



## ARISE Case Studies in Disaster Risk Management



### SM City Cabanatuan

SM Prime's commitment in building safer and disaster-resilient malls was considered in SM Cabanatuan by consciously and decisively designing the mall to allow overflowing creek floodwater during extreme floods into the mall property. The lower ground structure also serves as a temporary flood catchment which minimized the level of flood in the community.

RISK	ACTION	IMPACT	OUTPUT
<p>The 5th Annual Natural Hazards Risk Atlas (NHRA) report in 2015 ranked Cabanatuan City as the 6th city in the Philippines with extreme exposure to a myriad of natural hazards. Cabanatuan City is the largest city in Nueva Ecija and the 5th in Central Luzon with an estimated population of over 300, 000 and a daytime population of 1 million.</p> <p>The disaster resilient feature of the mall was tested during the onslaught of Typhoon Lando last October 18, 2015. Typhoon Lando was a devastating tropical cyclone that hit Luzon which caused massive damages and severe flooding in the region including Cabanatuan City. The city experienced severe flooding which hampered the operations of many establishments. Most of the roads going to the mall were not passable to light vehicles for 2 to 3 days.</p>	<p>Given that SM City Cabanatuan is located in a high-risk, flood-prone area, SM Prime designed the mall to allow overflowing water from the nearby creek, into the lower ground basement parking as a temporary flood catchment. This minimized the flood level on the nearby barangays and neighboring areas. The basement area can hold about 14 million gallons of flood water. The mall's basement parking area was built without walls and tire guards. This way, floodwater can flow without obstruction through the area and act as a flood catchment basin. The mall's design did not compromise the safety of the surrounding communities. The typical design approach to eliminate flood water on a property is to backfill or elevate the entire property or fully enclose the structure to displace the flood water to other low level areas, eliminating flood on the property, however that contributes to more flooding into the community.</p>	<p>On October 18, 2015 ninety percent (90%) of the city of Cabanatuan was inundated and without power during the onslaught of Typhoon Lando.</p> <p>During the height of the typhoon, the mall served as a safe refuge to over 400 stranded customers, whom we provided with food, water, charging stations and basic medical assistance. Aside from this, the mall accommodated overnight parkers to over 400 vehicles at the upper ground level parking area.</p>	<p>SM City Cabanatuan managed to prevent severe damage that could have affected the lives and businesses of more than 1,050 mall employees, affiliates, and agency personnel, 262 merchandise suppliers, as well as regular customers.</p> <p>The mall, particularly the Supermarket, was open to serve the needs of the customers and the general public at the height of the typhoon.</p>





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### Lessons Learned

This proved that the additional 10% in costs to build a disaster resilient mall were more than recouped in avoided losses. SM Prime saw the opportunity of doing business while considering the risk. After the devastation, SM Prime gained more trust with its stakeholders because we anticipated the risk and took action based on their needs which we rendered sustainable competitive advantage.

### BUSINESS CASE

Through the implementation of disaster resilient mall designs, the SM brand has steadily been gaining reputation for a company that invests in technology for disaster risk preparedness; this strategy not only serves as a preemptive strike towards what may cause the company further losses due to infrastructure and business opportunity damages/losses after the disaster has occurred as opposed to the investment spent for the disaster resilient feature of the mall; it also cements the SM Brand as a forerunner company that understands the need for risk resiliency and disaster preparedness.

### REPLICATION OPPORTUNITIES

Through understanding the risks inherent in the area/community where SM Prime would potentially build and invest in the near future, information and data gathered from previous areas/infrastructures with similar risks can be adapted for newer infrastructures or older ones that may be prone or/are already developing these risks due to external factors such as climate change or drastic alterations these locations have undergone through the years.

These ideas and newer innovations of the aforementioned thoughts can also be applied to different branches and industries of the company, which could, more or less be affected by the same disaster risks faced by the company today.

### How does the project support the implementation of the Sendai Framework targets?

1	<i>Reduce disaster mortality by 2030</i>	X	Availability and access to EWS/DR information are addressed through our individual Weather Stations located on every SM Supermall, the localized information gathered from these stations are readily available for the public and also used by the company to disseminate the data towards our malls for early warnings. Our investment on designs for disaster resilient infrastructure enables our malls to serve as a safe refuge where people are provided with their basic need, which in effect, reduces the disaster mortality and the number of affected people; It also decreases the disruption of services and businesses that affects economic losses.
2	<i>Reduce number of affected people by 2030</i>	X	
3	<i>Reduce economic loss by 2030</i>	X	
4	<i>Reduce infrastructure damage and disruption of services by 2030</i>	X	
5	<i>Increase countries with DRR national/ local strategies by 2020</i>		
6	<i>Enhance international cooperation to developing countries</i>		
7	<i>Increase the availability of and access to EWS* and DR information to people by 2030</i>	X	

### How does the project contribute to the ARISE Themes?

1	<i>Disaster Risk Management Strategies</i>	X	The strategies implemented in this project, in conjunction with the ARISE work streams includes disaster resilient features of our mall infrastructures, as well as our AWS (Automatic Weather Stations) available in every SM Mall branch to serve as an EWS, contributing to our risk and disaster preparedness; in connection to this, we have seen the damages and losses caused by calamities happening in older infrastructures before starting this project through case studies and data gathering has an even more staggering value vis-à-vis the additional cost dedicated to ensuring the risk and disaster resiliency of our malls.
2	<i>Investment metrics</i>	X	
3	<i>Benchmarking and Standards</i>	X	
4	<i>Education and Training</i>	X	
5	<i>Legal and Regulatory</i>		
6	<i>Urban Risk Reduction and Resilience</i>	X	
7	<i>Insurance</i>	X	

### For More Information



**UNISDR ARISE**  
 UNISDR ARISE TEAM  
 arise@un.org  
<http://www.unisdr.org/partners/private-sector>

**Sm Prime Holdings In**  
 Liza B. Silerio  
 liza.silerio@smsupermalls.com  
<http://www.smprime.com/>