

# Accelerating Organizational Purchasing Processes

CASE STUDY | Operational Efficiency



**Industry**

Wholesale Import \ Export

**Location**

São Paulo, Brazil

**Use Case**

Operational Efficiency

**Specializing in**Supply of Machinery Spare  
Parts

# Improving Operational Efficiency in Encoparts' International Purchasing Process

## Introduction

Encoparts® was founded by highly specialized professionals with more than 20 years of experience in importing and distributing spare parts for the Yellow line.

Located in Piracicaba, São Paulo, Brazil, it specializes in supplying Parts and General Components for the Yellow Line Equipment – in the most diverse needs, offering almost 80% of parts currently available on the market.

Encoparts® has operations in Brazil, the USA, Chile, Peru, Colombia, Ecuador, Australia, Canada, and Mexico, serving mining companies, the sugar and energy industry, large construction companies, earthmoving companies, public institutions, etc.

As a distribution logistics company with a strong presence in the Americas and Australia, Encoparts® was dealing with a number of challenges in its International Purchasing (LLC-USA) Unit.

Let's summarize them below.

## Challenges

### Challenge #1 – High complexity

One of the main challenges was related to the high complexity of the international purchasing workflow. Their process consists of a high degree of diversity of items (purchased, manufactured, assembled), with different sources of supply (internal US and external), forms of negotiation and payments, and compliance with foreign trade legislation.

### Challenge #2 – Customer dissatisfaction

The company was also facing a high degree of failure to meet delivery deadlines with the Global Sales and Brazil Purchasing areas. There was a need to build a history of missed deadlines and the respective justifications.

### Challenge #3 – Low visibility of the process

The activities of “search, negotiation, placing an order, finance, follow up with suppliers, receiving and approving parts” were carried out through unpredictable processes, with several records in Excel spreadsheets, and reactive controls.

### Challenge #4 – Bad communication

Different areas and people involved in the International Purchasing process simultaneously were seeking information on order status, supplier position, reasons for delays, and corrective actions. This caused a lack of focus on dealing with problems, inaccurate and redundant information without leading to practical solutions.

### Challenge #5 – Need for systemic vision and automated workflow

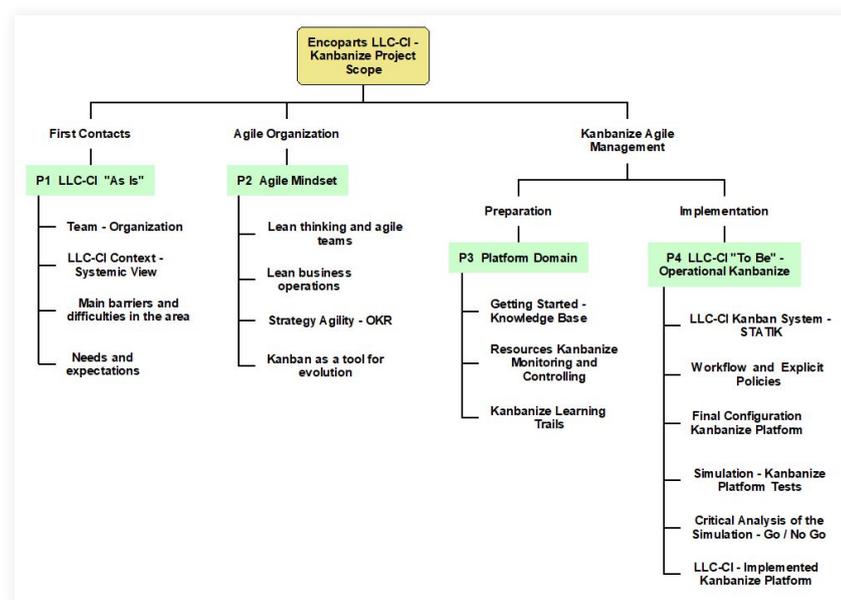
In view of the above-mentioned challenges, Encoparts® realized that having an integrated and effective solution involves defining a value stream map (LLC-CI clients) and subsequently designing the automated process for the International Purchasing Area.

Through automation, they would be able to bring simplification, create patterns, and increase the predictability of results. In addition, this could help them have the information on the status of activities always up-to-date and visually available, which would reduce collection and processing time. All of this would eventually contribute to the improvement of the company's organizational climate.

## Enabling Workflow Transparency & Efficiency Through a Lean/Agile Transformation Journey

The Lean/Agile transformation journey in the Encoparts purchasing area was built around the introduction of the Kanban method, which happened through a concept known as STATIK (Systems Thinking Approach to Introducing Kanban). To put this systematic approach to practice, the purchasing area devised a WBS (Work Breakdown Structure) covering the most significant stages of the Lean/Agile implementation.

As you can see from the image below, the first stage (P1) relates to gaining a systematic view of the purchasing process “as is” and understanding its main barriers as well as what an “ideal” state would look like (needs and expectations). The next stage (P2) is about promoting a Lean/Agile mindset across teams and experimenting with different practices. Only then comes the implementation of a specific solution.



Work Breakdown Structure

## Process Mapping & Other Lean/ Agile Practices

To understand the current processes of the purchasing area, including their weak spots, the company underwent a series of theoretical training which led to the implementation of the Lean technique – Value Stream Mapping. The technique represents a visual method for illustrating, analyzing, and improving the steps required to deliver a product or service. Through this concept, it was possible to determine what adds value to the processes but also uncover the non-value adding steps and other deficiencies that limited the evolution of the service.

For example, in image 1 below, we see the structure at the level of Coordination of the flow of International Purchases. Encoparts visualized three classes of services in the area, according to the respective difficulty level of the service.

Sales Request - Work Cards									
Backlog	Approval process	In Progress					Done		
		Procurement	Negotiation	Purchase Order	Financial	Follow-up		Warehouse ops	
		Hard - First purchase / Develop product and Source of Supply							
		Medium - Suppliers in need of negotiation / uncertainty in supply							
Easy - Reliable suppliers / immediate service availability									

Image 1

The coordinator of the purchasing area, together with the team, uses this table to visualize all the existing demands for adequate periodical management of the operations (cadences).

In image 2, on the other hand, we can see a more granular view of the “In Progress” area.

In Progress											Done
Procurement	Negotiation	Purchase Order		Financial	Follow-up			Warehouse Operations			
		Firm Order	Supplier Approval	Encoparts Approval	Lead Time +5	Lead Time +10	Lead Time +30	Read to pick-up	Receiving / Waiting for conference	Quality / Waiting for approval	

Image 2

Teams prepared an actual breakdown of each of their most

important steps in the process and visualized them for better clarity. What's important here is that this helped them understand their value-adding and non-value-adding activities. For example, they clearly mapped which actions do not add value (in orange) but are necessary to allow the approvals required in the process, the maintenance of the quality of products, as well as waiting on input from other areas. In Lean, that's known as "necessary waste".

After mapping the flow, teams turned to implementing more specific Lean/Agile practices.

This included the introduction of metrics for measuring the purchasing area's process flow and engaging in regular "review" sessions for the purpose of continuous improvement. These metrics involve order **lead time**, **cycle time** (how fast work is done – only "In Progress"), **blocking time** of work items (Block time and release actions), **transfer rate** (throughput – how much work is delivered) and **flow efficiency** (time spent in queues vs. time spent on purchasing activities).

## Accelerating The Lean/Agile Transformation

To bring the Value Stream Mapping technique into practice and get historical data for process metrics, Encoparts embraced a digital solution in the face of Businessmap. With the implementation of the platform, it was possible to sequence and integrate the main functions of International Purchasing (LLC-CI) in a Leaner and more transparent workflow for all those involved in the process.

In image 3, we have a partial view of the LLC/CI Workflow, with the demands for parts distributed among the three service classes mentioned ("Hard, Medium, and Easy"). The colors of the work cards are related to the different suppliers responsible for fulfilling the placed orders.



Image 3

In general, some of the most used features from the digital solution at Encoparts include:

1. **E-mail integration** – facilitating the direct placement of orders from the Global Sales and Brazil Purchasing areas.
2. **Comments** – used to add clarifications to sales orders and updates to cards.
3. **Classes of services** – defining the service priority of requests in three layers.
4. **Output criteria for work items** – implementing the work “pull system” – visual management.
5. **Workflow Management** – defining columns of “queues” (waiting) and “activities” that add value.

By leveraging a digital system, the Encoparts International Purchasing Team, alongside other functional areas in the company, gained knowledge of their delivery capabilities. This allowed them to focus their efforts on minimizing the time work spent in non-value-adding parts of the process (queues). In turn, this has a direct impact on the area’s efficiency indicators.

Let’s move on to some actual results achieved by the International Purchasing area after the implementation of Lean/Agile practices and the Businessmap Software Platform as a workflow management solution.

## Key Results for Coordination and Flow Efficiency

Among the improvements that followed, post-implementation, Encoparts® highlighted 5 main points that proved most beneficial in the International Purchasing operations because of the Businessmap Software Platform implementation.

### 1. Reduction of complexity:

The company reported simplification of the entry of Sales Orders in the system, with the integration of emails sent by the Global Sales and Brazil Purchasing Areas directly on the workflow management platform. By standardizing data entry, Businessmap's solution ensures the integrity and history of Sales operations throughout the entire workflow.

### 2. Improved communication:

By using the “Comments” field on the Job Cards (work items) and visualizing the different technical data of the parts, including customer service requirements, the Work Team gained more accurate and complete information about what they needed to do.

### 3. Prioritization in customer service:

With the classes of services incorporated in the platform, the Encoparts Work Team acquired focus and rationality in the service, accelerating the treatment of more complex orders. This contributed to raising the level of service provided (SLA-OTIF).

### 4. Process automation and visibility:

The company achieved a clear breakdown of Sales Orders (through parent-child link relationships) based on suppliers, types of material, and geographic regions. The International Purchasing area now has a visual monitoring of demand fulfillment (“In Progress” column) until all Child Cards (lower-level work items) are delivered (“Done” column). Furthermore, they gained better control of notices and issue alerts on critical dates for order fulfillment (by implementing deadlines on Cards).

This was further accelerated through the capability to quickly view overdue Child Cards (by tracking their SLE – Service Level Expectation).

## 5. Metrics for performance evaluation/analysis of deviations/improvements

To have a central view where Encoparts could analyze the most crucial flow metrics across the respective teams, the company created a dashboard in the work management platform where they visualized all that information through widgets. As we saw earlier, the most significant source of Customer dissatisfaction is linked to meeting deadlines in fulfilling orders. In this way, the Area Coordination intends to closely monitor the Sales Order Flow Metrics and the Workflow Performance Summary, as shown in images 4, 5, and 6 below.

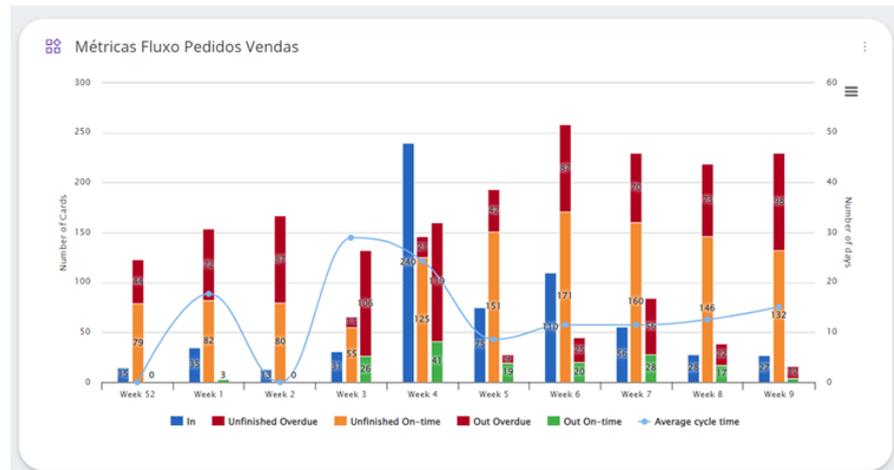


Image 4 – Flow Metrics for the Sales Orders

### The chart legend is expressed as follows:

**Column 1** - Blue - Entry of new orders/work cards in the System

**Column 2** - Orange In progress "On time" / Red - In progress Overdue

**Column 3** – Green – Completed “On time” / Red – Completed late

**Blue Line** – Average Cycle Time/number of closed cards per number of days



Image 5 – Flow efficiency stats before the process improvements

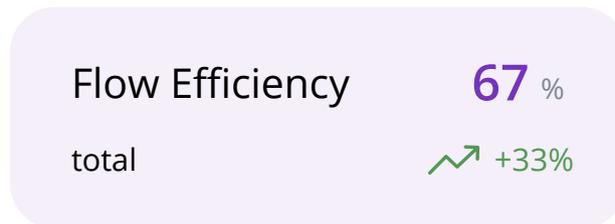


Image 6 – Flow efficiency stats after the implementation of Lean/Agile practices

### **\*Note\***

Images 5 and 6 are part of a premium feature in the platform called “Workflow Performance Summary”. Besides “Flow efficiency”, the LLC-CI / USA area uses the feature to visualize all their important workflow metrics and analyze whether they’re improving compared to previous periods. Those metrics include the following:

- **Lead Time** – Total time the customer waits for the order to be delivered.
- **Cycle Time** – Actual work-in-progress time for order delivery.
- **Block Time** – Time that something prevented the Team from working on a given task.
- **Throughput** – Measures the delivery speed of orders in a given period.
- **Flow efficiency** - Added value time x Queue time (waiting) required to complete a process.
- **Work in Process / WIP** – Total number of orders in process in a given period.

## Next Steps & Future Plans

In view of the recent implementation of the Businessmap Software Platform at Encoparts , the Coordination of the LLC-CI - USA area established the following priorities:

- Stimulate Team communication and integration - streamline workflow/order fulfillment.
- Understand the area's external dependencies regarding the flow of information and decisions involved.
- Build order fulfillment history/causes of delays/corrective actions.
- Define “business rules” for the automatic movement of work items (Job Cards).

The company also plans to integrate the storage operational processes (receipt/quality/dispatch) alongside an International-Procurement process inside the platform. The idea is to construct an even wider “value chain” and improve the entire customer service lifecycle.

## Key Takeaways

In conclusion, it is worth noting that the digitization of the order fulfillment process in the LLC-CI – USA area provided a systematic measurement of the work carried out by its team. Measurement is undoubtedly a fundamental condition for implanting a culture of continuous improvement, with Kaizen events, for example, already prepared.

The Area Coordinator and the team of collaborators are very excited about the visibility of the process and the agility in the flow of information that Businessmap's work management platform has provided to everyone involved in the International Purchasing operations.

In summary, just in the first two months of monitoring the Purchasing Process through the platform, the following improvements can be seen:

- **The stabilization of the Order Fulfillment Cycle Time** – an average of 152 cards/work items in 12 days
- **Flow Efficiency** – focus on activities that add value – 33% improvement
- **Accurate statistics of overdue cards:** Analysis of Deviations / Causes / Corrective and Preventive Actions
- **Transparent management of Lead Time and Cycle Time** – improvement in meeting deadlines.

## Testimonials



“As a result of the growth of the Encoparts Group, we were looking for a way to control new demands, making it as visual as possible. As Manager of the International Purchasing Area of the Encoparts Group, I had a hard time meeting project deadlines, understanding the department's capacity, and defining new strategies, since this process was done manually through spreadsheets.

With the help of Interflow Consultoria e Gestão de Negócios, we were able to implement the Kanban system in less than six months and achieve very satisfactory results.

The Businessmap Software Platform helped us to measure and quantify data transparently, making it visually easier and more practical. We achieved a 33% improvement in our process - now understanding the flow and being able to focus on the heat map and define new strategies assertively and effectively.”

Pedro Iago Ferro da Silva Risco Bert,  
International Purchasing Coordinator  
at Encoparts Group

“In my point of view, the most significant solution that Businessmap brought to Encoparts was to give transparency to our international purchasing process (sight management) as well as significantly reduce our difficulties in understanding flow problems due to the lack of centralization of information.”

Such problems are reflected in the failure to meet the deadlines agreed upon with the customer, impacting our OTIF goals (parts delivery performance within our supply chain). In some more critical cases, leading us to financial losses with order cancellations.”

Caio Grigorine,  
General manager at Grupo Encoparts

## About Businessmap



Businessmap is an enterprise-ready platform for agile project, product and portfolio management. It provides visibility across all teams, connects strategy with execution, and helps teams deliver faster. Built upon the idea that all processes evolve, Businessmap can easily adapt to changes in your organization, regardless of it being a start-up or a fortune 100 enterprise.

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