDER VIEW

With blockchain technology, each page in a ledger of transactions forms a block. That block has an impact on the next block or page through cryptographic hashing. In other words, when a block is completed, it creates a unique secure code, which ties into the next page or block, creating a chain of blocks, or blockchain.



SIMPLIFIED BITCOIN BLOCK CHAIN

SECTION 2 SUPPLY CHAIN MANAGEMENT



MANAGEMENT

Supply chain management (SCM) is the active management of supply chain activities to maximize customer value and achieve a sustainable competitive advantage

SCM involves a series of key activities and processes that must be completed in an efficient and timely manner. Otherwise, product will not be available when needed by consumers like you

SCM HISTORY

1940

The Early Years

In the 1940s and 1950s, the focus of logistics research was on how to use mechanization to improve the very labor intensive processes of material handling and how to take better advantage of space using racking.

1980

Logistics Comes of Age

Early 1980s provided tremendously better computer access to planners and a new graphical environment for planning. Company executives became aware of logistics as an area where they had the opportunity to significantly improve the bottom line

1990

The Technology Revolution

The logistics boom was fueled further in the 1990s by the emergence of Enterprise Resource Planning (ERP) systems, result of this change to ERP systems was a tremendous improvement in data availability and accuracy

2000

The timeline diagram features three major milestones: "Globalization and Supply Chains" in 2000, "Now" in 2018, and "Future is Near" in 2020. Each milestone is represented by a downward-pointing arrow from its respective year to a horizontal line that ends in a dark grey arrowhead pointing to the right.

Globalization and Supply Chains

The widespread recognition of the term "supply chain" has come primarily as a result of the globalization of manufacturing. This growing association of supply chain management with strategy is reflected in the Council of Logistics Management's changing its name to the Council of Supply Chain Management Professionals in 2005.

2018

Now

Today Supply Chain Management is expanding its domain and also includes services such as:

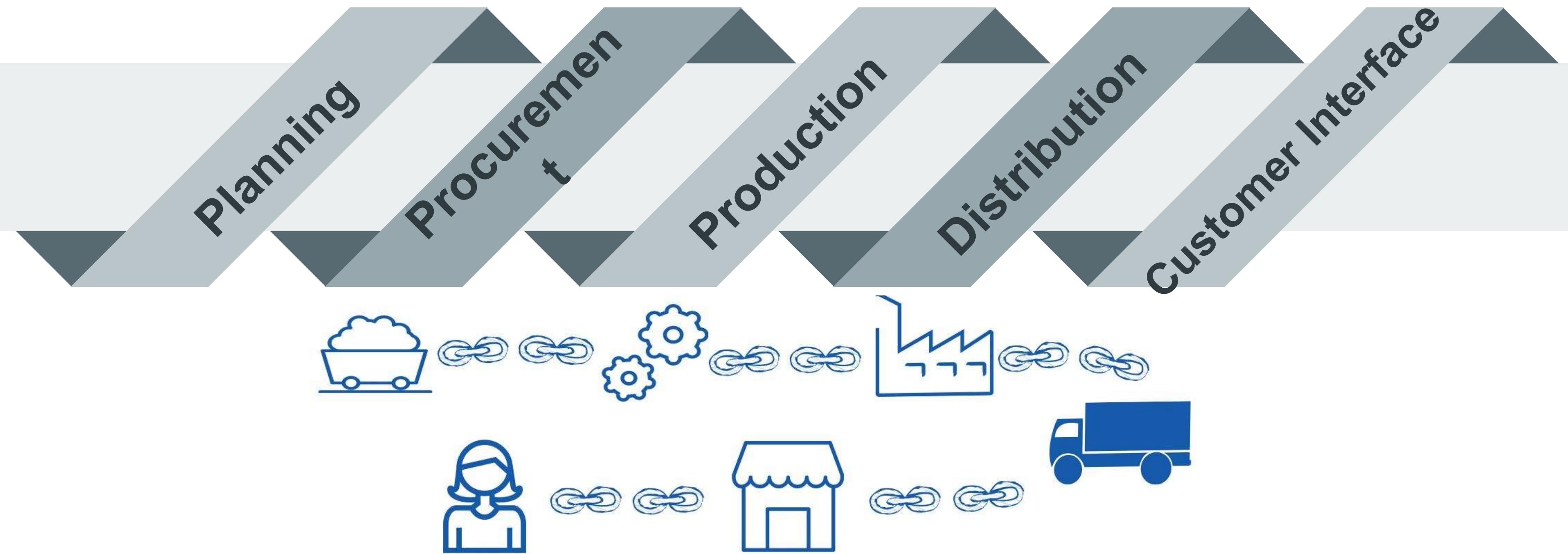
- Operational Analysis and Design
- Materials Handling
- Distribution Strategy
- Warehouse Design
- Project Management

2020

Future is Near

Mathematical algorithms will automate Supply Chain planning processes and accelerate the decision-making. The technology and analytics will fuel algorithmic business, that means hiring data scientists and investing in advanced business intelligence tools is must, so as to gain a competitive edge.

PROCESS OF SCM



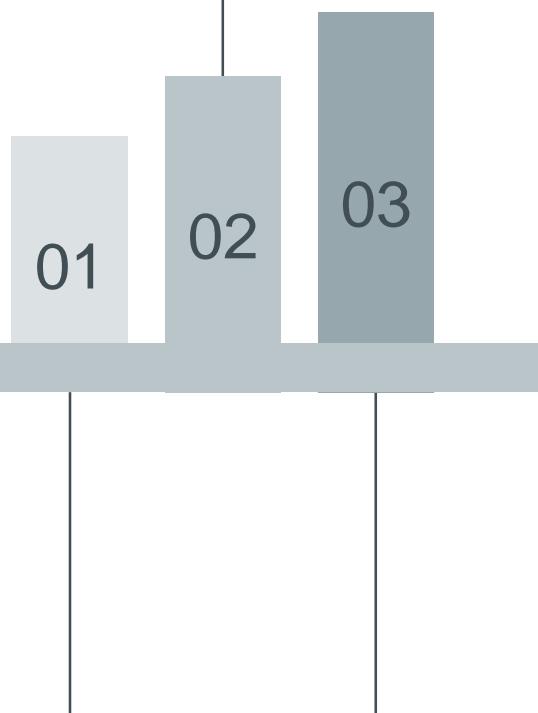
SUPPLY CHAIN MANAGEMENT

KEY-IMPORTANCE



EFFICIENCY

By Using the limited resources at
the best possible manner.



LOWERS COSTS

Increase in efficiency will lowers
various cost leading to raise in
profits

**BOOSTS
COLLABORATION**

Supply chain help maintain the
collaboration among the different
strategic units in a business



SUPPLY CHAIN COMPLEXITY

- Number of suppliers and suppliers' suppliers
- Number of customers and customers' customers
- Third-party logistics providers
- Integrated Financial organizations
- Marketing research providers



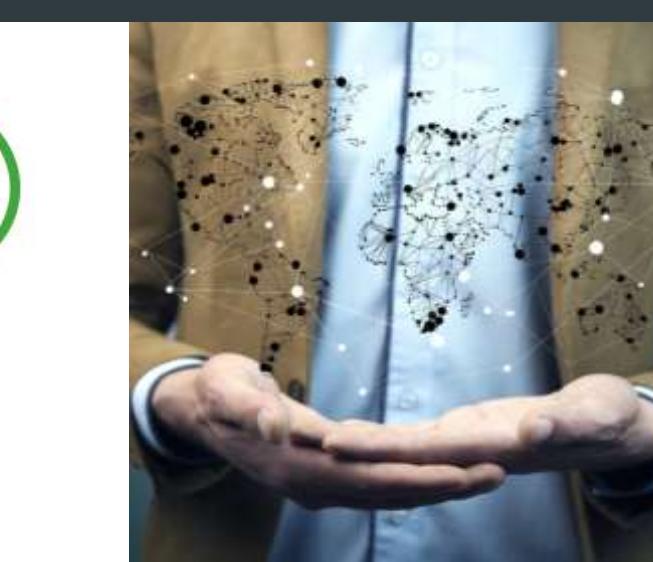
BIG DATA

A graphic featuring the words "BIG DATA" in large, bold, white letters against a dark blue background. The background is filled with abstract white shapes and lines representing data analysis and storage.

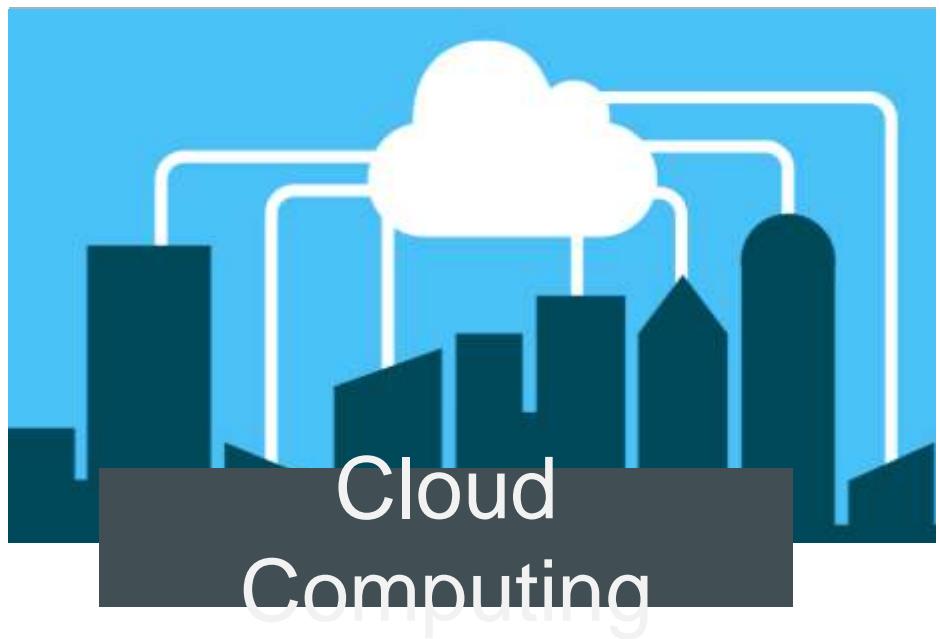


INNOVATION

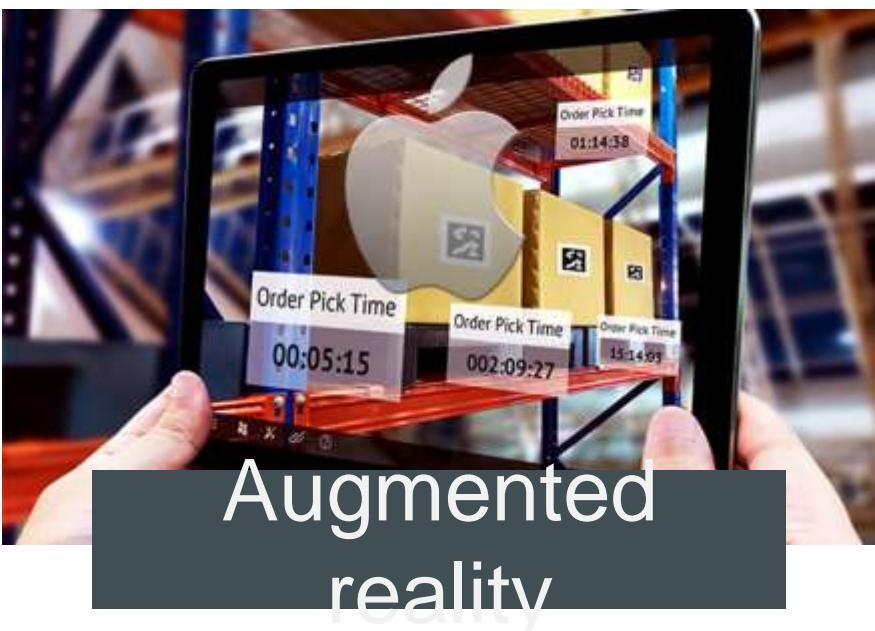
SECTION 3



Informational/analytical innovation:



Physical innovation:



EVOLUTION

Direct Delivery
Channels

01

02

Collaboration

03

04

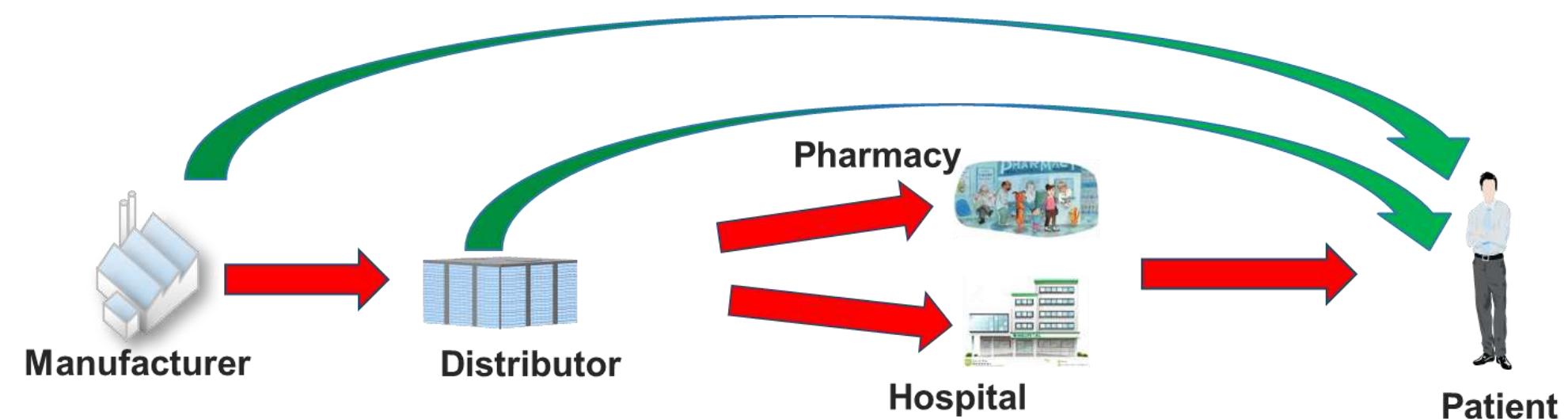
Transparency

Agility and Flexibility

DIRECT DELIVERY CHANNELS

Strong inventory management, demand planning capabilities, and fast response time made direct delivery a reality

- Tesco, UK based company adopted the strategy by the name of “CLICK + COLLECT”, delivering the product in same day
- Another company that has shortened its supply chain is Cardinal Health, a Fortune 500 distributor of medical devices and pharmaceuticals
- By working directly with patients suffering from chronic disease and giving them direct treatment, eliminating patients' need to spend time and money in hospitals, and eliminating two links in Cardinal Health's supply chain: distributor, and hospital/pharmacy





TRANSPAREN CY

- With new advances in technology, such as the IoT (Internet of Things) and big data, companies are able to gain complete visibility of their entire supply chain and make dynamic decisions and optimize their resources
- Sensors & software application on delivery trucks can help logistics managers know in real time where inventory is and allow them to plan accordingly

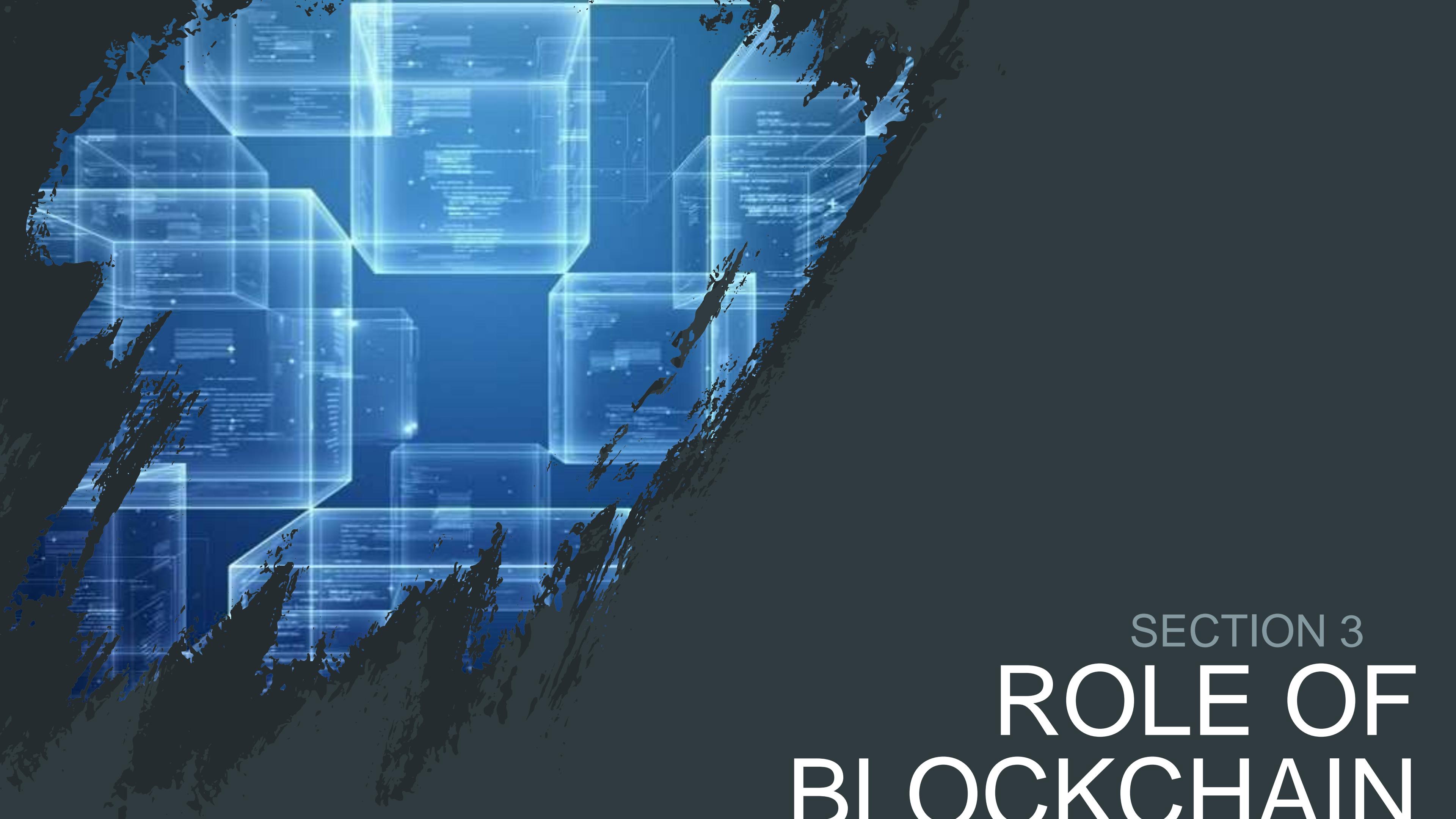
COLLABORATION

Companies will need to work together to optimize their supplier chains. While working alone may seem preferable, companies can save money and time if they share, whether it be space in a warehouse or truck, or in a delivery system

AGILITY AND FLEXIBILITY

The ability to change plans fast and react will become more and more important, as companies stuck in their ways will find it harder to maintain profits if they can't keep up with trends

Zara known as a leader in "fast fashion," being able to get products from design to store shelves in just 6-8 weeks apply the principle of Agility & flexibility resulting in its products stays not more than 2 weeks on shelves and only about 20% of items are sold at a discount



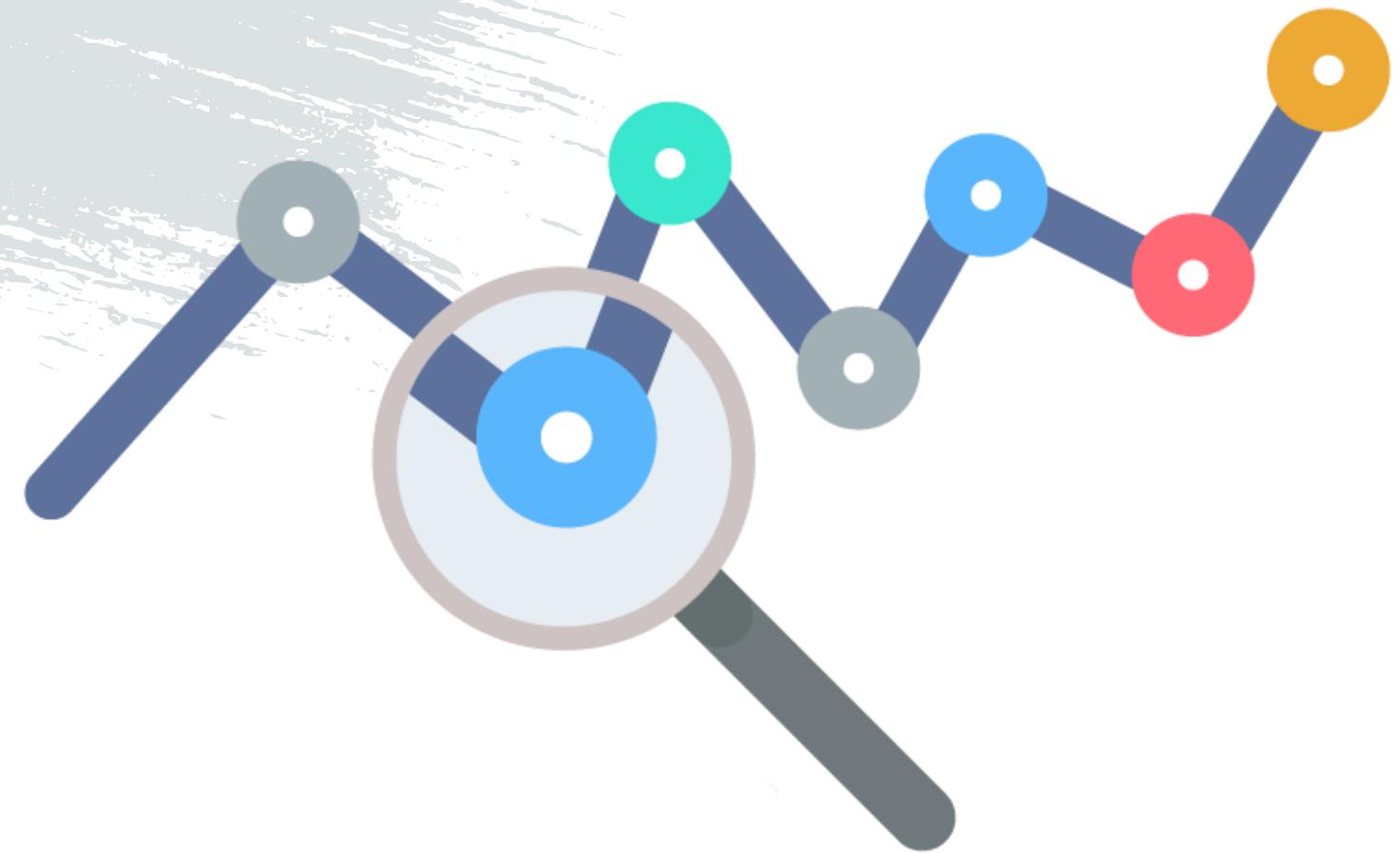
SECTION 3

ROLE OF BLOCKCHAIN

Benefits to Supply Chain Management?

TRACEABILITY

- In the food sector, the valid traceability of the origin of ingredients and goods is a prerequisite for operating a trustworthy business, or may even represent a license to operate Traceability can be automated, simplified and accelerated by efficient use of Blockchain technology
- Product status at each stage of production can be recorded using blockchain



SMART CONTRACTS

- Electronic contracts based on automated actions that are triggered through predefined events. Such contracts can be used for automated execution of payments in case of an in-quality and on-time delivery
- By using public cloud service as an integration platform to have a collaboration between Large corporations typically using ERP based, private clouds with suppliers (often Small and Medium-sized Enterprises) are frequently using cost efficient cloud-services



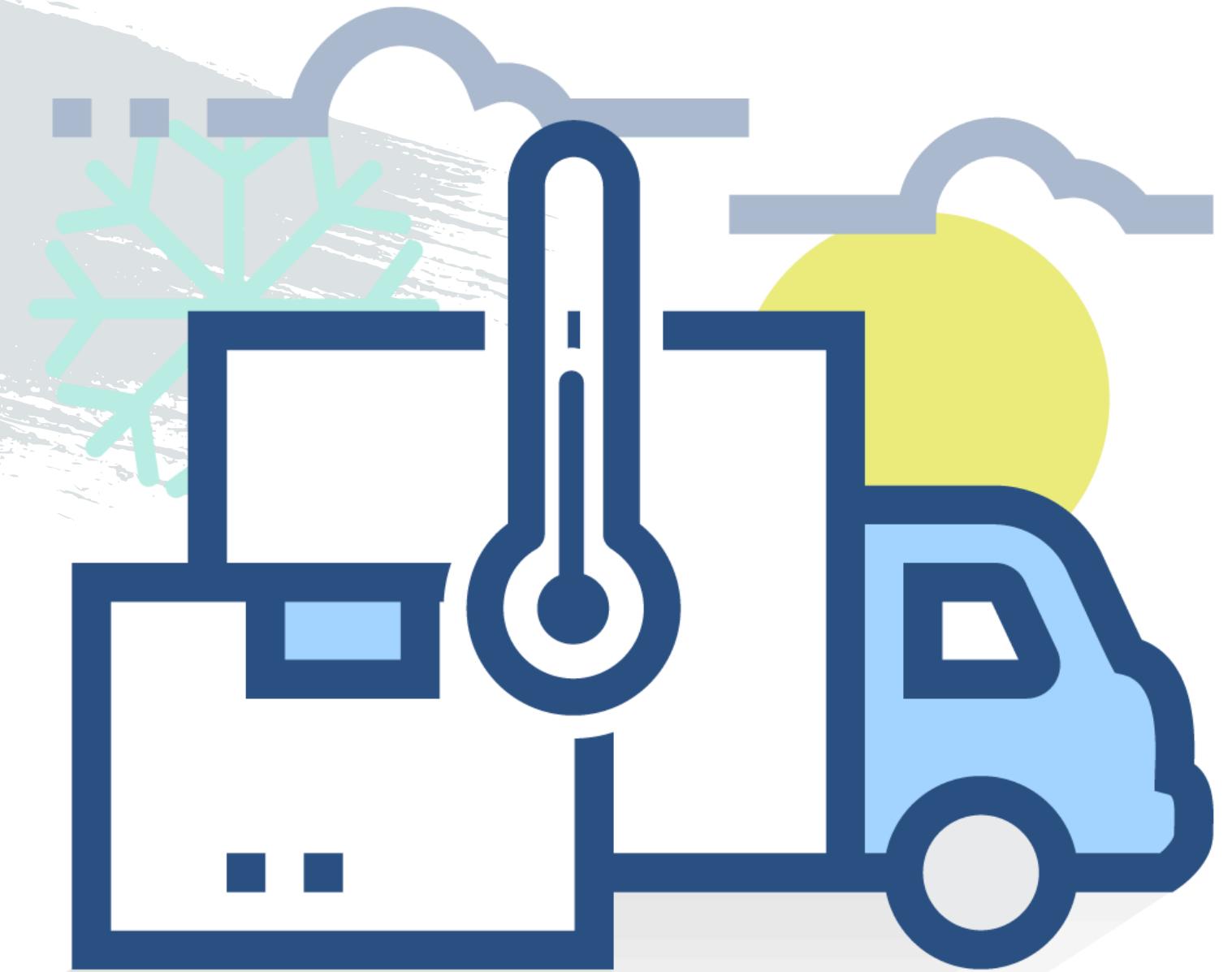
IMMUTABILITY

- No entity can tamper with an entry in the distributed ledger
- Transactions cannot be erased. Only a new transaction can reverse the effect of a previous one having a Unique ID for each transaction
- Supply chain payments cannot be falsified, Neither can records of inventory, warehousing conditions, delivery times and dates, and so on
- Drug Supply Chain Security clearly creates an industry impact and the shared ledger and immutable record look to be a good way of handling exception management processes



COLD CHAIN MONITORING

- Food and pharmaceutical products often need special storage
- Sensors on sensitive products can record temperature, humidity, vibration, and other items of interest. These readings can then be stored on blockchain. They are permanent and tamperproof
- If a storage condition deviates from what has been agreed, each member of the blockchain will see it
- A smart contract can trigger an action to correct the situation Depending on the size of the deviation, this action may be to simply adjusting the storage or it could also extend to changing “use-by” dates, declaring products unfit, or applying penalties





❖ **Ecosystem still in progress**

The first telephone was useless until the second one arrived. In time the phone spread all over the world and now we can't do without it, It may be just a matter of time until businesses "join the dots" for widespread acceptance

❖ **Technology and knowhow**

Blockchain programming takes a mix of software skills, You may have to train staff or hire new people with these skills

❖ **Initial Costs**

Though blockchain technology promises long-term benefits with regard to productivity, efficiency, timeliness and reduced costs, it is expensive to initially put it in place

❖ **Awareness and understanding**

The principal challenge associated with blockchain is a lack of awareness of the technology, especially in sectors other than banking, and a widespread lack of understanding of how it works. This is hampering investment and the exploration of ideas

AT THE END

- Even though the adoption of blockchain in the traditional marketing stream is relatively slow, it is expected to gather pace in near future, it can be said that businesses and brands need to embrace blockchain technology well in time so that they can reap its rewards and get better with time
- Right now, there is a need to realize that moving over to the technology is no longer a choice but a necessity for businesses. The blockchain is not just a passing trend; it is here to stay and marketers who tend to overlook it are bound to lag behind in future
- In-depth transformation of supply chains will not happen overnight. However, supply chains can already start using blockchain for small portions of their operations, “Smart contracts” can help eliminate costly delays and waste currently due to manual handling of paperwork. From there, the door is then open to smarter, faster, more secure supply chain from one end to the other

THANK YOU!

ANY QUESTIONS?

