



**CHRIST**  
(DEEMED TO BE UNIVERSITY)  
BANGALORE · INDIA

# SIGMA

## NEWSLETTER

**SCHOOL OF BUSINESS  
AND MANAGEMENT**

**LEAN OPERATIONS AND  
SYSTEMS**

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# EDITORS' NOTE

## Greetings Readers!

It is our pleasure to bring before you the Sigma Newsletter October 2022 edition. The articles in this Issue throws light on Importance of Supply Chain Analytics, Supply Chain Tower; Challenges faced by Supply Chain Analytics , Importance and Evolution of Supply Chain and Importance of Reverse Logistics in Supply Chain Management.

It also includes a Puzzle, Buddy Corner and Poetry.

We, Team Oasys, express our sincere gratitude to our Dean, Dr. Jain Mathew and the entire leadership team, Head of Specialization, Dr. Ramakrishnan N, Faculty Coordinator Dr. Saibal Kumar Saha, faculty members of the specialization and all those who have contributed in developing this edition of the newsletter.

Wishing the readers, a happy reading.

Best Wishes,  
**Team Oasys.**

# SUPPLY CHAIN ANALYTICS

The market in India is highly unstructured, uncertain, and unpredictable. Supply chain Analytics can study, gain insights and extract valuable data and information in the entire supply chain from procurement, processing, distribution, and finally, exports. This would be a valuable asset in developing an optimal, efficient, and responsive supply chain network for sustainable trade in India. Moreover, the economy of India would flourish inside-out via supply chain analytics as it would improve wide-scale forecasting and predictive analysis to eliminate uncertainties. The Indian Market has untapped potential; owing to its rich culture and heritage, there is a huge demand for Indian Goods in global Markets, such as spices, artworks, designer products, consumer goods, etc. The global export opportunity for India lays a foundation for the deployment of SMART logistics using supply chain Analytics for building New India – A truly Aatmanirbhar Bharat

**ARPAN KUMAR SINGH**  
**2128004**



# SUPPLY CHAIN TOWER

Supply chains are an integral part of daily life, the foundation of the world economy, and a dependable source of innovation and differentiation for companies. Customers acquire the commodities and services they desire at the right price, at the right place, and at the right time when things move well. Supply networks' weaknesses and fragility have been revealed due to irregular demand, supply, and logistics interruptions, as well as ongoing efforts to enhance customer experiences and continuously optimize operations and costs.

Challenges in the Supply Chain Demand changes result in empty shelves at some merchants and products that have been languishing on shelves for months at other stores. Weather and traffic delays, as well as health and safety problems and warehouse backlogs, cause shipment delays with little to no notice. The time they spent seeking things at different stocking sites and engaging with people via email and phone to check availability and transfer merchandise. Critical equipment shortages, which accounted for 40% of supply chain disruptions, were brought on by a lack of visibility into suppliers at tiers 2 through 1. They don't have end-to-end, real-time visibility over their inventory and workflow operations.

Organizations cannot establish a competitive advantage by optimizing supply chain performance to match customer expectations. The fact that organizations must manage enormous amounts of internal and external data that is scattered among siloed systems originates from various sources and comes in several formats is another crucial difficulty. Traditional data integration approaches take a long time and are costly.

Supply chain control towers give the entire supply chain (E2E) visibility that is end-to-end. A central data dashboard with visibility into events and key business indicators is frequently included. Modern control towers increasingly depend on cutting-edge technology like Artificial Intelligence (AI) and Machine Learning (ML). The key benefits of modern control towers include (a) depth of vision they offer, which is frequently more detailed than what is possible with older systems, and (b) visibility they provide into data across silos or boundaries. An improved control tower will enable cross-functional teams and partners to collaborate and maintain organizational information to improve and accelerate decision-making and outcomes (in the form of digital supply chain playbooks).

The supply chain control tower solutions that use AI or Data Analytics provide the following functions responding swiftly and making smarter decisions with real-time data visibility and understanding. To avoid or mitigate disturbance, predictive data analysis and sophisticated data analytics are applied. Data analysis that is prescriptive and can make suggestions, support human decision-making, and automate some processes.

**JOHN JOSEPH**  
**2128066**



# CHALLENGES IN SUPPLY CHAIN ANALYTICS

We can buy whatever we desire online in today's society, from a little pen to a millions-of-year-old fossil. Nowadays, we have instant access to almost anything we might need, with guaranteed delivery schedules that sometimes bring the item to our door the same day we order it. All of this is possible because of supply chain analytics, the science that enables this "practical magic." Algorithms that offer amounts, dollars, and modes are used in supply chain analytics to answer the what, where, how, when, and how queries. Some of the challenges of supply chain analytics are as follows:

**Cost-** The cost of acquiring and maintaining analytical software tools is high. Most corporate software technologies have a lot of unknowns and uncertainties when it comes to implementation. Most analytics solutions are frameworks that aren't explicitly designed for the manufacturing industry. Change management comes with many costs: new platforms, training, troubleshooting, etc. Businesses must engage domain specialists to use the platform and solve problems for their staff.

Adopting supply chain analytics solutions across numerous locations and ERP systems may cost millions of dollars upfront.

**Integrating Data from Multiple Sources-** As a result of acquisitions throughout time, most businesses have several systems. It's not unusual for companies to use three, four, or even five different ERP systems across their various locations.



This results in executives receiving data in multiple formats, mixed language for the same data points, and non-standardized reports. Companies must not only organize the data but also arrange it to solve the most pressing concerns, such as gathering data from all ERPs and presenting it in standardized forms to buyers, managers, and executives, ensuring that everyone speaks the same language.

Many firms are stuck using Excel since their data is usually not connected across all their sites. To be successful in supply chain analytics, companies must move away from Excel for many of these manual operations. Data should offer insights and report from analytics on a cloud-based platform that enables real-time collaboration. Need for experts-Whether a small business or a large conglomerate purchases solo software or a complex software system, they will require knowledgeable individuals to operate the software. But keep this in mind when considering if expert training or recruiting is the best approach for your company: the rest of the industry is moving at light speed. The longer it takes to train their specialists on the analytical tools and the supply chain metrics that matter most to their company, they will likely fall behind.

**HIMANSHU CHANDER  
BHATT  
2127966**





# IMPORTANCE OF SUPPLY CHAIN ANALYTICS

Supply chain analytics examines data from various supply chain applications, including supply chain execution systems for inventory management, procurement, order management, warehouse management and fulfillment, and transportation management (including shipping). A supply chain works the same way that dominos do: each step in the network impacts the one after it. Any issues at any level could influence the capacity to achieve consumer expectations.

Each of the pieces mentioned above software may have reporting functions that provide insight into that specific step of the supply chain, such as estimated lead times for suppliers, current warehouse safety stock levels, or orders fulfilled per hour. Supply chain analytics work better when the systems are integrated, especially through ER. They can use software or tools such as dashboards to demonstrate information from around the supply chain.

Businesses of all sizes may use supply chain analytics to make improved, quicker, and better decisions about their operations. As a result, it provides businesses with significant and long-term value. The reports support companies in recognizing potential threats, refining, scheduling, adjusting inventory control, and delivering on the high standards of their base. It can detect this pattern and predict the possibility of further delays.

Also, the system can estimate the cost of chargebacks and repayments and the probable late distributions. As the holidays approach, suppose a store detects a steady increase in sales. In that situation, it would place greater procurement orders with suppliers and involve more servicers to staff its warehouse in the possibility of a rush in orders over the vital Christmas season. Assume that any of your suppliers are unable to meet the increased demand. In that instance, the store might look for other suppliers while time is still on its side. Many firms have either too much or too little inventory, both undesirable—excess inventory results in higher-than-necessary inventory carrying costs, whereas running out of things results in revenue loss. Analytics can help you establish the right inventory balance to reduce expenses and minimise stockouts. The system may offer an attention for SKUs that are behind the supplier's lead time. Sales designs can also support operations staff regulate matters need more storage space and which can be kept in partial numbers or phased out.

**NIDHIN NELSON**  
2127917



# THE EVOLUTION OF SUPPLY CHAIN ANALYTICS

It has taken many decades for supply chains to embrace analytics fully. For many years, supply chain leaders made critical inventory decisions based on instinct and experience. At first, the supply chain analytics was chiefly focussed on statistical tools, analysis and computable metrics for designing and predicting. Data was stored in spreadsheets provided by various supply chain participants.

Companies began using Electronic Data Interchange (EDI) and Enterprise Resource Planning (ERP) systems in the 1990s to centralize the business process. These designs made it simpler to access data. Companies began to turn to business intelligence and predictive analytics software solutions in the 2000s. These explanations assisted companies in comprehending the routine of the supply chain system, how to make healthier choices, and how to enhance their links.

A typical supply chain accessed 50 times more data in 2017 than five years ago. However, only about a quarter of this data was analyzed. Furthermore, while approximately 20% of all supply chain data is organized and effortlessly comprehended, the rest 80% is formless. According to research, AI will play a predominant role in supply chain analytics. AI solutions go beyond data storage and process automation. AI software can think, reason, and learn like humans do. AI can also promptly process large data; structured and unstructured data to deliver outlines and analyses of that data.

According to IDC, by 2020, AI will be dominating most of business software processes. It provides a platform for robustly relating and comprehending data from several systems and sources, allowing enterprises to analyse real-time supply chain information and intelligence.

**KUSHAL PRAMANICK**  
2128217



# IMPORTANCE OF REVERSE LOGISTICS IN SUPPLY CHAIN MANAGEMENT

When manufacturers design their supply chain flow, they prioritize the product development process and how the products reach the end-user / customer. It starts with procuring various raw materials from suppliers and passing them through different production and manufacturing processes. The process ends by delivering the finished product to the customer. Reverse logistics begins with the end-user and goes back to the distributor or the manufacturer through the supply chain.

## MAIN REASONS FOR REVERSE LOGISTICS

- Returns- The majority of the selling company has a return policy. Customers would have made a mistake and purchased the wrong item. Accepting returns gives customers a better opportunity to purchase what they want, increasing the likelihood of buying from the buyer in the future and increasing their loyalty.
- Delivery problems-There may be times when there is a problem with goods transit. The buyer might not be available at the agreed-upon time. Alternatively, unanticipated factors may prohibit the driver from arriving at the targeted location. The only viable choice is to return the item to the warehouse in this situation.
- Repairs- Manufacturers may agree to repair if a product breaks within a particular term after purchase. Any restrictions on repair policies would be spelled out in advance.

- Recycling-Reverse logistics may also be required for items that have reached the end of their useful life. A consumer is more likely to abandon an item that has died. Some manufacturers offer to recycle these materials if the customer returns the product.

## BENEFITS OF AN EFFICIENT REVERSE LOGISTICS

- Sustainability- Recycling and reusing old materials is not only cost-effective but is also better for the environment.
- Business insights -When it comes to reverse logistics, a wealth of information is generated. This can be utilized to the company's benefit. The company can make decisions based on the no of returns they receive.

## STRATEGIES TO OPTIMIZE REVERSE LOGISTICS

- Centralize Return Centre-You can better classify items and choose the appropriate next steps for each of them with a centralized return center. Businesses can more quickly figure out how to recoup product value with the help of a center.
- Use Data to Optimize Processes-You may learn why customers return things by collecting product returns data. After that, you may alter your sales, product design, and forward logistics operations as needed.
- Evaluate Relevant Policies and Agreements- Examine and change the processes for returns and repairs at the organization. These rules should be straightforward and consider the underlying causes of returns and repairs.

**CHRISTEENA JOSEPH**  
2128334



# PUZZLE

A farmer needs to take a fox, a chicken, and a sack of grain across a river. The only way across the river is by a small boat, which can only hold the farmer and one of the three items. Left unsupervised, the chicken will eat the grain, and the fox will eat the chicken. However, the fox won't try to eat the grain, and neither the fox nor the chicken will wander off. How does the farmer get everything across the river?

**KUSUMA KEERTHI  
KUDUMULA  
2127838**



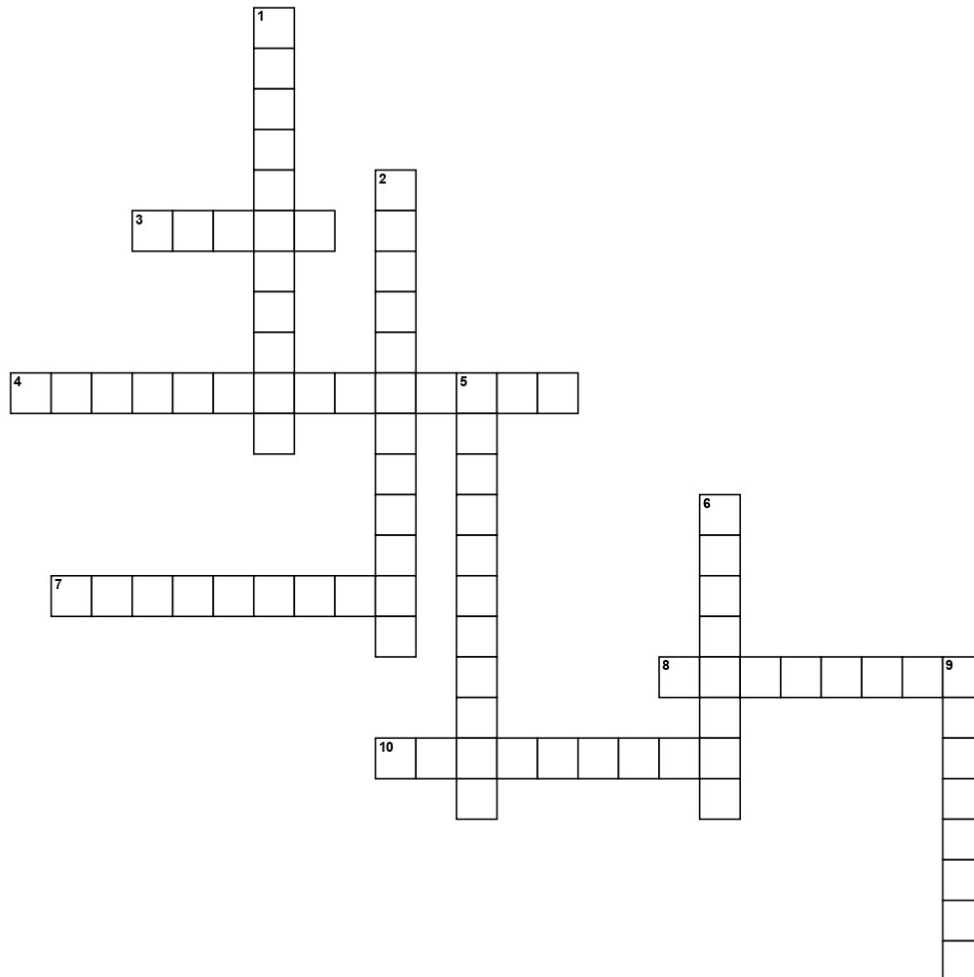
*The farmer must follow these steps.*

- Take the chicken across the river.
- Come back with an empty boat.
- Take the fox across the river.
- Bring the chicken back.
- Take the grain across the river.
- Come back with an empty boat.
- Take the chicken across the river.

**ANSWERS**



# CROSSWORD



## Across

- [3] A sequence of processes involved in the production and distribution of a product is called a supply ...
- [4] The movement of goods from place to place
- [7] A building for storing goods
- [8] A person or a company that provides goods and services to other companies
- [10] To get work done by making a contract with another company to do it

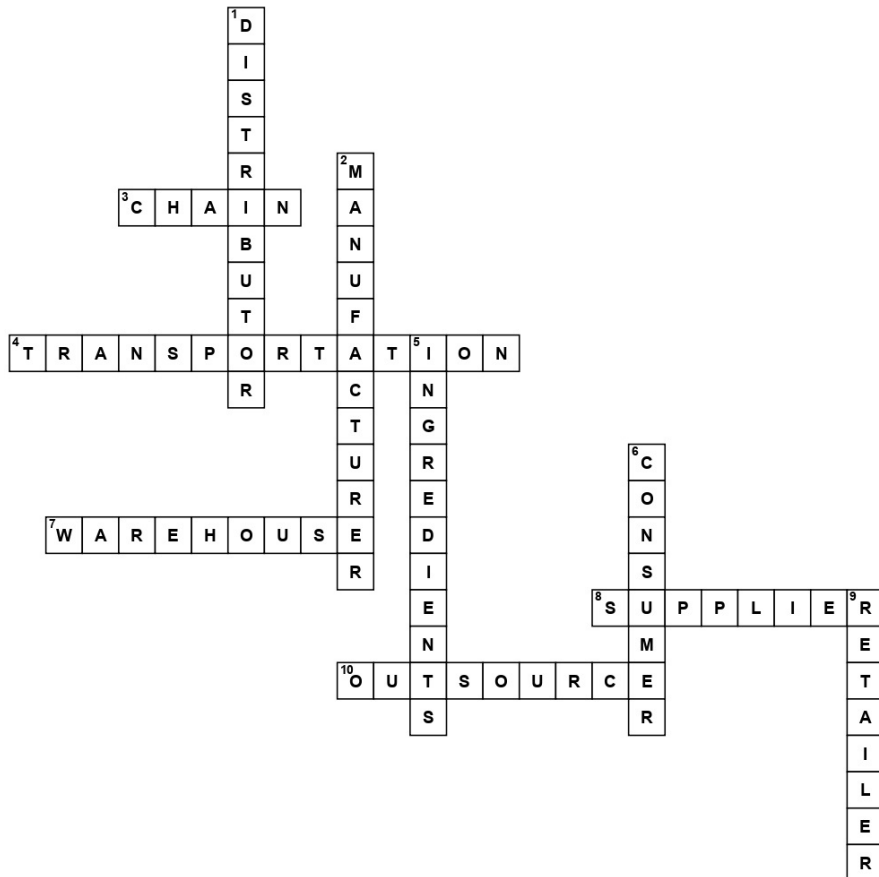
## Down

- [1] A person or organization that supplies goods to retailers
- [2] A company that uses raw materials and employee labor to create finished products
- [5] Elements or components of something
- [6] A person who purchases and uses products and services
- [9] A person, shop, or business that sells goods to consumers



# CROSSWORD

## Solution



### Across

- [3] A sequence of processes involved in the production and distribution of a product is called a supply ...  
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### Down

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 [9] A person, shop, or business that sells goods to consumers

**PAGADALA MRUDULA**  
 2127551



# DOWNCAST

Through the windows and trees  
When the sun rays peep  
I'm alive inside out  
I'm on the window with half opened eyes  
I breathe, smoke a cigar.

The warmth keeps me awake  
Days make me smile a bit  
Why is it the beginning and not the end?  
Why do we start when the sky is bright?

Morning Blue is my enemy  
The enemy I need to fight every morning  
My wavy clavi cut hair,  
Tangles herself to a bun  
I breathe, smoke a cigar.

Through the windows and trees,  
When the sun rays peep  
I'm stuck in a loop of thoughts  
It leads me in and out of my mind  
Screams for growth and success

But stuck inside my own morning blue  
I can sway my fingers on the board of failures,  
With my eyes closed  
For I have mastered  
Mastered the delineation of darkness inside

I certainly am my worst enemy  
I look down to the road,  
Trying to calm myself  
I breathe, smoke a cigar.

When the sun bows  
And the sky drizzles,  
I'm on the window  
Sitting with a coffee and a pen  
Aghast at failures,  
Striving to come back alive

I'm stuck in a loop of thoughts  
It leads me in and out of my mind  
Screams for love and comfort  
I breathe, smoke a cigar

Through the windows and trees,  
When the moonlight falls,  
Something inside hits really hard  
I urge for a drink to sweep it away  
I become vulnerable,  
Like everyday

Emotions row in faster  
I hold my legs closer to my face  
Looking down the road at the happy life,

Rest my chin with tears rolling down my legs  
Why does it end this way?  
Why are nights in jeopardy?

As time sprints,  
Nothing gets better  
Entropy heightens  
I try to push myself out of the window  
But fear subjugates my adrenaline  
I breathe, smoke a cigar.

**APARNA ANAND**  
**2127638**



<https://parnaanandts.wixsite.com/website>

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# BUDDY CORNER

Welcome you all to the World of Fintech. If you are wondering what the fintech industry is, what they do, how it generates revenue, and how work life will be there, this article will give a quick glimpse of it.

I started working at Razorpay on March 9, 2020. I also entered the new industry with very little exposure. Razorpay is a payment aggregator authorized by RBI to act as a third-party payment collector from customers, and they settle it to merchants. To ensure this flow seamlessly, Razorpay has multiple in-house products for which merchants will pay and use the services.



Razorpay was the first payment aggregator in India that started providing features like payout, UPI subscription, and Razorpay X, where they shifted themselves from not only acting as an intermediate to becoming a customized bank as per the requirement of each merchant.

Razorpay has a start-up culture that allows you to explore various departments and learn new things irrespective of your position and tenure in the company. I was given many opportunities to understand my strengths and work on my weaknesses too.

Once after becoming Unicorn, the quality and work culture slightly shifted, but it allowed me to explore working in a start-up culture and also work in a unicorn company with just 16 months of experience.

I felt a start-up is a good place to start if we are ready to build and work in an organization from scratch. There won't be a structured process, advanced technology, or defined rules, but the scope of exploring or trying new ideas will be high.

The process is structured with advanced technologies and policies in a well-built organization, but learning is less. It takes a lot of time to shift departments or implement new ideas as you need to follow the hierarchy for approval.

Both have pros and cons; it depends on individuals choosing their path based on the work culture they wish to be in and remuneration. I liked the start-up culture where I had the freedom to learn and experiment with my ideas.

**PRAVEEN R**  
**2127921**



# CLUB ACTIVITY

**Date: 22 July 2022**

**Name: Fact Check**

**Description:** The Oasys Club conducted club activity Fact Check on 22nd July 2022. The club activity was about finding 2 true statements out of the 3 statements. These statements were facts.

Each row was divided into different teams, and 3 rounds were conducted. This activity helped in gaining general knowledge of students, awareness of current affairs, business news, political news, international news, inventions and discoveries, national news, companies related to business models, economic news, etc. The students thoroughly enjoyed the club activity and got great insights on different facts which would also further help them in their placements during group discussions and interviews adding up to their general domain knowledge as well.





# ALUMNI CONNECT

Lean Operations and Systems specialization offered at CHRIST has had an astounding effect on my career. The perfect mix of subjects offered such as Enterprise Resource Planning, Lean Operations Management, Operations Planning, and Business Analysis has propelled my career as a Supply Chain Consultant.

Projects and assignments that we worked at college provided a great platform to work with a diverse team and focus on value delivery. CHRIST provides immense opportunities on extra-curricular activities that helped me improve networking skills and time management both of which hold importance in a corporate environment.

Since the advent of COVID-19 pandemic, most organizations have realized the importance of imbibing technology into supply chain, and this has led to immense growth opportunities in the supply chain space. Organizations seek to build their supply chains to be resilient and agile with a goal of continuous improvement. Most organizations are looking to implement technology-based solutions to tackle their supply chain problems while also managing risks. Hence, a career in supply chain is definitely promising. It is essential to consistently identify current supply chain trends and understand how technology is solving supply chain problems.

My advice to students of current batch would be take up as many projects as possible with a solution-oriented approach so that you gain exposure to the real-world scenarios. Aim to apply classroom learning to projects. Always have the eagerness to learn since it is essential with constant changes encountered in the tech space. Move out of your comfort zone and indulge in activities that help you build your personality and gain exposure.

**Priyanka Prabhakaran**  
**Supply Chain Technology Consultant,**  
**EY GDS**  
**Batch (2019-2021)**





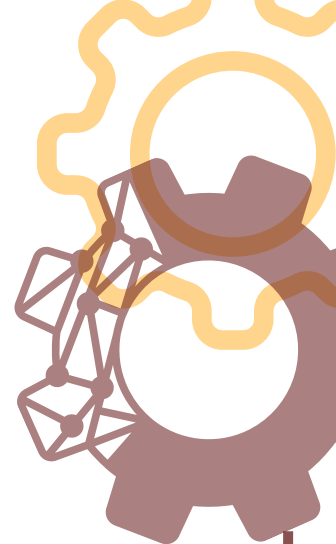
# FACULTY CO-ORDINATORS



**Prof. Ramakrishnan N**



**Prof. Saibal Saha**



## DESIGN TEAM



**Sucheta**



**Saumya**



**Gayathri**



**Tarun**



**Praveen**

## CONTENT TEAM



**Francis**



**Aparna**



**Nidhin**



**Vidhi**



**Christeena**



**Aditi**