

**SUMMER TRAINING PROJECT ON
A STUDY ON AUTOMATION IN SUPPLY CHAIN AT
TATA STEEL LTD (KHOPOLI)**

**SUBMITTED BY
SIDDHANT KAMBLE**

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**UNDER THE GUIDANCE OFF
PROF. BALASHANKAR RAMDAS**



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PIMSR

CERTIFICATE OF APPROVAL

This is to certify that the project titled “A STUDY ON AUTOMATION IN SUPPLY CHAIN AT TATA STEEL LTD ” as a part of the curriculum of Master of Management Studies is submitted by **SIDDHANT SANJAY KAMBLE**, a student of Pillai Institute of ManagementStudies and Research with OPERATION specialization for the academic year 2022-24 has been approved.

Prof. Balashankar Ramdas
Faculty Guide

Dr. R. Chandran
Director

DECLARATION

I declare that this project report titled “A STUDY ON AUTOMATION IN SUPPLY CHAIN AT TATA STEEL LTD ” is my own original work, and that all sources that I have consulted have been duly acknowledged.

Date:

Signature:

Place: New Panval.

Siddhant kamble

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Chapter 1

INTRODUCTION

The project work "A STUDY ON AUTOMATION IN SUPPLY CHAIN AT TATA STEEL LTD" refers to the potential effects that automation may have on the supply chain management (SCM) industry. We are familiar with the term "automation" and how it is applied in society. In the SCM industry, automation implementation will be essential. It can lessen effort and have a significant impact on working practices when automation is implemented.

Automation has been increasingly popular across industries in recent years and has the potential to revolutionize how businesses function. Organizations are figuring out how to automate operations to increase their efficiency, concentrate on innovation, and generate major financial benefits.

According to a PWC analysis, supply chain automation, or the term "supply chain automation," will be used 72 percent of the time until the fall of 2025 globally. Automation of the supply chain is essential for companies to run at scale. For instance, an organization can make more products faster and with a consistent quality by automating industrial production operations. Because of the "Amazon Effect," which has led consumers to anticipate speedier delivery, retailers on the front end of the supply chain frequently have to deal with increased pressure on last mile deliveries.

Automation in the supply chain supports human workers rather than replacing them. For instance, the world still needs truck drivers, airline pilots, and ship workers to continue delivering goods in the absence of widespread autonomous vehicles. Using automation solutions helps improve teamwork across the production chain.

OBJECTIVE

1. To study supply chain industry in India using the industry analysis frame work.
2. To study and analysis Tata steel company using the company analysis/tools/framework.
3. To study SCM with reference to Tata steel industry.
4. To study on automation in supply chain at Tata steel ltd.

SCOPE OF THE PROJECT

Automation in India has a bright future. Every area of the economy could be changed by automation for the betterment of society. Automation encompasses a number of valuable technologies, including huge industrial control systems, self-driving cars, warehouse robots, machine learning, big data, and pattern recognition. Soon, almost any company or sector will remain unaffected by this potent tool.

LIMITATIONS OF THE STUDY

- The Results generated from the data is done on the assumption base.
- The Access to Data & Computing Time
- The period of Study was not sufficient to study all aspects.

METHODOLOGY OF SAMPLE DESIGN

Primary Data:

Primary data is gathered through training, observation, data collection, interaction with the manager for questionnaire design, discussions with the organization, department heads, support staff, and company leaders.

Secondary Data:

Secondary data is gathered from the company's official website.

Descriptive research

Descriptive studies identify and document existing conditions. It can only measure what already exists and has no control over what is. Research that describes facts and traits about the population or phenomenon under study is frequently referred to as statistical research.

CHAPTER 2

INDUSTRY ANALYSIS

PESTEL ANALYSIS OF TATA STEEL LTD

Political, Economic, Social, Technological, Environmental, and Legal Analysis is referred to by the acronym PESTEL. The primary purpose of this environment scanning tool is to comprehend how external macroeconomic factors affect the market, a certain industry, a corporation, and its product and service offerings. Since a corporation cannot control these environmental variables, they are regarded as external forces. However, a thorough PESTEL analysis of Infosys can improve the companies' capacity to deal with instability in the external environment. It is one of the most commonly used strategic planning and management tools that aids management in determining the threats and opportunities that exist in the external environment as well as the influence of various environmental elements on the firm. Management may make informed strategic decisions based on the external environment by developing a thorough awareness of it.

PESTEL analysis is a straightforward and practical framework for scanning the environment that makes it easier to comprehend the larger business environment. In order to avoid or lessen the negative influence on business operations, it urges organizational management to think strategically and move fast in response to changes in the external environment. Additionally, it motivates management to consider the external business environment from a variety of angles. However, a thorough PESTEL analysis takes a lot of time to complete, and the model is unable to capture the full complexity of the environment. Additionally, the model does not adequately illustrate the intricate interconnectedness of various external environmental forces. Even with these shortcomings, the model is nevertheless widely used to make crucial business decisions. When businesses need to make international decisions, models are shown to be especially useful.

So here is the PESTLE ANALYSIS OF TATA STEEL LTD:

1.3.1 POLITICAL

The variables that may have an impact on Tata Steel are heavily influenced by political variables. Tata Steel took a significant level of risk by investing in nations like Bangladesh, Iran, and Thailand, even though they made the numerous purchases for the company's expansion and growth. As an illustration, the gas supply issue is delaying the plan put in place in Bangladesh, whilst the lease issue pertaining to the extraction of iron ore in Iran is to blame for the rise in production costs. The government is now introducing a number of programs to develop the transportation and road infrastructure. With the introduction of various infrastructure-related programs, companies like Tata Steel and other steel industries in India should be able to reduce the amount they spend on freight and transportation. Tata Steel and other steel businesses in India spend a lot of money on freight and transportation every year.

1. The licensing is no longer necessary for capacity creation.
2. Up to 74% of foreign equity investment was permitted.
3. Imports and tariffs were decreased from 105% in 1992–1993 to 30% in 1996–1997.
4. In addition, the import and export restrictions have been loosened
5. These are some significant aspects of the liberalization strategy that put Tata Steel on the route to expansion.

1.3.2 ECONOMIC: -

The SUBPRIME CRISIS, which hit every strong economy in a very severe way two years ago, hit the US economy hard. Regarding liquidity, there was a very significant risk during this time period on the global stock markets. Due to the decreased confidence in liquidity and investment returns in 2007, several international investments and stocks saw a downturn. Since the Netherlands, the United Kingdom, and Germany are the key markets for the CORUS COMPANY, the subprime crisis in the US caused European markets to experience the effects of the recession, which has a negative effect on Tata Steel.

Because many industries, like construction, vehicles, and appliances depend on the steel industry, the steel industry may have been negatively impacted by the economy's cyclical nature. If the economy experiences any form of slowdown, Tata Steel may also suffer losses. The entire steel production process is reliant on the energy market, which has an economic impact on Tata Steel. The corporation improved growth prospects with the acquisition of CORUS, however the cost of the acquisition exceeded financial projections.

1. Economic education level
2. The economy's labor costs and productivity
3. Rate of unemployment
4. The rate of inflation

1.3.3 SOCIAL: -

TATA STEEL received recognition for its dedication to upholding business ethics and enhancing the quality of life for both its employees and their families. Tata Steel received the GOLDEN PEACOCK GLOBAL AWARD in recognition of this. TATA STEEL also prioritized fostering a positive social atmosphere. They made continuous improvements to the nation's educational, economic, and health-related infrastructure. In Jharkhand, this approach is effective in around 800 villages. both Chhattisgarh and Orissa. Tata is also responsible for the habitation in slum regions in urban emerging cities. Tata's primary idea is the hospital on wheels. The following social elements should be examined by TATA STEEL Limited leadership for the PESTEL analysis: -

1. The population's demographics and skill level
2. The social hierarchy, class system, and power structure.
3. The industry of Tata Steel Limited's education standard and level. Culture (social norms, gender roles, etc.)
4. The spirit of entrepreneurship and the larger scope of society. While some societies support entrepreneurship, others do not.
5. Mentalities (environmental awareness, etc.) Recreational pursuits

1.3.4 TECHNOLOGICAL FACTORS: -

Technology should always have the capacity to adapt to changing conditions. In the middle of 2000, Tata Steel and The Sail (India's steel authority) launched the E-PORTAL system. This technology, sometimes referred to as the METAL JUNCTION, benefits not only Tata Steel but the entire industry as a whole. With the use of modern technology, the world's largest market for buying and selling steel is the internet. Tata Steel is working on developing ultra-low carbon steel in an effort to lessen CO2 emissions into the atmosphere. Tata is also working toward the goal of energy conservation programs, doing research to lower the amount of energy used during production.

A company should analyze the industry's technological state as well as how quickly it is being disrupted by technology. Slow technological disruption will allow more time, whereas rapid disruption may give a firm little time to adapt and be profitable. Analyzing technology requires comprehension of the following effects. -

1. Recent technical advancements made by TATA STEEL Limited's rivals
2. The effect of technology on product offerings
3. The effect on the technical and system SCM industry's cost structure
4. Effect on the technology sector's value chain structure

1.3.5 ENVIRONMENTAL FACTOR: -

The release of CO₂ gas during the production process, which is exceedingly detrimental to both nature and people, is a significant issue in the steel business. Tata Steel is developing a program that would enable Tata Steel to cut its CO₂ emissions by 20%.

The joint venture between LASRSEN AND TOURBO and TATA STEEL is the DHAMRA port. This collaboration was established to safeguard Olive Ridley marine turtles. These projects are located close to Orissa. Both the conservation of wildlife in India and the preservation of saltwater crocodiles are supported by DHAMRA Port. Additionally, it provides horse shoe crabs with breeding sites.

1.3.6 LEGAL FACTOR: -

The safety of the employee at work is given the utmost priority. Tata Steel ensures EHS (ENVIRONMENTAL HEALTH AND SAFETY), whereby the EHS framework controls the activities of each and every employee. Along with this advantageous element, the business is also dealing with certain legal issues. Although the issue of land purchases in West Bengal is not a concern for Tata Steel, it is damaging the company's reputation.

Tata Steel is experiencing some legal problems as a result of the unstable government in Jharkhand and different tribal demonstrators. It should be mentioned that over the past 100 years, no strikes or internal problems have interfered with business operations. The Tata Steel Company launched the provident fund in the year 1920. The leave pay program was first offered to the workforce by Tata in 1920; it was actually put into practice after the country gained independence in 1945. These recently introduced plans will soon be codified into Indian law.

PORTER ANALYSIS

The porter 5 forces design would help in gaining knowledge of the Porter's 5 Forces of the Tata Steels Acquisition of Corus Case Analysis industry and measuring the likelihood of the success of the options that have been taken into consideration by the company's management for the purpose of handling the new problems related to the minimizing customer membership rate.

Intensity of rivalry

1. It serves as a reminder that the Tata Steels Acquisition of Corus Case Solution belongs to the global entertainment sector in the US. The business has been involved in providing video on demand, streaming media, and media service provider services in more than 90 countries.
2. There are numerous market participants with sizable market shares and rising profits in the market where the Porter's 5 Forces of Tata Steels Acquisition of Corus Case Analysis has been operating since its inception. In the media and entertainment industry, there is fierce rivalry, which forces businesses to work hard to keep their present customers by providing services at reasonable or budget-friendly prices.
3. Porter's Five Forces of Tata Steels Acquisition of Corus Case Analysis needs to contend with severe competition from rival on-demand video providers, traditional broadcasters, and DVD vendors. Since both of these companies rent DVDs, they compete in this market for the same target audience, making Amazon the principal direct competitor of Porter's 5 Forces of Tata Steels Acquisition of Corus Case Solution.

Threats of new entrants

1. The media and entertainment industry has a high barrier to entrance. The home entertainment service businesses, which are involved in the entertainment industry, have higher startup costs, which include the following:

Legal cost.

Marketing expense.

Distribution cost.

Licensing cost.

2. The intensity of competition among the key market participants in the business is another essential factor, which makes new entrants wary of entering the market. Market competitors and Porter's Five Forces of Tata Steel's Acquisition of Corus Case Analysis adjust the innovation and trends in the media market, which is evolving constantly.
3. Even if the new entrant can easily copy the business model, what gives competitors an advantage in the market and Porter's Five Forces Analysis on Tata Steel's Purchase of Corus Case Help is provided in a variety of formats for your convenience. Gaining such a competitive advantage would necessitate provider contracts, capital expenditures, and networking, none of which would be simple for new entrants to adopt.

Threat of substitutes

1. The threat of substitutes in the market place is a moderate threat level for the entertainment industry and the media. The company is up against fierce competition from rivals who offer equivalent services through online streaming and DVD rentals. Another illustration of a replacement item is the supplier of standard media content.
2. As opposed to consuming media content and internet streaming, the customer may engage in various forms of entertainment and information gathering.

Bargaining power of buyer

1. The media and entertainment industry's attributes give consumers strong negotiating power. Customers positioned in various parts of the world are what drive the company's revenue and sales.
2. In addition, because switching media providers is so inexpensive, more customers are able to switch to other providers and stop paying for their subscriptions, which raises the risk to the company. As a result, the company might not charge its customers large prices for services, and it should maintain its pricing strategy in line with customer needs while only gradually raising prices.

Bargaining power of suppliers

1. The supplier has significant market influence and strong bargaining power. This is due to the fact that a few different types of suppliers create entertainment and media-based material.
2. Given that the Tata Steels Acquisition of Corus Case follows Porter's Five Forces Help has been in direct competition with the traditional media and entertainment providers, thus it must exhibit greater contractual flexibility than the old firms. The products are technology-based, and businesses are becoming more and more dependent on technology.

PORTERS CHART:

Bargaining power of buyers	Bargaining power of suppliers	Extent of competition	Threat of substitutes	Threat of new entrants
1. Low cost of switching	1. Few number of suppliers	1. Offers services at affordable or reasonable price.	1. Competitors offers similar services via online streaming & rental DVDs	1. Huge amount of capital required including Legal cost marketing expense distribution cost and licensing cost
2. Customer demand Increased	2. Technology based products increases dependency over suppliers.	2. Offers on demand videos, traditional broadcaster and retailers selling DVDs.	2. Traditional media content provider 3. Customer engage in leisure activities & source of information	2. Intense market competition 3. Evolving technology and trends in the media industry

SUMMARY OF INDUSTRY ANALYSIS

PESTEL is a potent strategic planning tool that can offer Tata Steel useful advice for developing effective business strategies. According to the discussion above, Tata Steel is one of the most powerful players in the steel sector. They are a private player in the industry, and they closely monitor every PESTEL ANALYSIS component. Tata Steel is likewise making significant efforts to advance the sector.

Goals of the Company:

By raising the sales unit for each product, the organization hopes to lower product rates overall. Second, organizational management is involved in identifying possible items that customers may use in the short- and long-term. The ability to maintain a competitive position within the American sensor manufacturing market on the basis of five pillars—client care, effective operation management, brand recognition, adaptability, and technical development—represents the organizational strength.

Due to its configurable services and sensing unit system offerings, the company is a market leader and performs as such in the US sensing unit market. One of the company's competitive advantages is the development of its principles, item design, and service delivery to its clients. The company has employed cross-functional managers who are responsible for change and comprehension of the organization's strategy for competitiveness; however, one of the organization's weaknesses is that decisions about which items to keep or drop are made solely on the basis of financial considerations. As a result, the incorporation of trade and customer issues are unrelated to ROIC calculation.

COMPANY ANALYSIS



Jamshedpur, Jharkhand is the home of the multinational Indian steel manufacturer Tata Steel Limited, which also has its headquarters there. With offices in Mumbai, Maharashtra, and Jamshedpur, Jharkhand, Tata Steel Limited is a global Indian steel manufacturer. It belongs to the Tata Group.

Tata Steel, formerly known as Tata Iron and Steel Company Limited (TISCO), is one of the top producers of steel in the world, with an annual capacity of 35 million tonnes of crude steel. With activities and a global commercial presence, it is one of the most geographically diversified steel producers in the world. The group's consolidated revenue for the fiscal year that ended on March 31, 2023, was US\$31 billion (excluding SEA activities). With a capacity of 21.6 million tonnes per year, it is the second-largest steel firm in India (based on domestic production) after Steel Authority of India Ltd. (SAIL). Only three Indian steel companies, TATA Steel, SAIL, and Jindal Steel and Power, have their own iron ore mines, giving the three businesses an advantage.

HISTORY

Jamsedji Nusserwanji Tata and Sir Dorabji Tata created the Tata Iron and Steel Company (TISCO) on August 26, 1907. As a division of Jamsedji's Tata Group, TISCO began producing pig iron in 1911 and steel in 1912.[15][16][17] On February 16th, 1912, a steel ingot was produced for the first time. The corporation advanced quickly during the First World War (1914–1918).

The Tinplate Company of India Ltd. (TCIL) was established in 1920 as a joint venture to produce tinplate by The Tata Iron & Steel Company and the then-Burmah Shell. With a 70% market share in India, TCIL is currently known as Tata Tinplate.

It ran the biggest steel mill in the British Empire by 1939. In 1951, the business began a significant modernization and growth initiative. The project was then enlarged to a 2 million metric tonnes per annum (MTPA) plant in 1958. Around 40,000 people were employed by the company in Jamshedpur by 1970, while an additional 20,000 worked in the nearby coal mines. In November 2021, Tata Steel was the most profitable company in the Tata Group.

Stanley, which accepted the bid price and acquired a 13% stock position. In June 1993, it listed its shares, with trading beginning at 145 yen (\$145, or 11 US dollars in 2020) per share. There have been two unsuccessful attempts to nationalize TATA Steel, one in 1971 and the second in 1979. The nationalization attempt made by the Indira Gandhi administration in 1971 was unsuccessful. The Janata Party government (1977–79) wished to nationalize TISCO (now Tata Steel) in 1979. At the urging of Biju Patnaik, the then-Minister for Steel, George Fernandez, proposed nationalization; however, the proposal was thwarted by union protests. The business started to grow in 1990, and Tata Inc. was founded as a subsidiary in New York. In 2005, the business changed its name from TISCO to Tata Steel Ltd.

Shareholding

On March 31, 2020, Tata Group owned 31.64% of Tata Steel. About 21% of its shares are owned by more than 1 million individual individuals. With a 14.88% stake, Life Insurance Corporation of India is the company's largest non-promoter shareholder.

Shareholders	Shareholding
Promoters: Tata Group companies	31.64%
Insurance Companies	21.81%
Individual shareholders	22.03%
Foreign Institutional Investors	15.35%
GDRs	02.41%
Others	07.05%
Total	100.29%

BOARDS OF DIRECTORS

Name	Designation
1. Mr Natarajan Chandrasekaran	Chairman
2. Mr Noel Naval Tata	Vice - Chairman
3. Mr Deepak kapoor	Independent Director
4. Mrs Farida khambata	Independent Director
5. Mr V k Sharma	Independent Director
6. Mr Saurabh Agarwal	Non-Executive Director
7. Mr T V Narendan	CEO & Managing Director
8. Mr Koushik Chatterjee	CFO & Executive Director

VISION AND VALUES

Be a benchmark in the Indian Long Product Industry for value creation and corporate citizenship. We are driven by our five core values.



MISSION

Tata Steel Long Products strives to attain sustainable growth by actively pursuing quality products, services and setting best-in-class practices to emerge as the partner of choice for all our stakeholders.



SWOT ANALYSIS OF TATASTEEL LTD

The most well-known business organization in India, Tata organization, includes Tata Steel. It is India's largest private-sector steel producer. The corporation operates production facilities in over 25 countries and has a presence in over 50 countries. Following the European crisis, demand for Tata Steel fell, and the company has recently seen a decline in sales.

So below is the Internal Factor of Tata steel Ltd: -

Strength: -

1. Tata Steel is the second most geographically diversified producer of steel in the world and one of the largest producers of steel globally. It is well-established in both Europe and the Asia-Pacific region.
2. Tata Steel produces a wide variety of goods, including flat steel items, tools for farming, building, and much more. Revenue flow from several global markets is ensured by a varied product portfolio.
3. Not just in India but throughout the world, Tata is one of the most dependable and esteemed brands. The affiliation with the name gives the business tremendous brand equity.
4. In India, the entire production of finished steel material, from extraction from mines and ores to it, is integrated. The integrated operations maintain the required quality while saving a significant amount of time and money.
5. Tata Steel has operations in over 26 countries and a presence in over 50, which helps it get a larger market share.

Weakness: -

1. The split between Ratan Tata and Cyrus Mistry has damaged the Tata group's reputation, which also applies to Tata Steel.
2. Since Europe accounts for over 50% of Tata Steel's sales, any slowdown in the region's economy has an impact on Tata Steel's earnings.
3. Despite the fact that Tata Steel's operations in India are integrated, those in Europe are fractured and hence reliant on a number of different suppliers. Costs will rise and quality control will be compromised.
4. Operational effectiveness isn't as high as that of world leaders. a little behind the times technologically.

Opportunities: -

1. Due to the expansion of the building sector and manufacturing facilities in India, the steel market in that country is anticipated to rise during the next four years. Tata Steel will undoubtedly gain from this.
2. Tata Steel falls behind its rivals in terms of technology, but it has the chance to absorb more recent innovations like the Cortex process and Hismelt process.
3. Future expansion in the steel industry will be driven by growth in the manufacturing, construction, and automotive sectors, and Tata Steel is poised to profit from this.

Threats: -

1. Industry behemoths like JSW Steel, Essar Steel, Arcelor Mittal, etc. fiercely compete with Tata Steel. As a result, its global market share declines.
2. Both in mining and production, Tata Steel is subject to strict regulatory and environmental laws. The corporation now pays more for compliance.
3. Because China produced too much steel, it was able to sell it to the rest of the world at a lower price, which pushed down the cost of production everywhere.
4. Violent protests against land acquisition are common in India. Norms set by the government and the law. Their business is also hampered by international competition.

MCKINSEY 7'S OF TATA STEEL LTD

The McKinsey 7s model is a strategic tool and framework that aids in performance evaluation for managers and enterprises. This model's main objective was to coordinate and assess organizational effectiveness. These are the seven components:

1. Strategy
2. Structure
3. Skills
4. Staff
5. Style
6. Systems
7. Shared values

Hard factors are those that can be quickly detected and dealt with by management in the event of any problems. Strategy, structure, and systems are the components that fall under this category.

The skills, style, staff, and shared values that make up organizational culture are represented by soft elements, which are intricate, abstract, and essential elements.

- **Strategy**

All of the workers and stakeholders are aware of the strategic direction and overall business strategy for TATA STEEL LIMITED. As a result, the organization is better able to oversee performance, direct actions, and develop various strategies that are in line with the company's goals. Additionally, TATA STEEL LIMITED operations are made more transparent and the company's duties and actions are aligned thanks to the definition and communication of the business plan.

The strategic direction of TATA STEEL LIMITED is crucial in assisting the company in directing stakeholder, employee, and staff behavior toward the pursuit and accomplishment of objectives. According to the company plan, SMART Goals are established with short- and long-term deadlines. Employees make decisions about strategies and actions to achieve the objectives set in order to advance the company's growth.

- **Structure**

A learning and forward-thinking organization supports TATA STEEL LIMITED's shorter organizational hierarchy. The employees feel more comfortable and confident and have greater access to information when there are fewer managerial levels between them and more access to senior management and leadership. Additionally, the flatter hierarchy speeds up decision-making for TATA STEEL LIMITED and promotes employee loyalty to the company.

There is excellent departmental cooperation at TATA STEEL LIMITED. When working on projects or tasks that call for a variety of skills, the company's departments frequently form cross-departmental teams. All cross-departmental coordination is efficient and well-planned. To achieve efficient work operations, processes, and goal attainment, TATA STEEL LIMITED has a systematic approach for starting and overseeing departmental cooperation.

- **Skills**

The personnel at TATA STEEL LIMITED is admirable and very capable. All hires are made in accordance with their credentials and merit. TATA STEEL LIMITED takes pride in selecting and developing the best professionals to support growth and development.

Tasks and job positions have been established by TATA STEEL LIMITED, and personnel are hired and trained for skill levels in accordance with those. The firm makes sure that all job requirements are satisfied and that personnel are equipped with the necessary abilities to carry out their specific tasks in line with the company's values and culture, as well as its operational objectives and business strategy.

The development of its employees' talents and skills is a priority for TATA STEEL LIMITED. For its employees' professional development, it regularly organizes internal and externally managed training sessions and workshops. TATA STEEL LIMITED collaborates with its workers to promote both personal and professional growth.

- **System**

To guarantee that business operations are conducted successfully and that there are no conflicts or problems, TATA STEEL LIMITED has established clear-cut systems. Most of TATA STEEL LIMITED's systems are departmental in nature, and they include things like:

- Human resource management
- Finance
- Marketing
- Operations
- Sales
- Supply chain management
- Public Relation Management

At TATA STEEL LIMITED, each clearly defined system has controls that were created specifically to assess performance and target attainment. Based on the specific activities and responsibilities of each department, these controls and measures have been developed. Additionally, each department creates unique controls for its employees' performance reviews as well as for activities and responsibilities that cross departmental boundaries.

- **Shared Values**

To promote a flexible and encouraging organizational structure that will enable employees to perform at their best as well as increase their motivation and organizational commitment, TATA STEEL LIMITED has defined and conveyed its fundamental values. The following, among others, are some examples of TATA STEEL LIMITED's core values:

- Creativity
- Honesty
- Transparency
- Accountability
- Trust
- Quality
- Heritage

The TATA STEEL LIMITED company also makes sure that all of its activities and operations are carried out in accordance with strict moral and ethical principles that have been redefined and measured against global standards.

TATA STEEL LIMITED promotes a welcoming environment that values diversity. TATA STEEL LIMITED makes sure that its organizational culture is supportive of diversity and that it has internal procedures to reduce instances of prejudice because the company has an international presence and production facilities that are dispersed across many nations.

- **Staff**

There are enough people working for TATA STEEL LIMITED throughout all of its international activities. Depending on the urgency and the skill levels required, employees are employed both within and externally for various job tasks and positions. This indicates that TATA STEEL LIMITED has individuals that possess the necessary skills for their positions and job duties. All staff members receive internal training to help them become acquainted with the business and its core principles. For the purpose of raising skill levels, external training is offered in addition to internal training.

Numerous people are employed by TATA STEEL LIMITED. Depending on the demands and needs of the activities, the number of personnel varies from nation to nation. The TATA STEEL LIMITED global team is an inclusive one that embraces and promotes diversity and collaborates with members to guarantee the achievement of corporate objectives. For TATA STEEL LIMITED, the team members and employees are the most crucial component of corporate success.

- **Style**

The leadership style at TATA STEEL LIMITED is participative. TATA STEEL LIMITED is able to involve and involve its employees in managerial decisions and decision-making processes by using a participative leadership style. This enables the leadership to regularly engage with the workforce and other managerial groups in order to identify any possible disputes and solicit feedback on operations and strategic initiatives. TATA STEEL LIMITED is able to develop organizational commitment and ownership among employees as well as other stakeholders through its participative leadership style.

BCG MATRIX OF TATA STEEL LTD

The Boston Consulting Group of the United States created the BCG Growth Matrix Analysis, sometimes known as the BCG Matrix, which uses a two-dimensional perspective. These are the relative market share and the industry growth rate. Significant involvement of Tata firms may be found in a number of other industries, including Tata Steel, Tata Motors, Tata Power, Tata Global Beverages, Titan, Tata Chemicals, Tata Consultancy Services, Tata Teleservices, Tata Communications, and Indian Hotel firms.

CASH COW: -

- According to the BCG Matrix, the company's steel division is a cash cow. 6.439 million tons are produced, but 6.170 million tons are sold overall. Despite the fact that output in the FY 10 was greater than sales. Overall sales increased by 18% over the prior year (5.232 million tons in FY09)

STARS: -

- The BCG Matrix stars would include the Ferro alloys and minerals sector of TATA in the TATA STEEL LTD. This division's production is 1.302 million tons, and its entire sales have surpassed 1.508 million tons. Stainless steel demand increased as a result of infrastructure spending in Asia. Charge chrome exports from TATA Steel KZN PTE LTD reached an all-time high, and the division's 6% global market share in FY10 was a division record. South Korea served as the location of TSL's first international hub. India's ferroalloys and with an estimated 27% market

share, minerals segment dominates the Ferro chrome industry. In the fiscal year 2009–2010, sales of manganese alloys reached an all-time high, and TATA Steel became India's largest manganese alloy producer.

QUESTION MARKS: -

- The BCG Matrix's category of question marks includes the bearing and tubes divisions. Despite having a small market product share, they are expanding quickly. They have the capacity to increase their market share and rise to fame. When the market's expansion slows down, it might potentially turn into a cash cow.

DOGS: -

- None of the TATA Steel divisions can be categorized as a dog. They all have strong market shares and robust market expansion. regrowth in the future.

ANSOFF'S MATRIX TATA STEEL LTD

Ansoff's matrix is a tactical tool designed to assist and direct companies in making decisions related to corporate expansion. The four strategic options presented by the Ansoff matrix to organizations are market penetration, market development, product development, and diversification. Any of these four strategies, or a combination of them, may be chosen by a company or organization, depending on a variety of internal and external circumstances.

The political stability and economic health of a region may be considered external variables, whereas resource capacities and talent management may be considered internal factors. Organizations choose several growth strategies based on an analysis of internal and external factors, which can be broadly categorized under the Ansoff matrix.

Market penetration

Businesses who want to expand their offerings in markets where their brands are already well-established and in use utilize the market penetration strategy.

- Tata Steel's production capacity will increase. Corus was purchased in order to expand into the same market and reach additional clients.
- Controlled overhead costs would result in competitive pricing and would appeal to consumers in the same market
- The Tata Steel Company increased production capacity would also contribute to greater efficiency and effectiveness, particularly for controlling overhead costs In order to expand market penetration, the

acquisition of Corus may also raise its spending in marketing and advertising initiatives.

- Investing in marketing initiatives and advertising will enable Tata Steel to engage in communication. the purchase of Corus to expand consumer reach within the same market
- The Tata Steel will be able to use new and improved distribution methods and tactics. Improved supply chains and distribution systems may result in increasing penetration within the same market by enhancing accessibility. The acquisition of Corus to reach new consumer segments and consumer groups in the same market that may have previously been unreachable.
- Competitive pricing will give the business a competitive advantage and increase consumer interest in the product.
- Joint ventures and strategic alliances will enable Tata Steel to: Gaining access to various customer groups, their market behavior, and purchasing habits through the acquisition of Corus
- Partnerships and joint ventures can give Tata Steel Corus was purchased with the intention of enhancing market penetration in existing markets.
- Increased marketing and communication of new product uses, advantages, qualities, and features will result in higher consumption among both current and new customer groups and segments.
- Tata Steel. The acquisition of Corus may also launch a marketing and communication campaign targeted at boosting the frequency of product consumption in current markets.

Market development

Using market expansion tactics, Tata Steel Through the introduction of current products in new markets, the acquisition of Corus can accelerate its commercial growth. Tata Steel will be able to do this. Corus's acquisition using several tactics.

Why The Tata Steel the Acquisition of Corus should spend money on R&D to find potential new markets and customer groups for its goods.

- The R&D should concentrate on finding and comprehending various market cultures, trends, and consumer behaviours - and how they differ from existing markets' customer behaviour patterns.
- Tata Steel the Acquisition of Corus's access to new consumer segments and increased market share will result from international expansion.
- The Tata Steel Company will require international expansion. The purchase of Corus will make it possible to do thorough PESTLE, Porter's Five Forces, and SWOT analyses in order to develop a comparative strategy and overview for potential future expansion.
- The business will also need to be aware of any cultural differences and adjust its expansion strategy as necessary. In the process of global expansion, cultural variations should be taken into consideration.
- The business can identify new product features and uses as well as new consumer segments to target with its current items.
- In order to grow and expand, the company will be able to take advantage of new markets and market trends within the same market.
- Increased brand awareness for Tata Steel is crucial to the company's ability to attract new consumer groups and boost visibility. Additionally, the acquisition of Corus increases brand memory, which is crucial for making purchasing decisions.
- "Tata Steel" By teaching new customer categories in existing and new markets, the acquisition of Corus boosts sales, resulting in total business development and growth.

Product development

Product development refers to the process by which a business strives to increase its growth in current markets through new goods. "Tata Steel" Different factors influence product development as a result of the Corus acquisition.

- Tata Steel. The acquisition of Corus may result in product revisions and enhancements that provide customers with fresh and improved options.
- Tata Steel. The company then goes through an NPD process, develops new products, and launches them in the market for consumers. This broadens the company's reach and also enables Tata Steel to acquire Corus. The acquisition of Corus also frequently engages in R&D activities to understand and identify new points of consumer demand. Corus was purchased in order to enter new market segments.
- Regular investments in research and development are made by Tata Steel since it acquired Corus, notably in areas related to understanding market trends and customer behaviour. The acquisition of Corus will allow the company to innovate and be creative in product releases and other functional areas like marketing, operations, and financing in order to maintain its competitiveness.
- The Tata Steel was also built through research and development. Corus was purchased so that the company could run its operations and daily tasks more effectively.
- Strategic alliances enable Tata Steel. Corus was acquired so that access to new processes and product advancements could be gained with little financial risk.
- This matters to Tata Steel. The acquisition of Corus was made in order to comprehend the new product's development process, the market's response to it, and its acceptance before starting full-scale manufacturing of one's own.

Diversification

When a business creates new products for new markets, it is said to be diversified. This relates to the expansion and development of the business. Diversification is crucial and allows companies like Tata Steel to grow. The acquisition of Corus will help the company maintain its ability to be competitive, inventive, and knowledgeable about consumer markets.

- Tata Steel's vertical diversification by adding new products to current product lines, the acquisition of Corus means aiming to expand company.
- This indicates that Tata Steel's recent product developments and launches The acquisition of Corus would fit into already-existing product groups and categories and be similar to them.
- When Tata Steel engages in horizontal diversification The Corus Acquisition chooses to launch and engage with new product innovations that are unrelated to the current offerings.
- However, it is advantageous to highlight new product launches and advances for goods that come from comparable economic settings to the host goods.
- One strategy employed by Tata Steel to The acquisition of Corus may examine conglomeratic expansion through mergers and acquisitions to penetrate new industries. In an effort to expand into new markets and new consumer groups with products and services that are wholly new and unrelated to existing offers, Corus can collaborate with, or buy, organizations and enterprises that interest it.
- Tata Steel. The acquisition of Corus can diversify into a conglomerate by being involved in an entirely different industry.
- Tata Steel would be involved in this type of diversification through a new industry. The acquisition of Corus to investigate new company concepts and the potential for launching or acquiring for reasons of expansion and growth

INTRODUCTION TO MANAGEMENT CONCEPT

Supply chains have existed since the very first good or service was produced and sold in antiquity. SCM advanced with the advent of industrialization, enabling businesses to produce and distribute goods and services more effectively. For instance, Henry Ford's standardization of vehicle parts was a game-changer that made it possible for things to be produced in large quantities to satisfy the demands of an expanding consumer base. SCM systems have become more complex throughout time as a result of little adjustments (like the creation of computers). SCM, however, largely remained a linear, soloed function that was run by supply chain specialists for decades.

All of that has altered as a result of the internet, technological advancements, and the rapid growth of the demand-driven global economy. The supply chain of today is no longer a straight path. Instead, it's a multifaceted network infrastructure that is accessible around-the-clock. Customers want their orders to be completed when they want them and in the way they want it at the center of these networks.

We currently live in an era marked by unprecedented levels of international trade and business, not to mention ongoing technological advancement and fast shifting client expectations. The most effective supply chain strategies of today ask for an operational model driven by demand that can unite people, processes, and technology around integrated capabilities to provide goods and services with amazing speed and accuracy.

Although SCM has always been a cornerstone of business, the supply chain is now more important than ever as a gauge of a company's success. The businesses that can successfully manage their supply chains to change with the fast-paced, technologically driven business environment of today will be the ones to survive and prosper.

Although SCM has always been a cornerstone of business, the supply chain is now more important than ever as a gauge of a company's success. The businesses that can successfully manage their supply chains to change with the fast-paced, technologically driven business environment of today will be the ones to survive and prosper. One may say that the supply chain is the foundation of Industry 4.0. Businesses in Industry 4.0 use technology in the supply chain in a fundamentally different way than they did in the past. For instance, businesses would often wait until a machine broke down before fixing it in the maintenance function.

Intelligent technology has altered that. We can now foresee failure before it occurs and take action to stop it so that the supply chain can function as usual. In today's SCM, technology is used to make the supply chain—and the company—smarter.

Enhanced Productivity with SCM:

1. Better collaboration

For organizations that outsource procurement, information flow presents a substantial difficulty. Research studies indicate that 76% of businesses lack an automated information flow throughout the supply chain. The integrated solutions are intended to eliminate information bottlenecks and enable seamless information sharing, giving a comprehensive perspective from beginning to finish.

2. Improved quality control

Companies gain from improved quality control when they have more control over their direct suppliers and the suppliers of their suppliers. Suppliers can adhere to the standards for minimum quality required by your business by using the process guidelines.

3. Higher efficiency rate

Companies can put backup plans in place when they have real-time data on manufacturing delays and the availability of raw materials. The latter could involve obtaining supplies from a backup vendor and averting additional delays. Without real-time data, businesses frequently don't have enough time to start a Plan B, which leads to issues like delayed shipments and out-of-stock inventories. Implementing intelligent automation solutions is one thing businesses can do to increase efficiency. After discussing the advantages of good supply chain management, let's look at some strategies for boosting productivity.

4. Implement a robust training program

Productivity can be significantly increased by implementing a practical and useful training program. It aids in coordinating employee performance with the goals and ideals of the firm. Owners of businesses should be aware that people are the primary natural resource powering the supply chain. Because of this, spending money on employee training can greatly benefit the business.

According to numerous studies, businesses that spend in staff training outperform the market by 45%. Even more unexpected would be the finding that 60% of workers are more inclined to stay with a company that invests in their professional growth than to go for one that pays more but doesn't make any such effort.

Automating Processes with AI:

Supply chain automation refers to the use of technology to handle supply chain tasks without direct human intervention. Automation comes in many forms and uses several types of technologies. For example, manufacturing plants may use physical machines and Internet of Things (IoT) devices to automate physical tasks on the shop floor. Technologies like robotic process automation (RPA) and intelligent document processing (IDP) can automate software-driven processes on the shop floor and in the back office.

Automation of the supply chain is essential for firms to function at scale. For instance, businesses may make more products faster and with a higher level of consistency by automating industrial production operations. Due to the "Amazon effect," which has caused customers to anticipate quick delivery, retailers at the front end of the supply chain frequently face greater challenges on last-mile deliveries. Automating the shipping procedure makes it faster so that these other merchants can compete.

Supply chain agility can also be increased by automation. A corporation has the opportunity to assist teams in adapting more quickly when it puts up automatic alerts to monitor client demand signals. To avoid shortages, the procurement staff should, for instance, begin placing orders for goods and supplies earlier. By automating notifications when suppliers may fall behind schedule or lack manufacturing capacity, businesses may also build more robust supply chains. In these circumstances, the buying corporation may seek for additional, temporary suppliers or decide to buy premium freight.

Automation in the supply chain supports human workers rather than replacing them. For instance, the world still requires truck drivers, airline pilots, and ship personnel to continue delivering packages in the absence of widespread autonomous vehicles. Teams operating across the supply chain can become more effective with the use of automation solutions.

Speed and agility have evolved into real competitive differentiators in the age of digital transformation. You can respond to the next interruption effectively by using supply chain automation technologies and techniques. Are you prepared to develop a new supply chain strategy? Discover upcoming supply chain developments, examples of what can be automated, and business advantages by reading on.

FACTORS INFLUENCING AUTOMATION IN SCM

Environmental Uncertainty

Supply chains are impacted by any environmental concerns affecting a product chain, such as unforeseen changes to customers, suppliers, rivals, and technologies. The assistance of the government and unpredictable factors from abroad both significantly influence the success of your firm. A company's expectations for quality, prompt delivery, competition, and the amount of business rivalry are all related to the atmosphere of the organization.

And businesses turn to importing as a means of effectively managing demand and achieving flexibility, however this practice can have unfavourable effects given its unpredictability. However, you can lessen it by developing strategic alliances with important suppliers. The degree of government assistance your business receives for imports is also very important. These standards, guidelines, rules, and recommendations come from the government, whose reforms support exporters by boosting the industrial sector's competitiveness on the global market through logistics proficiency. Speaking of environmental uncertainty, recognizing that there is one abroad also plays a significant role in supply chain management systems because it raises your risks with matters like communication challenges, transportation, transportation costs, exchange rates, tariffs, and administrative procedures.

Information Technology

Today's technology enables real-time communication between all parties involved in the supply chain. It cuts down on lead times, paperwork, and other superfluous tasks, which helps managers coordinate, access information and data exchange, strengthen connections with clients and suppliers, and manage inventories. The management of warehouse data, vendor-managed inventory, distribution requirement planning, and customer relationship management are all supported by various IT technologies.

Supply Chain Relationships

Without strong supplier alliances and solid customer relationships, what good is an efficient supply chain? After all, by coordinating and integrating activities with suppliers and being aware of client needs, companies ultimately profit. Since all businesses have a propensity to indirectly collaborate with various suppliers, it is imperative that your relationship with those suppliers meet the demands of both your business and the suppliers.

Manufacturing

The main element that affects a product's success in the current age is smart manufacturing. Flexibility and quality are the major variables that increase the worth of your items. This is due to the fact that you must be prepared to respond quickly to client needs in light of competitive pressure, complex markets, and rapid demand fluctuations. However, you also need to realize that customers demand excellence, not as an added bonus. Poor quality has traditionally been associated with high expenses, low productivity, and a loss of market share. Therefore, make intelligent decisions and actions.

Supply Chain Management Performance

The operational excellence of providing a top-notch customer experience is defined by SCM, which includes logistics, supplier markets and performances, and material procurement. A superior supply chain management requires significant information with regard to supplier markets and their performance, which is typically higher when supply managers perceive trust and satisfaction. Logistics must be focused on the coordination and collaboration of activities, logistics social responsibility, strategic distribution planning, and technology and information systems.

Business Management

The operational excellence of providing a top-notch customer experience is defined by SCM, which includes logistics, supplier markets and performances, and material procurement. A superior supply chain management requires significant information with regard to supplier markets and their performance, which is typically higher when supply managers perceive trust and satisfaction. Logistics must be focused on the coordination and collaboration of activities, logistics social responsibility, strategic distribution planning, and technology and information systems.

Customer Satisfaction

The perception of a client and the perception of the product's maker are not the same. This is due to the fact that consumers place a higher importance on affordable prices, prompt deliveries, and acquiring customized products, whilst manufacturers and merchants look for workable after-sales policies that allow them to raise customer satisfaction levels. Companies strive to provide customers with the best service possible in an effective and efficient manner, taking into account details like product availability, order status, shipping dates, and product descriptions, while also helping them with any needs they may have as determined by demand forecasting, service levels, order processing, parts/service support, and aftermarket operations.

LITERATURE REVIEW

In the literature analysis, we discovered that automating firms' logistical procedures has been a crucial connection for market expansion and improving the service that goes along with the sale of any product. The Colombian industry is still learning, but gradually, various economic sectors have realized how critical process optimization through technology is and have chosen more flexible postures before implementation. 2013 PORTAFOLIO

A business should consider its logistical process as well as design strategies and targets to ensure that this integration is the response to the company's mission (Casati, Dayal, & Shan, 2001). The supply chain is the set of operations carried out to meet the needs of customers of a product or service.

The first industrial revolution saw the use of water and steam power to mechanize production. The second industrial revolution brought about mass production using electric power, and the third and final industrial revolution saw the use of electronics and IT to further automate production. (2013) Cutler

The automation of processes has been the primary goal of all industrial advancements over the past century, starting with the automation of the production line at the turn of the century and continuing through support systems decision-making and integration of current information integration (Viswanadham, 2002).

In the 1960s and 1970s, when the cost of global logistics processes was between 15 and 25% of the gross domestic product of industrialized nations, the study and practice of physical distribution and logistics evolved. 2007 (Ballou).

The need for additional industrial expansion in this sector was urgent, and so the path toward process improvement, process unification, and area discovery through the design and execution of logistical operations, the level of costs, and services that support market survival, was set. The need to explicitly manage costs and turnaround times through logistics procedures, including supply and reverse logistics, has grown dramatically in recent decades. Producing and providing services are necessary for market survival and true competitive advantage. The systems approach has been applied to create a framework for comprehending SCM during the 2000s. As SCM research attempts to give analytical depth and implementation models for SCM practice, there is still interest in various units of analysis (Gundlach, Bolumole, Eltantawy, & Frankel, 2006).

SCM research has included a variety of analysis levels, including tactical, operational, strategy, and strategic orientations, in addition to various analysis units. Because the approach of optimizing individual processes does not always result in the optimization of the chain as a whole, the generation of models that integrate supply chain management begins in response to these needs. (Nickl, 2005) This is because integration and collaboration along the supply chain have as their goal to be synchronized with demand.

Integrating every component of a supply chain becomes the problem at the global

supply chain level. The synchronization of the value, information, and material flows is necessary (Ehm, Ponsignon, & Kaufmann, 2011). In order to always meet financing and customs regulations and to fully benefit from globalization, one of the main enablers for an organization trying to automate is the value flow controlled in all aspects. Automation of logistics processes reduces the need for human intervention through the use of control systems and informatics technology. An automated supply chain boosts output, lowers costs, and provides significant advantages to reduce operator risk. (2012) (Garca M. N.)

Data Analysis and Interpretation

In order to gather information for this study, a well-structured questionnaire with a series of standardized questions was developed. The goal of this study was to get insight into the actions and efforts performed by the business. Consequently, to explain the topic well, it has been used. The survey's data is evaluated, and an interpretation is provided in light of the findings.

Data Based on Demographics

1. Have you heard about Automation?
2. Did you know that Automation is likely to automate many jobs over the next 20 years, including office jobs?
3. Would you be interested in learning more about Automation, as it may affect the future of your career?
4. What role can artificial intelligence (AI) play in automating SCM processes?
5. Can you provide examples of real-world companies that have successfully integrated automation into their SCM practices?
6. How does automation improve the accuracy and efficiency of shipping and distribution?
7. What are the key benefits of implementing automation in SCM processes?
8. What steps should a company take to successfully implement automation in its supply chain?
9. How does automation facilitate data-driven decision-making in SCM?
10. What technologies are commonly used for automating warehouse operations?

Brief report on project done at summer internship

I completed my summer internship with Tata Steel Ltd, an Indian steel manufacturer that offers a wide range of steel components for the good of our nation. It is a well-known and highly regarded brand worldwide. I gained knowledge about logistics and the automation used in it while serving as a logistics executive.

Along with manual testing, other tasks assigned to me include the following.: -

Action items:

1. Material management.
2. Planning of vehicles according to dispatch of material
3. SAP basics
4. How to maintain TAT (Turnaround Time)
5. Automation used in SCM.

I was interested in researching the most recent process that featured automation and routine TAT maintenance to produce more for the organization's, vendors', and consumers' benefits. document processing and document data monitoring. This automation process offers the most advantages. Logistics and material delivery planning are required. Planning the dispatch involves the material management department. Conditions that must be met in order for an organization to easily deliver goods to customers.

Findings

- It is found that Responsible Automation Has Never Been More Important.
- Most of People are aware about at Automation but there are quite few who doesn't know what the Automation is.
- Most of people have used Automation in general.
- It is observed from the analysis of the study that majority (56%) of the respondent revealed that they are satisfied and work is easy comparative to manual work with comparison to automated work.
- It is observed that employee prefer more Automation in their day to day things

Suggestion

- Automation are easily penetrable so if they are trying to implement Automation, they should try to hire technical guy to ensure the safety during process.
- Recognize the social risks implied by automation.
- Adapt training and education to the new automation society.dd
- Organizations must give high preference to employees and should consider their health and safety, such a way that they should take measures in providing good environment to the employees.

CONCLUSION

The primary goal of supply chain automation is to create specific The major goals of supply chain automation are to create particular processes, track results, and reduce lead times while employing staff members who are familiar with the business. Companies that want to have a full production system that includes suppliers and distributors must concentrate efforts on moving forward with the automation of all supply chain linkages in order to concentrate efforts and implement crucial business-growth strategies. Data streams and product flows may no longer be regarded as separate subjects and domains. Using the most recent, specialized, and business-relevant technology allows globally networked firms to conduct business and commercial interchange in a more efficient and effective manner. With more automation, logistics is tackling its most recent issues; improved supply chain planning decisions lead to higher operational efficiencies for logistics and result in significant cost savings. As a result of factors like expanding variety, rising product personalization, declining vertical integration, and rapidly changing production, storing, transport, and distribution processes, customers' expectations for supply chain plans are continuously increasing. These challenges can be overcome by using automated systems and equipment, whether throughout the entire supply chain or just some of the key processes. A balanced material and information flow system is one that reaches a breaking point between adaptability, autonomy, and automation within those conditions and constraints. The needs of the final client should be catered to as much as feasible, and automation's developments in technology and infrastructure should be taken advantage of. In the case of Colombia, the businesses have a long way to go before they can keep up with global trends, starting with the infrastructure of the nation's terrain and continuing with the demand for knowledgeable managers and technicians. The most widely used technologies today are those that relate to products. Smaller businesses and independent contractors have reacted to having to bear these costs for their operations, so the widespread implementation of any system or technology will take longer. Identification (RFID), and the path for trucking, cargoes, and transport tracing and tracking began a few years ago with the largest companies.

REFERENCE

1. Kersten, W.; Seiter, M.; von See, B.; Hackius, N.; Maurer, T. *Trends and Strategies in Logistics and Supply Chain Management: Digital Transformation Opportunities*; DVV Media Group GmbH: Hamburg, Germany, 2017.
2. Junge, A.L.; Verhoeven, P.; Reipert, J.; Mansfeld, M. *Pathway of Digital Transformation in Logistics: Best Practice Concepts and Future Developments*, Special Edition; Straube, F., Ed.; Scientific Series Logistics at the Berlin Institute of Technology; Universitätsverlag der TU Berlin: Berlin, Germany, 2019; ISBN 978-3-7983-3094-8.
3. Viswanadham, N. The Past, Present, and Future of Supply-Chain Automation. *IEEE Robot. Autom. Mag.* **2002**, *9*, 48–56.
4. Nitsche, B.; Straube, F.; Wirth, M. Application Areas and Antecedents of Automation in Logistics and Supply Chain Management: A Conceptual Framework. *Supply Chain Forum Int. J.* **2021**, 1–17.
5. Straube, F.; Nitsche, B. Heading into “The New Normal”: Potential Development Paths of International Logistics Networks in the Wake of the Coronavirus Pandemic. *Int. Transp.* **2020**, *72*, 31–35.
6. Nitsche, B.; Straube, F. Defining the “New Normal” in International Logistics Networks: Lessons Learned and
7. Wuest, T.; Kusiak, A.; Dai, T.; Tayur, S.R. Impact of COVID-19 on Manufacturing and Supply Networks—The Case for AI-Inspired Digital Transformation. *SSRN Electron. J.* **2020**.
8. Hobbs, J.E. Food Supply Chain Resilience and the COVID-19 Pandemic: What Have We Learned? *Can. J. Agric. Econ. Can. Agroeconomie* **2021**, *69*, 189–196.
9. Belhadi, A.; Kamble, S.; Jabbour, C.J.C.; Gunasekaran, A.; Ndubisi, N.O.; Venkatesh, M. Manufacturing and Service Supply Chain Resilience to the COVID-19 Outbreak: Lessons Learned from the Automobile and Airline Industries. *Technol. Forecast. Soc. Change* **2021**, *163*, 120447.
10. Khan, I.; Javaid, M. Automated COVID-19 Emergency Response Using Modern Technologies. *Apollo Med.* **2020**, *17*, 58–61.
11. Dumitrescu, R.; Westermann, T.; Falkowski, T. Autonome Systeme in Der Produktion. *Ind. 40 Manag.* **2018**, *2018*, 17–20.