

RETAIL MANAGEMENT: HOW CAN INDIAN MALLS BECOME RESILIENT FOR PANDEMICS AND CREATE VIRUS FREE -BUILT ENVIRONMENTS.

Navneet Sharma¹ & Aloka Majumder²

¹Research Scholar, School of Real Estate, RICS School of Built Environment, Amity University, Mumbai, India

²Research Scholar, RICS School of Built Environment, Amity University, Mumbai, India

ABSTRACT

This paper aims to present a review of the current Covid-19 pandemic impact on the retail sector in India. It aims to demonstrate how facilities management (FM) in shopping malls can evolve towards achieving virus free built environment. In order to prevent the immediate effect on the business and to increase resilience to the new normal, facilities managers will have to evolve as strategist decision makers. Despite the significant efforts made by the government, a coherent and strategic facilities management plan shall be required to fight the pandemic. The research utilizes quantitative and qualitative approach towards analysing data and information based on survey and prior knowledge. It also highlights expectations and approaches undertaken by the customers during mall visit. During the research it was observed that the customers are concerned on certain critical aspects related to the virus. Knowledge of the proposed interventions will suggest and assist facility managers towards developing strategies for safer mall premises. The paper also presents a Mall-Entry Map as a first step towards encapsulating knowledge on facilities management and the Covid-19 pandemic.

KEYWORDS: *Shopping Malls, Retail Mall, Retail Management, Covid-19, Facilities Management, Consumer Behaviour, Mall Strategies, and Built Environment*

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INTRODUCTION

The retail sector in India has come a long way. Evolution of the sector has witnessed a three cyclical growth phases. The first growth was initiated through multi brand and exclusive branded stores in a larger space formats, followed by the first cycle a second change wave was triggered by big food retail players and the third, fuelled by the growth of e-commerce and international brands.

The future of the Indian retail industry is likely to be driven by a large population base and rapidly evolving customer needs. Although a significant portion of the industry still remains unorganised, and the share of organised retail continues to expand rapidly. Indian retail industry currently deploys 15 million modern and traditional retailers, with an employment base of approximately 45 to 50 million people (India, 2020).

A nation-wide lockdown announced on 24th March 2020, by the Indian government towards prevention of the spread of COVID -19 has to a greater extent impacted several businesses. Multiple stores, with the exception of Essential Food & Grocery stores, were closed down throughout the country. Retail real estate sector witnessed several structural to business model

changes with delays in new mall completions, slowed leasing with vacancy losses in terms of collection of rentals.

India recorded its first COVID-19 case on 30th January 2020; the above figure (1) elaborates on the progression of confirmed cases with two observable peaks in 2020 and 2021. A total of 2.10 crore confirmed cases were observed as on 05th May 2021 with a recovery rate of 82.6% and mortality rate of 1.09% (Dong E, Du H, 2021).

The outbreak of COVID-19 served as a catalyst for reform and emphasized the need to pay close attention towards how Malls in India will be operated. The role of Facilities manager's has now emerged from just operations managers to building doctors. Based upon the new developments and pandemic the research focuses to answer the following question: "How resilient can Facilities managers (FM's) become towards COVID-19/pandemics in Indian Malls."

The objective of this research is to identify / highlight customer preferences / expectation son their visit to Indian malls, elaborate on how COVID – 19 has impacted on retail businesses and stakeholders and recommend best practices/strategies for efficient operations of malls post pandemic towards minimizing the COVID-19 spread. Towards achieving the desired objectives, a survey was conducted between February 2021 to April 2021. The data collected was then further analysed and presented with justified statements.

The first section of the research evaluates literature on facilities management. Next, the research analyses on the sample (n=300) responses on the impact of COVID-19 on customer preference and perception. This section is accompanied by a detailed discussion of the findings and the research concludes with conclusion and recommendations for facilities managers of a mall in India.

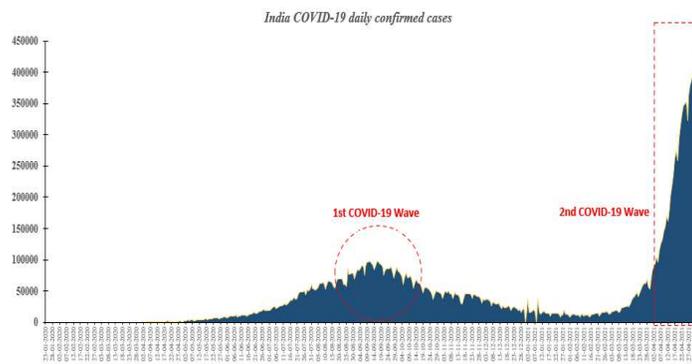


Figure 1: India Daily Confirmed Cases COVID-19 As On 05th May 2021

Data Source: (Dong E, Du H, 2021)

LITERATURE REVIEW

The increased spread of extreme "severe acute respiratory syndrome corona virus 2" disease (SARS-CoV-2) triggering 2019 corona virus (COVID-19) infections around the globe has created awareness amongst the general public with serious concerns and fears for preventing and managing SAR-CoV-2. A recent review of the literature on COVID-19 and built environment, highlights a potential need to create and operate built environment in such a way that the spread can be minimum and all safety aspects to be undertaken for the human living forms.

According to International Facilities management association (IFMA), facilities management has been addressed as, "a profession that encompasses multiple disciplines to ensure functionality, comfort, safety and efficiency of the built

environment by integrating people, place, process and technology” (IFMA, 2021).

Facilities management has been widely addressed by ISO 41011:2017 vocabulary as, “organizational function which integrates people, place and process within the built environment with the purpose of improving the quality of life of people and the productivity of the core business”(ISO, 2021).

A research conducted by Dietz L et al (2020), highlights the relationship of microbiology and the built environment. The focus of the research was majorly towards providing guidance for the strategic real estate decision makers towards reduction of the infectious disease. Corona viruses (CoVs) earlier were most frequent contributors to mild conditions and illnesses but have now often resulted in significant outbreaks of human disease in recent years. As described by the author(s), transmission types have been recognized as “hosts and humans”. In particular, COVID-19 patients can acquire the virus through contact with abiotic Built Environment surfaces which could be a possible source of transmission. SARS-CoV-2 particles can transmit from body secretions, such as “saliva or nasal fluid, soiled hand touch and the settlement of spreading, sneezing, coughing and vomiting, by infected people with aerosolized virus particles and major droplets”. Human beings should avoid touch and spatial distance around infected persons and always wash their hands with soap and hot water for at least 20 seconds. The study also emphasizes on the environmental measures to avoid the spread of SARS-CoV-2 which also includes chemical deactivation of surface viral particles (Dietz L, Horve PF, Coil DA, Fretz M, Eisen JA, 2020)

A recent review of present COVID 19 pandemic in relation to developed countries by Daniel Amos et al. (2020), illustrates how to boost delivery of facilities management (FM) programs to tackle the COVID-19 pandemic. Information about a pandemic need to be critically synthesized with a technical view of how the management of the facilities can be strengthened against the COVID-19 pandemic. FM services are capable of reducing or becoming the basis for viral transmission through environmental channels. Interventions proposed by the researchers emphasizes on : Work planning to decrease the physical proximity of facilities management personnel, training and resource management, change management for new working environments post COVID-19, Effective stakeholder communication protocols, Creation of a central coordination point to improve the management of strategic facilities, Establishment of a future space management database, Enhanced sanitation and routine disinfection requirements(Amos, Au-Yong and Musa, 2020).

Most recent evidence from a study undertaken by Megahed et al. (2020), emphasizes that in order to face pandemics, and build less dragging, more sustainable architecture, and urbanism in general, we should more efficiently use: safe design and planning techniques. Through the current pandemic, the value of incorporating human health as an aim for sustainability can be seen. The pandemic showed us the lack of management and some important lessons from this involuntary experimentation. The pandemic has also created awareness that the strategies alone won’t be enough towards tackling the issue, but installation of an “antivirus- built environment” is something to be enacted on by the built environment professionals (Megahed and Ghoneim, 2020).

Due to this pandemic, all the sectors are experiencing consumer behaviour changes with 9 out of 10 consumers having changed their behaviour this lockdown. Covid-19 getting its name from its discovery in 2019, had its first case in China from where it spread the world. The lockdown imposed in India in March 2020, created a “scarcity effect” and people started stockpiling various essential goods even though essential goods were being provided for limited hours every day. Many retailers profited from this panic situation buying of sanitizers, masks, medicines and were selling these with higher profit margins. This behavioural shift happened in 2 ways: “decreased public mingling; adoption of digital platforms”. With complete shut-down of malls, consumers moved to OTT platforms for their entertainment dosage. There

were massive layoffs of workers in these malls due to the closure of mall operations (Varade, 2020).

Some preliminary work conducted by Elenora Pantano et al. (2020), tried to synthesize the various challenges retailers are facing during this pandemic from the consumers and managers perspective. Change in consumer buying behaviour is the biggest challenge retailers are facing in the current times. Some of the changes in consumer buying behaviour were also documented as - (1) Retailer Switch: Due to proximity or availability of products, consumers are switching retailers during the pandemic situation. (2) Loyalty: Consumers will tend to stick with retailers who demonstrated themselves to be supportive during the lockdown such as home delivery of goods. (3) E-Commerce boom: This pandemic induced virtual shopping amongst older demographics for its sheer safety and benefits (Pantano *et al.*, 2020)

As per Cheng He et al. (2020), recovery varies from city to city depending on tier levels, city characteristics such as population, GDP, infrastructure etc. The research highlights recovery curves after reopening in China via real-time dataset of consumer traffic in 463 malls in 88 Chinese cities. The study revealed that the footfalls had recovered up to 64% of pre-Covid levels (2 years prior to the pandemic). There are ongoing debates on the recovery curve. Some say it will be “V-Shape” while others say it will be “U-shape” but due to sheer lack of empirical data nothing concrete can be said. Shanghai reported zero new cases since mid-February which positively impacted mall footfalls, whereas increasing cases in Zhengzhou impacted mall traffic negatively. Tier-I cities recovered slower than tier-II cities since the former is associated with higher migrant population. This research suggested that the economy will have a “U-Shape” recovery as the recovery cannot be as quick as the slump (He *et al.*, 2020).

Retail is a business that caters to people's ever-changing needs. Retail can take many forms, ranging from small shops to high-street outlets to malls, which have become increasingly common in India over the last two decades. While it's still a promising sector in India, the Covid-19 sudden outbreak and the subsequent modalities such as lockdown and social distancing norms have resulted in a decline in the sector. If this is to be seen as just an obstacle and not the end, then facilities managers need to rethink and re-strategize the operations of the malls.

METHODOLOGY AND PROFILE OF RESPONDENTS

Towards achieving the desired objectives of the research, a sample size of 300 was randomly selected. The survey was conducted between February 2021 to April 2021, towards selecting the sample. The survey participation comprised of Male (55 %) and Female (45 %) participants. We conducted a descriptive study on the sample to decide the answers to our questions. Before analysing the data collected a Binomial test was conducted in the direction of highlighting the significance of the sample with respect to the population of India. The test proportion selected for Male is 52% of the population (Affairs, 2021). The hypothesis for initial sample test is defined as:

H₀: there are no significant difference between the sample distribution and the population distribution.

H_a: there are significant differences between the sample distribution and the population distribution.

The sample (n=300) test results obtained are as follows:

The p-value from the above Table 1 is 13.6 % which is higher than 5 %, so according to the decision rule we retain the null hypothesis (H₀). This further elaborates that the proportion males and females in the sample is equal to the same proportion in the whole population. So, the sample is a representative of Indian population from this point of view. It was also observed that the difference for the observed proportion and the test proportion are very close and the difference is not significant.

Towards identification of the goodness of fit of the sample towards the preference of visiting a mall in pandemic, Chi square test was conducted. The observed distribution is displayed as follows:

The above Table 2 describes the number of preferences for the visit of customers towards malls during pandemic are not equal. No specific days are at the first place with 156 preferences, weekdays visit is on the second place with 84 preferences and weekdays at the last with 60 preferences. It was also noticed that the p-value for the above Chi-square test was observed to be less than 5 % which implies that there is a significant difference between observed frequencies and expected frequencies.

Table 1: Binomial Test

		Category	N	Observed Prop.	Test Prop.	Exact Sig. (1-Tailed)
What is your gender	Group 1	Male	166	.55	.52	.136
	Group 2	Female	134	.45		
	Total			300	1.00	

Sample Significance Test

Table 2: Your Preference Towards Visiting a Mall During a Pandemic?

	Observed N	Expected N	Residual
Weekdays	84	100.0	-16.0
Weekends	60	100.0	-40.0
No specific days	156	100.0	56.0
Total	300		

Observed distribution of the sample (n=300).

Preference to Visit the Mall in Pandemic:

The sample (n=300), was analysed towards understanding the preference of customers towards visiting the mall during the pandemic. The data collected was analysed and towards testing the significance below hypotheses were defined.

Ho: Despite the increased demand in online shopping during lockdown, people are not willing to shop in-stores at the mall.

Ha: Despite the increased demand in online shopping during lockdown, people are willing to shop in-stores at the mall.

Table 3 describes the willingness to shop in-stores at the mall for customer preferences. It can be observed that the residual value in case of the option *willing to shop (102)* is the highest amongst all the other options describing the opinion of the sample undertaken for the research. For the testing the significance of the above-mentioned hypothesis the p-value of the above table was calculated and was observed to be less than 5%. Which further as per the test rule rejects the null hypothesis (Ho) and accepts the alternate hypotheses (Ha). The test results describe that the statement, "*Ha: Despite the increased demand in online shopping during lockdown, people are willing to shop in-stores at the mall.*" is significant and the customer's willingness can be very well observed.

The sample collected was also asked for sharing their preference towards following social distancing norms and wearing masks in public places after receiving the vaccinations. Above 86% of the participants surveyed prefer (strongly and somewhat) to follow the COVID appropriate behaviour even after getting vaccinated. Most of the strong preferences were observed between the age groups of 25 to 35 years.

Table 3: Despite The Increased Demand For Online Shopping During Lockdown, Are You Still Willing to Shop in-Stores at the Mall?

	Observed N	Expected N	Residual
Strongly willing to shop	44	60.0	-16.0
Willing to shop	162	60.0	102.0
Neither agree nor disagree	60	60.0	.0
Disagree somewhat	26	60.0	-34.0
Strongly Disagree	8	60.0	-52.0
Total	300		

Observed Sample (n=300) results

CURRENT CUSTOMER EXPECTATIONS AND APPROACHES

The new mall perspective is unlikely to boost mall cash flow. Consumer behaviour will change as a result of new norms. Collecting and scrutinising relevant consumer data is important for comprehending this new behaviour and developing retail strategies around it. Malls are built to calm our nerves, make everyone feel comfortable, overshadow about our stressful day at work, and hence (as research has repeatedly demonstrated), build an environment conducive to shopping. All this could radically change with the modern social distancing and hygiene standards. Firstly, the new rules require customers to be constantly alert and careful. This can further detract from the purchase process. In addition, the possibility of a virus that leads to a depressive mood would be remembered frequently.

It is therefore important to check the expectations of the customers, and then identify the approaches that customers are willing to take on their physical visit to the malls. This segment first comments on the results, secondly the approaches visitors are willing to take towards ensuring their safety.

Customer Expectations

The success of any mall depends upon meeting the customer expectations. Towards utilizing the full revenue potential contributions from footfalls, it becomes crucial towards exploring the customer expectations. However when it comes towards exploring the opportunity very little is being known about the customer expectations (Haseki, 2013). In order to analyse the prospects, the respondents were asked whether they (1) Agree (2) Neutral (3) Disagree; on the ten identified aspects mentioned in the Figure (2). Majority of the respondents have agreed on facilitates such as: digital payment options, social distancing norms, obligatory face masks, regular sanitization, and emergency support options to be provided during customer visit to a mall. The least preferred options agreed were prebooked mall visit and availability of Isolation rooms.

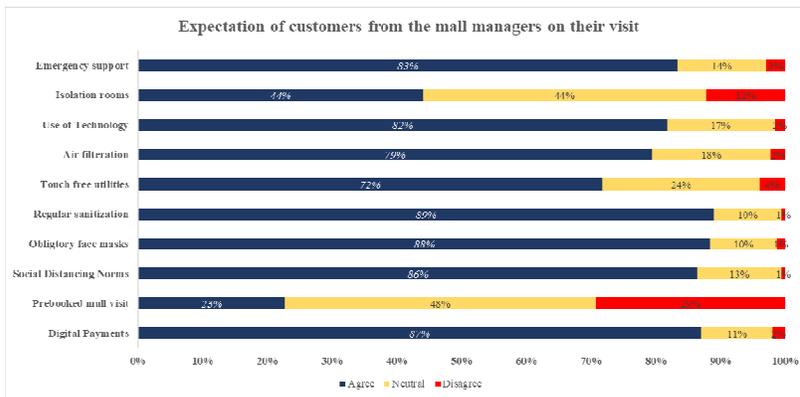


Figure 2: Customer Expectations; Source: Primary Survey.

Customer Approaches

Our research also investigated several customer approaches that would be opted by the visitors. The primary investigations revealed that customers are worried and yes, they are willing to follow COVID appropriate behaviour. Approaches such as face masks, social distancing, bringing own hand sanitizers at the mall, visit for less crowded mall is demonstrated by the participants. On the contrary, when participants were asked whether they would like to avoid eating at a mall, avoid using elevators and trying clothes. It was observed that the customers are not willing to avoid the above mentioned, instead majority of the customers have stated “No” for the approach.

Consumer behaviour has changed, and these changes will remain. With consumer life updated during the pandemic, significant and long-term changes have occurred in the way people live, work, and do business.

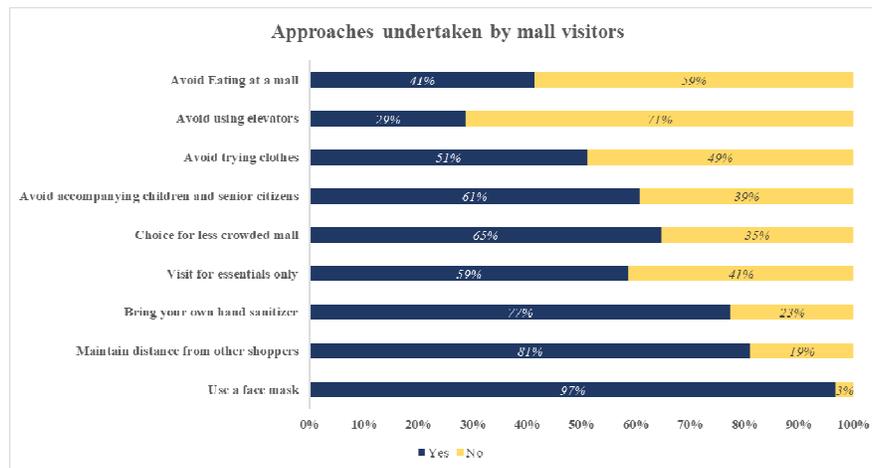


Figure 3: Customer Approaches; Source: Primary Survey.

RECOMMENDATIONS AND CONCLUSIONS

During the pandemic, shopping online grew but was not sufficient to eradicate the damage caused by store closures and economic worries, which led to an expenditure on non-essential products. Due to lockdown constraints a new generation of customers who are slower to accept new technology are forced to cross the barrier. The big question in keeping with changes is not how long the online shopping boom is going to last, but how new technology will make it possible for the mall businesses to respond to ever evolving needs and tastes of customers. Given the omni-channel models, malls can't stand on the fringe any longer if they hope to remain important. Digital, both customers and tenants, have to be at the core of the mall value offer. Covid-19 has forced customers to change their purchasing behaviour, and malls must transform from transactional trading centres to experience centres and ecosystems by raising their sense of lifestyle and protection.

Malls in major cities have begun to reopen in stages following the lockdown. Retailers and mall owners are collaborating on new initiatives to boost footfall and restore customer trust. To combat the crisis, shopping centres have developed new SOPs, social distancing norms, Omni channel tactics, and updated financial models. Towards adding more value to facilities managers' operations approach we have also developed a “Mall-entry map” as follows:

The risk of COVID-19 infection and other new outbreaks needs a more holistic approach. Figure (4) details a Mall entry map for customers, employees, and its tenants. The mall entry map identifies major critical areas towards carving out strategies for effective management of the real estate in a pandemic.

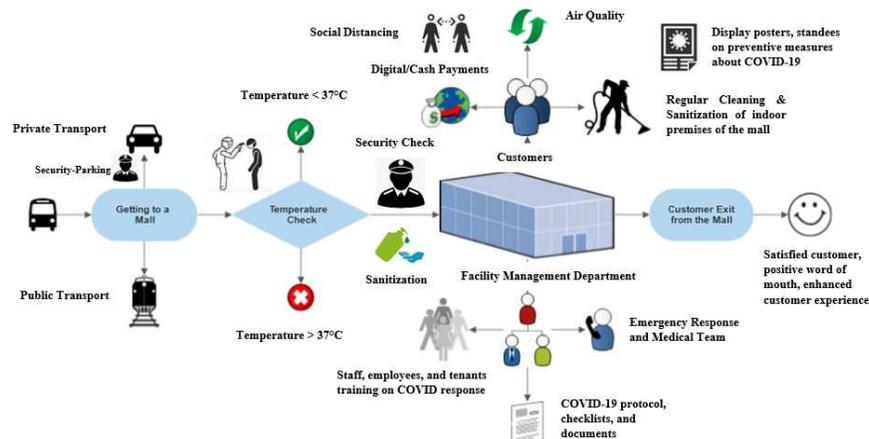


Figure 4: Mall-Entry Map.

Management of Premises

Facilities managers have to act as enablers of change, which can further mitigate the risk of a potential spread of the virus in the built environment. Customers, employees, and tenants can visit the mall by any two modes of transport: private or public. The first step for the entrants of the mall is to go through mandatory thermal screening, only asymptomatic customers/visitors should be allowed access. Security staff should ensure that obligatory use of face masks by all customers/visitors/workers and must be worn inside the premises at all times. Facilities managers shall ensure that adequate manpower is deployed at various sections of the building premises towards ensuring that social distancing norms are followed. Proper crowd management system should be in place with guidelines and protocols displayed inside the premises. Security patrol option and use of technology can be utilized towards effective management and implementation of the norms and guidelines formulated by the Mall management and the governments concerned. All touch points such as doors, handles, escalator rail, lifts to be regularly sanitized with “1% sodium hypochlorite” and checklist to be filled and checked on regular basis. Temperature setting of air-conditioning devices to be operated in range of 24 to 30 degree Celsius, relative humidity between 40 to 70 percent with regular intake of fresh air as much as possible in the mall premises (CPWD, 2020).

Management of COVID-19

Any customer if shows symptoms related to the virus, Emergency response team (ERT) to act responsibly and to be ready to handle the situation. Utilization of isolation rooms for such visitors/ employees shall be undertaken. Nearby hospitals to be communicated further and proper evacuation of the infected person to be ensured under facilities managers supervision. In case if any tenant shows any symptoms, the shop needs to immediately closed and sanitized by ERT with proper personal protective equipment (PPE) kit.

Management in Case of Lockdown

Business continuity plan to be exercised, the mall premises to be prepared for the same. Facilities managers to ensure that all the perishable items inside the mall are extracted out of the premises. Proper communication through email, personal contact to be undertaken. Minimization of energy usage to be planned by only utilizing for essential areas. Special permissions to be undertaken by the local authorities towards the functioning of essential items in supermarket. During the lockdown situation pest control should be frequently done and monitored by facilities managers. Essential departments

such as engineering, housekeeping, security, and landscaping to be functional with minimum of 35% of staff at the mall premises.

Best Practices for Facilities Managers

Malls must find new ways to satisfy their consumers' appetites and provide them with a long-term loyalty. In order for property owners and retailers to survive and flourish in modern times, these are main realms that facilities managers can stress more upon.

- **Concentrate on Protection and Comfort:** Malls will need to carefully balance the wish for social interaction between customers and their need for a healthy, convenient shopping experience. Facilities managers can address the customers concerns by integrating innovation in store layout, communication standards, payment collection and product delivery.
- **Re-Consider the Store's Function:** Facilities managers (FM's) have to rethink the scale and number of shops, mitigate tenant retention risk during crisis. Consumers will no longer come in just to browse; they will arrive already knowing what they want. Social distancing plans are appropriate solutions for achieving success and towards minimizing the spread.
- **Utilizing Technology:** Retailers have to take a digital first-party page—the seamless omni channel brand presence has never been more important. Online and off-line digital experience is increasingly being sought by customers, allowing technological innovation on every turn. Digital tools are essential for malls and retailers to maximise productivity and effectiveness and create a dynamic, lively experience.
- **Becoming the New Venue:** Most importantly, malls should become the community's new meeting place—a multi-functional destination offering extensive leisure and other functions, such as offices, homes, and cultures. Shops should be combined with other additional uses and visitors can experience an interactive way of playing in the whole antivirus-built environment.
- **Conduct consumer Survey's:** Customers today are demanding a secure environment without friction. The way to bring them back to malls is to collaborate with owners and retailers, invest in consumer protection/safety and include more resources like dedicated apps that make shopping experience easier and more convenient. Facilities managers have to understand what exactly the customer desires during the visit to a mall.
- **Compliance:** Facilities managers should ensure that the government norms related to disaster management and COVID-19 to be exercised with dedication. Educating the customers and its employees should be a top priority for FM's. Special budgets shall be allocated for training the mall employees and staff handling the customers especially in food courts and shops.

Overall, it has been a difficult year for the Retail Industry. The facility managers must leverage technology, take digital as the latest way of operating and promote creativity in business activities to transform this crisis into an opportunity. The retailers of the future have to be flexible and versatile and have to continue investing towards developing high-confidence ties with their customers and employees. FM providers and employees need to work together to create a holistic perspective that enhances resiliency by incorporating a range of digital and physical solutions that reflect business objectives.

REFERENCES

1. Affairs, M. of H. G. of I. (2021) *Gender Composition*. Available at: https://censusindia.gov.in/census_And_You/gender_composition.aspx (Accessed: 27 April 2021).
2. Amos, D., Au-Yong, C. P. and Musa, Z. N. (2020) 'Enhancing the role of facilities management in the fight against the COVID-19 (SARS-CoV-2) pandemic in developing countries' public hospitals', *Journal of Facilities Management*, 19(1), pp. 22–31. doi: 10.1108/JFM-06-2020-0034.
3. CPWD (2020) *Guidelines for running of air circulation, air cooling and. Air conditioning equipments's during COVID-19*. New Delhi.
4. Dietz L, Horve PF, Coil DA, Fretz M, Eisen JA, V. D. W. K. (2020) '2019 Novel Coronavirus (COVID-19) Pandemic: Built Environment Considerations To Reduce Transmission', *mSystems*, (7 April 2020), pp. 1–13. doi: <https://doi.org/10.1128/mSystems.00245-20>.
5. Dong E, Du H, G. L. (2021) *An interactive web-based dashboard to track COVID-19 in real time*. doi: 10.1016/S1473-3099(20)30120-1.
6. Haseki, M. I. (2013) 'Customer expectations in mall restaurants: A case study', *International Journal of Business and Society*, 14(1), pp. 41–60.
7. He, C. et al. (2020) 'Surviving COVID-19: Recovery Curves of Mall Traffic in China', *SSRN Electronic Journal*. doi: 10.2139/ssrn.3613294.
8. IFMA (2021) *What is Facility Management*. Available at: <https://www.ifma.org/about/what-is-facility-management> (Accessed: 11 May 2021).
9. ISO (2021) *ISO 41011:2017(en) Facility management — Vocabulary*. Available at: <https://www.iso.org/obp/ui/#iso:std:iso:41011:ed-1:v1:en> (Accessed: 11 May 2021).
10. Megahed, N. A. and Ghoneim, E. M. (2020) 'Antivirus-built environment: Lessons learned from Covid-19 pandemic', *Sustainable Cities and Society*, 61, p. 102350. doi: 10.1016/j.scs.2020.102350.
11. Pantano, E. et al. (2020) 'Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak', *Journal of Business Research*, 116(July), pp. 209–213. doi: 10.1016/j.jbusres.2020.05.036.
12. Varade, H. (2020) 'Impact of Covid-19 Pandemic Situation on Consumer Buying Behaviour in Indian Market- A Review', *International Journal for Research in Applied Science and Engineering Technology*, 8(5), pp. 2584–2589. doi: 10.22214/ijraset.2020.5429.