

LEARNING FROM TIANGUIS:

Iterating the Informal Market Typology for a More Responsive and Engaging Retail Design

by

Chiun Lee

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

This thesis explores the potential towards a transformative role of informal markets within modern retail environments, contrasting them against the backdrop of both rigid physical retail storefronts and intangible digital platforms. The informal market typology in Mexico, the tianguis, has persevered by adapting and responding to people's demands despite its various drastic social and political changes throughout Mexico's history in the span of centuries from the Spanish conquest to the more recent revolution. While more recently, there have been safety concerns about the contextual relevance of the tianguis based on increased crime, the newer generation of storeowners in the city are working to enhance social relationships through communities with more contemporary informal strategies that allow for building a more comfortable environment to sell their products.

Central to the analysis is the dichotomy between formal and informal retail structures in the contemporary scene. This paper explains how formal retail spaces usually do not encourage social interactions like community bonding necessary for marketplace through their rigidity and uniformity. By contrast, with their flexible and community-based designs, tianguis not only answer local people's needs and preferences but also enhance social and economic resilience.

In order to form the basis of a retail environment that embraces flexibility, community interaction, as well as identity, this paper uses varied cases studies and prototype design to develop a tianguis prototype. It calls for rethinking retail space design in view of the iterative concerns of informal architecture towards more inclusive, responsive and community engagement. In addition, this study constitutes an important contribution to the urban design/retail management literature through an examination on how informal market practices can inform and redefine current retail strategies making them adaptable enough for modern urban life and its inhabitants.

Acknowledgements

First and foremost, I extend my sincere appreciation to my defense committee members:

Thank you to my most amazing supervisor, Linda Zhang, I was incredibly fortunate to have met you and have been under your supervision. Since the very first meeting, your work was an inspiration and your approaches really impacted what values I would want to have as a designer. Your belief throughout the process of this thesis, and your encouragement were my guiding light during the more challenging times. Without your support, this work would not have been possible.

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To Tara Bissett, my internal reader, for the insightful feedback and discussion Your profound knowledge and passion for cultural identity and media have been a guiding force in my studies. Thank you for inspiring me to explore the depths of cultural identity and for your unwavering encouragement throughout this journey.

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I am also indebted to the incredible team that helped with the building process of the prototype for design and the collaborative brands that have contributed to this project. Special thanks to LASG (Living Architecture Systems Group) for the provision of space and resources needed for the build, and Teo Mlynczyk from LASG for the constant support throughout the entire building process. Thank you to Justin Park, Justina Yang, Nini Chen, and Calvin Liang for the support and for being part of the assembly and disassembly process of the structure, and the product collaborations.

Thank you so much to the stackt marketplace and DesignTO for the opportunity to take part in the 2024 design festival, especially Carmel and Robyn for letting the process be flexible and much easier to work with. Additionally, I would like to recognize tormenta.mx, ppaayyss, reil!, thepack, and filia for their contributions and unwavering support throughout the DesignTO festival.

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Analysing, designing, and building a prototype for an informal marketplace typology was a very collaborative process and I am very grateful to have received feedback and support from so many incredible people. I want to again express my deepest gratitude to every individual, organization, and community.

Land Acknowledgement

I would like to recognize the lands that the Greater Toronto Area is situated on as the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. I am grateful for the opportunity to live and work on this land and honor the rich history and ongoing contributions of Indigenous peoples to this region.

Much of this research was conducted at the University of Waterloo and its School of Architecture in Cambridge, that is situated on the land of the Neutral, Anishinaabeg, and Haudenosaunee people – land that is part of the Haldimand Tract which by treaty was six miles to both sides of the Grand River for the Six Nation.

With parts of the thesis having taken place in Mexico City, I want to recognize, especially coming from a first generation immigrant family there, towards the indigenous populations within Mexico City. I want to recognize that the city is located on the ancestral lands of the Mexica people and other indigenous groups, including the Otomí, Nahuatl, and Mazahua peoples. This land has been a site of human habitation, culture, and civilization for thousands of years. We honor and respect the enduring presence and contributions of indigenous peoples to the cultural and historical fabric of this region.

Como un miembro de inmigrantes coreanos, reconocemos que la Ciudad de México se encuentra en las tierras ancestrales del pueblo Mexica y otros grupos indígenas, incluidos los Otomí, Nahuatl y Mazahua. Esta tierra ha sido un sitio de habitación humana, cultura y civilización durante miles de años. Honramos y respetamos la presencia y las contribuciones perdurables de los pueblos indígenas al tejido cultural e histórico de esta región.

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CHAPTER 1

Tianguis as a Place

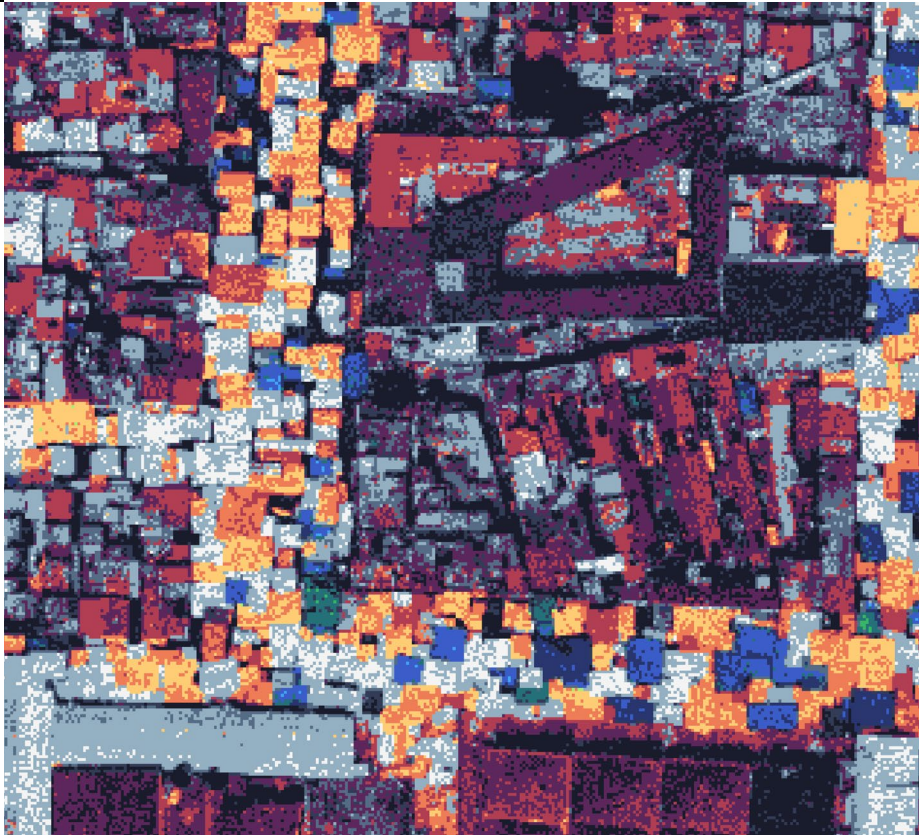
As contemporary retail focuses more on optimization over time, it reduces its architecture into modern big-box retail spaces that are solely optimized machines for transaction lacking human and cultural dimensions. Informal marketplaces, particularly the tianguis has stood through centuries and continues to be a prevalent Mexican retail typology from which potentials one can learn and apply in the contemporary retail landscape. Chapter 1 sets the foundational understanding of the traditional tianguis and it's relevance in the contemporary retail landscape later introduce the design and build of a tianguis prototype in the thesis. The chapter examines the historical, and inherently social roles of marketplaces, and the dichotomy between formal and informal architecture when it comes to retail architecture. In doing so, it provides a critical context for why the contemporary retail environments can benefit from the adaptable, community-focused nature of informal market structures. This exploration is necessary to identify the core principles that can be integrated into retail design, ensuring that the designing and building of the tianguis prototype not only meets contemporary needs but also retains the social ngagement between the store owner and visitors that traditional markets bring.



*Figure 1.1
Tianguis stalls in
Tepito, Mexico City.
Photo by Author
(2023).*

1. Tianguis as a Place

Since the beginning of civilization, markets have always been central to human interaction, serving not only as places for commerce but as social centres where cultures converge and histories unfold. Traditionally, marketplaces were spatially integrated into the community, between the supplier and the market, positioned as places where people gathered for exchanges. They operated as open, flexible spaces that encouraged both social and economic interactions, which was necessary for nurturing their respective communities, reflecting the social fabric, the local culture and needs of the community. However, modern formal architecture has transformed these retail systems considerably, introducing rigid, uniform structures that prioritize operational efficiency over communal interaction. This shift has led to a generic appearance and feel across different locales, often sacrificing the unique cultural identity of the market spaces. The reason for this change lies in modern retail architecture's economic drive towards cost efficiency and brand consistency, which unfortunately limits the interaction between the community and the market. On the other hand, informal retail architecture shows a potential for contemporary retail by remaining flexible and adaptable to needs and inputs of the community. The reason in which informal setups are able to excel is because of their capacity to adapt quickly to be prevalent with the community's changing needs, encouraging a deeper engagement and sense of ownership among locals. The tianguis is specifically considered one of the most relevant typologies in informal architecture because it is a very dynamic and adaptable one. As such, it has made tianguis a highly vibrant and interactive market where the entire community feels comfortable both physically and functionally. Therefore, this defines the reason why tianguis can be very important in changing today's retail environments as well as in enhancing local economies through community participation. In summary, contemporary retail culture may recover its social-cultural significance and role as a focal point of community if it adopts the principles of informal retail architecture demonstrated by tianguis.



*Figure 1.2
Tianguis Aerial View.
Retrieved from
Google Maps, "Aerial
View of Tepito,"
accessed May 15,
2024.*

1.1 Marketplaces

¹ Mete, Silvia, Luca Tomaino, and Giovanni Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

² Caramaschi, S. 'Public Markets: Rediscovering the Centrality of Markets in Cities and Their Relevance to Urban Sustainable Development', 1187-97. Siena, Italy, 2014. <https://doi.org/10.2495/SC141002.1187-1197>.

³ Tangires, Helen. *Public Markets and Civic Culture in Nineteenth-Century America*. Johns Hopkins University Press, 2003. <https://doi.org/10.1353/book.72308>. xv-xx.

In 'Tianguis Shaping Ciudad', markets are introduced in the following manner, "Enshrouded in scents, colours, flavours, and meanings, markets are more than just buying and selling space for daily supply, they are a synthesis of culture and history of a region, as well as trade relations having it with other populations."

¹ Markets, the earliest form of retail spaces, were born out of the necessity for survival, where the exchange of goods was as much about fulfilling basic needs as it was about human connection. Over time, these marketplaces constantly changed and developed to become more than just spaces of transaction- they are places that "increase the sense of pride of place" and "the building of sustainable cities and strong communities"². These venues have acted as areas for interaction, shaping the dynamics of human relationships and cultural exchange. The architecture of these spaces reflects their organic development, aligning with the evolving needs and identities of their communities. Furthermore, the everyday transactions in these markets reinforce and redefine community bonds over time. Therefore, understanding the role of retail spaces offers insights into the broader narratives of community formation and identity, driven by interaction, architectural evolution, and shared community experiences.

Markets, where cultures meet and develop, have always been more than places of transaction (Figure 1.3). The interactions that take place in these spaces are not just economic; they also involve cultural exchanges and socialization. In the book *Public Markets*, Helen Tangires shows that these interactions do not only promote trade but also build a sense of community among participants.³ Retail spaces frequently adapt to the social norms and values of their patrons, thus becoming reflective mirrors of society. The layout and operation of these spaces can either encourage or inhibit community interaction, playing a crucial role in shaping social dynamics.

Marketplaces, like living organisms, change structurally to meet the increasing demands of their communities. Marketplace



*Figure 1.3
Christmas Market
Stalls in Mexico City.
Photo by Author
(2023).*

⁴ Caramaschi, 'Public Markets: Rediscovering the Centrality of Markets in Cities and Their Relevance to Urban Sustainable Development'. 1187-1197.

designs and structures often start as basic functional spaces and then integrate elements of culture and beauty indicative of the surrounding community. Valentina Caramaschi points out how public markets have changed over time to reflect new urban realities. The adaptive reuse of space in response to urban development pressures is another example of how marketplaces are integral parts of city life. These architectural changes are both utilitarian and symbolic, signifying that a society has forever found an innovative way to adapt itself during times when it might be faced with serious challenges or hurdles. Thus, this is how retail environments evolve physically showing themselves as a reflection as well as a determinant to the societal values.

⁵ Tangires, Helen. 'Public Markets and Civic Culture in Nineteenth-Century America.' *Johns Hopkins University Press, 2003.* <https://doi.org/10.1353/book.72308>. xvii.

Daily interactions within retail spaces serve as microcosms of the broader dynamics of social relations and therefore influence the character of communal bonds and the structures of society. Habitual interaction in such settings results in the emergence of a shared community identity and a feeling of collective belonging. In *Public Markets*, Tangires illustrates that such interactions have not only made the context for the marketplace but in addition, have been a part of a complex system:

“The moral economy reflects the local government’s effort to maintain the social and political health of its community by regulating the ethics of trade in life’s necessities. Since antiquity, cities have established market laws designed to limit profiteering and regulate built spaces devoted to the sale of basic foods, at times restricting individual liberty and property in order to guarantee citizens an adequate supply of healthful food at affordable prices.” ⁴

In such a system, “The community helped to police and regulate the public market, the principal place where it could observe and respond to the successes and failures of its government.” ⁵

⁶ Smas, Lukas. 'Transaction Spaces: Consumption Configurations and City Formation.' *Stockholm Studies in Human Geography* 18. Stockholm: Univ, 2008. 20 - 35.

In 'Transaction Spaces': consumption configurations and city formation discuss how these interactions contribute significantly to the social cohesion and identity of communities.⁶ The rituals and routines developed within these markets reinforce societal



*Figure 1.4
Activity in the Tianguis
Street View.
Photo by Author
(2024).*

norms and help inculcate new cultural practices. Moreover, the inclusive nature of these spaces often serves as a counterbalance to social isolation, promoting a more interconnected community. Ultimately, retail spaces are indispensable in their role as catalysts for encouraging responsive community networks.



Figure 1.5
Bazaar of Athens
Painting by Edward
Dodwell.
Retrieved from
Wikimedia Commons
contributors,
“File:Bazaar of Athens.
jpg,” Wikimedia
Commons, [https://
commons.wikimedia.
org/w/index.
php?title=File:Bazaar_
of_Athens.
jpg&oldid=818993109](https://commons.wikimedia.org/w/index.php?title=File:Bazaar_of_Athens.jpg&oldid=818993109)
(accessed May 30,
2024).



Figure 1.6
A Moorish Bazaar
Painting by Rudolf
Ernst.
Retrieved from
Wikimedia Commons
contributors, “File:The
Moorish Bazaar.
jpg,” Wikimedia
Commons, [https://
commons.wikimedia.
org/w/index.
php?title=File:The_
Moorish_Bazaar.
jpg&oldid=615315348](https://commons.wikimedia.org/w/index.php?title=File:The_Moorish_Bazaar.jpg&oldid=615315348)
(accessed May 30,
2024).

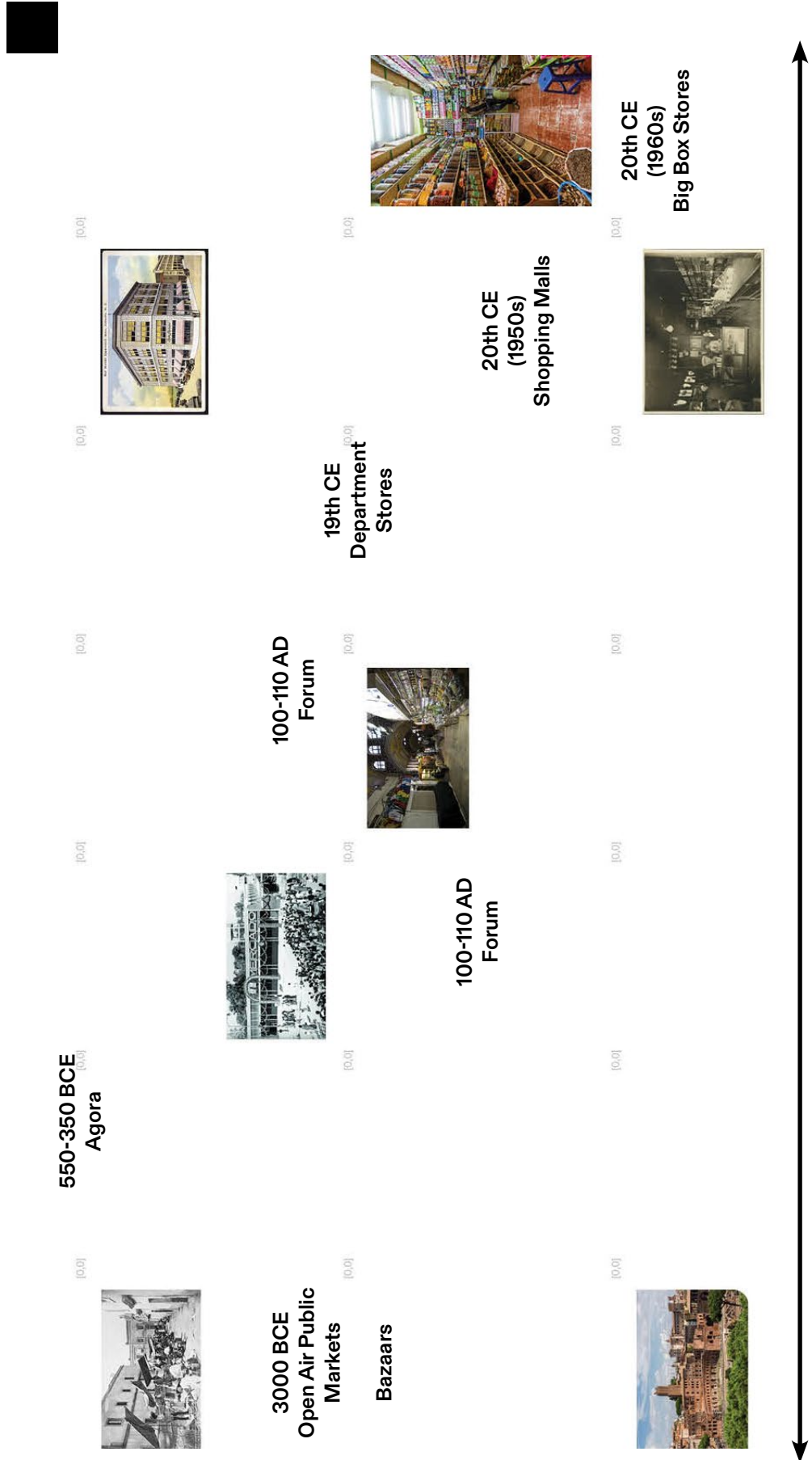
1.2 Formal Retail Architecture

⁷ Smas, Lukas.
'Transaction Spaces:
Consumption
Configurations and
City Formation.'
20 - 35.

⁸ Ahmed, Sayed.
'Architectures of
Informality'. *Acta
Structilia* 27, no. 1
(29 June 2020): 178.
[https://doi.org/
10.18820/
24150487/
as27i1.7](https://doi.org/10.18820/24150487/as27i1.7). 32-39.

Retail spaces have shaped the contours of societal interaction and community development.⁷ Their role as centres of interaction has been pivotal in developing the cultural and social architecture of communities. The evolving architecture of these spaces reflects the adaptive and dynamic nature of human settlements. Everyday engagements within these spaces have reinforced and redefined the communal bonds that are essential to societal cohesion. Thus, the study of retail environments offers valuable insights into the mechanisms through which communities evolve and sustain their unique identities and cultural practices. However, in modern times retail spaces have become generic. Modern retail, especially big box retail, has mostly relied on static, formal architecture as a precedent to build permanent spaces. The rigidity and inflexibility of these permanent spaces as a practice, not only limits its responsiveness to its context but also the interactivity between the people and the products. Moreover, the homogeneous designs that are perceived to be cost-efficient for mass development and global branding have caused big-box retail to contribute to a loss in community engagement and local identity at a spatial perspective. As per, "Wal-Mart locates its stores in places where it expects to be profitable' (Basker 2007); yet, the retailer shows a utilitarian and neo-liberalist attitude, which is reflected both in its strategies and in the consumption model exported across many countries. The interventions of Wal-Mart, as well as those of multinational corporations, go far beyond the simple exercise of power (Sassen 1994). Therefore culture, together with other elements, prompts different perceptions of individual and collective issues, leading to different appropriations of space."⁸ The slow nature of the construction process and in the permanent demands of formal architecture, coupled with modern architecture's inclination towards cost efficiency, mass development, and homogeneous design is inevitable for many retail environments, especially big box stores that are responsible for over a quarter of retail sales worldwide (which has been relatively more recent as seen in Figure 1.7).

Figure 1.7
 Formal Retail Space
 Changes over Time.
 Diagram by Author
 (2023).



⁹ Ahmed. 'Architectures of Informality'. *Acta Structilia* 27, no. 1 (29 June 2020): 178. 32-39.

¹⁰ Best, Steven, and Douglas Kellner. 'Postmodern Theory.' *London: Macmillan Education UK*, 1991. <https://doi.org/10.1007/978-1-349-21718-2>. 34-39.

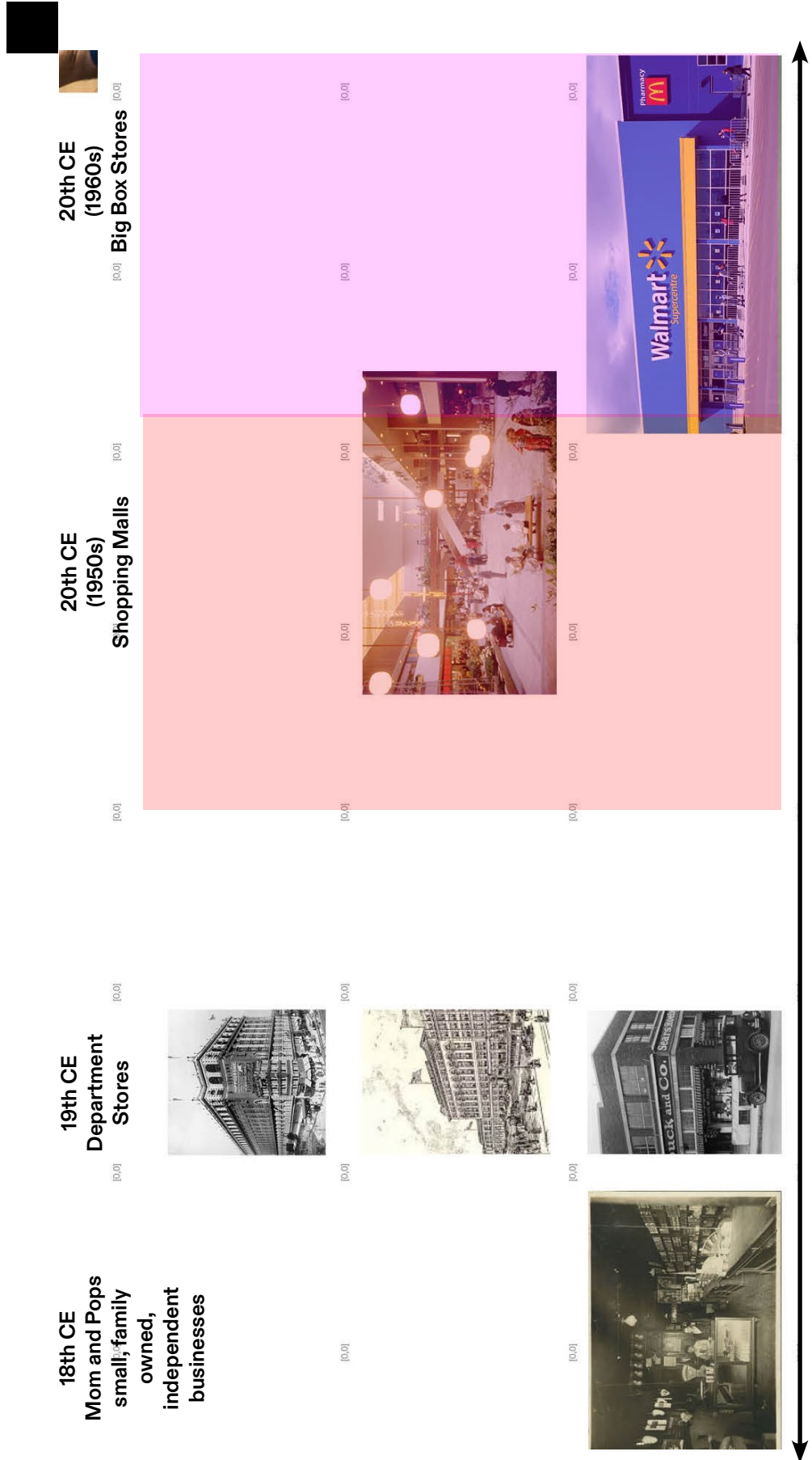
¹¹ Lacerda Neto, Filipe. 'Aesthetic Delirious Urbanism – Rem Koolhaas'. *IOP Conference Series: Materials Science and Engineering* 603, no. 3 (1 September 2019): 032057. <https://doi.org/10.1088/1757-899X/603/3/032057>. 1-5.

¹² Venturi, Robert. 'Complexity and Contradiction in Architecture.' 2. ed., Repr. *The Museum of Modern Art Papers on Architecture*. New York, N.Y.: Museum of Modern Art, 1996. 16.

The movement toward formal architecture in contemporary architectural environments has brought about significant cultural and community implications within retail spaces.⁹ These spaces, characterized by their rigidity and inflexibility, often result in prioritization in cost efficiency over cultural identity, leading to a lack of uniqueness and personalization. Big-box retail models, a product of this formal architecture, contribute to the diminution of local community engagement and cultural uniqueness. The repetitive and non-iterative nature of these designs fails to adapt to the evolving needs of communities, stifling organic growth and interaction. This section will explore how modern formal architecture, while efficient, creates significant shortcomings in regard to community engagement and cultural diversity in retail environments.

Modern architecture's emphasis on "seriousness, purity, and individuality"¹⁰ often leads to environments that are starkly generic and uninspiring. This approach prioritizes uniformity and scale, often at the expense of flexibility and local relevance. Rem Koolhaas in *Generic City* argues that such spaces are designed to be repeatable and predictable, which diminishes their ability to respond to unique cultural contexts.¹¹ The inflexibility of such designs means they cannot easily adapt to the changing needs or unexpected uses by the community. It has further been shown that rigid architectural forms struggle to integrate into the dynamic urban fabric, leading to underutilized or abandoned spaces. Furthermore, the focus on cost reduction often results in the use of cheaper materials and simplified designs that lack durability and aesthetic value (as seen in the evolution of the formal typology Figure 1.8). The inability of formal architecture to evolve with its inhabitants ultimately undermines its utility and relevance, contributing to a sterile urban environment. Robert Venturi complained in his 1966 *Complexity and Contradiction* that modernist ideals such as purity or directness led to a kind of order that was rigid and stereotypical, whereas the complexity and contradictions of ambivalent formal languages, such as mannerism, were much more capable of evoking a continuing interest.¹² Instead of the puritanically moral language of orthodox

Figure 1.8
 Formal Retail Space
 Changes over Time.
 Diagram by Author
 (2023).



¹³ Venturi, Robert. 'Complexity and Contradiction in Architecture.' 16.

modern architecture, he preferred “hybrid” rather than pure elements, compromising rather than clean, distorted rather than straightforward, and ambiguous rather than articulated.¹³

Not only does the repetitive nature of formal architectural practices stifle creativity, but it also resists developing distinctive community identities. These environments do not capture the uniqueness of their locales since standardized models are adopted. Countless identical retail formats exist across different regions, making each look similar to every other, thereby failing to capture locality flavours and traditions. The absence of iteration and customization often leads to spaces that fail to engage and inspire the communities they are meant to serve. Research in urban studies shows that non-iterative design processes create a mismatch between the space and its users. Moreover, an absence of feedback loops in the design process does not allow these spaces to develop based on user engagement and criticism. Thus, formal architecture resists incorporating community input, leading to environments that are not only culturally detached but also much less commercially vibrant (See Figure 1.9).

¹⁴ Best, Steven, and Douglas Kellner. 'Postmodern Theory.' 34-39.

Formal architecture’s failure to encourage community engagement is probably its most critical shortcoming, leading to environments that lack social cohesion. The formal principles to guide the design of the modern retail spaces often overlooks the importance of communal spaces that encourage interaction and engagement. The research in ‘Postmodern Theory’ highlights how such spaces usually do not have enough common spaces, thereby limiting opportunities to interact socially.¹⁴ The alienation of the local population creates a reduction in foot traffic and a feeling of community disparity because the designs are impersonal and utilitarian in nature. In addition, branding and uniformity suppresses local identity and customs, which are other points in community bonding. This architectural approach puts formal aesthetics and efficiency before community engagement, hinders in allowing community spaces to be interconnected.



*Figure 1.9
Empty Mall due to the
pandemic.
Retrieved from
Wikimedia Commons
contributors,
“File:Empty mall amid
COVID19 lockdown.
jpg,” Wikimedia
Commons, [https://
commons.wikimedia.
org/w/index.
php?title=File:Empty_
mall_amid_
COVID19_lockdown.
pg&oldid=733409329](https://commons.wikimedia.org/w/index.php?title=File:Empty_mall_amid_COVID19_lockdown.pg&oldid=733409329)
(accessed May 30,
2024).*

Modern formal architecture in retail spaces is an efficiency that is paradoxically replacing community and cultural engagement. These designs lack adaptability in their rigidity and inflexibility and, as such, deprive themselves of vibrant, culturally rich community space. Repetitive and non-iterative practices in architectural design hinder the development of unique community identities and engagement. The lack of focus on community building within formal architecture creates spaces that are disconnected from the societies they aim to serve (See Figure 1.10 of abandoned retail space as a result to the disconnection from its community). As a result, while formal architecture do offer short-term economic gains, its long-term implications on community cohesion and cultural identity reveal substantial drawbacks, necessitating a re-evaluation of architectural priorities in retail space design.



*Figure 1.10
Urban Plaza in
Mexico City in an
Abandoned State.
Photo by Author
(2024).*

1.3 Potentials in Informal Retail Architecture

¹⁵ Bingham, Ashley. 'Five Points of "Informal" Architecture: Toward an Architecture of Abundance', *n.d.* ahm

¹⁶ Mete, Silvia, Luca Tomaino, and Giovanni Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 5.

¹⁷ Mete, Silvia, Luca Tomaino, and Giovanni Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 5.

In Bingham's 'Five Points of Informal Architecture', informal markets are described as having non-Cartesian arrangements and are thus considered to be outside of the architectural canon and so "in contrast to the rigid confines of formal retail architecture, informal retail spaces offer a dynamic and adaptable approach to community engagement and design"¹⁵ These spaces thrive on iterative development, enabled by their fast-paced construction, which allows for continuous adaptation and improvement. They are highly responsive, giving users the freedom to modify and personalize spaces to better meet their needs and enhance customer interactions. Furthermore, informal retail environments are inherently community-driven, cultivating a sense of ownership and identity among locals. This section will explore how informal retail spaces, through their iterative, responsive, and community focused designs, they present unique opportunities that formal retail environments do not offer. Informal markets are seen as one of the most important public situations in neighbourhoods that can modify "the anonymous, ephemeral, transient and partial space that constitute the core of the dimension of the modern age"¹⁶

Informal retail's core lies in its ability to evolve rapidly—a stark contrast to the static nature of formal retail architecture. The structures in such settings are easily and quickly erected and can be modified frequently to allow for immediate feedback, which suggests ongoing improvement activities addressing the ever changing market demand.¹⁷ Researchers have observed that these flexible construction practices significantly reduce downtime and adapt more swiftly to consumer trends and economic shifts. This iterative nature also encourages innovation as well as ensuring that there is an alignment between retail spaces built to cater for consumers needs within their communities. Iterative conditions have been found to enhance customer experience through their impact on creating effective more personalized environments during shopping experiences where experimentation is common among both retailers as well as consumers. Nevertheless, by encouraging active participation



Figure 1.11
Street View of a
Tianguis in Mexico
City with Informal
restaurants and
stores.
Photo by Author
(2023).

¹⁸ Ahmed, "Architectures of Informality." 32-39.

from all corners, they then become collaborative workshops whereby any input could spark off actual changes taking place within them.' As observed in field studies, user satisfaction and business performance is significantly improved by adopting these approaches.' Thus, this iterative process not only adapts but shapes the current landscape hence producing a vibrant retail environment.

¹⁹ Ahmed, "Architectures of Informality." 32-39.

Flexibility is the hallmark of informal retail, where the design of the space can be swiftly altered to respond to user needs and market conditions.¹⁸ The layout and structure of informal retail spaces can be easily modified, allowing for an adaptive use of space that formal retail simply cannot offer. Real-time adjustments to spatial configurations in response to customer flow and behaviour patterns have been documented to boost sales and customer engagement.¹⁹ These changes not only cater to functionality but also enhance the interactive experience between the product and the consumer. Interactive displays and customizable setups have proven to increase consumer time spent in stores and positively impact purchasing decisions. Furthermore, the ability to personally engage with the space empowers users, cultivating a deeper connection between the consumer and the retail environment. Tangires suggests that environments that engage consumers personally see higher return visits and greater word-of-mouth promotion.²⁰ Responsive design in informal retail not only meets immediate functional needs but also builds a lasting relationship with its users.²¹

²⁰ Tangires, Public 'Markets and Civic Culture in Nineteenth-Century America.' xv-xx.

²¹ Bigham, "Five Points of "Informal" Architecture: Toward an Architecture of Abundance." 24-33.

Informal retail spaces are not just economic entities; they are vibrant community centres that reflect and enhance local culture and identity.²² These spaces serve as communities, supporting local businesses and encouraging social interactions among residents. Community-driven markets have been shown to stimulate local economies and increase community cohesion through shared spaces and common goals. By prioritizing such needs and values, informal retail helps preserve cultural identities and traditions, which are often sidelined in formal retail settings.

²² Bigham, "Five Points of "Informal" Architecture: Toward an Architecture of Abundance." 24-33.



Figure 1.12
Koenji Market with
Informal Stalls in
Tokyo, Japan.
Photo by Author
(2023).

²³ Berndt, Christian, Jamie Peck, and Norma M. Rantisi, eds. 'Market/Place: Exploring Spaces of Exchange.' *Economic Transformations*. Newcastle upon Tyne: Agenda Publishing, 2020. 12-35.

Bigham indicates that markets that integrate local customs and products resonate more deeply with the community and draw greater support.²³ Moreover, the inclusion of community feedback in the design and operation of these markets ensures that they remain integral parts of the urban fabric. Feedback loops within these markets have successfully transformed many temporary setups into permanent community fixtures.²⁴ Therefore, the community-driven nature of informal retail significantly contributes to the social and economic vitality of the areas they serve.

²⁴ Tangires. 'Public Markets and Civic Culture in Nineteenth-Century America.' xv-xx.

In summary, informal retail spaces combine flexibility, responsiveness, and community focus to bring an alternative to the more static formal retail environments.²⁵ Their iterative design allows for continuous adaptation and enhancement, keeping up with the market and community needs. The responsive nature of these spaces promotes an engaging and interactive shopping experience that adapts to visitor preferences and behaviours. Furthermore, their community-driven approach not only supports local economies but also reinforces and celebrates local cultural identities. Informal retail spaces showcase how adaptive, responsive, and community-focused design can successfully meet the evolving needs of both consumers and communities, presenting a compelling design response that formal retail architecture is unable to offer.

²⁵ Tangires. 'Public Markets and Civic Culture in Nineteenth-Century America.' xv-xx.



*Figure 1.13
Informal Market
inspired by North
Korean Jangmadang
near the border,
Incheon, South Korea.
Photo by Author
(2022).*

1.4 Tianguis as an Informal Retail Typology

²⁶ Mete, Tomaino, and Vecchio, 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

²⁷ Garnica Quiñones, Frances Paola. 'Dar vista: dialéctica visual del puesto de tianguis'. Encartes 6, no. 12 (21 September 2023): 175–96. <https://doi.org/10.29340/en.v6n12.289>.

²⁸ Mete, Tomaino, and Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

In Mexico's retail environment, tianguis markets serve as a compelling example of informal retail typology, offering a stark contrast to the more structured and rigid formal retail environments. They "fill two different kinds of voids: the first one is related to the absence of strict regulation on public spaces, while the second refers to those large shares of market not absorbed by formal economic activities; in this sense, they can be considered as insurgent practices".²⁶ These markets exemplify an iterative design, evolving naturally with community needs and economic conditions. They create a highly responsive and interactive space where transactions are deeply intertwined with community and cultural engagement. Moreover, tianguis play a crucial role in community building, shaping both the social and physical landscapes of their locales. This section will discuss how the architectural and operational characteristics of tianguis make them unique among informal retail typologies, highlighting their iterative growth, responsiveness, and community-driven nature.

The organic growth of tianguis markets mirrors the dynamic spirit of the communities they serve. Originating as temporary setups, these markets expand and contract in response to vendor availability and seasonal changes.²⁷ Studies have shown that this flexibility helps sustain vendor engagement and customer interest, maintaining market vitality even in fluctuating economic climates.²⁸ The physical layout of tianguis is adaptable, allowing for the incorporation of new products and services as community demands evolve. Research indicates that such adaptability attracts a diverse vendor base and a wide range of products, enhancing the market's appeal. This iterative process is critical for fostering an environment of innovation and entrepreneurship within the market. Examples include the introduction of artisanal goods and organic produce in response to emerging consumer trends. Thus, the organic growth of tianguis not only reflects but also actively contributes to the economic and cultural dynamism of their communities.



*Figure 1.14
Tianguis extending
from surrounding
buildings through its
Flexible structure.
Photo by Author
(2024).*

²⁹ Mete, Tomaino, and Vecchio, 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

³⁰ Mete, Tomaino, and Vecchio, 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

³¹ Mete, Tomaino, and Vecchio, 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

³² Mete, Tomaino, and Vecchio, 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

In tianguis, the lines between vendor and customer, and the community blur, creating a highly interactive and responsive retail environment.²⁹ Vendor-customer interactions in tianguis are notably personalized, often based on long-standing relationships that enhance trust and loyalty. Surveys from local tianguis indicate that personalized service results in higher customer satisfaction and repeat business. The arrangement of stalls and the openness of the space encourage a flow that maximizes interaction between customers and products. Behavioural observations within these markets demonstrate that open layouts increase the likelihood of spontaneous purchases.³⁰ Furthermore, vendors often collaborate with local community groups to sponsor events or provide community-specific services, reinforcing community bonds. Case studies detail how tianguis has hosted cultural festivals and local workshops that have promoted a strong sense of community identity and involvement. Therefore, the responsive and interactive nature of tianguis significantly enriches both the shopping experience and community life.

More than a marketplace, each tianguis serves as a cornerstone of community architecture, bringing social cohesion and communal identity. The physical setup of tianguis encourages communal gatherings, turning shopping into an event that reinforces social ties. 'Tianguis Shaping Ciudad' shows that the communal spaces in tianguis facilitate interactions that extend beyond commerce, promoting social connectivity.³¹ The concept of Mexican informality involves complex social and political dynamics, including the use of public space and interactions between various groups such as street vendors, their families, commercial leaders, local authorities, shopkeepers, customers, and residents."³² These markets often serve as venues for community dialogue and decision-making, integrating economic activity with civic engagement. Reports highlight how discussions held in tianguis spaces have led to community actions and initiatives. Tianguis also contribute to the physical shaping of urban and rural landscapes, adapting their structures



*Figure 1.15
Storeowner setting up
a tianguis in response
to Weather Changes
(rain in this case).
Photos by Author
(2024).*

³³ Mete, Tomaino, and Vecchio, 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

to fit within community layouts and needs.

“Street vendors organizations are – probably - the most important social networks themselves, as underlined by a poll of street vendors in which the 51 % of them ‘believe they benefit from being members because the organization negotiates on their behalf with local government authorities’ and the about 30% ‘believe that they benefit from the organization because it is a mechanism to address the problems of distribution of work spaces in the market.’” ³³

Thus, tianguis profoundly influences both the culture and the physical structure of their communities, embodying the essence of a community-driven retail environment.

Tianguis stands as a testament to the resilience and community orientation of informal retail typologies. Their iterative nature allows them to evolve and thrive, continuously adapting to meet the needs and preferences of their communities. These markets encourage an interactive environment that improves both economic transactions and community relationships. As important components of community architecture, tianguis not only supports economic activities but also strengthens communal bonds and identity. The unique structure and operation of tianguis encapsulate their role as dynamic, responsive, and community-focused entities, showcasing what informal retail can offer.



*Figure 1.16
Activity and
circulation within
the tianguis,
featuring storeowner,
customers, delivery
people.
Photo by Author
(2023).*

CHAPTER 2

Methodology:

This chapter discusses the methodology for this design-research thesis including the design, construction and evaluation of a 1:1 prototype. This involves the analysis of different theories surrounding formal and informal architecture in the retail environment, and towards an argument that can build as to why informal architecture specifically provides what retail architecture should do: be more integrating socially and develop the community consisting of the supplier and the market into it. The chapter then delves into case studies to further dissect the roles within the community between supplier and market, as well as criteria that we can learn from the tianguis in Tepito that has continually survived and adapted to drastic contexts, as well as the new generation of storeowners that begin to take agency over other informal strategies to expand their own communities. These takeaways set the ground for the different aspects that were combined in constructing, iterating and eventually disassembling the tianguis prototype.

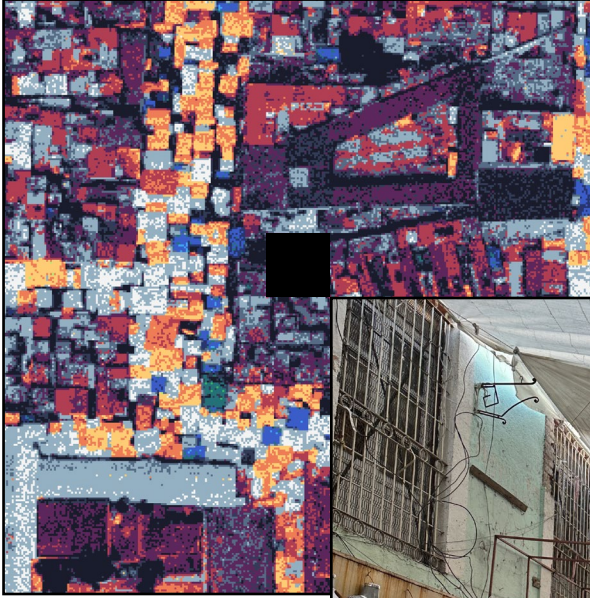


Figure 2.1
Tianguis Aerial View.
Retrieved from
Google Maps, "Aerial
View of Tepito,"
accessed May 15,
2024.



Figure 2.2
Main street within
a tianguis in Tepito
with clothing retail
storefronts.
Photo by Author
(2024).



Figure 2.3
Prototype interior for
stack market at the
DesignTO exhibition.
Photo by Author
(January, 2024).

2. Methodology

This chapter outlines the methodology for research and full scale design prototyping of a tianguis to test the informal market typology in a more contemporary market setting in this project's case being at the stackt market for the DesignTO Festival. The prototype aims to integrate the inherent vibrancy and flexibility of traditional tianguis with contemporary design and operational efficiencies. By analysing historical contexts, evaluating current retail failures, and adapting successful informal market strategies, the design will cater to both cultural significance and contemporary needs. This approach will ensure the market not only serves its traditional roles but also meets today's urban demands, creating a space that supports economic activity and fosters community bonds.

³⁴ Caramaschi, S. 'Public Markets: Rediscovering the Centrality of Markets in Cities and Their Relevance to Urban Sustainable Development', 1187–97. Siena, Italy, 2014. <https://doi.org/10.2495/SC141002>. 1187 - 1197.

The literature review section explores various areas of market designs, both traditional and contemporary, to insights that will inform the development of the tianguis prototype. The historical analysis of marketplaces explores the changes and adaptation of marketplaces from their role in their economy to being social gathering spots, focusing on the socioeconomic importance throughout its history³⁴ (Figure 2.4). By examining texts and studies of anthropological research, the section reviews how traditional markets were designed to maximize social interaction and community integration. Understanding these historical dynamics helps in crafting a design that replicates the successful elements of traditional markets, such as accessibility, community focus, and flexibility, ensuring the prototype resonates with users on a cultural and functional level. The evaluation of modern retail spaces identifies the key areas of the shortcomings in modern retail spaces to meet the needs of the community, such as its inability to foster social interactions and adapting to local cultures.³⁵ By analysing case critiques from theorists, urban planners and architects, this review will pinpoint deficiencies in current retail design practices. Highlighting these failures provides a clear direction for avoiding similar pitfalls in the tianguis prototype, ensuring it remains an iterative, interactive, and community-focused space rather than a sterile commercial

³⁵ Smas, Lukas. 'Transaction Spaces: Consumption Configurations and City Formation.' *Stockholm Studies in Human Geography* 18. Stockholm: Univ, 2008.



*Figure 2.4
Activity within the
tianguis in Tepito.
Photo by Author
(2023).*

³⁶ Ahmed, Sayed. 'Architectures of Informality'. *Acta Structilia* 27, no. 1 (29 June 2020): 178. <https://doi.org/10.18820/24150487/as27i1.7>. 32-39.

environment. Informal markets, known for their adaptability and community focus, offer potentials for creating iterative and responsive retail environments.³⁶ This analysis highlights strategies that foster flexibility and spontaneity, which are crucial for the dynamic interactions typical of traditional markets. Investigating various successful informal markets around the world through architectural reviews and field studies will offer insights into effective design and operational strategies. These strategies will guide the creation of a tianguis that is both flexible and responsive to the community's needs, encouraging interactions and organic growth. This review positions tianguis as a model of informal retail architecture that successfully integrates traditional market dynamics with contemporary retail needs. By comparing the fast-paced construction ability and modular characteristics of tianguis with other market, this analysis hopes to demonstrate their unique ability to foster community engagement and economic vitality. Understanding the strengths of tianguis helps in designing a prototype that not only meets retail needs but also serves as a community hub, enriching the local social and economic landscape.

³⁷ Mete, Silvia, Luca Tomaino, and Giovanni Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.', *n.d.* 2-11.

The case studies apply the insights from the literature review to specific examples of tianguis, providing data and narrative to guide the prototype design. The first case study explores the tianguis in Tepito, as seen in Figure 2.5 and Figure 2.6, one of the oldest and most vibrant markets in Mexico City. It examines how this market has evolved to meet the needs of its community and how it continues to thrive by maintaining strong ties with local traditions and adapting to changing urban dynamics. Through on-site observations, engagement with vendors and customers, and review of market operations, this study will gather comprehensive insights into the functionality and community impact of the market. The findings will help identify what aspects of the traditional tianguis can be preserved or adapted into the prototype to enhance its community engagement and operational efficiency.³⁷ Focusing on new tianguis models, this study looks at how newer generations of market owners are integrating digital



Figure 2.5
Activity within the
tianguis in Tepito tents
on products.
Video by Author
(2023).

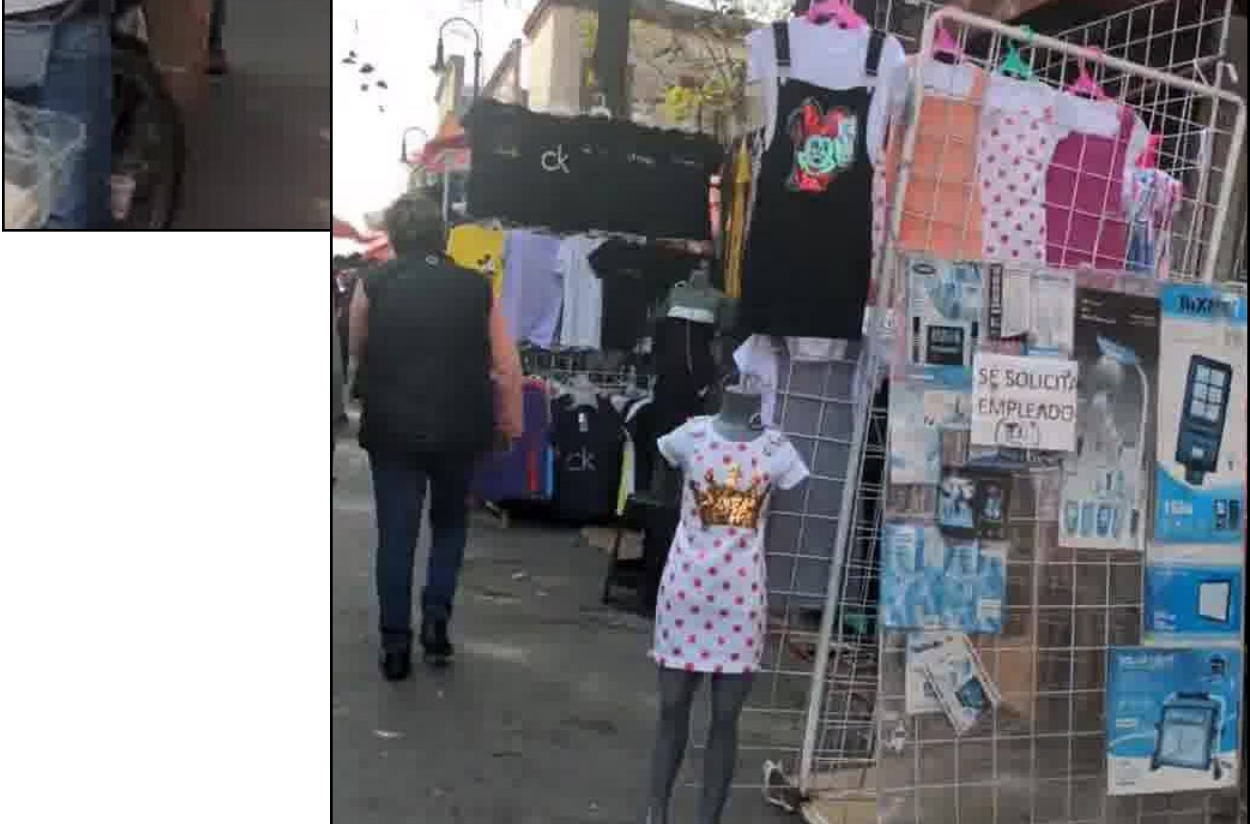


Figure 2.6
Activity within the
tianguis in Tepito
product display.
Video by Author
(2023).

³⁸ Monahan, Cait. 'Meet Fila Store, the Go-To Spot for Mexico City's Next-Gen Designers'. Hypebae, 28 May 2023. <https://www.yahoo.com/lifestyle/meet-fila-store-spot-mexico-022751440.html>.

³⁹ Mete, Silvia, Luca Tomaino, and Giovanni Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.', *n.d.* 2-11.

tools and strategies to enhance market operations while still preserving the informal, community-focused nature of traditional tianguis. Analysing the integration of digital tools like social media for marketing and digital outreach, this study will assess the impact of informal technologies on market operations and customer interactions.³⁸ This will inform how digital tools can be effectively used in the prototype to enhance market accessibility and efficiency without compromising the informal, community-focused nature of tianguis.

The design and build of the tianguis prototype focuses on encapsulating the essence of informal market typologies, which include flexibility, community focus, and cultural integration.³⁹ The project will be taking place through the DesignTo Festival at the stackt market as its venue in Toronto. The given site being within a container market with the dimensions of 39'10" x 14'10", the construction of the prototype has to be considerably smaller and was aimed to be around 10' x 20' in area. By revisiting successful elements identified in earlier chapters, such as modular setups and open, fluid spaces that encourage social interactions, the design incorporates features that facilitate these aspects. These features are crucial for ensuring that the tianguis remains true to its roots as a dynamic, community-driven space that adapts over time to the evolving needs of its users. The building process uses lightweight, modular components such as pipes and pipe fittings with fabric dropsheets that can be easily assembled, reconfigured, or expanded similar to the ones shown in Figure 2.7. Employing easy connections and prefabrication for interlocking designs enables rapid construction and modification without significant downtime or labour. This approach not only speeds up the construction process but also ensures that the structure can quickly adapt to changes in vendor requirements, seasonal demands, or community events, maintaining high responsiveness to the market's context.

Capturing each iteration of the design and construction process through detailed images and diagrams. Photography, 3D



*Figure 2.7
Tepito tianguis activity
in the food section
after the retail section,
Mexico City.
Photo by Author
(2023).*

⁴⁰ Lazo, Pablo. 'Assemblage in Mexico'. *Arquine: Revista Internacional de Arquitectura* 36, 2006, 84.

Scanning, and architectural drawings are used to document changes from the initial opening to the incorporation of smaller modules and adjustments made in response to community feedback. Visual documentation helps in analysing the practical effects of design changes on space usage and vendor operations, providing a concrete basis for assessing the functionality and impact of each iteration. Assessing how the inherent transformability of the structure facilitated various iterations and adaptations. The design allows for easy adjustments in layout and capacity, supporting a wide range of activities and vendor setups.⁴⁰

An iterative design approach allows the tianguis to evolve naturally with the community's needs, fostering organic growth. This growth is crucial for maintaining the relevance and vibrancy of the market, ensuring it continues to serve as a community. The ability to construct and modify the market quickly is essential for responsiveness to immediate community needs or opportunities. A design that is driven by community input and needs ensures that the market not only meets the current demands but also supports the growth of a local ecosystem. This involvement helps in cultivating a sense of ownership and belonging among the community members, which is vital for the sustainable success of the market. By adhering to these criteria, the tianguis prototype aims to demonstrate a unison between traditional market values with contemporary design and operational strategies.

This methodology provides a structured framework for developing a tianguis prototype that is rooted in traditional market values yet equipped to meet contemporary urban challenges. By focusing on community integration, adaptability, and sustainability, the project aims to revive the cultural and social relevance of marketplaces, transforming them into active nodes of urban life. The successful implementation of this prototype could serve as a model for implementation in other urban retail spaces around the world.



Figure 2.8
Entrance towards the
tianguis in Centro,
Mexico City.
Photo by Author
(2023).

CHAPTER 3

Case Studies

The case studies presented in the chapter inform the design and build principles that are applied in the prototype in chapter 4. The case studies chapter discusses two main cases of informal tianguis typologies: one being the more traditional tianguis set in Tepito and the other being a newer pattern of storeowners and their informal methods to expand their network of community. The chapter analyses the two case studies to later influence the design build prototype by outlining significant takeaways of how the two cases work similarly and differently. This analysis is necessary to bridge the gap between theoretical concepts discussed earlier in Chapter 1 and practical application, ensuring that the design strategies applied in Chapter 4 presents both new experiences grounded in pre-existing theoretical frameworks.

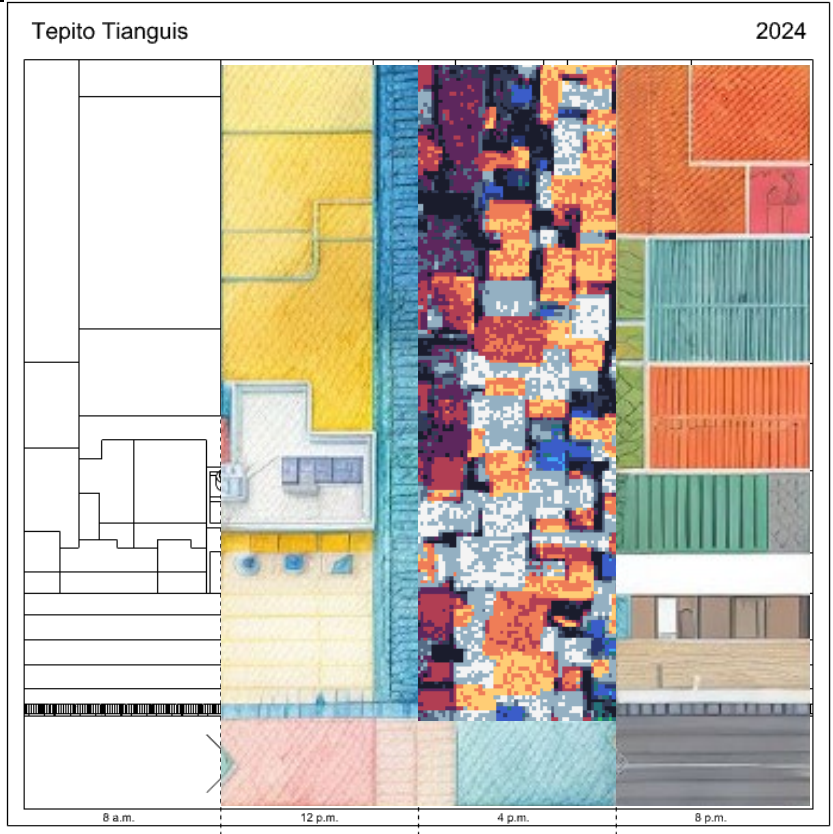


Figure 3.1
Collage representing
the activity system in
the tianguis in Tepito.
Diagram by Author
(2023).



Figure 3.2
Collage representing
a system in the
new-generation
storeowners.
Diagram by Author
(2023).

3.1 Tianguis in Tepito

⁴¹ Mete, Silvia, Luca Tomaino, and Giovanni Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.', *n.d.* 2-11.

Located in the centre of Mexico City, the tianguis in Tepito stands as an emblem of vibrant street commerce and community spirit (See Figure 3.3). Having existed for many centuries since the Aztec Empire, the tianguis underwent various socio-political changes including Spanish Colonialism in the 16th century, the subsequent Independence in the 19th century, the revolution, and the contemporary Mexican environment.

⁴² Mete, Tomaino, and Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

'Tianguis Shaping La Ciudad' details the tianguis' centuries of history. During the beginning of Spanish Colonialism, Hernan Cortes described Tlatelolco (a site across Tepito) as the most populated site in the whole world. As a result, every species of goods produced in the area was found in the marketplaces in Tepito. During and after the Spanish conquest, Mexicans adopted a colonial lifestyle including in trade, where in the beginning of the 17th century there was an implementation of a spatial division for different types of activities in Mexico City. This implementation caused weakened the traditional model of trade. By the 18th century, there were three recognizable forms of market trade in Mexico City: the first was a stable market for the 'nobles' in the city centre, second was a market spread in the periphery and the third being the tianguis, which is widespread in a lot of different streets crediting its un-fixed structures.⁴¹ As a result, "Tianguis are deeply rooted in Mexican culture and history, this word probably comes from the Pre-Colombian words *tiantiztli* or *tianquiztli* used to identify the marketplace."⁴² This marketplace exemplifies the dynamism of informal economies, evolving through decades to cater to the nuanced needs of its community. Yet, this evolution brings with it challenges in scalability and regulation, affecting both vendors and patrons. Moreover, the tianguis serves as a critical node for community interaction and engagement, providing more than just economic benefits. This section explores how the tianguis in Tepito have adapted and grown, its struggles with this growth, and its role in growing a unique community identity.



*Figure 3.3
Sign Reading 'Long
Live Tepito' near the
entrance of Tepito's
tianguis.
Photo by Author
(2023).*

⁴³ Tangires, Helen. 'Public Markets and Civic Culture in Nineteenth-Century America.' *Johns Hopkins University Press*, 2003. <https://doi.org/10.1353/book.72308>. xv-xx.

⁴⁴ Berndt, Christian, Jamie Peck, and Norma M. Rantisi, eds. 'Market/Place: Exploring Spaces of Exchange'. *Economic Transformations*. Newcastle upon Tyne: Agenda Publishing, 2020. 12-35.

⁴⁵ Mete, Tomaino, and Vecchio, "Tianguis Shaping Ciudad. In-formal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico." 2-11.

⁴⁶ Best, Steven, and Douglas Kellner. 'Postmodern Theory.' London: *Macmillan Education UK*, 1991. <https://doi.org/10.1007/978-1-349-21718-2>. 34-39.

Tianguis in Tepito, a market deeply woven into the fabric of Mexico City's urban culture, exemplifies the historical evolution and adaptation of informal marketplaces. What began as a small gathering of local vendors expanded dramatically as migration surged and the city's population increased. By the post-1950s era, tianguis had transformed into a crucial economic hub for immigrants, diversifying its offerings to range from basic groceries to luxury items in response to shifting economic landscapes (See Figure 3.1 outlining the progression of tianguis history in Tepito). This adaptability reflects broader trends in urban informal sectors and has been pivotal for the marketplace's survival and growth.⁴³ Such flexibility is often associated with resilience against economic downturns, helping tianguis adapt to both external pressures and internal community needs.

The marketplace's vibrancy is not solely a product of its historical adaptability but also of its high degree of user interactivity. Vendors in Tepito do more than sell goods; they engage in meaningful dialogues with customers and other vendors, beginning a rich exchange of information that enhances customer loyalty and enforces a sense of community within the marketplace.⁴⁴ Community events and markets further engage the local population, with surveys indicating high levels of community satisfaction. However, challenges such as overcrowding and logistical inefficiencies occasionally arise, potentially deterring new customers and impeding operational flow.⁴⁵ Thus, maintaining this interactivity without succumbing to its pitfalls remains a critical challenge for the marketplace.

Moreover, tianguis in Tepito is known for its responsiveness to community needs and external changes. Iterative improvements in its layout and vendor selection have optimized both traffic flow and customer experience, with architectural studies highlighting significant improvements in navigation and safety. The adoption of digital payment methods caters to younger, tech-savvy shoppers, increasing sales and reflecting the marketplace's ability to adapt to technological advancements.⁴⁶ Nonetheless, some

post-revolution

porfiriato

independence

colonialism

pre-colonialism

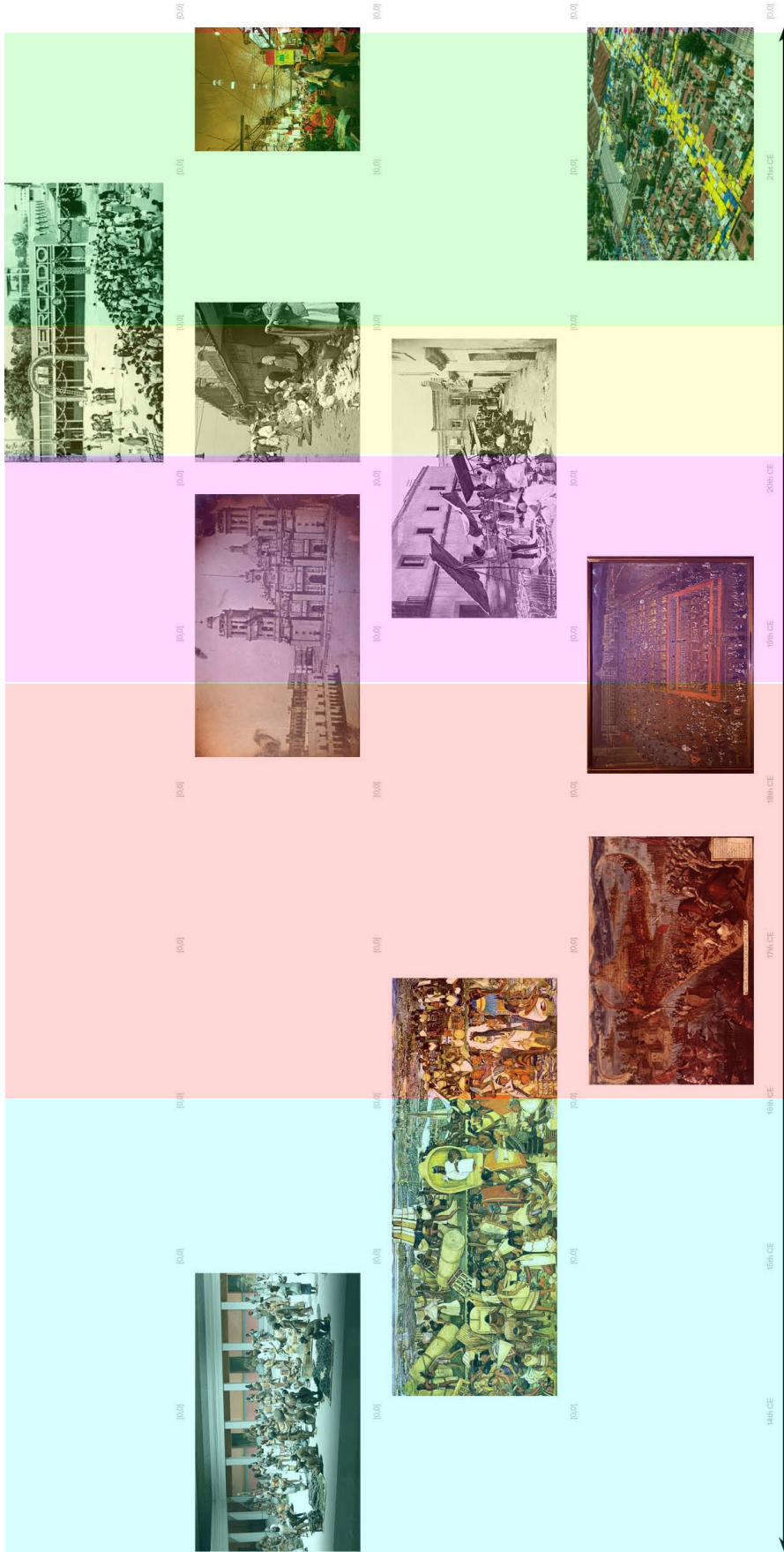


Figure 3.4
Timeline Diagram of
Tianguis in Tepito.
Diagram by Author
(2023).

⁴⁷ Berndt, Christian, Jamie Peck, and Norma M. Rantisi, eds. 'Market/Place: Exploring Spaces of Exchange'. 12-35.

traditional vendors struggle with these new systems due to gaps in digital literacy, indicating that while striving for modernization, the marketplace must also ensure accessibility and support for all vendors.⁴⁷

Tianguis in Tepito showcases the complex interplay between tradition and contemporary within informal marketplaces. Its enduring success amid numerous socioeconomic shifts is a testament to its historical adaptability. The dynamic interactivity and community engagement at its core enhance its charm and introduce unique challenges. Meanwhile, its iterative improvements and responsiveness to technological changes underscore its commitment to evolution and community inclusion. This case study highlights the importance of understanding and supporting the unique ecosystems of informal markets, emphasizing their critical role in urban cultural and economic landscapes.



*Figure 3.5
Usage of flexible
materials: fabric and
plastic drop sheets as
a divider between two
stores, Mexico City.
Photo by Author
(2023).*

3.2 New-Generation Tianguis

In Mexico City, not too far from the site of Tepito, the introduction of a 'new tianguis' marks a significant evolution in the landscape of urban marketplaces. Following globalization and the necessity for a wide sample of methods to sell following strict rules against physical activity during the recent pandemic, a new-generation of store owners in Mexico City are incorporating informal digital methods to augment the experience. This expansion is not just a matter of physical growth but reflects a broader trend of urban adaptation, responding to increasing consumer demand amidst a growing urban population. Through the incorporation of an online presence of the store, the store owners aim to iterate versions of the stores digitally allowing for more flexibility and a wider spread of their branding. With interactive elements within the store such as the incorporation of cameras and screens, the store owners also constantly experiment with user engagement and the way people begin to experience the products in different manners. Following such behaviour, the store owners also begin to coordinate with local artists, designers, musicians and other creatives to build both a local community that with its strong identity also becomes an outlet in reaching people with similar interests. Such new incorporations have enhanced the marketplace's ability to be iterative, interactive, and community-driven.

⁴⁸ Berndt, Christian, Jamie Peck, and Norma M. Rantisi, eds. 'Market/Place: Exploring Spaces of Exchange'. 12-35.

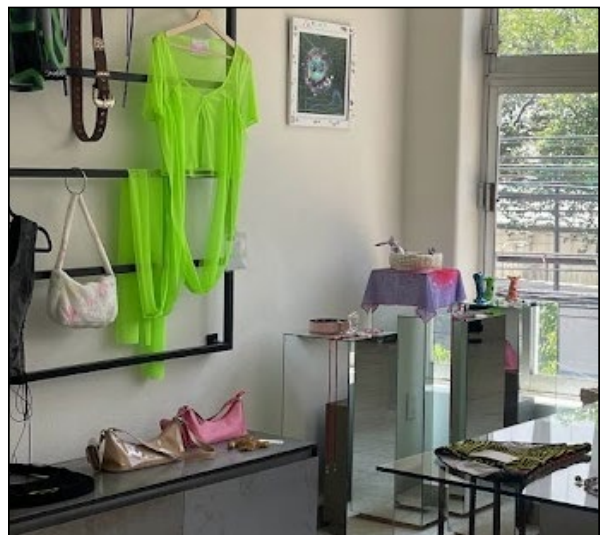
⁴⁹ Caramaschi, S. 'Public Markets: Rediscovering the Centrality of Markets in Cities and Their Relevance to Urban Sustainable Development', 1187-97. Siena, Italy, 2014. <https://doi.org/10.2495/SC141002>. 1187-1197.

The emergence of the 'new tianguis' in Tepito did not occur in isolation. Economic shifts driven by globalization and local demographic changes necessitated a rethinking of traditional market setups. An increase in the availability of international goods has prompted vendors to expand their offerings, thereby growing the marketplace both physically and commercially.⁴⁸ Urbanization has also played a pivotal role; as more people have moved into the city, consumer behaviours have shifted, leading to increased consumer foot traffic which vendors have capitalized on by expanding their stalls.⁴⁹ In addition, there is a role for government policy, as is often the case. Regulatory changes have typically forced vendors into more permanent setups. In some towns and cities, relaxed regulations have been useful in



Figure 3.6
Filia Store Entrance.
Retrieved from
Google Maps Street
View, "Filia store"
accessed May 15,
2024.

Figure 3.7
Filia Store Interior
Space.
Image provided by @
filia.store (2022).



⁵⁰ Caramaschi, S. 'Public Markets: Rediscovering the Centrality of Markets in Cities and Their Relevance to Urban Sustainable Development'. 1187-1197.

extending the marketplace across a whole block, growing more and more established as a retail-based marketplace. Through the use of an online presence, they hope to replicate versions of their stores online, which will be both more flexible and more able to carry their branding further afield. ⁵⁰ This not only expands their reach but allows them to pivot more rapidly when consumer whims and marketplace trends change.. An excellent example of this approach is Filia, a boutique in Mexico City that has successfully extended its physical presence into the digital realm (See Figure 3.6 and 3.7). The store's online platform is not just a sales channel but a comprehensive extension of its brand, showcasing its unique identity and curated products, thus attracting a broader audience beyond its geographical location.⁵¹

⁵¹ Monahan, Cait. 'Meet Filia Store, the Go-To Spot for Mexico City's Next-Gen Designers'. Hypebae, 28 May 2023. <https://www.yahoo.com/lifestyle/meet-filia-store-spot-mexico-022751440.html>.

Moreover, the 'new tianguis' has expanded not only in size but also in the depth of its community interactions. The design of the marketplace is such that it allows for extensive buyer-seller engagements, enabling consumer journeys that are seamless and unforced, helping to keep people engaged longer and to make more stops.⁵² Community engagement is not just limited to shopping but includes social activities such as festivals and cultural events that strengthen the overall sense of community and belonging. These interactions can sometimes be affected by issues of overcrowding and poor infrastructure that detracts from the quality of user experience and safety during peak hours, although the tianguis remains a model of vibrant community engagement, adapting continuously to meet the needs of its users. In this regard, the new Tianguis storeowners, with an objective to transform the way products are sold to consumers, are inculcating advanced interactive elements within their traditional physical stores. This is evident with the installation of digital screens and cameras. Such tools enable customers to visualize how products function in real-time and in real-life contexts, which significantly enriches the shopping experience. At Filia, for instance, screens showcase how items are styled and worn, thereby offering style inspiration and aiding customers in visualizing these products in their lives. Through this, the

⁵² Monahan, Cait. 'Meet Filia Store, the Go-To Spot for Mexico City's Next-Gen Designers'.



Figure 3.8
New Tianguis Brand
Depiction Diagram.
Diagram by Author
(2023).

⁵³ Monahan, Cait.
'Meet Filia Store, the
Go-To Spot for Mex-
ico City's Next-Gen
Designers'.

customer is not only made more attentive but also gains a closer association with the merchandise.⁵³

⁵⁴ Monahan, Cait.
'Meet Filia Store, the
Go-To Spot for Mex-
ico City's Next-Gen
Designers'.

The significance of the 'new tianguis' in Tepito extends beyond its economic dimensions. Embracing a community-centric approach, these forward-thinking storeowners also collaborate with local artists, designers, musicians, and other creatives to forge a vibrant community.⁵⁴ This collaboration not only enriches the store's cultural footprint but also taps into the collective creativity of the local scene, making the store a hub for cultural exchange and innovation. Filia stands out in this regard by hosting events and showcases that feature local talent, effectively turning the store into a cultural venue that attracts like-minded individuals (Figure 3.9 and Figure 3.10). Such initiatives not only enhance the store's appeal but also create a strong community identity that resonates with people who share similar interests. The Yahoo Lifestyle article on Filia exemplifies how these collaborations can transform a store into a cultural focal point, thereby extending its influence and reinforcing its brand within the community.

The new-generation of Tianguis storeowners is redefining the traditional marketplace by integrating digital technologies and community-focused strategies. Through online iterations, interactive retail technologies, and collaborations with local creatives, these innovators are not only expanding their reach but also enhancing the consumer experience and growing a strong community identity. This blend of traditional market values with contemporary digital tactics showcases a promising path forward for urban marketplaces, demonstrating resilience, adaptability, and a deep connection to local culture. As seen with Filia, this dynamic approach can significantly influence both the economic and cultural landscapes of urban centres, providing a model for future retail innovations.

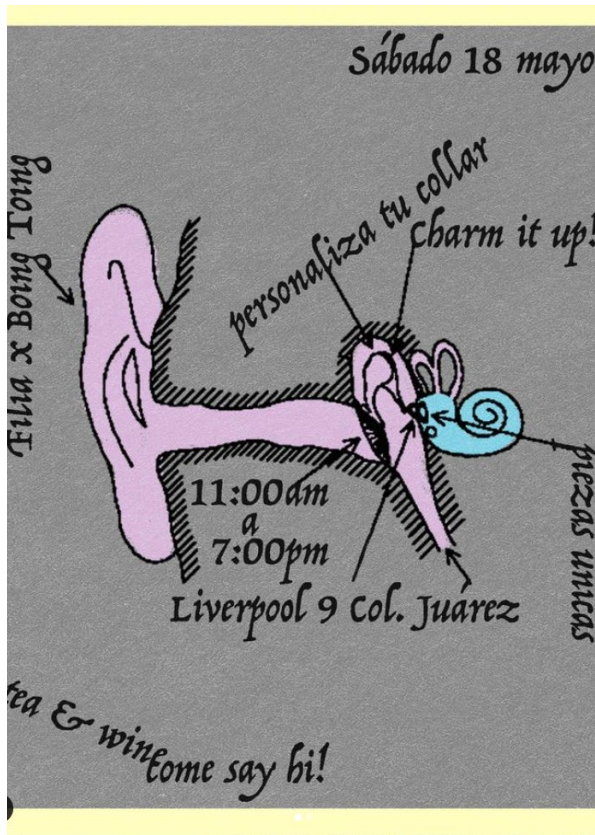


Figure 3.9
 Fila Store Event and
 Collaboration.
 Image provided by
 @filia.store (posted
 May, 2024).

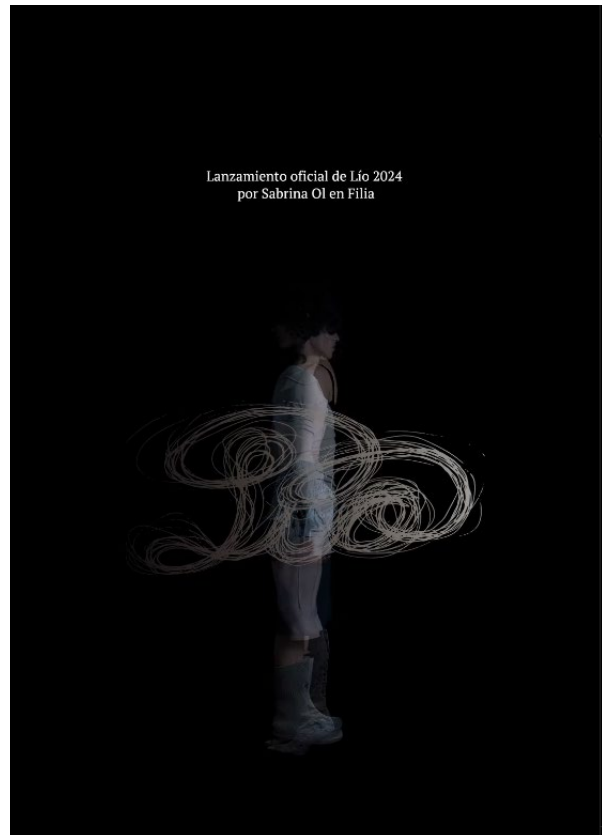


Figure 3.10
 Fila Store Product
 Launch. Image
 provided by @filia.
 store (posted 2024).

3.3 Comparison and Takeaways

⁵⁵ Mena, Ramón Sebastián Acle, Vidal Armas Torres, and Luis Daniel Bautista Castelán. 'Descriptive Approach to the Tianguis and Its Cultural and Commercial Activity in the Magical Town of Cuetzalan Del Progreso', *n.d.* 1-15.

In Mexico City's vibrant neighbourhood of Tepito, the traditional tianguis stands as a testament to the enduring nature of informal markets, deeply rooted in community and cultural practices. In recent years, however, a new-generation of tianguis has begun to reshape the urban marketplace landscape by integrating digital technologies and innovative retail methods. This section critically examines both models—traditional and new-generation—within the framework of informal retail architecture, focusing on their iterative processes, interactivity, responsiveness, and community-building capabilities. By analysing these aspects, we aim to uncover the practices that contribute to the success of informal markets and identify areas ripe for further exploration and enhancement.

⁵⁶ Berndt, Christian, Jamie Peck, and Norma M. Rantisi, eds. 'Market/Place: Exploring Spaces of Exchange'. 12-35.

The iterative nature of tianguis, whether traditional or contemporary, is crucial for their adaptability in the dynamic urban environment of Tepito (Figure 3.11). Traditional tianguis exhibit a natural evolution in response to the community's needs. Vendors, often family-run businesses, slowly modify their offerings based on daily customer interactions and gradually shift consumer trends. For instance, a vendor might initially sell homemade food items and, noticing a demand for artisanal goods, might start incorporating these into their offerings. This slow but steady adaptation helps maintain their relevance and sustains customer interest over generations.⁵⁵ In contrast, new-generation tianguis employ a more structured iterative approach driven by market analysis and consumer data. Utilizing digital tools, these markets can quickly respond to trends by adjusting their marketing strategies or inventory almost in real time. A notable example is the use of social media analytics to track consumer preferences, allowing vendors to stock products that are currently trending, thereby maximizing sales.⁵⁶ However, this rapid adaptation cycle can lead to overlooking the deeper, more nuanced consumer needs that traditional interactions capture, potentially alienating those who value the personal touch of the traditional tianguis.⁵⁷

⁵⁷ Monahan, Cait. 'Meet Filia Store, the Go-To Spot for Mexico City's Next-Gen Designers'.



*Figure 3.11
Usage of tarps 'lona'
and steel for
temporary market
stands in Tepito.
Photo by Author
(2023).*

⁵⁸ Pérez and Genovez, “Mercados y tianguis en el siglo XXI.”

⁵⁹ Monahan, Cait. ‘Meet Filia Store, the Go-To Spot for Mexico City’s Next-Gen Designers’.

⁶⁰ Monahan, Cait. ‘Meet Filia Store, the Go-To Spot for Mexico City’s Next-Gen Designers’.

⁶¹ Monahan, Cait. ‘Meet Filia Store, the Go-To Spot for Mexico City’s Next-Gen Designers’.

Interactivity and responsiveness are hallmarks of successful marketplaces, and their execution can significantly affect a tianguis’s success. Traditional tianguis thrive due to the personal connection vendors establish with their customers. The face-to-face interactions not only build trust but also allow vendors to immediately respond to customer feedback. This real-time responsiveness ensures that the offerings are closely aligned with customer desires, enhancing customer satisfaction and loyalty.⁵⁸ On the other hand, new-generation tianguis expands interactivity to the digital realm, reaching customers through online platforms and social media (Figure 3.12). This method broadens their audience and provides a platform for quick feedback through online reviews and interactions. However, such digital interactivity often lacks the personal engagement that characterizes traditional markets, possibly leading to a disconnect between vendors and customers. Furthermore, reliance on digital platforms can introduce challenges in customer service, where responses may not be as immediate or personalized as those in a physical setting.⁵⁹

Community building is another critical factor influencing the vitality and sustainability of tianguis. Traditional tianguis are not just marketplaces; they are community centres where social bonds are formed and reinforced. Regular events, such as local festivals or holiday markets, integrate cultural significance into the marketplace, strengthening community ties and building a sense of belonging.⁶⁰ These activities encourage regular attendance and participation, creating a loyal customer base anchored in shared cultural and social experiences. New-generation tianguis attempts to cultivate community through virtual events and social media engagement. While effective in attracting a wider, potentially global audience, these digital approaches sometimes lack the physical community engagement that traditional events provide. Although virtual events can offer convenience and accessibility, they may not fully replicate the communal atmosphere and shared experiences that are central to traditional tianguis.⁶¹



Figure 3.12
Filia Store Banner.
Image provided by
@filia.store (posted
2024).

⁶² Mena, Ramón Sebastián Acle, Vidal Armas Torres, and Luis Daniel Bautista Castelán. 'Descriptive Approach to the Tianguis and Its Cultural and Commercial Activity in the Magical Town of Cuetzalan Del Progreso'.

Both traditional and new-generation tianguis in Tepito offer valuable insights into the evolution of informal marketplaces. While traditional tianguis excel in cultivating deep personal connections and community ties, the new-generation introduces efficient, data-driven approaches that expand market reach and responsiveness.⁶² The future success of informal markets in Tepito could lie in a hybrid model that combines the community focus and personal touch of traditional tianguis with the technological innovations and broad reach of new-generation markets. By embracing the best of both worlds, Tepito's tianguis can continue to thrive as vibrant, adaptive, and inclusive community marketplaces (Figure 3.13).



Figure 3.13
Framing Activity
Inside the tianguis in
Tepito.
Photo by Author
(2023).

CHAPTER 4

Design



*Figure 4.1
Prototype at the
DesignTO exhibition
at stackt, zoomed
elevation Toronto,
Canada.
Photo by Author
(2024).*

4.1 Scope and Objectives:

The primary design focus for the new generation tianguis was to build a space that is adaptable, interactive, and community-focused. An effective informal market structure must not only accommodate commercial activities but also develop social interactions and community bonding. The design prototype objectives include 1) creating a market that can iterate with its community's needs, 2) promoting sustainable economic activities, and 3) becoming a model for future informal market designs. The tianguis presents itself with frugal innovations, in which both physical and policy-based constraints lead people to become more resourceful in terms of its materiality, towards affordable yet easily alterable materials including light wood or steel frame structures and durable fabric that can easily be mounted and de-mounted depending on the user's agency. This section delineates the design approach, processes, and iterative adaptations learned from the traditional and the contemporary tianguis to respond to contemporary needs across contemporary and traditional values. It incorporates the hypothesis that an iterative construction and testing method, along with interactive components, through participatory design can significantly enhance the market's function as a community of exchange. Through an in-depth analysis, the tianguis prototype has been iterated based on interaction and feedback, assessing its success in the creation of a thriving informal marketplace.

With a variety of Mexican brands collaborating to be part of the design prototype through their permissions of utilizing the products for display and interaction in the tianguis prototype, the brands wanted to also experiment and understand how this version of the tianguis would further expand their outreach with those outside of their usual communities. For instance, some young Mexican designers that at the moment were only able to use the online platform to expand their business saw this as an opportunity for testing interest with a temporary, physical storefront. Meanwhile, more established brands with physical stores were interested in seeing how the integration of interactive and responsive elements would shape the way people view their brand products.



*Figure 4.2
Prototype at the
DesignTO exhibition
at stackt, exterior
elevation Toronto,
Canada.
Photo by Author
(2024).*

A working prototype for this tianguis was selected to be exhibited for the 2024 DesignTO Festival, at Stackt, under the title “Learning from Tianguis: Exploring Hybrid Marketplaces”. The project was exhibited in the Stackt venue in Toronto, a venue known for its use of shipping containers as a marketplace, to test the spatial qualities, interaction, and adaptability in a short-term setting over the span of a week during the design festival. The prototype was planned within the confines of one container space in Stackt with dimensions of 12 metres x 4.5 metres. This container unit was characterized by an east-facing double-door entrance with 2 walls of floor-to-ceiling windows. The interior was characterized by the white walls, grey floors with vinyl cover and track lighting on the ceiling. While much of the floor to ceiling height in the container was 2.5 metres, due to the ceiling and track lighting the minimum floor to ceiling height was 2.3 metres. The marketplace setting of Stackt provided an environment to demonstrate a hybrid marketplace concept, with a relevant audience to visit and interact with the prototype. The simplicity of a shipping container as a site also accentuates the prototype allowing for detailed observation and analysis of space dynamics in the retail setting. The diverse mix of brands was curated, encompassing both emerging online designers and established brands with physical storefronts. This collaboration was facilitated through initial outreach with specifically newly emerging Mexican clothing brands, and with independent artists as they began to hear about the installation and product showcases during the exhibition. This diversity helps the project explore how different retail models adapt to and benefit from such a hybrid marketplace specifically in an informal setting. It provided insights into how traditional and new elements can be blended to enhance brand visibility and community engagement, essential for validating the tianguis model in a contemporary retail landscape.

The installation was designed to maximize visitor interaction, through the placement of the brand products and the pre-made furniture, along with the product display and different interactive



Figure 4.3
Product display and racks within Prototype at the DesignTO exhibition, Canada. Photo by Author (2024).

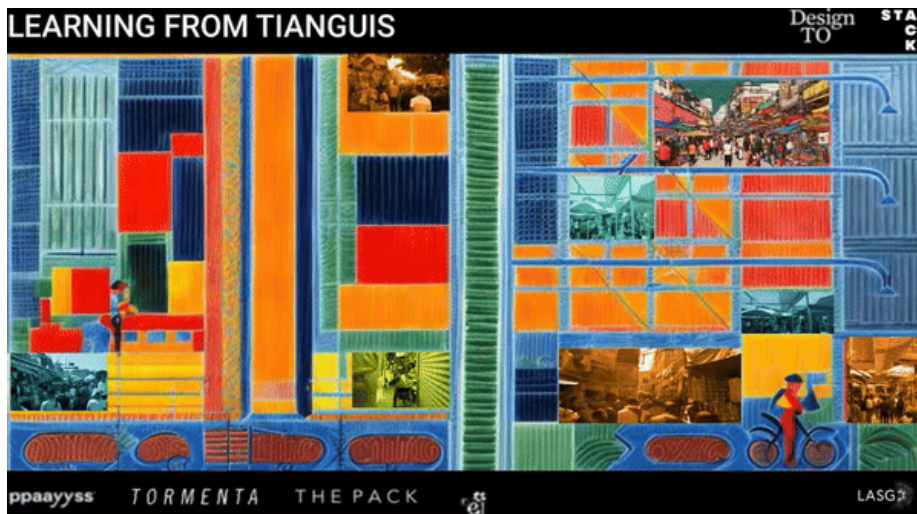


Figure 4.4
DesignTO Display Poster with List of Collabourators and collage. Image by Author (2024).

elements to enhance the displays from within the tianguis prototype allowed visitors to experience them and to further leave their marks on the fabric that enveloped the structure. Visitors could also physically handle products and interact with both the structure of the tianguis prototype, and the digital projections installed to showcase more brand products, but also video projections within the space that acted as a digital mirror integrated as part of the prototype. This integration was fundamental for examining the effectiveness of analysing what incorporations to input for more improved interaction and initial visitor attraction. Engagement methods included participatory design elements like direct feedback where visitors could draw and write on the prototype, and observational studies with the aid of volunteers over the course of a week to gather data on visitor responses and interactions. Engaging visitors in this manner helped collect consumer behaviour and preferences to further alter the structure for new responses. Over the course of the week, over three hundred visitors stepped into the prototype.



*Figure 4.5
Initial Furniture
Layouts with visitors
within Prototype at
the stackt market,
Canada.
Photo by Author
(2024).*

4.2 Designing Prototype

⁶³ Lazo, Pablo. 'Assemblage in Mexico'. *Arquine: Revista Internacional de Arquitectura* 36, 2006, 84.

⁶⁴ Mete, Silvia, Luca Tomaino, and Giovanni Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.', *n.d.* 2-11.

Embracing the iterative nature of traditional tianguis, the prototype employs a lightweight steel frame with connections that reflect the frugality and resourcefulness inherent in tianguis construction. This design utilizes steel pipes and pipe fittings as connectors, chosen for their durability and ease of assembly, ensuring the structure can be easily set up, dismantled, and reconfigured. These design choices directly reflect the adaptability seen in tianguis setups, allowing for rapid assembly and reconfiguration based on the immediate needs of the vendors and space.⁶³ This approach is crucial not only for adapting to various spatial needs but also for aligning with the dynamic nature of market environments, where flexibility in structure and placement is often necessary. Modularity is another key aspect of the tianguis that has been incorporated into the prototype through the use of ¾” pipes for all structural members and connectors (see Figure 4.6 and Figure 4.10). The importance of modularity lies in its ability to support the changing demands of the marketplace, enabling a quick response to different events and customer flows.⁶⁴ Additionally, flexibility within the prototype is achieved using soft materials like fabric to subdivide spaces. This element is inspired by the informal yet functional subdivisions within traditional tianguis, providing not only practical but also aesthetic benefits. Implementing soft materials allows for easy modifications and user interaction, giving people the agency to change the appearance and functionality of their environment, which is important for developing a marketplace that is both inviting and adaptable.

The lightweight and modular design of the steel framework facilitates iterative adjustments, making the installation highly responsive to user feedback and environmental changes. The process of installation of the structure to fill the dimensions of 3m x 6m by a height of around 2.1 m, took around 3 hours with the usage of pipes and pipe fittings from the beginning of the construction with the labour of two people (See diagrams from Figure 4.6 to Figure 4.14). While it may seem to take longer than the installation of a more usual tianguis with pre-made steel

Figure 4.6
 Construction 1:
 Pre-construction Diagram-
 pipes, fittings, dropsheets
 and products from
 collabourators.
 Diagram by Author (2024).

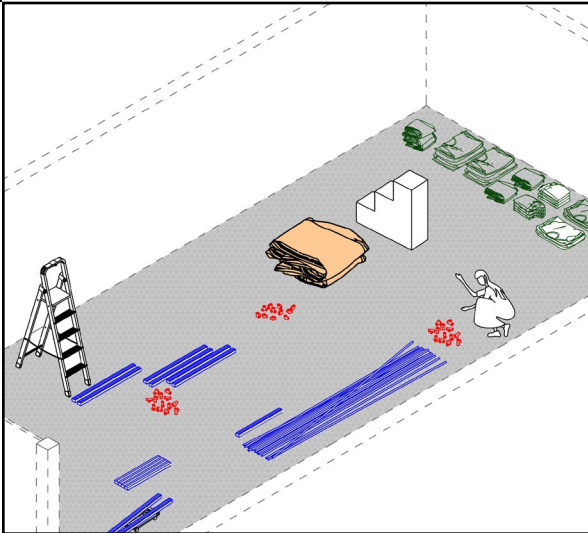


Figure 4.7
 Construction 2:
 Laying out Perimetre for
 External Shell.
 Diagram by Author (2024).

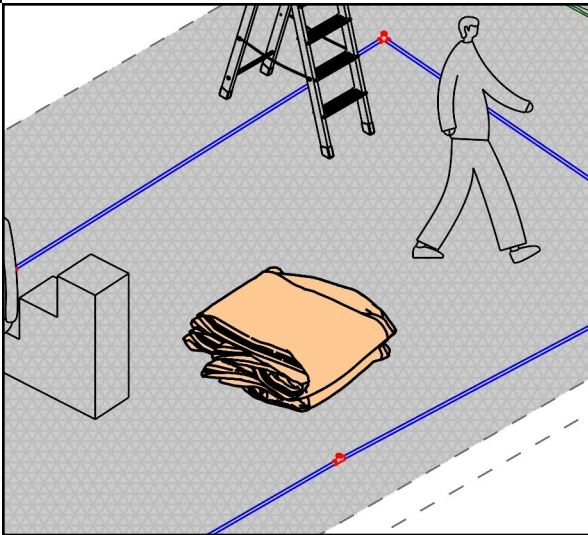
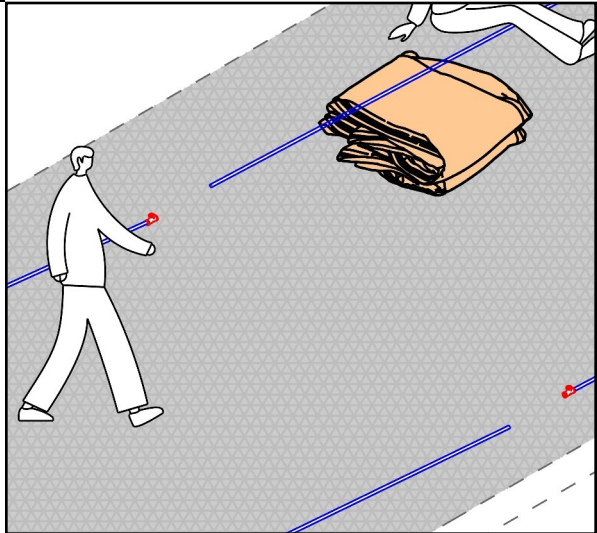


Figure 4.8
 Construction 3:
 Initial Construction Process
 Connecting a Perimetre for
 External Shell.
 Diagram by Author (2024).

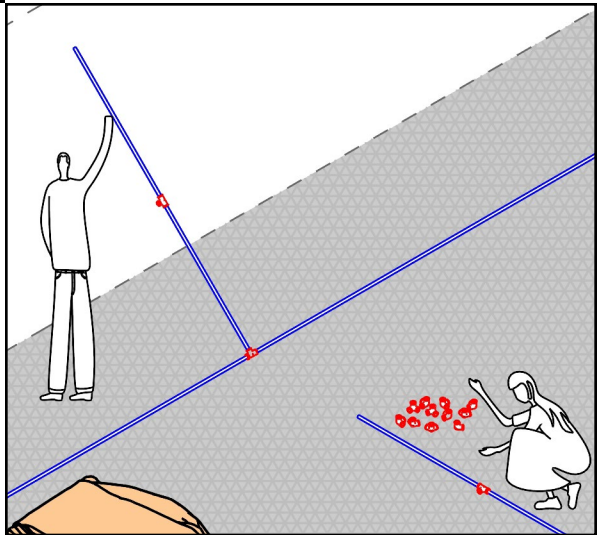


Figure 4.9
 Construction 4:
 Initial Construction Process
 Constructing The Side
 Columns to Support Sides
 of the Prototype.
 Diagram by Author (2024).

⁶⁵ Pérez, Sergio Moctezuma, and Darinel Sandoval Genovez. 'Mercados y tianguis en el siglo XXI', *n.d.* 338.

⁶⁶ Vodopivec, Barbara. 'Made in Tepito: Urban Tourism and Inequality in Mexico City', *n.d.* 3-25.

frames, which on average take half an hour to an hour of set-up time, it is important to note that this excludes the welding of the frames that are pre-fabricated to be sold as a whole, as well as significantly smaller dimensions of around 1 to 2 metres in width and length with a height of around 2 metres.⁶⁵ When comparing the prototype to less traditional wooden tianguis stands, it is a similar or if not faster assembly as it does not require the sizing of wooden posts, connecting, and detailing, which would take in the range of 4 to 9 hours. Not to mention, it does not involve drilling nor gluing allowing for complete disassembly afterwards. The modular framework of utilizing pipes and fittings also allows for the agency of the user to expand the dimensions to respond to the amount of space they require, without permanent implementations into the structure, which would restrict disassembly methods. This responsiveness is important for maintaining an engaging marketplace atmosphere to cultivate community, and learning from the adaptable nature of traditional tianguis. The use of flexible soft materials, specifically fabric, enhances this interactivity by allowing occupants to alter their surroundings rapidly (see Figure 4.10 for all materials involved).⁶⁶ This capability builds off of the dynamic and often makeshift arrangements found in tianguis in order to support diverse interactions with the design prototype, such as drawing on the fabric, moving it around, or using it as a medium for projections and shading. These interactive elements made the space more engaging and responsive, aligning with the communal and adaptable spirit of traditional marketplaces, which was evident from the increase in visitor activity and the observation of a prolonged stay from each person as they engaged in social activities within the prototype.

Further integrating learnings from the new generation of tianguis, digital enhancements such as screens, projectors, and cameras are included to modernize the user experience. These digital tools are designed to interact with the physical elements of the market, enhancing product displays, providing interactive customer service, and encompassing a contemporary shopping

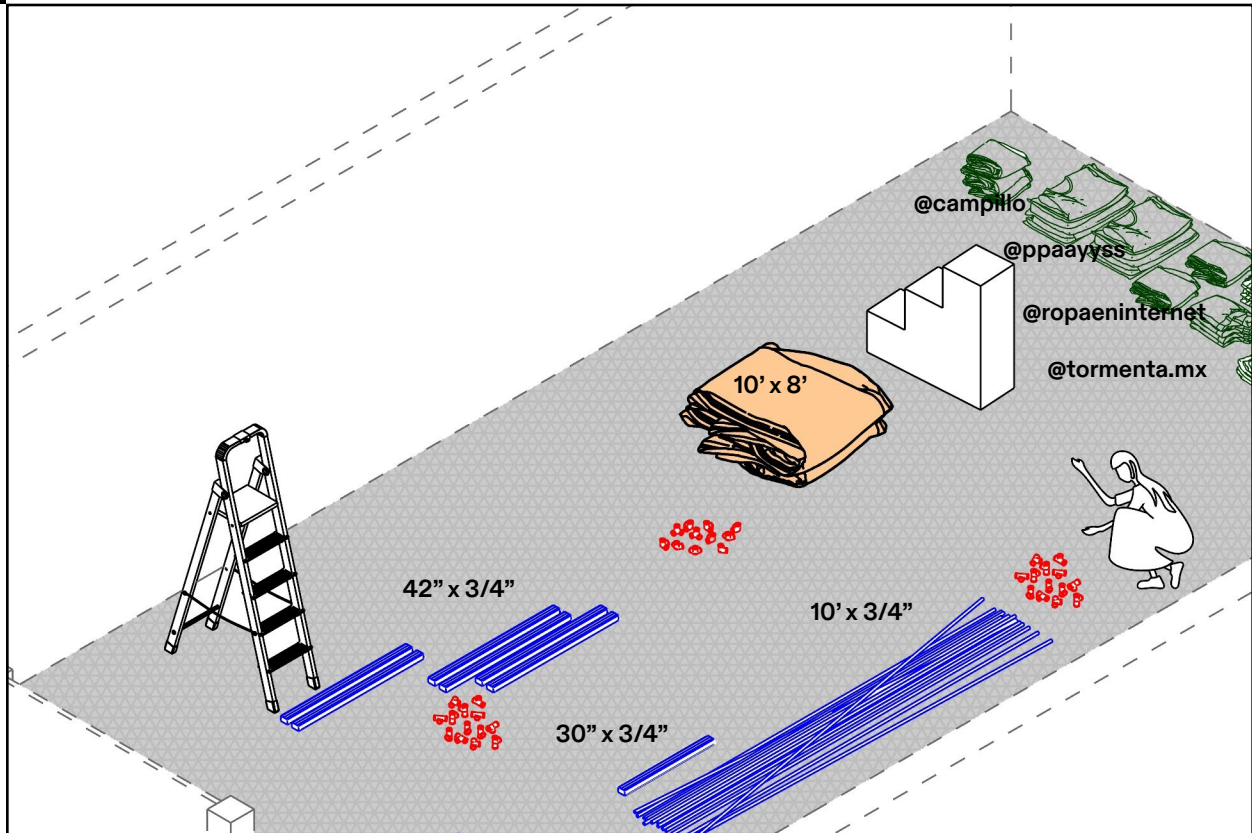


Figure 4.10
 Construction 1:
 Labeled Pre-
 construction Diagram.
 Diagram by Author
 (2024).

⁶⁷ Mete, Silvia, Luca Tomaino, and Giovanni Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

⁶⁸ Mete, Silvia, Luca Tomaino, and Giovanni Vecchio. 'Tianguis Shaping Ciudad. Informal Street Vending as a Decisive Element for Economy, Society and Culture in Mexico.' 2-11.

environment. One instance came from the modular changing area, where people had the agency to view themselves in the space through a camera and projection. The necessity of these digital tools in contemporary times lies in their ability to bridge the gap between traditional market values and the necessity for community expansion. The changing area exhibited cameras that projected the interior space of the tianguis as a digital extension of the space. People could then visualize themselves within the space and with the displayed products, allowing for more engagement and interest in the interaction. These design decisions were made based on the tianguis-centred community interaction as a fundamental component of the tianguis that is emphasized in the prototype through strategic design choices. By facilitating interactions among people, the structure aims to support a vibrant market culture, mirroring the lively, communal atmosphere that is a hallmark of traditional tianguis.⁶⁷ This is achieved through the layout and interactive elements that encourage conversation and exchange, thereby nurturing a sense of community in this case being the brands and the visitors (see Figure 4.12). During the tianguis prototype installation, collaborations from local brands and artists further factored in changes in layout to modify the circulation and methods of interactions that people would have with these new works. Involvement with such brands, designers, and artists is another aspect borrowed from both traditional and new tianguis, where interdisciplinary collaborations are often seen as productive implementations to enhance community engagement.⁶⁸ By collaborating with these local creatives, the prototype serves as a platform for showcasing regional talent, thus expanding its community outreach and cultivating a richer cultural exchange. Lastly, the inclusion of designated areas for specific programming and social interactions ensures that the market serves not only as a commercial space but also as a centre for community life (see Figure 4.14 for the way space would start to be shaped). These spaces are essential for hosting various interactive activities, thus enhancing the social fabric of the marketplace and reinforcing its role as a seed for a potential community.

Figure 4.11
Construction 5:
Constructing The Side
Columns to Support Sides
of the Prototype.
Diagram by Author (2024).

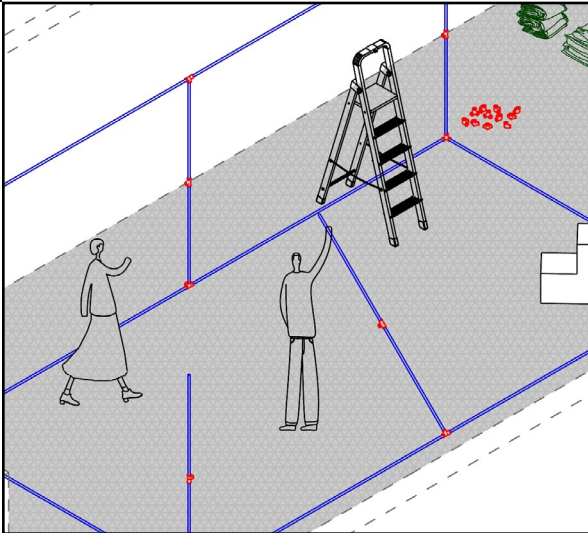


Figure 4.12
Construction 6:
Constructing Before
Stabilizing all the
Connection Points.
Diagram by Author (2024).

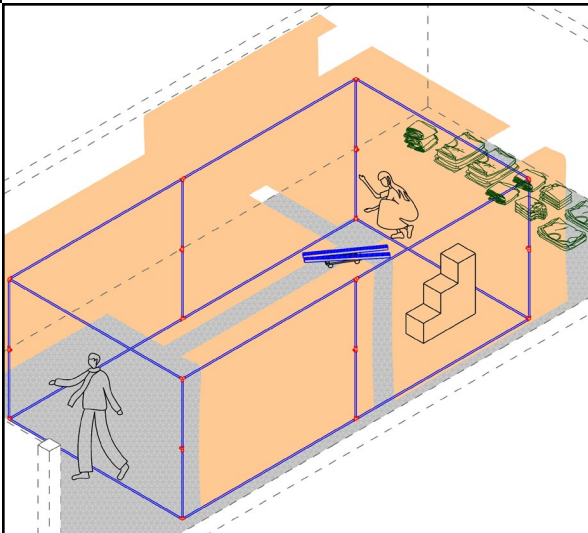
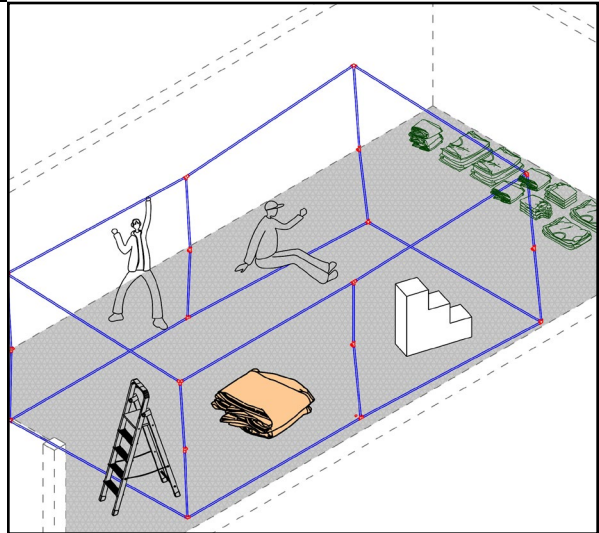


Figure 4.13
Construction 7:
Connections and Laying
Out Exterior Drop Sheet.
Diagram by Author (2024).

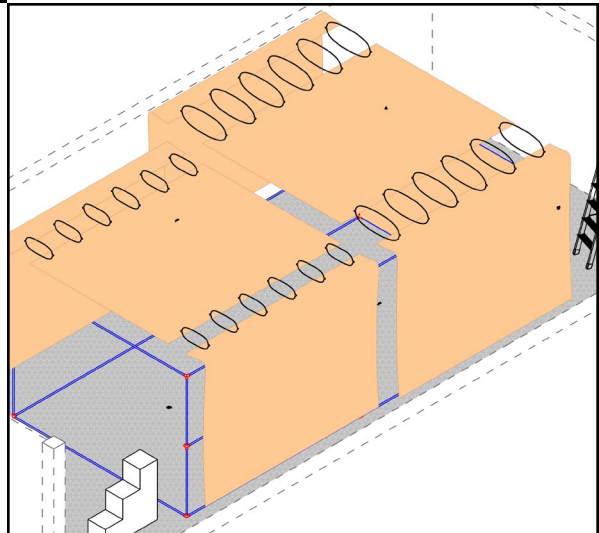


Figure 4.14
Construction 8:
Connecting the Drop
Sheets in Groups of Three
and Overlaying.
Diagram by Author (2024).

4.3 Construction Process

The construction process was designed for the prototype building to be iterative, interactive, and as a whole community-driven. It had to be pre-planned for the ease of construction given the setting up period of two days. Weeks prior, a base structure and construction system were planned digitally to pre-assess the installation of the prototype with minimal information. Setting up began with the acquisition of the materials, where steel pipes and fittings of $\frac{3}{4}$ " were acquired after experimenting with the spans and structure with smaller members to assess the sizing of the structural members. First, a large frame spanning 20' was built with 10' long pipe members as the spans to cover a perimeter of 10' x 20' (see Figure 4.15 for the shell structure constructed). This required the usage of linear three-way pipe fittings to connect the long members with one another and corner three-way pipe fittings to later connect to the vertical members. The vertical members were built in as a connection of two 42" long pipe members to accommodate an ideal height of 7' for the tianguis prototype. These would also be connected with the linear three-way pipe fitting as a way to keep the potential for future expansion and potential implementation for bracing members in case the structure would be too flimsy. The fabric was sized to be 10' wide and 8' long. To cover the entirety of the base structure, seven pieces were needed- one for one end, and three for the two subsections that would become the walls and roofs of 10' span each (see Figure 4.16 that shows drop sheet that covered structure). In order to create the walls and roofs, three fabric pieces were pre-processed to be connected using grommets and zip-tie connections prior to mounting on the pipe structure. With the remaining pieces of pipes and fabric, various pieces of furniture were quickly assembled in order to facilitate the products and the way they would be displayed. A blend of tall, mid-sized, and short platforms was necessary and the furniture pieces were necessary to accommodate different needs within the prototype. Taller structures would be built to support fabric walls, clothing, and bag racks, whereas mid-sized furniture would be built to support the projectors and other interactive digital tools. The shorter furniture would either display artwork and other



Figure 4.15
Initial Construction
Stage of Building the
Exterior Shell with
Pipes and Attaching
Back Fabric Wall.
Photo by Author
(2024).



Figure 4.16
Construction Stage
with Drop Sheet
Installed to Cover
entire Structure.
Photo by Author
(2024).



Figure 4.17
Final Stage of Laying
Out Interior Furnitures
and Products.
Photo by Author
(2024).

smaller scale display products as well as markers and drawing tools that also acted as a physical interactive activity for people to utilize. Pipe mounts were used as connections between digital tools such as digital screens, projectors, and cameras and the main structural members of the tianguis prototype (see Figure 4.18 that details series of construction phases).

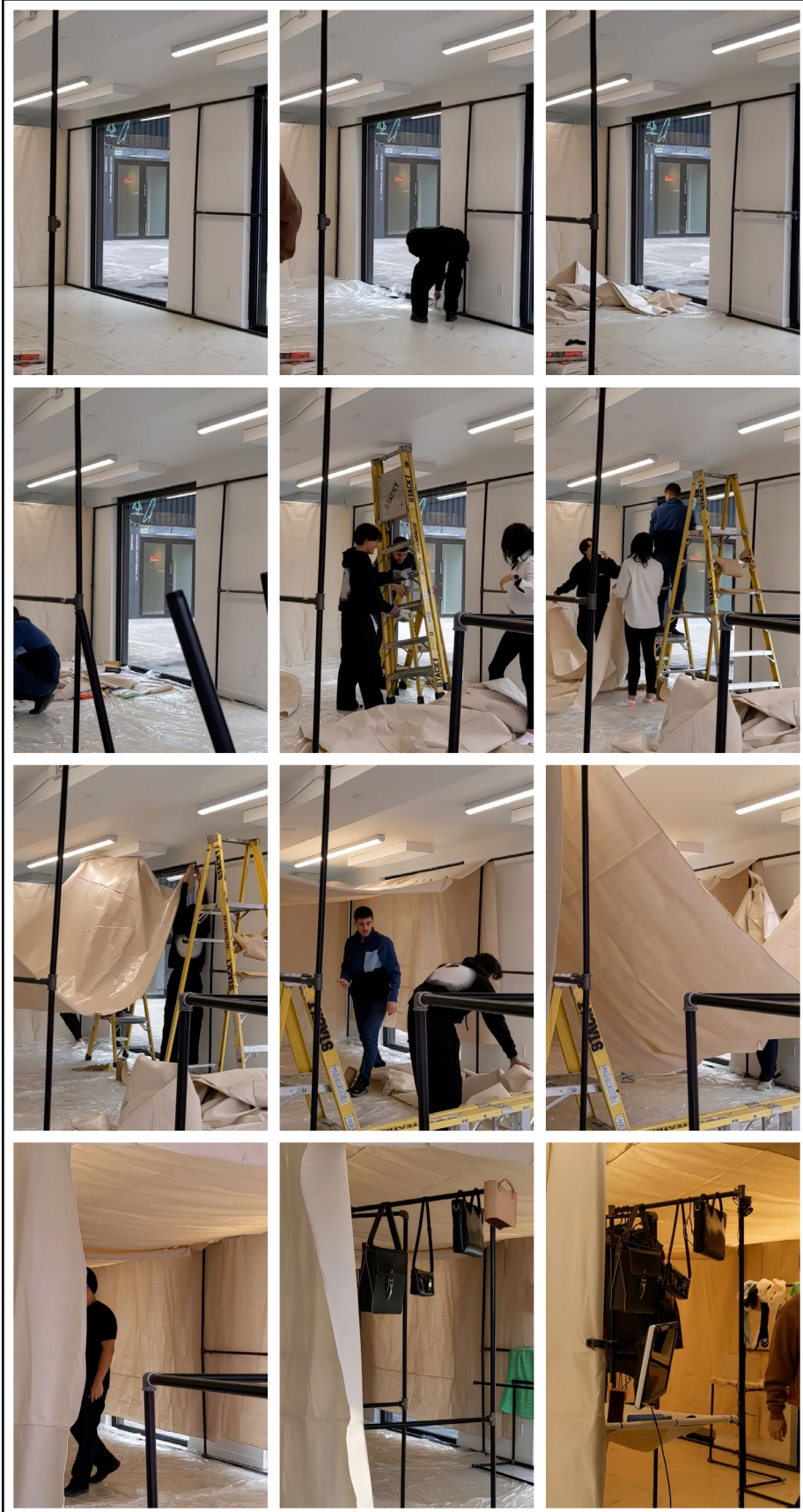


Figure 4.18
Construction Process
Photo Series from
Frames in Timelapse.
Photos by Author
(2024).

4.4 Iterative and Adaptive Elements: Steel Frame, Fabric, Digital Screens

A progressive evolution tailored to enhance user interaction, product display, and the integration of digital technology in a dynamic retail environment is illustrated in Figure 4.19 to Figure 4.27 depicting a series of prototype iterations. This detailed analysis will explore the structural changes, furniture adaptations, modifications in circulation patterns, and revisions to digital equipment positioning that have occurred throughout the iterations. The change begins with the steel pipe members. Initially, these structures were basic, lightweight frames that served as the foundational skeleton. Iteratively modified to increase both stability and flexibility, early configurations aimed to test structural integrity and ease of reconfiguration. As the iterations advanced, these structures expanded and included more complex junctions. This allowed for the introduction of more dynamic shapes and increased load-bearing capabilities, accommodating more extensive and varied product displays and interactive elements.

Parallel to the evolution of the steel frames was the strategic placement of fabric within the setup. Fabric elements were introduced to soften the industrial feel and add versatility, enhancing the tactile experience for customers and allowing for quick adjustments and reconfigurations to respond to different setups or specific event needs. Initially, fabric panels served primarily to delineate distinct zones. Over time, however, their role became more nuanced. Fabric placements were adjusted to allow natural light to permeate areas designated for physical product displays while reducing light in areas with digital displays to enhance screen visibility. Experimentation with different fabric densities effectively balanced the internal lighting conditions, catering simultaneously to the needs of digital and physical display environments.

Simultaneously, the furniture within the prototypes saw significant evolution (see Figure 4.19). Initial furniture units were simplistic and closely mimicked the modular framework of the overall structure (see Figure 4.19). However, with each iteration,

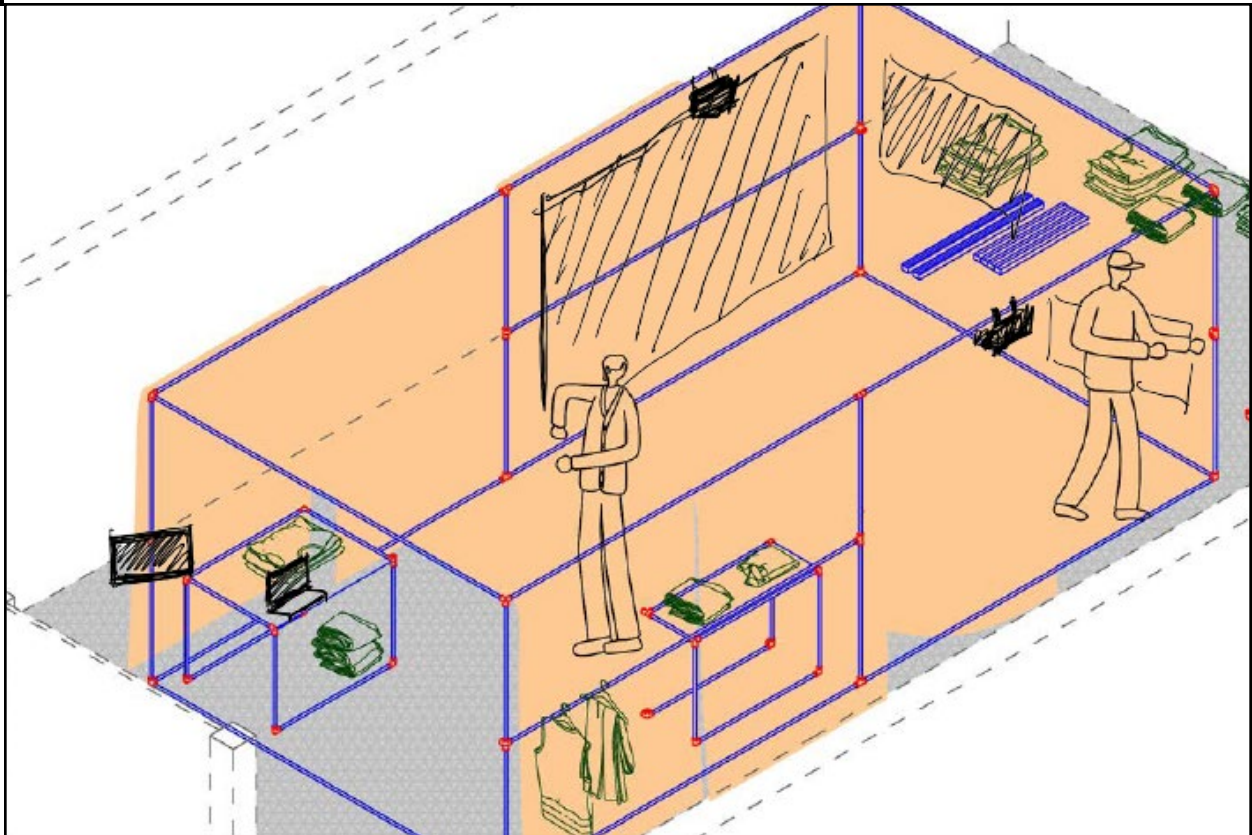


Figure 4.19
Early Iteration of Prototype
during the DesignTO
exhibition.
Diagram by Author (2024).

the furniture grew in size and complexity. This was reflective of an increased capability for displaying a wider array of products. Furniture scale pieces were crafted from the same steel pipes used in the main structure, ensuring aesthetic coherence and structural integrity (Figure 4.19). The arrangement of both structural and furniture elements was deliberately designed to facilitate easy movement and encourage interaction among visitors. Circulation within the space was meticulously planned to enhance community engagement. Open spaces were maintained or adjusted in each iteration to support community engagement activities such as product demonstrations, interactive sessions, and social gatherings (Figure 4.20).

Additionally, circulation pathways were optimized to guide visitors through a curated experience of both products and digital interactions. Strategic placement of interactive digital stations alongside physical products ensured that visitors engaged with both elements effortlessly, enhancing the overall shopping experience. The placement of digital screens evolved to ensure optimal visibility amidst changing light conditions and customer flow patterns. Adjustable mounts became more common in later iterations, allowing screens to be repositioned based on specific needs, such as different times of the day or for particular types of events. Cameras were strategically positioned to capture interaction data, helping to further refine customer experience and product placement strategies. Projectors were integrated in a way that they could be easily moved or adjusted, projecting onto large fabric screens for advertising or interactive displays. This integration allowed for a seamless blend of the physical and digital, enhancing the dynamism of the space.

Figure 4.20
Iteration 1:
Simplicity in Setup to Test
initial Projections.
Diagram by Author (2024).

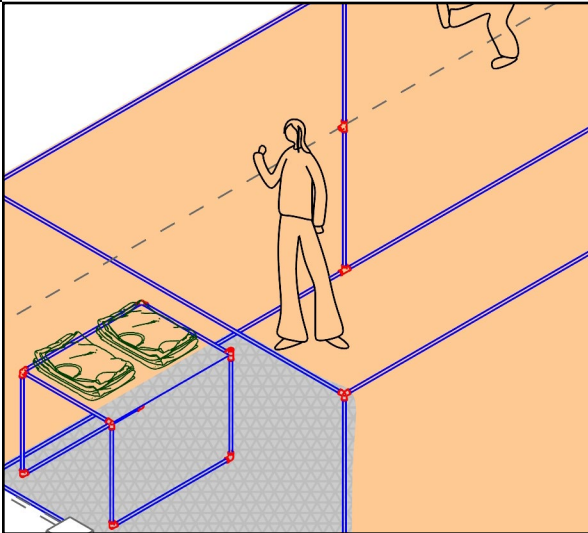


Figure 4.21
Iteration 2:
Building more furnitures
for more product display
areas.
Diagram by Author (2024).

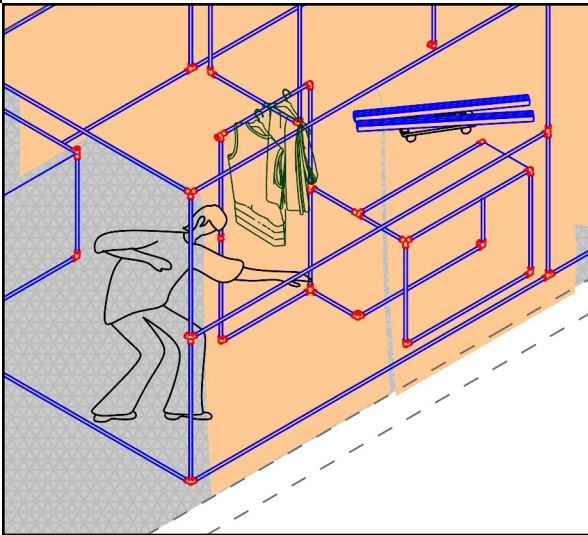
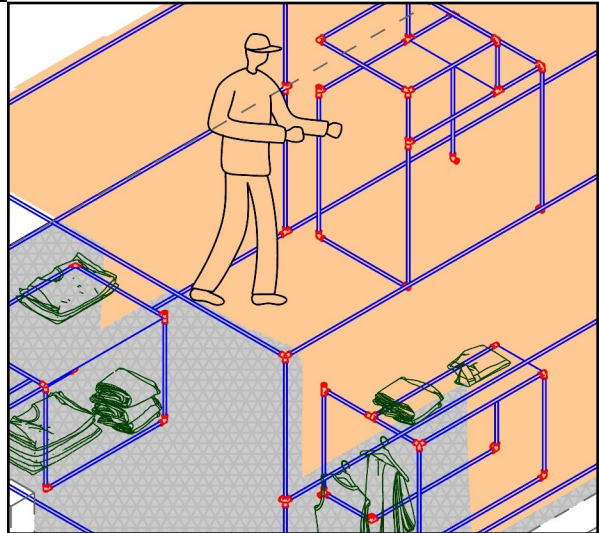


Figure 4.22
Iteration 3:
Testing furnitures for more
product display areas.
Diagram by Author (2024).

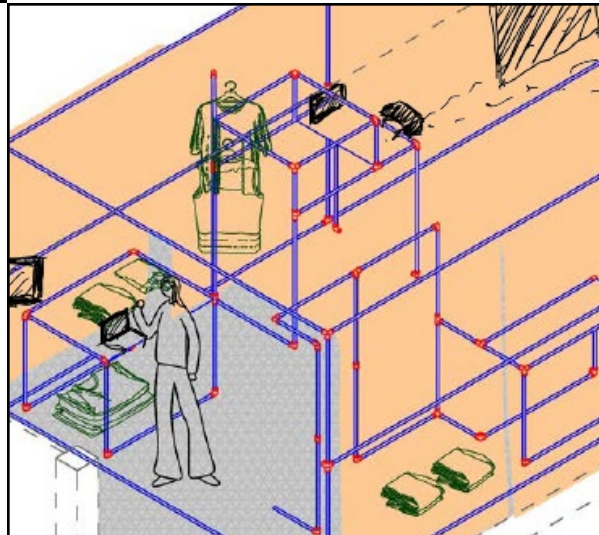


Figure 4.23
Iteration 4:
Larger and more versatile
modes to display physical
product.
Diagram by Author (2024).

4.5 Analysis of Iterative Responses

Each iteration of the tianguis came with a necessary input and a response based on the outcomes. In this evolving prototype of a contemporary tianguis, each iteration builds upon the previous to enhance structure, furniture adaptability, circulation flow, and digital integration, crafting a progressively sophisticated and user-centric environment. The initial iterations focus on establishing a basic structural framework using steel pipes, with minimal fabric used for basic zoning (see 4.25). Furniture in these early stages is simple, featuring small tables and display racks that align with the minimalist design, facilitating clear and open pathways around the perimeter of the displays to ensure easy navigation. At this point, digital equipment is either absent or minimal, possibly limited to a single projector or screen to test visual impact. From this initial stage, the central evaluation factor/success measure for the design prototype would be its ability to accommodate the feedback loop from customer interaction and community space needs (see Figure 4.27). On opening night, the simplicity of the setup attracted over fifty visitors, indicating a strong initial interest. Feedback highlighted the openness of the layout and the ease of navigation, but visitors also expressed a desire for more engaging digital content and interactive displays.

As the prototype develops through subsequent iterations, the structure will undergo slight expansions to include more display areas, while furniture sees the introduction of slightly larger tables or shelves (see Figure 4.20). Fabric integration begins as an experimental method to manipulate lighting and create distinct zones, which also necessitates adjustments in layout to test different circulation flow patterns. The digital equipment becomes more pronounced, experimenting with placement for optimal visibility and interaction. By the fourth to sixth iterations, the design incorporates more intricate designs with additional layers or levels in the steel framework. Furniture becomes larger and more versatile, capable of supporting a broader array of products. The circulation design is enhanced to accommodate increased foot traffic and interaction zones, and multiple digital screens and projectors are strategically placed across different

Figure 4.24
 Iteration 5:
 Shift in digital projections
 and initial visitor interaction
 with the fabric through
 drawing on it.
 Diagram by Author (2024).

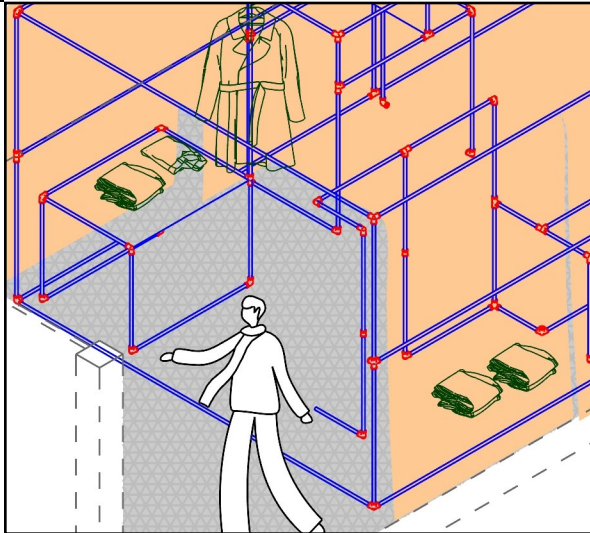


Figure 4.25
 Iteration 6:
 Addition of more product
 displays following more
 artist collaborations
 during the installation.
 Diagram by Author (2024).

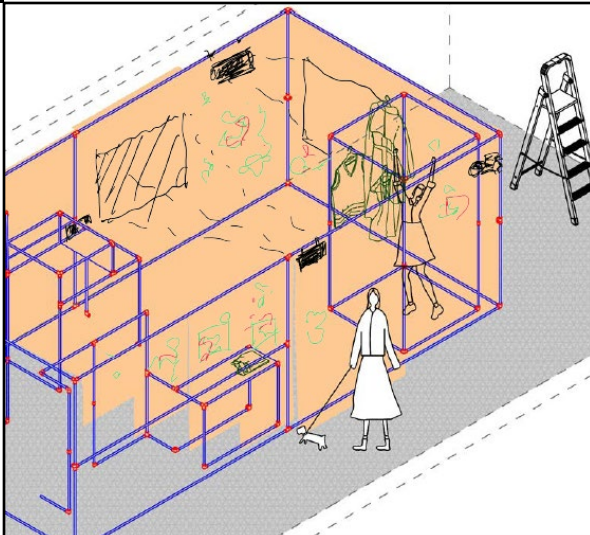
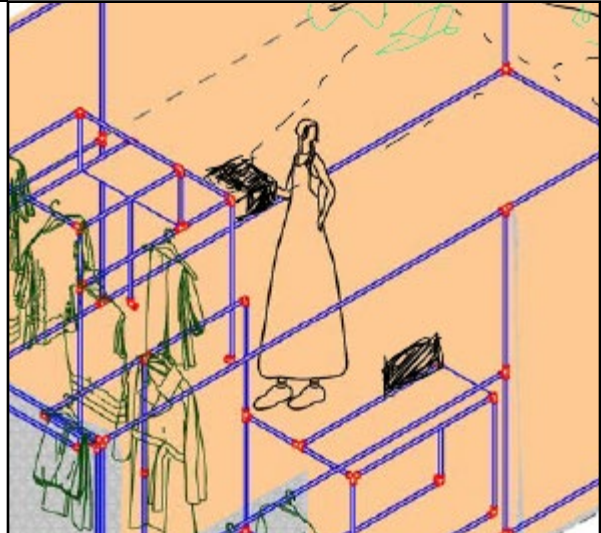


Figure 4.26
 Iteration 7:
 Movement of prototype to
 facilitate for an external
 corridor for more art
 displays.
 Diagram by Author (2024).

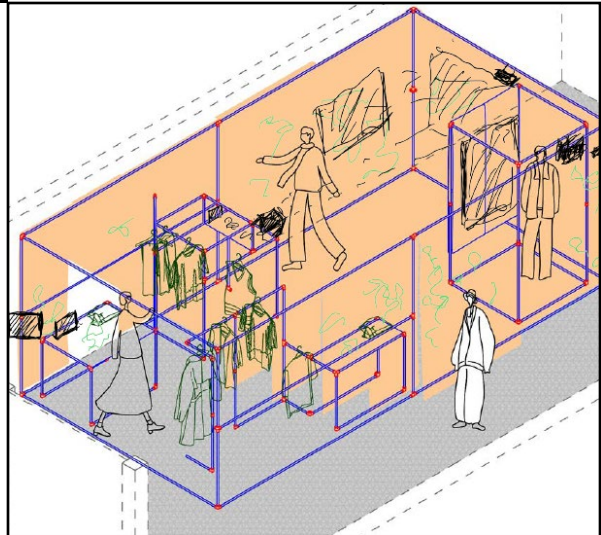


Figure 4.27
 Iteration 8:
 Final Iteration with more
 visible inputs of scribbles
 from visitors and changing
 room projection.
 Diagram by Author (2024).

zones to maximize engagement and test visibility. A dip in visitors on the fourth day prompted a reevaluation of engagement strategies, leading to the steady return of thirty visitors daily. Enhanced digital displays and improved product arrangement led to increased dwell time and interaction, particularly with digitally presented information (see Figure 4.19).

From the seventh to ninth iterations, there is a significant focus on light management, adjusting fabric placements to better control lighting for product display and digital screen visibility (see Figure 4.21). Furniture design introduces hybrid units combining storage and display functionality, and interactive zones are implemented to require visitors to engage with both physical products and digital tools. This period also fine-tunes the locations of digital interfaces to enhance user interaction, incorporating touchpoints for feedback and engagement. Enhanced lighting and zoning improved the visual appeal and circulation of the space. Visitors interacted with products and digital content, providing valuable insights into optimal placement and technology usage. People began to exhibit a wider range of interactions with more availability of interactive tools, to the point where certain interactions began to merge. For instance, the projections of the room on the fabric would become a space where people would trace themselves onto the prototype's fabric walls. Feedback from people at this point was generally positive describing the space as 'homey' and 'cozy' (see Figure 4.23).

In the final phases, see the iterations and interactive responses of structural layouts determined to be most effective in earlier tests (see Figure 2.26). Furniture designs become customized and fully integrated with structural elements, potentially including built-in digital components. Circulation pathways are optimized to lead visitors through a narrative journey of products and digital experiences. The control of lighting reaches advanced levels, perfecting the use of fabrics to create suitable atmospheres for different times of the day and types of interactions. Furniture systems are designed to be fully adaptive, allowing

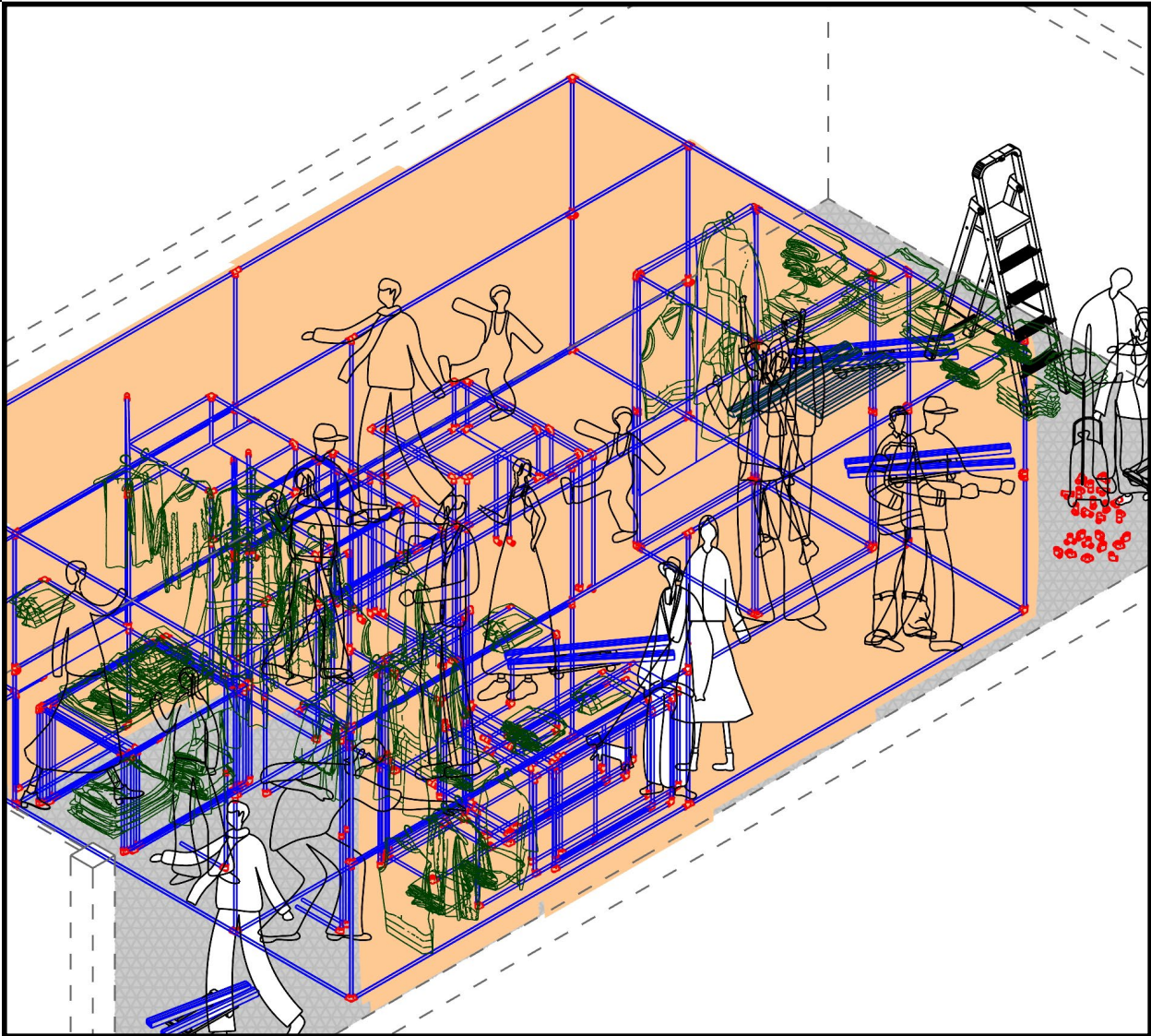


Figure 4.28
Iterations 1 ~ 8:
Combination of all
construction processes and
iterations overlaid on top
of one another.
Diagram by Author (2024).

reconfiguration by users according to immediate needs. The environment led to enhanced visitor engagement, with the narrative pathways and integrated digital experiences providing a cohesive journey through the tianguis. Feedback from these phases was positive with people inquiring more regarding the brands and their products, along with communication between visitors through the interaction fabric highlighting some positive impacts from the responsive design in surrounding a social atmosphere (Figure 2.27).

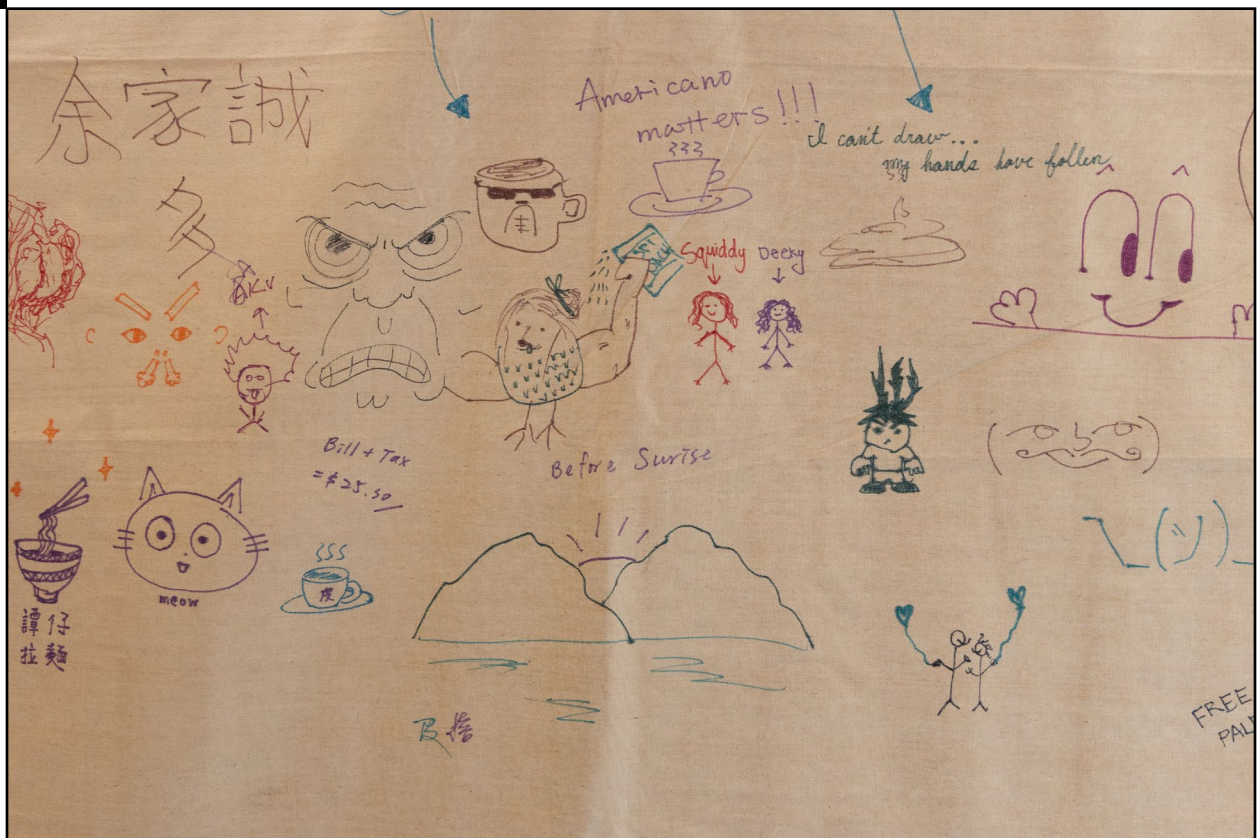


Figure 4.29
Drawings from
multiple visitors on a
dropsheet panel that
used to be for digital
projection.
Photo by Author
(2024).

4.6 Evaluation, Limitations, and Implications

The continuous iterations and responsiveness of structure, furniture, circulation, and digital equipment showcase a commitment to creating a space that is not only commercially viable but also social. The focus on human interaction throughout each iteration with the way people feel, touch and navigate the space is changed little by little until the initial experience is much different from the last (see Figure 4.30 a particular space that was impacted by the incorporation of a new collaborator). It also leverages resourcefulness in utilizing different mediums to enhance human interaction with the space. Each iteration of the prototype tianguis is a step toward a more interactive, adaptable, and engaging marketplace environment. By continuously refining the integration of structure, function, and technology, In the context of the DesignTO Festival, the prototype tianguis' continuous iterations underscored a commitment to optimizing both commercial viability and social interaction. By gradually refining structural elements, furniture, circulation pathways, and digital interfaces, the installation evolved into a space that improved how people experienced and interacted with their environment during the festival.

The changes in the space demonstrated a deep understanding of user engagement, showing that even minor adjustments can significantly impact the overall visitor experience. However, within the constraints of the festival's duration and the physical limits of STACKT Market, certain limitations became apparent. For instance, the fixed size and semi-permanent nature of the shipping containers limited the extent to which structural changes could be implemented, posing challenges in fully realizing some of the more outside of the box implementations. Within the environment of DesignTO, the prototype not only tested for new retail and social interactions but also shed light on the inherent challenges and limitations of innovating within a predefined space and time frame. This experience lays a solid foundation for further exploration and refinement in future iterations of the project, where these initial insights can drive even more nuanced and impactful developments.



*Figure 4.30
Corridor area to
display art and
open up circulation
following an artist
collabouration.
Photo by Author
(2024).*

CHAPTER 5

Conclusion

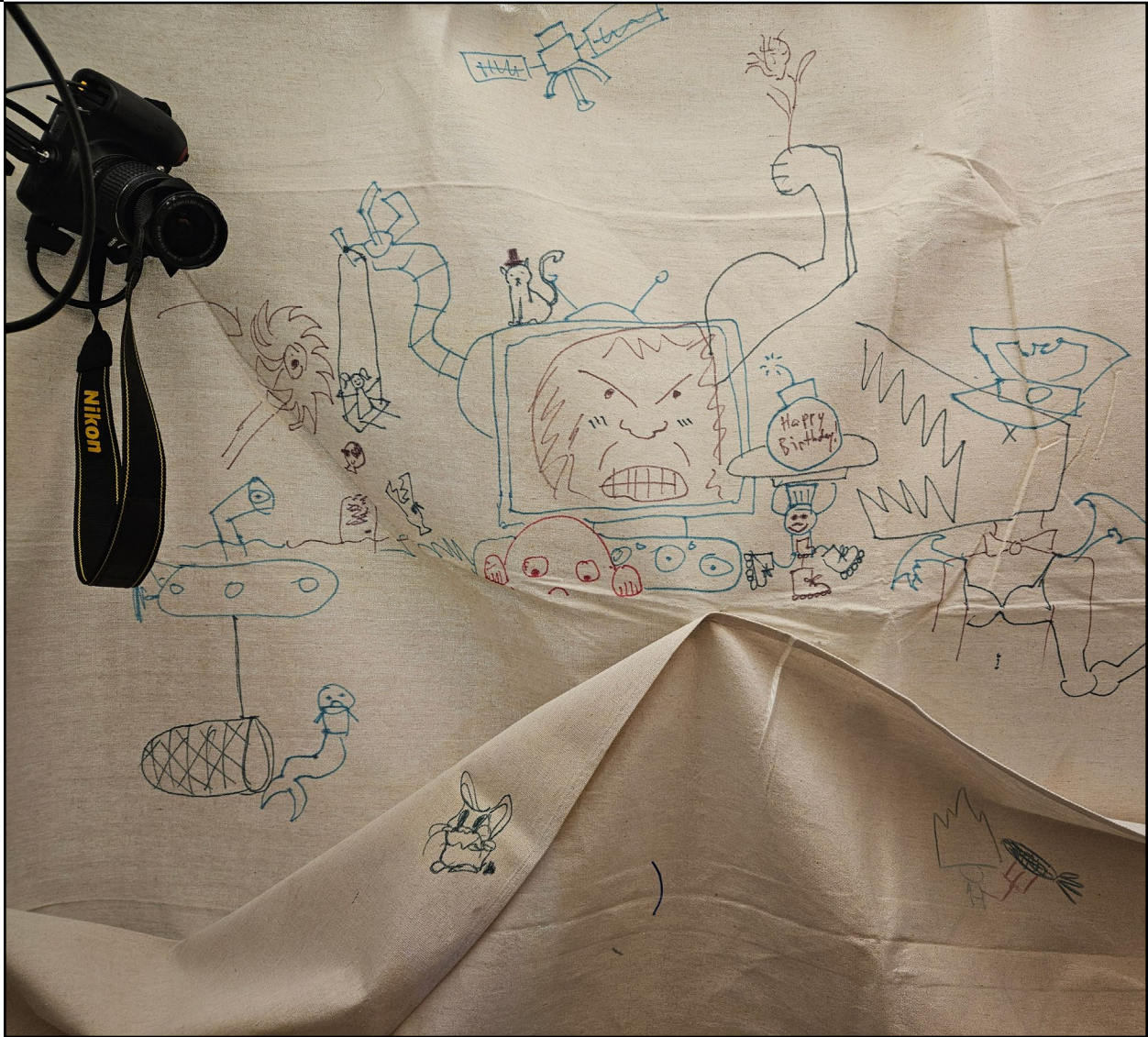


Figure 5.1
Interaction Outcomes
in the form of People
taking agency to
draw on and Change
Fabric Form.
Photo by Author
(January, 2024).

5. Conclusion

Tianguis as informal retail spaces delved into the nuanced relationships between marketplaces, community identity, and architectural evolution. It presented a compelling argument that these markets, characterized by their informal and adaptive nature, were not merely economic spaces but vital social ecosystems that fostered community engagement and cultural vibrancy. The project exemplified a forward-thinking approach to merging traditional market values with contemporary retail innovations, ultimately enhancing both the vendor and consumer experience in urban market settings (Figure 5.1).

In Chapter 1, the discussion began by contrasting traditional marketplaces with modern retail environments, highlighting the shift from communal, culturally rich spaces to more sterile, efficiency-driven models. Chapter 1 emphasized the importance of tianguis in preserving cultural identities and fostering community bonds in the face of increasing commercial standardization. Moving into the methodology in Chapter 2, the approach for developing a prototype tianguis was outlined. This involved analysing traditional market functions and integrating them with contemporary design principles to create a space that was both culturally significant and functionally contemporary. The emphasis was on flexibility, community focus, and sustainability, suggesting a model that adapted to both the community's evolving needs and contemporary urban demands. Chapter 3 presented case studies from Tepito, demonstrating the enduring relevance of traditional tianguis and the emergence of new models that incorporated digital tools to enhance market operations. These studies showed how tianguis continued to evolve, responding to both the community's needs and broader socio-economic shifts, thereby maintaining their role as central hubs of activity and interaction within urban settings. In Chapter 4, the design process of a tianguis prototype was examined, detailing how modular and inclusive design principles were applied to enhance functionality and maintain the market's role as a community hub. The iterative design-build process highlighted in this chapter showed how feedback from



*Figure 5.2
Projections on
Different sides of
the interior layout of
Prototype in stackt
market.
Photo by Author
(January, 2024).*

community interactions between supplier and market, was crucial in shaping a space that truly served its users (Figure 5.3). Through having learned the socially responsive values and applying them into a 1:1 design-build prototype, the experiences of the collaborators and the visitors helped understand the important values prevalent to what helps improve the contemporary retail environment. The thesis concluded with a discussion of the contextual implications moving forward, suggesting that the adaptability, community orientation, and cultural integration of tianguis offered valuable insights into creating a more responsive retail environment.

By focusing on community engagement and cultural richness, tianguis served as a model for rethinking urban market spaces globally, emphasizing the importance of maintaining local identity and social connectivity in retail architecture. This exploration of tianguis not only underscored their importance in contemporary urban landscapes but also provided a blueprint for implementing market spaces to enhance both economic vitality and community well-being. As retail architecture is continually reshaped by changing social values, the iterative principles learned from tianguis can guide the construction of fast, inclusive and more responsive retail environments that strengthen the relationships between the supplier, the market visitors, and the local community.



*Figure 5.3
Interaction Outcomes
Camera Projection
and Drawings within
Prototype at stack,
DesignTO.
Photo by Author
(January, 2024).*

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