

# **LIT Boutique BPMN Process: In-Store Customer Transactions**

## **GR602: Group 1 Members + Contributions**

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## ***Background***

### ***Overview, Competitive Strategy***

LIT Boutique (LIT) is a women-led minority-owned fashion e-commerce company that offers chic womens' clothing, shoes, and accessories at medium to high price ranges. It is a regional brand that is headquartered in Boston, with brick-and-mortar stores located in decent-sized metropolitan areas in Massachusetts and 2 neighboring states. It has 2 stores in Boston, Massachusetts, specifically in Newbury and Hanover, 1 store in Newport, Rhode Island, and 1 store in Portsmouth, New Hampshire. These cities are popular tourist attractions, getting high customer traffic during the holiday seasons and throughout the year from locals in the area.

LIT Boutique is a medium to high-end boutique retailer. Its position is in between mass market discount retailers such as TJMaxx and luxury designer brands such as Gucci, with higher price ranges and product quality than mall brands such as Urban Outfitters. With this, it targets metropolitan women in their early twenties to their late forties. Carrying various clothing brands allows them to offer different styles to numerous segments from college students to working professionals. This is reinforced with their store locations in bustling New England cities. As a retailer, the company does not design or manufacture its clothing. In lieu of this, it forms partnerships with brands through biannual trade shows and wholesale vendor markets throughout the country. It purchases products at wholesale prices and re-sells them at marked-up retail prices for profit. It orders in bulk before every season, creating a schedule of deliveries for the season to get new merchandise biweekly. This ensures the availability of new products regularly to cater to clients in proximity to the stores and visit frequently, maintaining longer customer lifecycles.

### ***Link to Process***

In lieu of product manufacturing, LIT can specialize in its sales strategy and provide differentiation with its styling services, in which stylists (also called sales associates) help customers purchase event ensembles or curate new wardrobes. Stylists form close relations with clients, learning personal information regarding their style, brand and material preferences, and specific occasions in shopping visit purposes. With this unique service aspect, our group chose to examine in-store customer transactions. We wanted to explore how the physical stores style customers and process purchases, interested in how this additional service, its value proposition,

impacts a common process within the retail industry. Our contacts are North End branch manager Ami and team member Nicole, both with 3 years of experience at LIT (Romangsuriat).

## **Process Description**

### *SIPOC Analysis*

Like most retail chains, LIT Boutique relies on establishing relationships with brands and designers to keep their stores filled with the products. Once relationships are established, products are shipped to the warehouse before being sent to the company's four locations. Although these brands are the suppliers of LIT products, the sales associates are the suppliers of the service process in providing the styling services to customers. When a customer arrives, they are greeted with a more personal and attentive environment than they would receive at other retailers. This involves a dedicated and knowledgeable sales staff greeting every customer at the door and initiating an information intake process. The primary information gathered at this stage includes prior visits and shopping purposes, including specific events and style preferences, key information for the sales associates to create the best recommendations. These are the inputs, which are used to provide a service that will lead to customer purchases.

Based on the information provided, the sales associate begins guiding customers around the store. They continue to ask questions to refine customer taste as well as other important information such as price range. The goal of sales associates is to keep the experience as conversational as possible. As they guide customers around the store, they recommend items based on the information they have collected. Once the customer begins to find items they like, they are guided to the dressing room where final selections are made. After the customer has determined what items will be purchased, the checkout process begins. Checkout utilizes the Shopify customer database, and is a multistep process where the sales associates collect a final set of data. For returning customers, their email is inputted to find their account. For new customers, they are asked if they would like to join the LIT Boutique mailing list. Once this step is completed, the process ends with the orders being packed into LIT branded bags and customer payments processed on Shopify, also a point-of-sale terminal. The resultant outputs are completed customer purchases and sale receipts. With new customers, LIT is able to gain additional mailing addresses for sales and other promotional material.

The primary customers of LIT are those who frequently shop in the North End. While the area was primarily known for its Italian cuisine, there has been a recent surge in retail presence, especially fashion retailers. With its higher priced merchandise, LIT shoppers are higher earners on average. These customers make up a loyal consumer base who return to the store on a regular basis as new inventory arrives. The shop also benefits from walk-in traffic who often see the storefront and an item catches their eye, and tourists visiting the area.

### *Process Objective*

As a retail store, the primary purpose of LIT's north end branch is to increase sales to generate store revenues. With the in-store customer sales process that we are focusing on, there are two throughputs that the store can maximize; the number of customer transactions or the number of products sold in each transaction. Given the nature of the sales process and the constraints of the project, we considered the first option and focused on how the sales process could maximize in-store customer purchases.

### *Additional Process Design Elements*

Various resources are required to fulfill this process, including the store employees or sales associates. During a slow retail day, there are 3 employees working in the store; one senior sales associate who is the acting store manager working the entire day, and two junior sales associates working the opening and closing shifts respectively. The fitting rooms are resources as well, in which the customers use to try on items of interest, a step that takes a significant amount of time. Packing supplies are also present which are stored in bulk in the storage room, hence it is unnecessary to consider restocking for this process, an activity that is generally done biweekly.

The flow unit for this process is the daily number of transactions and revenue earned. Its supporting information structure is similar to the process inputs; information on customer styles, preferences, and past purchases. It has technology architecture with Shopify, LIT's customer, sales, and inventory database, also acting as a point-of-sale system to process payments.

### *Data Collection*

To collect the data required for our process analysis, Nicole met with Ami to discuss the process details and other metrics that would be inputted into the simulation. They met in the

store during opening hours while Ami was on break. After much discussion and consulting other employees that were present at the store, Nicole and Ami determined the average percentages of the decision points and re-created the process in real-time to determine the approximate length of each process step. Data collection was done in this manner as LIT Boutique is a relatively small company that does not keep track of the aforementioned metrics. As Nicole and Ami both have 3 years of experience working in this company, this method was therefore the most reliable way of obtaining this information. The data collected can be found in the Appendix.

### ***Problem Identification***

#### **Key Problems**

LIT Boutique faces pivotal process-related challenges that impact the store's productivity, quality, and responsiveness. Delving into the symptoms will help uncover the implications on the organization's performance. One of its symptoms include a small throughput during slow retail days, which includes Mondays, Tuesdays, and rainy days. During these days, the store witnesses a dearth of customer traffic, leading to diminished sales volumes and customer transactions. Although the low throughput can be attributed to low traffic, the question remains whether this is also caused by process ineffectiveness. It could be the case that the sales process is ineffective in providing good quality service to the limited customers who walk into the store, preventing potential sales from being converted into actual ones. Another symptom includes low employee utilization and productivity. During the slow days, the company experiences reduced customer flow, causing excess idle time as the employees have more time without customers to support. This could impact their ability to contribute to store operations effectively and impact morale.

#### **Proposal Improvement: Slow Retail Days & Impact to AS-IS Model**

As aforementioned, we narrowed down the process to focus on slow retail days. Our initial proposal highlighted our interest in the company's sales process because of the unique styling service. However this process has significant variety in terms of customer traffic and customer transactions, which presented a potential problem in furthering our project. To resolve this, we decided to focus on slow days for a less complex and more defined process and related data. It is also because the company's current problem is the relatively small number of sales during these days. It has no issues with process efficiency during busy days, and we wanted to

explore a relevant issue that the company faces. With the slow store traffic, employees must make better item recommendations to increase sales. This narrowed focus of slow days influenced certain steps in the AS-IS process. With the slow traffic, there is little overlap between the sales associates and the customers. Sales associates often work with five customers simultaneously during a busier day, however they can instead focus on one or two customers at a time. This creates a more streamlined process to model and analyze.

## ***Process Analysis***

### ***Qualitative & Quantitative Analysis, Root Causes***

The main issue at hand is the lack of steady traffic during slow retail days. These are days where people are busy with work during the start of the week or would prefer to stay indoors because of bad weather. This is a concurrent issue that the retail industry faces, an external factor regarding customers' working lifestyles and environmental factors that is difficult to address. With this, several problems are generated relating to the in-store sales process. First, sales revenues are severely impacted, which in turn affects profits, funds for purchasing new products, employee bonuses, and more. Second, without customers to cater to in the store, employee utilization becomes low during these days. Third, there is resultant poor resource allocation from keeping stores open despite low traffic. The labor costs could be greater than the revenues earned, causing working hours to be cut to avoid the overallocation of resources, a poor outcome for retail workers who work minimum wage and are not earning as much as they would like.

For LIT, slow traffic means obtaining two to three customers each hour, in contrast to the ten per hour that they see on the weekends. As each store is located in a popular tourist area, it is store policy to have at least two employees working at a time. There must always be a senior employee and a junior employee in the store, except the half hour that a senior employee is on break. This is done for employee safety and theft prevention. However, this keeps employee utilization and productivity low. Store employees cannot influence customer traffic; this is the role of the marketing team who uses social media and the company website to do so. This job allocation is ineffective during slow days. Store employees can only cater to the small number of customers in the store, keeping them interested and preventing them from leaving after a few minutes of browsing. They can only focus on providing quality styling services, making the right contact points at the right times, and the right recommendations.

### AS-IS Model

To evaluate the process and create recommendations for improvement, we created an AS-IS process model and simulated it using the software Signavio. The model is uploaded in this submission as a separate attachment. We have a start point with the customer entering the store, and four end points in which the customer leaves the store with various outcomes. These were kept separate for customers who were regulars and those who were new, and for those who made purchases and those who did not, as we wanted to obtain metrics for each result. We added three pools for each process agent; the senior employee, the junior employee, and the fitting room. We treated the fitting room as an agent, despite the customer doing the action and the fitting room being a physical resource. This is because there is a step in which the customer is trying items on, that requires capturing time for and could not be in a separate pool for.

The first few steps for the process include having the senior employee greet the customer and determine whether they are a regular or a newcomer. Senior employees work with regular customers as they are more familiar with their preferences and past purchases, whereas junior employees work with new customers, their chance to build regular clients for the company. The employee would then have a short conversation with the customers or observe which areas or products they appear interested in. Based on the results of these two steps, the employee would make recommendations to the customer and assist them in the fitting rooms and in the checkout process. The steps that the senior employee and junior employee take after assigning each employee to the customer is nearly identical. We kept these as separate process paths as they are handled by different agents and led to different outcomes that we wanted separate metrics on.

### Simulation Setup

After creating the process model, we simulated it on the software Signavio. We added information based on the data that we collected. As we focused on slow retail days, we had 3 days for store operations a week; Mondays, Tuesdays, and Wednesdays which we interpret as rainy days. The store is open from 11 to 6 during these days, however employees arrive half an hour before and stay half an hour afterwards for opening and closing procedures. There is one senior employee that works the entirety of that day, a junior employee that works an opening shift, and a junior employee that works a closing shift. There is an hour of overlap in between these two shifts, to provide the senior employee with time to take a half an hour break without

problems. This break was not included in the simulation. In reality, this break is taken when there are no customers in the store, and on the off chance that a customer enters, a junior employee can take over. After several trials, we noticed that incorporating this break created little to no impact on simulation results, and decided to remove it to keep the model simple.

We included an average frequency of two to three customers walking in per hour, as well as the time taken for each step and the decision point percentages. We added a normal distribution for the steps in which the employee is giving item recommendations and the customer trying items on, and in reality, there is a lot of variability in this time. The time taken for all steps for both junior and senior employees are generally the same, except for 2 steps. The junior employee takes a shorter time to recommend items as they are not as experienced and generally find less items to recommend, whereas the senior employee will take multiple laps around the store and find more items to recommend. The junior employee takes a longer time to return items as they are not as familiar with the merchandise layout of the store. They are not in the store as often and the store layout gets rearranged every so often. We used the same percentages for regular customers and new customers coming out of the fitting room as the ones regular customers and new customers who walked into the store.

### *Simulation Report Features to Evaluate*

In assessing the LIT Boutique's in-store customer sales process, several crucial features warrant evaluation to enhance the overall efficiency and effectiveness of the retail operation. We determined several to examine from the Excel report that the Signavio simulation data generated. Firstly, Resource Consumption is a pivotal aspect to consider as it determines employee utilization during slow retail days. With one senior sales associate and two junior sales associates, understanding how tasks and responsibilities are allocated throughout the day is essential to individual productivity. An additional benefit of this is evaluating how the fitting room resource is utilized, to see if there is an excess or lack of them for the process. Secondly, Cycle Time is another area of focus. The duration customers spend in the store significantly impacts the likelihood of purchases. Evaluating and potentially increasing cycle time through strategic process adjustments can positively influence both customer engagement and sales outcomes. Thirdly, analyzing Waiting Instances is imperative. Instances where customers experience delays between steps can signal potential bottlenecks. A well-optimized process



should aim to minimize waiting times, providing a smoother shopping experience. Lastly, collecting data on the various process exit points is fundamental by. Understanding the conversion rates and potential reasons behind two customer segments leaving without making purchases is crucial for making informed decisions and refining the sales process.

### *Good & Bad Process Elements*

The model of LIT Boutique's in-store customer sales process demonstrates commendable aspects as well as areas that require improvement. On a positive note, the model effectively captures the sequencing and timing of activities, ensuring a logical and smooth flow throughout the process. It also successfully reflects process profitability in generating over \$2000 a day, providing a quantitative measure of success. However, there are notable areas of concern. The model reveals a contradiction wherein the process achieves financial success, however low resource utilization persists due to a safety policy requiring a specific number of employees in the store at all times. This discrepancy is indicative of a potential imbalance between financial success and operational efficiency. Furthermore, the model highlights that five customers daily leave without making purchases, emphasizing a missed opportunity for conversion. Addressing these issues and refining the model to align with both financial objectives and operational effectiveness is essential for the overall improvement of the in-store sales process.

### *Recommendations for Operational Improvement*

After modeling and analyzing the simulation results of LIT's customer transaction process, we concluded that enhancing the in-store customer experience demands a strategic approach. This requires streamlining the purchasing process, elevating engagement, and enticing buyers. To do so, we ideated three solutions that LIT could implement for process enhancement.

Firstly, to address the low utilization of the employees in this process, we recognized that assigning additional unrelated tasks can ensure that they remain productive and contribute to the store's overall functionality. These tasks would include inventory management, store cleaning, and promotional tasks including having senior employees texting their regulars about merchandise present at the store. These tasks contribute to the store's operational success but are often overlooked as working with the currently present customers take precedence. It is crucial

that these efforts do not detract the employees from their primary focus of serving the customer, which is why they can be conducted during slower times without the presence of customers.

Our second solution involves organizing and collaborating with neighboring stores to host events during the slow days in an effort to boost foot traffic and sales. Events such as themed promotions, joint sales, workshops, or even pop-up stores in either LIT's stores or in the other company's stores could be an effective way to collectively increase engagement. This would be done during Mondays, Tuesdays, and forecasted rainy days. Not only would these events attract the attention of LIT's existing customer base, but it has the potential to draw in potential new customers intrigued by the unique offerings of a collective retail experience. This initiative would further foster a sense of community amongst the local stores, potentially leading to long-term partnerships and increased brand visibility.

Lastly, due to the low utilization of the 4 fitting rooms in the store, we recommend that an innovative use of the fitting rooms as extra merchandise space could be a novel way to maximize the store's physical layout. We recommend that one or two fitting rooms would be redesigned into extra display space where the store can exhibit a wider array of products for customers to peruse. This solution not only increases the visibility of merchandise, but also provides a greater browsing experience. Given that most customers enter the fitting rooms during their visits, placing less popular items in the first fitting room ensures that the customers have the opportunity to see them on their way to try items on.

By implementing these strategies effectively through continuous assessment and feedback, the store can elevate its appeal, foster customer engagement, and ultimately drive sales in a dynamic retail landscape. However, it is crucial that the primary goal of enhancing customer experience must not be compromised to ensure effective and beneficial change.

#### Assumptions & Limitation in Analysis

Throughout this project, we made several assumptions and encountered limitations in our analysis, one of which includes the variability in process durations. In the sales process, there is a large range in the time between a customer walking into the store and walking out without a purchase. It can be as short as five minutes or as long as half an hour. We addressed this with a normal distribution in the simulation, however this might not be accurate in reality. Moreover, the numbers in the simulation are estimates. As aforementioned, LIT is a small company that does not invest heavily in analytics. It does not track real data with process durations and

decision point percentages, and there is limited information regarding sales conversions. As such, our analysis is not 100% accurate and can be improved with more reliable data.

## ***Conclusion***

In a comprehensive exploration of LIT Boutique's in-store operations, a unique boutique retailer providing styling services as a brand differentiator, critical insights surfaced regarding the challenges affecting its process of handling in-store customer transactions. A challenge revolved around slow retail days which impacts traffic and sales, reducing employee utilization and resource allocation effectiveness. The AS-IS model emphasized inefficiencies in customer engagement, necessitating strategic interventions for improvement. Our analysis delved into key areas including resource consumption, cycle time, waiting instances, and process outcomes, pinpointing crucial opportunities for enhancement. Despite the store's daily profitability exceeding \$2000, low resource utilization and missed conversion opportunities highlighted operational ineffectiveness. The five customers that leave without purchases on a daily basis indicate a need for improved engagement and conversion. Thus, it is crucial to address these low points for optimization in aligning financial goals with operational efficiency.

Our recommendations aim to address these identified challenges comprehensively, involving solutions relating to resource reallocation and influencing store traffic. Optimal employee utilization can be achieved by assigning tasks beyond direct customer interactions, such as inventory management and customer outreach. Collaborative events with neighboring stores can boost foot traffic and foster a sense of community, attracting new customers and retaining existing ones. Additionally, reimagining fitting rooms as extra display spaces can optimize store layout to enhance product visibility. Implementing these strategies could impact store performance during slow days, a common retail issue, to ultimately enhance engagement, drive sales, and create a more attractive shopping experience. Continuous assessment and feedback loops will be crucial in evaluating the efficacy of these changes for long-term success.

Ultimately, our actionable solutions are rooted in process refinement and customer-centric approaches. These recommendations aim to overcome current obstacles, creating a more engaging and profitable retail environment. Maintaining a focus on the consumers is pivotal for sustained growth within the competitive retail landscape, ensuring that the store remains adaptable and appealing to its clientele.

## *Appendix*

### *Appendix 1: Store and Employee Information*

<b>Daily Customer Traffic</b>	2-3 per hr
<b>Store Hours</b>	11am-7pm
<b>Employee Hours</b>	(takes 30mins for opening/closing procedures)
<b>Senior Employee</b>	10:30am - 7:30pm (30 min break during 1hr overlap of junior shifts)
<b>Junior Employee</b>	10:30am - 3:30pm (opening shift)
	2:30pm - 7:30pm (closing shift)
<b>Employee Wages</b>	\$22/hr (senior), \$18 per hr (junior)

### *Appendix 2: Task Execution Times*

<b>Task</b>	Greet Customer	Hand off to junior employee	Ask if looking for something specific	Ask questions on what they are looking for	Pay attention to items picked up	Recommend Items	Bring Items to Waiting Rack
<b>Duration</b>	10s	15s	10s	3m	10m	15m	30s
<b>Task</b>	Put Items Back	Determine if customer wants to try on	Lead to fitting room	Customer tries on	Check in on customer	Checkout/ Payment	Package Order, Hand to Customer
<b>Duration</b>	5-25m (senior) 1-21m (junior)	10s	30s	5-45m	3m	10m	2m

### *Appendix 3: Decision Points*

<b>Decision</b>	<b>% Yes</b>	<b>% No</b>
Customer looking for something specific?	30%	70%
Customer likes suggestions?	70%	30%
Customer have items they are interested in?	65%	35%
Customer want to try on?	80%	20%
Customer Type	50% regular	50% new