

ZIBELINE INTERNATIONAL™  
PUBLISHING

ISSN: 2976-3193 (Online)

CODEN: CSMJ CZ

# Corporate Sustainable Management Journal (CSMJ)

DOI: <http://doi.org/10.26480/csmj.02.2023.67.74>

## REVIEW ARTICLE

# FACILITY LAYOUT EVALUATION IN ARGAO PUBLIC MARKET CEBU, PHILIPPINES

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## ARTICLE DETAILS

### Article History:

Received 01 April 2023

Revised 13 May 2023

Accepted 24 June 2023

Available online 26 June 2023

## ABSTRACT

The study assessed the design of the Argao Public Market's current facilities as well as the various aspects taken into account when developing a new market layout in an effort to address the market's deteriorating conditions, which include disorganized stall arrangements, a lack of parking spaces for cars, poor policy implementation, and a lack of supporting facilities. The new layout design was created by the researchers using the descriptive quantitative design and a research tool that utilized the Systematic Layout Planning Method and an inferential approach. The statistical analysis of the data revealed that Argao Public Market requires redesign due to poor layout which didn't adhere to the standards for market construction. Based on the study's findings, it showed that sectioning is required for most of the areas were not adequately divided based on the type of items being sold. Moreover, it was found that both incorrectly organized stalls and improperly filled spaces add to traffic congestion. As a result, the study's proposal for a new market layout aid in resolving problems with the current facility, and to handle a high volume of market visitors given that Argao has an increasing population of 78,187 as per 2020 Population Census for Argao, Cebu, Philippines.

## KEY WORDS

Congestion, lay outing, optimization, planning, sectioning

## 1. INTRODUCTION

Public markets in the Philippines are frequently described as chaotic, disorderly, and filthy, with a terrible odor. These deteriorating conditions and a lack of supporting facilities result in a sharp drop in patronage at public markets (Nedic, 2012). According to the American Psychological Association (2012), many sellers are breaking government restrictions in the public market, as most vendors presently sell outside the market, which is prohibited under the IRR. Demirtas and Tuzkaya (2012) emphasizing that the structure of a public market should be viewed as a long-term plan, that it could suit the needs of ten or twenty years from now.

A Public Market is a year-round collection of owner-operated shops, stalls, and/or day tables that is deliberately constructed, intentional, and diverse. The objective of a Public Market is to serve as a public function, as well as showcasing a community's distinctive character and culture (Dela Cruz, 2014). A well-designed store layout can contribute to a pleasant shopping environment, resulting in the type of buying behavior that a merchant desire. However, many retailers today structure their store layouts on traditional and repetitious patterns, resulting in obsolete store layouts (Juel-Jacobsen, 2015). The placement of wholesalers, items, and vehicles in a public market is critical for the most effective layout prompting the construction of modernized supermarkets and hypermarkets that are fully air conditioned, promoting convenience shopping and resulting in its rapid popularity (Pride & Ferrell, 2016).

Base on the reviewed scientific journals, there are insufficient studies about facility layout in public markets, particularly in Argao, Cebu, Philippines. As researchers, we are challenged and encouraged to help in assessing and improving the situation of the Public Market. As observed,

the current layout of the Argao Public Market appears to be in need of restoration and re-designing due to congestion and traffic. The study aims to evaluate the facility layout of the Argao Public Market as basis for optimization, using systematic layout planning by Prince (2020).

## 2. REVIEW OF RELATED LITERATURE

### 2.1 Market Layout

According to Demirtas and Tuzkaya (2012), because numerous clients enter and exit the fruits and vegetables hall, which is a type of huge distribution hub, it has an impact on urban traffic. The poorly designed fruits and vegetable halls have an impact on the neighborhood and city's freight transit. Customer happiness, environmental damage, additional costs, and lost time are all negatively impacted by a negligently built hall. A distribution center's layout should be thought of as a long-term investment. It should not only give wholesalers, but also items and vehicles in a hall. As a result, we solve the mathematical model of a layout based on allocation to assure the optimal coordination between clients, vehicles, and wholesalers. As a result, we solve the mathematical model of a layout based on allocation to assure the optimal coordination between clients, vehicles, and wholesalers.

Demirtas and Tuzkaya went on to say that the management of the fruits and vegetables hall is crucial for traffic, consumer perception, environmental impact, additional costs, and time consumption. As a result, strategic planning for the arrangement of fruit and vegetable halls is required. According to the findings of the literature review, there is insufficient research on market layout. Public Markets have gotten a lot of attention, but it is given less attention. The majority of studies have focused on minimizing material handling costs. On the other hand, multi-objective model that integrates investment costs, product storage costs

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DOI:  
[10.26480/csmj.02.2023.67.74](https://doi.org/10.26480/csmj.02.2023.67.74)

with material handling costs, and storage quality criteria has been neglected.

Following conversations with experts in the field of public markets, it has been determined that the layout of these halls is strategically essential and must be considered. An upgrade to the hall's layout will have a significant impact on market traffic. Inventory, shipping, capacity plans, and material flows are carefully analyzed while determining the structure of market facilities.

## 2.2 Market Infrastructure and Design

In the community, public face of a market - the construction of a welcoming, safe, and dynamic environment attracts a diverse group of people public spaces are effective places for people to mingle. Markets can become a community's heart and soul, its common ground, and a gathering place where individuals can readily interact and where other community events can take place. (RECPHEC, 2016).

## 2.3 Market Infrastructures

When only one person has access to the market, traffic congestion is common. The market authority normally prefers operating entrance and exit to control admission to maximize money, as entry gates serve as revenue checkpoints generation. Congestion is exacerbated if the internal lead-in length is too long. Vehicle activity (parking, loading, and unloading) is limited due to the short access road. The actions on the site are not strictly regulated. Congestion, though, can be a problem. If traffic patterns are managed in a one-way system, and market trading is restricted, hours are altered or extended. However, it will still be dependent on the management of internal vehicular traffic management. (RECPHEC, 2016).

## 2.4 Market Design

The physical design of every market has a significant impact on its efficiency and success. The market layout must meet the following goals: An unencumbered traffic flow pattern and efficient parking management; Sufficient parking facilities are available; Highest opportunity for engagement between market participants; The potential for optimal pricing formation; Availability and full use of support facilities; To maintain proper preparations for the exhibition and sale of produce; Deliver high-quality results; and A productive produce handling system (such as by pallets and forklifts). (RECPHEC, 2016).

## 2.5 In-Store Layout Design

The layout of the store is one of the most important considerations for any merchant. As a believes that well-established concepts of urban retail designs are very significant for retail managers, particularly for supermarkets and larger retail establishments, in his research on pathway design (Juel-Jacobsen, 2015).

According to the store layout has an impact on both the shopping atmosphere and the shopping behavior of customers (Lewison, 1994). A well-designed store layout can contribute to a pleasant shopping environment, resulting in the type of buying behavior that a merchant desire. However, many retailers today structure their store layouts on traditional and repetitious patterns, resulting in obsolete store layouts (Juel-Jacobsen, 2015).

Another key part of shop architecture that retailers should think about is product placement on shelves. Efficient shelf space allocation management not only reduces the financial risks of empty product shelves, but it can also contribute to increased consumer pleasure, improved customer relationships, and, most crucially, increased product sales (Hwang et al., 2005; Fancher, 1991).

## 2.6 Layout Planning and Analysis

According to Studios Guys' article, there are primarily two categories of facility layout challenges: static facility layout problems and dynamic facility layout problems. A static layout facility problem involves determining the physical arrangement of industrial equipment and machinery within an available facility. During the planning stage, the flows of materials between different work centers, as well as the product demand, are static, fixed, or remain unchanging.

The movement of materials among work centers in a dynamic facility layout challenge, on the other hand, changes during the planning phase. Though there is a stumbling block in the form of pre-existing structures and services. The issue here is shifting an existing company's employees,

products, and facilities to a new plant that already has a basic layout. This necessitates a change in planning procedures or methods from the current state of affairs.

## 2.7 Markets in Modernization

According to 'markets' are commonly thought of in terms of their institutional meaning in the history and theorization of the types of cities that arose all over the world in the aftermath of economic and political revolutions in the nineteenth and twentieth centuries (Jon S. et al., 2015). Abstract conceptions of trade and exchange, whether in commodities, labor, cash, or shares, are referred to as abstract notions of commerce and exchange.

They are rarely studied as real, physical marketplaces within cities; as entities that occupy space; as entities that function in changing production and distribution chains; and as entities that evolve as a result of changes in wholesaling, retailing, consumption, and the political regulation of urban space, society, and economy. Indeed, after modernization took hold of urban landscapes all across the world, many contend that 'marketplaces' in this geographically bounded and physical sense ceased to be important.

Markets remained a lively element of many different towns and cities around the world. Any attempt to provide a universal description of the marketplace quickly becomes entangled in time and space specificities: market manifestations as real urban locations of interaction between buyers and sellers are simply too diverse and place-specific. In this issue, Victoria Kelley describes markets as having to do with buyers, sellers, commodities, location, and time (see Kelley in this volume).

## 2.8 Public Perception

It has stressed that the characteristics of a successful physical planning of a public market include an orderly layout and the building structures themselves (Md Sayuti Ishak1 and Nur Ain Che Aziz1, 2016). The local society would find it challenging to navigate around the store area while getting their daily necessities if the layout was disorderly. These occur because the vendors do not have enough space to store their products, and one simple solution is to place their belongings on the floor nearby. Wooden structures make up some of the public market structures. It will degrade year after year.

Public markets are evolving on a daily basis in a variety of ways, such as in terms of structure design and the number of services offered. Because Malaysia is a developing country, a development in the industrial sector, as well as an increase in the population, has resulted in a new phase of residential areas and factories. According to the parts of Kviberg's market were separated into two, left and right, and both were surrounded by corridors and stalls (Hem Sommerstad., 2013).

The user had a pleasant experience at the public market because to its layout. As a result, facilities management planning should not be overlooked in the rush of building construction. Building and facilities management planning must be parallel before, during, and after construction to preserve the building's original condition and to ensure that the building's surroundings are always of good quality, safe, and healthy to all tenants or visitors.

## 3. THEORETICAL FRAMEWORK

This research is based on Richard Muther's Systematic Layout Planning Theory modified in his study "The Systematic Layout Pattern", and additional studies related to facility layout requirements by (Prince, 2020). SLP theory required a step-by-step consideration of the facility layout, from raw material storage to finished product dispatch. This strategy aided in the development of a new plant layout with improved process flow and efficient space usage. From inbound to outbound goods, the freight forwarding arrangement takes the same manner.

According to a framework of phases, a pattern of methods, and a set of rules for identifying, rating, and visualizing the elements and areas included in a plan comprise systematic layout planning (Prince, 2020). Each design is based on three fundamentals: Relationships - desired degree of connection, among other things. Space - the quantity, kind, and configuration of the items to be placed out. Adjustments - putting everything in the best possible order. Prince stated that regardless of the products, processes, or project scale, these are at the heart of each layout plan. The pattern's data input is the most important in a process, and can achieve a progressive flow through the areas involved by structuring the layout around the order and intensity of material movement.

The space available for each activity is then draped on the activity relationship diagram to create a Space Relationship Diagram. This is essentially a layout, but it is ineffective unless it is adjusted or manipulated to integrate with space and modifying considerations. As a result, a number of options, each of which must be tested against practical constraints such as space and modifying considerations: cost, safety and worker preference.

Researchers also based the study on the concepts of Market Facilities and Equipment on Implementing Rules and Regulations of Chapter IV "Markets and Abattoirs". In the year 1998, the Department of Health issued Implementation Rules and Regulations of Chapter IV Markets and Abattoirs of the Philippine Sanitation Code for Standardization, with the scope that the implementing rules and regulations shall apply to all markets, including food terminals, satellite markets/talipapa, wet markets, dry markets, and other similar establishments operated by government agencies or instrumentalities, including corporations owned or controlled by the government, private organizations or enterprises, individuals or entities are all included.

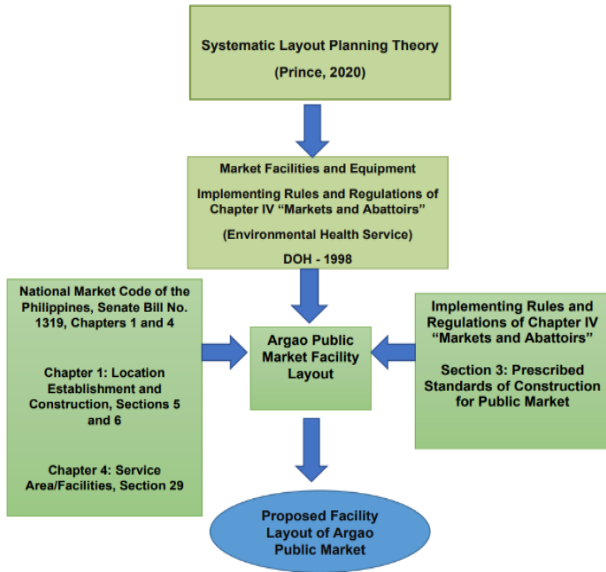


Figure 1: Theoretical Framework of the Study (Prince 2020)

4. METHODOLOGY

This research was carried out in Poblacion, Argao, Cebu, specifically in Argao Public Market (9.8819° N, 123.6010° E). An interview was conducted to the merchants and customers using unstructured questionnaire. The questionnaire was divided into two parts. The first part includes the demographic of the respondent. The second part include market experience as well as its perception on the situation of the market place. The questionnaire was employed to respondents including the market administrator/inspector and the municipal director of the engineering department. The number of customer entry were determined through observation technique wherein the number of market goers were identified within 30 minutes in each entry points, to justify congestion problem.



Figure 2: Map of the Research Environment

The study employed a mixed research technique that incorporated both quantitative and qualitative data collection and analysis. The inferential approach was also used to defined t-test value of people's entry in the market during lowest peak and highest peak days. The study also used the following formula:

4.1 Public Market Layout Analysis

The public market layout was analyzed using the following formula base from Prince (2020).

Area utilized by Equipment, Materials, Storage

Formula:

Area = L\* W

Where:

L = Length

W = Width

A. Sum of all Space Requirements

Formula:

Sum of all Space Requirements = Σ of all areas of each equipment and workflow processes

B. Activity and Space Relationship Closeness Rating

Table 1: Closeness Ratings, Activity, and Space Relationship	
CODE (Prince 2020)	Closeness Rating
A	Absolutely Necessary
E	Very Important
I	Important
O	Ordinary Closeness
U	Unnecessary
X	Avoid Closeness

5. RESULTS

5.1 Status of the current layout of Argao Public Market

5.1.1 Facility Demographics

The Argao Public Market is situated in Argao, Cebu, Philippines 6021. It was built more than a century ago. The public market currently covered an area of 11,507.83 square meters, had 243 stalls, and had thirteen entry points.

5.1.2 Site Development Plan



Figure 3: Argao Public Market Site Development Plan (Photo taken by Mary Grace Temeña)

5.2 Impact of the existing layout of the public market in Argao based on the following criteria:

5.2.1 Space Requirements

Argao Public Market current site comprised 31 dispersed sections with a total space of 8708.21 square meters and 18 pathways with a total area of

2799.62 square meters. The Argao Public Market covers an area of 11,507.83 square meters (1.150783 hectare). According to the study's findings, the stall, aisle, open space, and distance measurements at the Argao Public Market do not adhere to the IRR's guidelines. This might be the case because there are new tenants or market offenders who sell in the market with their own brought stalls but do not face the proper sanctions for their violations.

5.2.2 Activity and Space Relationship

The Activity and Relationship Diagram's Figure 4 showed which sections needed to be placed adjacent to one another. According to the findings, all areas that are directly related to food are close to one another, and the same is true for sections that are related to services. The connected portions that don't need to be close to one another are the ones that do not engage in similar activities or have no real commonalities.



Figure 4: Activity and Space Relationship Diagram

5.2.3 Internal and External Information of Argao Public Market

According to the calculations, the number of entries during the lowest peak increases by roughly 30% in the highest peak per 30 minutes, hour, and day. This indicates that there are more individuals on high peak days than on low peak days. This is because Sunday is recognized as a "tabo" day in the market, which means that there are more vendors selling on that particular day. They do not rent stalls inside the market, preferring instead to stay on the pavements, highways, and pathways. There are more people when there are more products. In Filipino culture, Sunday is also considered a shopping day.



Figure 5: Number of Entries during Lowest Peak (Friday) and Highest Peak (Sunday)

5.2.4 Lowest Peak and Highest Peak Determinant of the Most Utilized Entry Points

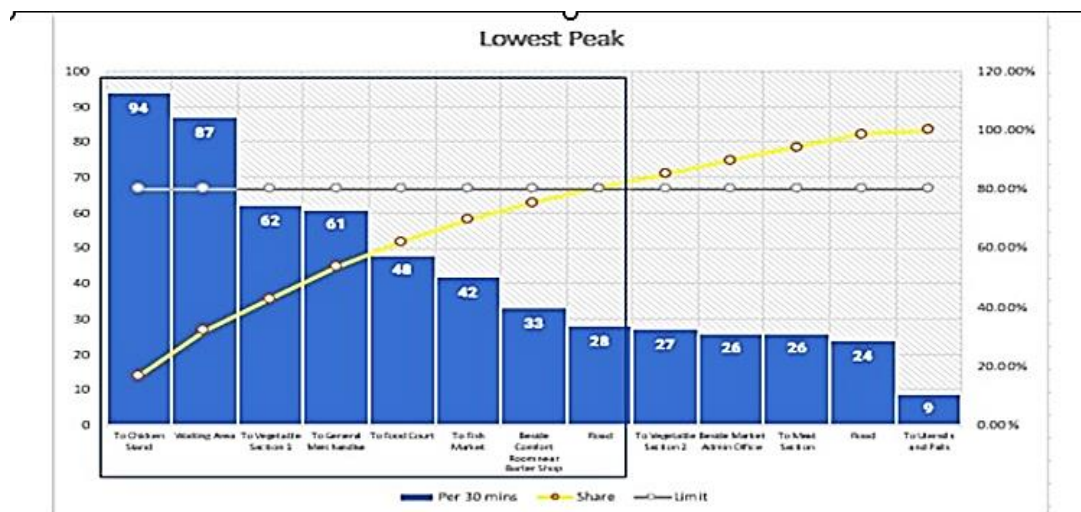


Figure 6: Lowest peak most utilized entry points

On the lowest peak (Friday), the most widely utilized entry point is Entrance 12, followed by Entrances 9, 13, 5, 11, 4, 8, and 10.

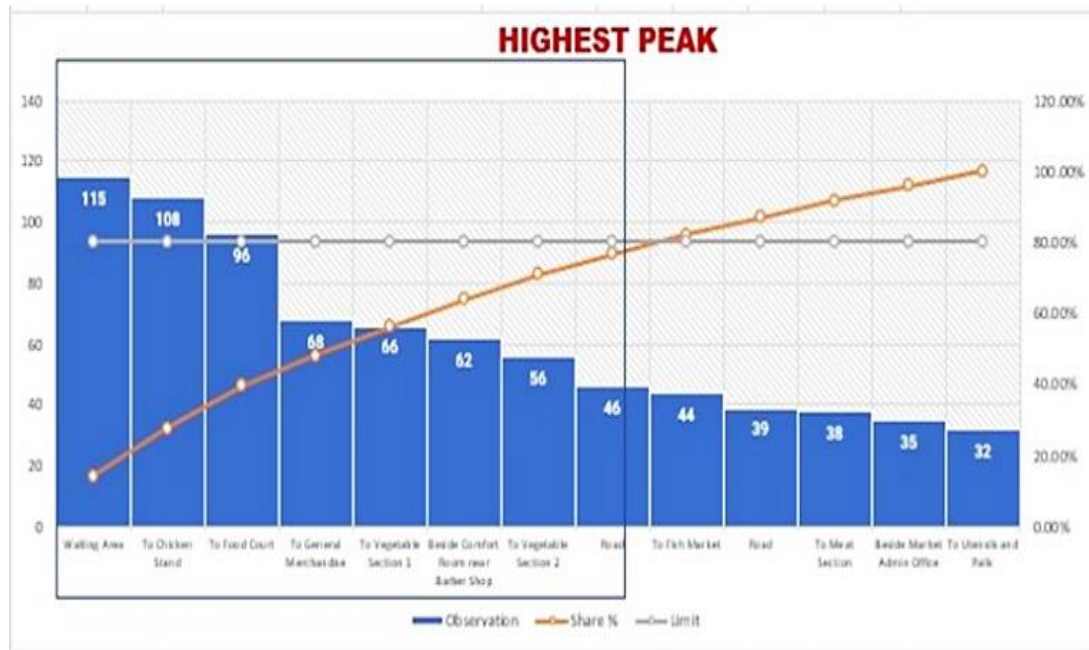


Figure 7: Highest peak most utilized entry points

On the highest peak (Sunday), Entrance 9 is the most popular access point, followed by Entrances 12, 11, 5, 1, 8, 13, and 10. These sections belongs to the intersecting line. As a result, these are the most actively used entry locations on both peak days, needing careful consideration throughout the suggested layout design.

These graphs depicted the main gates where the majority of people enter. During highest peak, these specific entry points contained the most access or entry.

### 5.3 Percentage of the Most Stayed Sections

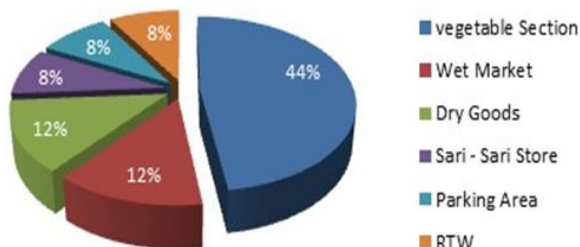


Figure 8: Percentage Illustration of the most stayed sections

Based on customer's time consumption and the sections present in the market, the vegetable section appears to be the most stayed, with customers spending more time in this section on both low and high peak days.

### 5.4 Safety Practices Applied in the Market

The results of the study revealed the main issues and worries of those who engage in everyday activities in the open market. Here are several examples:

- Curb bumps not properly highlighted;
- No warning signs for smoking and open flames;
- Number of renters allowed; and
- Proposed Policies and Strategies and Sanctions/Implementation Policy

Public markets are important resources for promoting and expanding local market prospects for small businesses. But far too frequently, flaws in their organizational design jeopardize the promise and expectation they made to the economy and the community. In this sense, it is crucial to establish a logical, practical, and pertinent leadership and governance structure right on. Public markets give the impression that they are easy to build and administer, but in reality, they require careful planning and

strong management in order to succeed immediately in terms of operations and, over time, become significant hubs for local growth and development.

### 5.5 Argao public market's status based on the 8 factors affecting plant layout

#### i. Man Factor

The Argao Public Market has adequate lighting but poor ventilation, and some of the facilities are inoperable due to a lack of appropriate door locks. It has congested areas that might lead to tripping and slipping hazards, particularly when it rains. Delivery workers delivering supplies from the outside to inside the market may experience delays due to congested lanes. Some electronic wiring is done incorrectly, resulting in spaghetti wires, which can cause troubleshooting issues.

#### ii. Material Factor

One of the various inputs that needs to be handled with attention at Argao Public Market is the volume of things supplied in the area for stallholders.

#### iii. Machinery Factor

A coconut grinder, a meat grinder, and a sharpening for sickle, saw, knife, and machete are among the machines or equipment at Argao Public Market, all of which should be placed in a safe zone to protect the safety of customers and the operator.

#### iv. Movement Factor

The existing mobility factor does not fully utilize the entire area of the Argao Public Market, according to their operations. There are restricting issues such as a sector of the Public Market that is underutilized and underserved while it might be used by other sections to expand their stall space.

#### v. Waiting Factor

Because some commodities can't be carried promptly to merchants owing to traffic on the roadside, especially during peak season, the goods that arrived in the Public Market have a waiting factor.

#### vi. Service Factor

When an emergency strikes, some safety materials such as fire extinguishers, emergency lights, and fire exits are unavailable.

#### vii. Flexibility Factor

Argao Public Market's workflow zones are flexible despite the enormous amounts of goods to be moved since delivery men use heavy duty trolleys for easy movement.

5.6 T-test Analysis

Table 2: T-test Analysis: Two Sample Assuming Unequal Variances

	Low	High
Mean	43.61538462	61.92307692
Variance	659.9230769	790.2435897
Observations	13	13
Hypothesized Mean Difference	0	
Df	24	
t Stat	-1.73339014	
P(T<=t) one-tail	0.047928781	
t Critical one-tail	1.71088208	
<b>P(T&lt;=t) two-tail</b>	<b>0.095857563</b>	
t Critical two-tail	2.063898562	

Null Hypothesis: There is no significant difference on the number of people's entry in the market during lowest peak and highest peak days.

Since the resulted p-value is (0.095857563) is greater than the level of significance which is (0.05), null hypothesis is accepted.

Therefore, there is no significant difference on the number of people's entry in the market during lowest peak and highest peak days. The number of people entering the market does not fluctuate depending on the day; if the number of people entering the market increases at the lowest peak, the number of people entering the market at the greatest peak increases as well.

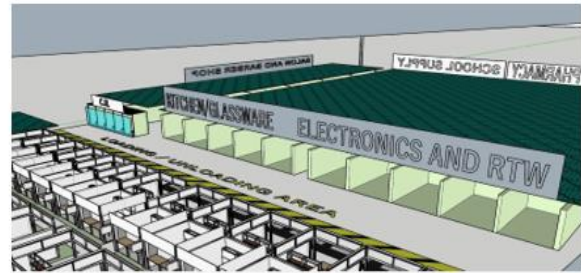
6. OUTPUT OF THE STUDY

6.1 Proposed Facility Layout of Argao Public Market

This section presented the researcher's suggested facility layout design for the Argao Public Market in order to enhance the area's work flow and ensure adequate departmental segmentation. Also, the researchers used Sketchup to create a visual representation of the suggested facility layout. The arrangements of various stalls were presented in the figure below.



Enclose to this section are the fried chicken and the public markets food stall area.



Enclose to this section are the kitchen/glass wares, electronics and RTW with a total of 54 stalls.



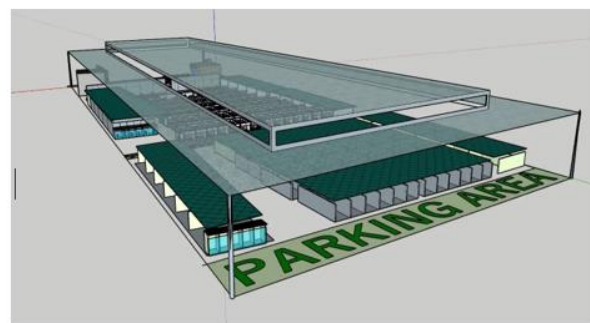
In this section are the fish meat and dry good section compose of 20 stalls for dried fish vendors while 48 fish and meat stalls.



Food Court and Karenderya compose of 20 stalls located at the left wing of the public market.



In this section are the Sari-Sari store and Vegetable and Fruit Section compose of 48 stalls.



This is the parking space of the public market located at the main entrance of the public market facing the highway.



Overall view of the proposed facility layout of Argao Public Market in Argao, Cebu, Philippines, with a total number 18 organized section.

**Figure 9:** Proposed Facility Layout (Visual Representation)

## 6.2 Proposed Rental Fee of the New Argao Public Market (in PHP)

**Table 3:** Proposed Rental Fee Government officials who violate the regulations and fail to put them into effect face sanctions.

SECTION	No. of Stalls	Rental Fee Monthly	Total Collection of Rental Fee per Month	Yearly Rental
Sari-sari Store	28	600	16,800.00	201,600.00
Vegetable and Fruit Section	48	600	28,800.00	345,600.00
Meat Section	24	1,000	24,000.00	288,000.00
Fish Section	24	1,000	24,000.00	288,000.00
Dried Fish Section	18	600	10,800.00	129,600.00
General Merchandise, Dry Goods	20	1,500	30,000.00	360,000.00
Utensils, Glassware	20	600	12,000.00	144,000.00
Pharmacy	4	1,000	4,000.00	48,000.00
RTW	34	600	20,400.00	244,800.00
Tailoring Shop	6	600	3,600.00	43,200.00
Barbershop, Salon	12	1,000	12,000.00	144,000.00
Clinic	2	1,500	3,000.00	36,000.00
School Supplies	6	800	4,800.00	57,600.00
Accessories, Fashion Supplies	10	600	6,000.00	72,000.00
Tool Sharpening Section	5	800	4,000.00	48,000.00
Food Court, Carenderia	20	1,000	20,000.00	240,000.00
Chicken Stalls	10	600	6,000.00	72,000.00
Bakery	1	1,000	1,000.00	12,000.00
			<b>231,200.00</b>	<b>2,774,400.00</b>

## 7. DISCUSSION

According to a poorly planned space has a negative impact on customer satisfaction, environmental harm, additional expense, and lost time (Demirtas and Tuzkaya, 2012). A public market's design should be taken into consideration as a long-term plan. It should provide not only today's demand but also next ten- or twenty-year's needs. The customer's experience in the store is greatly influenced by the store layout, which is a crucial component of the store atmosphere. The search, purchase, consumption, and after-sales phases of the customer experience are influenced by the layout and design of the store. The allocations of the wholesalers, items and vehicles in a public market are extremely necessary for the most appropriate arrangement.

In the current layout of Argao Public Market, there are some factors that does not meet with the requirements set forth by the IRR Prescribed Standards of Construction for Public Markets. Even with Dirk Duchscherer's list of market safety practices, it is clear that the public market does not adhere to the majority of necessary safety practices. The existing setup has to be modified because it is disorganized. The local authority of Argao should consider an effective and well-organized facility layout as part of a long-term plan to address serious problems with the current facility and accommodate market visitors who could make buying and selling easier and give them convenience in their operations. To address these issues, the local authority of Argao should consider an effective and well-organized facility layout as part of a long-term plan.

For public markets, a scale measuring service convenience can be created and used to enhance store design for facility layout planning, systematic layout planning (SLP) is frequently used in the manufacturing sector. Public Markets have not yet adopted it, though (Inglay, 2010). The proposed facility design is based on the IRR standard for Constructions of Public Markets and Systematic Layout Planning. Calculations showed that the number of entries during the lowest peak rises by 30% during the highest peak. This suggests that there are more people on days with high

peak traffic than on days with low peak traffic. The top 8 entry or access points utilized by market visitors on both low and high peak days were also disclosed by the data acquired as shown in figure 5, indicating careful attention throughout the suggested layout design. Also, data from figure 6 showed the proportion of customers that mostly stayed in the market's vegetable section, which had the highest percent rate of 44%.

Moreover, additional new amenities added by the researchers include a loading and unloading area, parking spaces, more space for the vegetable section, proper drainage facilities, an elevated wet market (Figure 7). As a result of an upgraded market facility, the local government unit should anticipate the proposed new rental fees of the new public market (table 3). This design is based more on a contemporary public market. Market operations and traffic control will be enhanced by implementing the suggested facilities design. Also, there are infractions and penalties if the imposed rental fees are not complied with.

It should be noted that when planning a facility layout for public markets, using Systematic Layout Planning (SLP) as an analytical technique is a great advantage to further enhance the layout by taking into account the factors required to achieve a good layout such as Space Characteristics and Catchment Analysis, Customer Flow, Activity Relationships, Circulation Plan, Adjacency Matrix, Space Allocation, Space Relationship Diagram, Modifying Considerations, Practical limitations, Develop Zoning Layout Alternatives and Evaluation, all of which are SLP steps that can make layout planning in public markets very inclusive.

## 8. CONCLUSIONS

The study examined the Argao Public Market's current facility layout in Poblacion Argao, Cebu. Argao Public Market, while more than halfway meeting the standards, still needs to improve its facility layout in terms of the positioning of the stalls, the arrangement of the different sections, the drainage systems, the development of proper roads or pathways, the assurance of proper roofing, the provision of an area for loading and

unloading stations, the modification and improvement of parking spaces, and the creation of a layout that can accommodate market visitors while simplifying their buying and selling activity and providing them with convenience in their operations and offering a long-term solution to the Argao local government unit in future years, issuing assistance to significant issues present in the current facility.

Therefore, this study ensured the favorable effects that the local government unit of Argao may experience when this proposed facility architecture is implemented in order to offer a long-term solution to the persistent issue that customers encounter in the public market.

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