LOGIC INSIGHTS

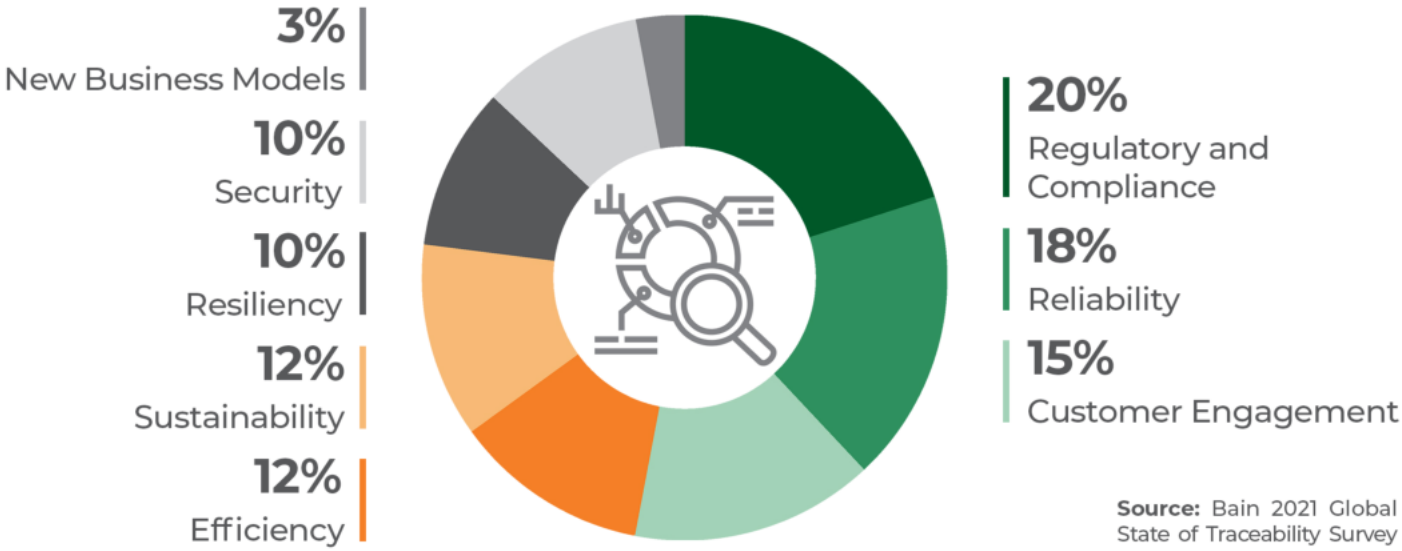
TRACEABILITY ACROSS THE VALUE CHAIN:

A NEW COMPETITIVE ACE

LOGIC CONSULTING

Companies across all sectors are under immense pressure to change the way they are managing their supply chain. From one side, the recent events that have disrupted the supply chain all over the world from a global pandemic to the warfare between Russia and Ukraine. On the other hand, consumers are looking at products through a new lens where their purchasing decisions are no longer limited to product specifications but extended to sustainability-related factors. Moreover, governments are trying to promote sustainable and transparent supply chains, hence enforcing laws concerning environmental and social aspects. Yet, neither brands nor consumers typically know what happens during a product's journey, and value is often diminished along the way. Thus, companies are left with no choice but to gain visibility over their entire value chain for more resilient and circular supply chains.

What Is The Most Important Outcome Your Company Want From Traceability?



Source: Bain 2021 Global State of Traceability Survey

In fact, across most industries and sectors, we are already beginning to see companies with traceable supply chains start to outrun competitors with limited visibility. Also, traceability technologies are evolving rapidly allowing digitizing and mapping all suppliers and real-time flow of products moving through the supply chain, from first-mile through to the end consumer. There is a broad set of objectives that can be expected from traceability applications including maximizing value and efficiencies, reducing risk, securing supply, meeting stakeholders' demands, etc. Yet, regulatory compliance is considered to be the most important outcome, according to Bain's 2021 global state of traceability survey.

Where Do Egyptian Companies Stand on Supply Chain Traceability? Which Industries Will Be Affected the Most?

Egyptian companies seem to be lagging behind in this regard, and little efforts are being directed towards integrating themselves into the global value chains. This is the situation despite foreign countries having stringent requirements around the importation of the different products. At the same time, Egypt is trying to enhance the localization of their supply chains and incentivize its export champions to drive economic recovery. For example, Egypt targets to increase **agricultural** exports volume by 15% in 2023 compared to 2022 through the introduction of the Agricultural Export development program. Moreover, the **pharmaceutical** industry is one of the industries that would contribute towards narrowing the trade gap, with goals to double export of medical products (including pharmaceuticals) by 2023 from the 2020 levels.

How Are the Leading Countries In these Industries Making Moves in this Regard?

1. Agri-Food Industry:

Increasingly, consumers want to know more about food products they are buying – what is in them, where they come from, the conditions under which they were made, how they got to them, and even how they will be disposed of. At the same time, food scandals have been making headlines for centuries from the rise of madcow disease in 80s till the 2015 "zombie meat scandal" where authorities seized 100,000 tons of expired meat. Such complications are requiring a major transformation in food systems to be able to address consumer demands and protect consumers from potential food fraud.

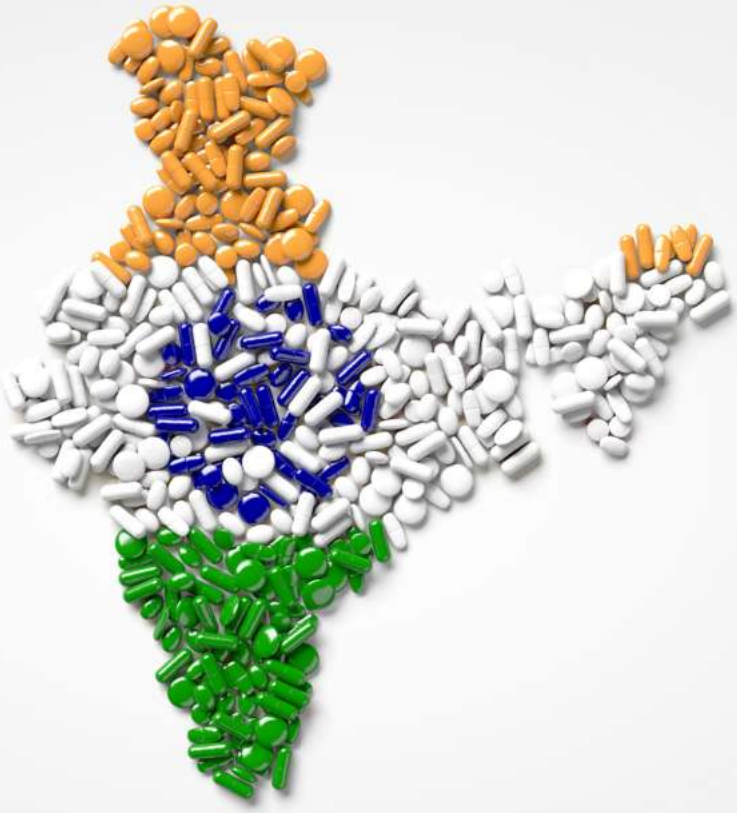
Brazil is the largest exporter of beef in the world with roughly 1.6 million metric tons exported in 2021, currently supplying quarter of the global beef market. However, the industry is one of the main contributors to the deforestation taking place in the Amazon, where 60% of all Brazilian cows are currently grazing on deforested lands. Responding to this, The European Union began to demand traceability for its fresh beef market to ensure sustainability, resulting in the introduction of Brazil's national identification system and the certification of Bovine and Bubaline Origin (SISBOV) program that develops unique animal IDs and digital certifications of farms to be stored and traced electronically. Additionally, to ensure transparency for Brazil's trade partners, all animal information such as cattle's origin and destination, cattle brand and inspection service records are consolidated on a unified database that can be accessed through the Ministry of Agriculture, Livestock and Food Supply (MAPA) Agricultural Management Platform. Also, the Brazilian Confederation of Agriculture and Livestock (CNA) has developed the Agri Trace CNA Brazil System to facilitate the management and organization of information relevant to cattle traceability, while serving as a guarantee for foreign buyers.

Besides, a foot-and-mouth disease outbreak severely affected **Uruguay** in 2001, resulting in costs of $243.6 million. With 3.8 cattle per capita, beef is Uruguay's second-largest export product, meaning that such outbreaks pose a significant economic risk to the country. In response, Uruguay implemented an individual livestock traceability system that requires electronic ear tags for all cattle populations to reduce risk exposure and promote food safety. Also, the government provided and distributed the ear tags free of charge to all food producers to ensure its wide adoption.

2. Pharmaceutical Industry:

According to the World Health Organization, one of the major threats to the pharmaceutical industry's credibility is the circulation of counterfeit products, with counterfeit drugs making up 10-30% of the global pharmaceutical supply. To address this epidemic and help protect patients from harmful counterfeit drugs, the **U.S.** FDA enacted the Drug Supply Chain Security Act (DSCSA) in 2013 that required pharmaceutical companies to serialize and track drug packages throughout the complex supply chain through labelling each drug package with a unique serial number and implementing a process to verify product serial numbers by late 2017.

India has been emerging as a leader in the pharmaceutical sector. According to the Indian Brand Equity Foundation (IBEF), the Indian Pharmaceutical market is the third largest in the world by volume, hence rampant counterfeiting has implications beyond its borders. India has been progressing towards building a transparent supply chain through outlining guidelines for a traceability system – Drug Authentication and Verification Application (DAVA). Exporting companies are mandated to incorporate serialization for all pharmaceutical products through a two-dimensional barcode encoding information such as unique product identification code, expiration date, etc. This data is then uploaded into DAVA's web portal before the products are released for authorities to scan the barcodes and cross-check the information.

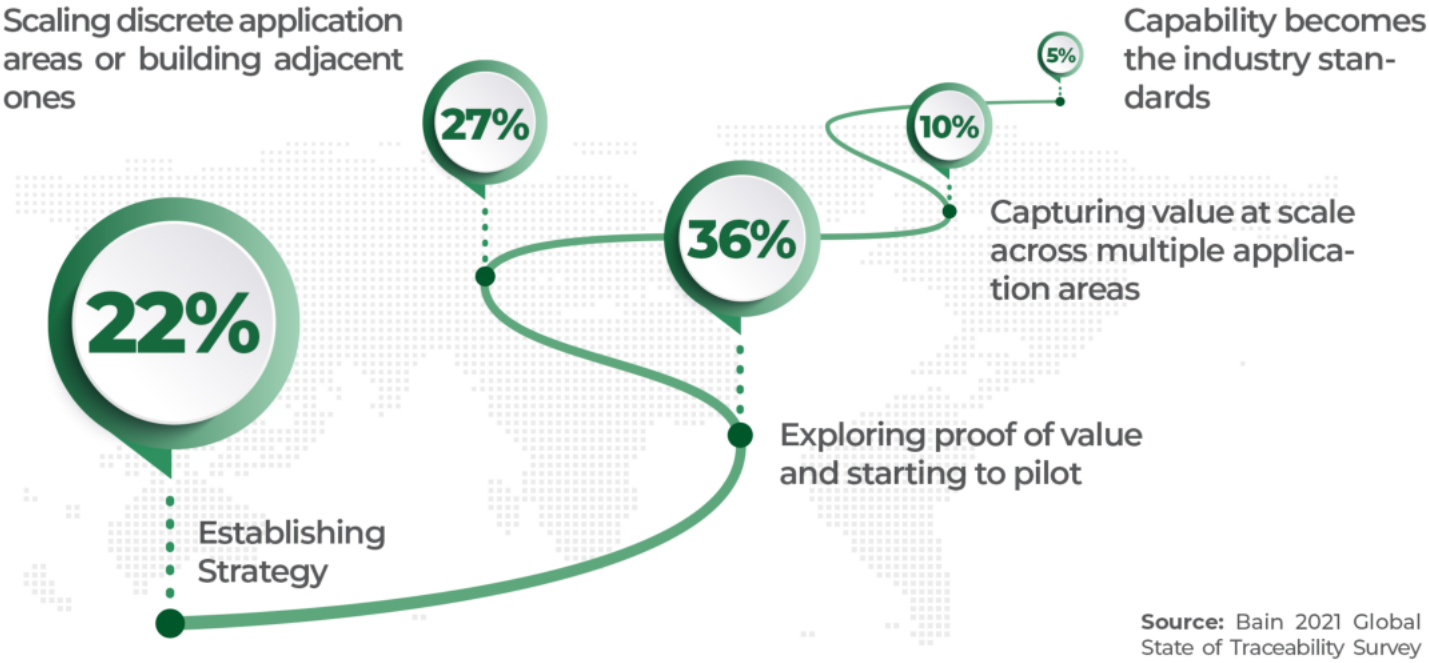


For Egypt, it is taking important strides towards establishing a well-regulated environment through focusing on serialization and traceability, which was the driver behind the Egyptian Pharmaceutical Track & Trace System (EPTTS). The EPTTS can spur additional value beyond reducing counterfeits by enhancing operational efficiency and reducing waste.

The Time for Change is Now. Market Forces, Demand Drivers and Technological Capabilities are All Aligned.

So, How Can Companies Enable Traceability Across its Value Chain?

Companies are fully aware of the importance of gaining end-to-end visibility as evident from Bain's Global State of Traceability Survey in 2021,where 68% of executives viewed traceability as “very or extremely important”. Yet, still over 50% are at the early stages of exploration and at best have started to pilot the concept.



Source: Bain 2021 Global State of Traceability Survey

Breakdown of Respondents by Current Stage of Their Traceability Programme

Accordingly, **LOGIC Consulting** proposes a three-pronged approach on how companies could implement traceability at scale to reap its multifaceted benefits.

A. Define a Clear Traceability Strategy

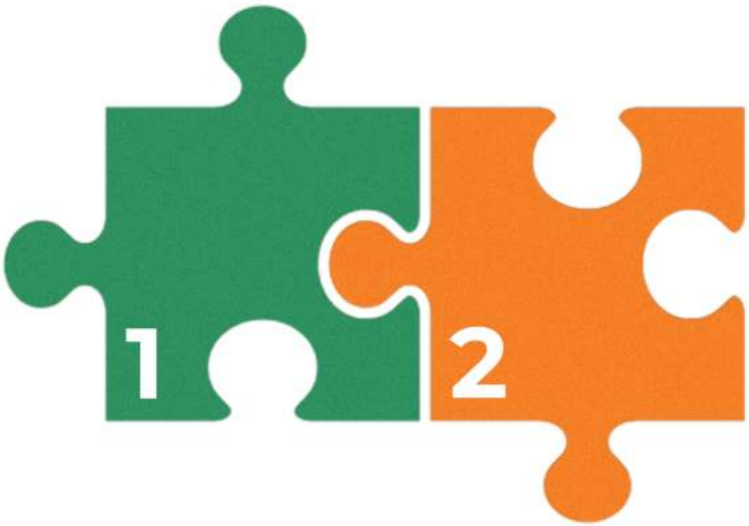
Most companies' approach to build their supply chain traceability capabilities is running a small-scale pilot project that can be rolled out at scale. Yet, it is still challenging to define the application areas of these pilot projects since such applications tend to address wide range of objectives. Thus, companies need to define a clear traceability strategy while aligning it with business objectives and assessing internal appetite and resources that could be put towards pursuing traceability strategy.

B. Identify & Prioritize Your Supplier Ecosystem

Most companies don't have effective systems that capture and store information about their direct suppliers and sub-tiers. According to a survey conducted by McKinsey & Co., only 2% of the companies claimed they have information about tier-3 suppliers and beyond. This emphasizes the importance of companies mapping its value chain while listing and documenting the different suppliers, sub-tier suppliers and any entity that is involved in securing its company's supply.

At this stage, the company does know two crucial pieces of information;

Desired objectives and outcomes from traceability



A list of all the potential actors within its value chain.

The next step would be coupling both together to converge the company's focus on specific part of the value chain, hence narrowing the pool of potential stakeholders through identifying the parts with the highest business value and ideally the lowest implementation complexity.

> **Companies should not feel pressured to participate in traceability schemes across every commodity they buy, but rather focus on what will generate the greatest value for the company.**

C. Establish Your Data Ecosystem

> **Traceability adds a new element of complexity: the need to collaborate with a vast ecosystem of value chain partners.**

Companies need to have a well-defined data strategy in place to begin collecting the necessary data across their supply chain. Thus, executives need to understand what data to collect (Data Identification) and how to collect it (Data Acquisition).

Data Identification: This step is usually overlooked by many organizations as they tend to jump into collecting as much data as possible without having a clear idea on what insights they need to generate from these data points. Thus, companies need to review their planned objectives and accordingly determine which data points need to be captured and in which format.

Data Acquisition: Having a data-enabled environment with access to the right data sets while putting in place robust data storage and architecture is a critical prerequisite for the establishment of a data ecosystem. Data needs to be accessible and useable. That's why we are seeing companies developing APIs to facilitate easy and quick access internally and externally while adopting strong data exchanges protocols that facilitate data sharing between multiple supply chain players. Effective data sharing starts inside each company by overcoming silos to create a single source of truth for relevant data.

Still traceability requires substantial investment in technology and processes, and coordination between different supply chain actors requires time and willingness on all sides. These costs are a concern for many actors pursuing traceability. Accordingly, **LOGIC Consulting** proposes the following matrix "Capability – Willingness Matrix" that would help companies segment their suppliers based on two main attributes: (1) Willingness to share information (2) Technological capabilities needed to provide data.

Capability - Willingness Matrix

One of the major constraints that is prevalent in emerging markets, like Egypt, is poor technological capabilities of companies. **This means that for most companies in Egypt, their suppliers would fall into the third and fourth quadrants.** Accordingly, companies should work on developing strong supplier development programs that would facilitate collaboration with high potential and strategic suppliers.

So, What Could Supplier Development Programs Entail?

Supplier development programs can come in many forms depending on the suppliers' needs and weaknesses. These programs could work on:

Human Capabilities Development:

Offering learning and development programs is one of the common approaches that companies can follow to ensure the development of its strategic suppliers. For example, Apple has established the "Apple Education Hub", which is part of its $50 million Supplier Employee Development fund that support the suppliers' employees in countries such as Vietnam and India with a goal of reaching 100,000 supplier employees with new learning opportunities by 2023.

Access to Tools and Resources:

Companies can support their suppliers through giving them access to already developed tools that they can utilize straight away with minimal training efforts and capital requirements. For example, Unilever uses a software tool, developed in collaboration with the University of Aberdeen, to collect data on whether farmers across its supply chain are using sustainable practices. Unilever offers them the tool for free, with the aim of procuring 100% of its agricultural content from sustainable sources.

Access to Capital:

As a result of the recent events, companies, especially SMEs, are struggling to access capital, hence forcing them to deprioritize digital initiatives and instead allocating the available capital to running the day-to-day operations. Providing SMEs with the required capital to develop their infrastructure can yield huge benefits. Samsung Group, for example, has been offering a grant program called win-win fund that aims to give loans with very low interest rates to Samsung's partners seeking funds for technological development and facility investment.

Measuring & Monitoring:

To reap the benefits of the supplier development program, companies need to regularly measure and monitor the performance of those suppliers to assess the effectiveness of the program. Also, there should be a clear vision on how these programs could positively impact the business performance, thus executives shall identify specific business objectives that should be improved as a result of these efforts.