



Crowd Control Solution

Presentation by VIVOTEK





Source: BBC News

London



Source: Khaleej Times

Dubai



Source: Mothership Singapore

Singapore



Source: ABC News

Australia

Reduced Crowd is a Government Regulation

STORES ARE GOING TO HAVE FEWER PEOPLE INSIDE

The new executive order limits the number of people allowed inside stores at one time, which means fewer people crowding the aisles, but also, if you go at a busy time, you may have to wait in line outside.

[Some stores were already doing this](#) — Target, Trader Joe's, Wegmans and Harris Teeter were already placing limits on occupancy. But now there are concrete rules requiring the metering of occupants and guidelines for how occupancy must be calculated.

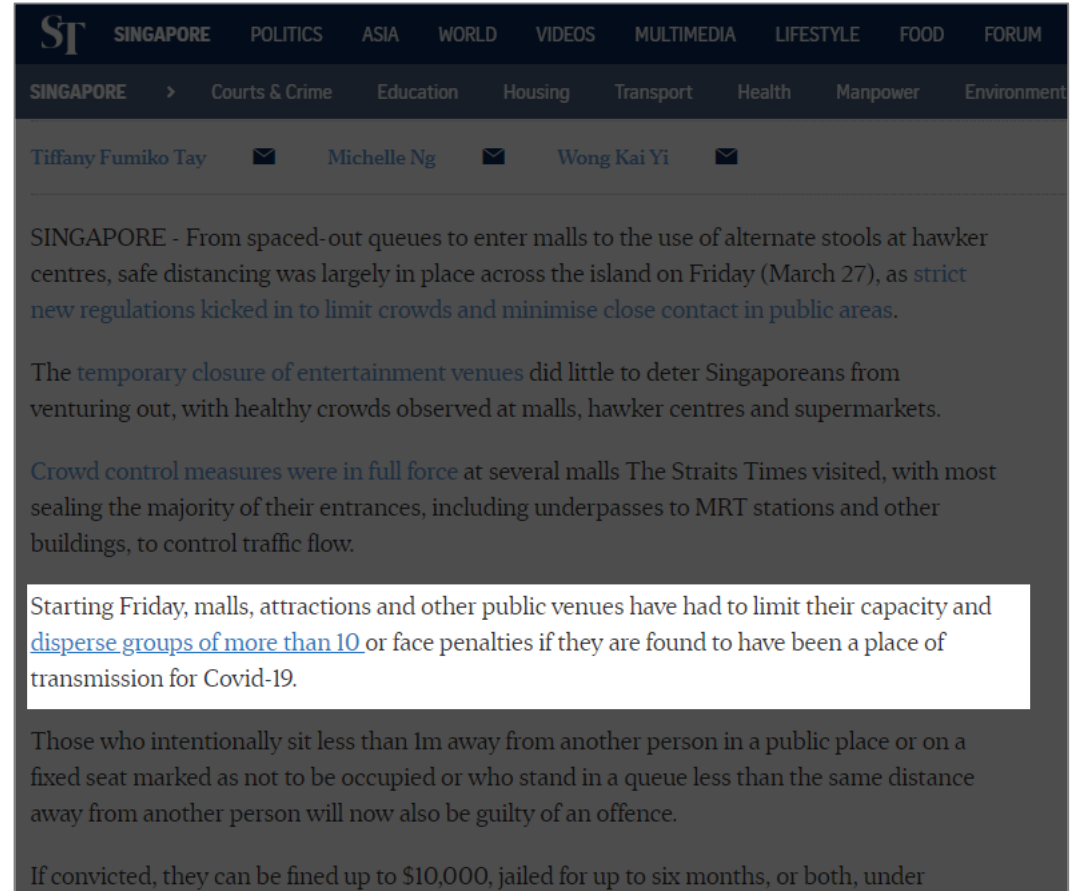
- The new executive order dictates that stores are limited to 20% of the stated fire capacity, or they can have 5 persons per 1,000 square feet. This is called Emergency Maximum Occupancy.
- Stores must have personnel at the door to limit access once the store has Emergency Maximum Occupancy.
- When Emergency Maximum Occupancy is reached and people are lined up outside stores, the store must clearly mark lines six feet apart where people can stand while waiting.

ONCE YOU'RE INSIDE, STAY FAR APART

The CDC has repeatedly said the best way to slow the spread of COVID-19 is to maintain a distance from others. If you must go out, stay six feet apart from other people.

But anyone who has been inside a store lately knows that not everyone follows that rule. (Note: Experts say it's [OK to quickly pass others in an aisle](#), but you should not linger near other shoppers or workers, contemplating which cut of meat looks better. Likewise, if someone is looking at the chicken, stand back and let them finish before crowding in.)

Source: New Observer



The screenshot shows the top navigation bar of the Singapore Times website with categories like SINGAPORE, POLITICS, ASIA, WORLD, VIDEOS, MULTIMEDIA, LIFESTYLE, FOOD, and FORUM. Below this is a sub-navigation bar for SINGAPORE with links to Courts & Crime, Education, Housing, Transport, Health, Manpower, and Environment. A user profile bar shows names like Tiffany Fumiko Tay, Michelle Ng, and Wong Kai Yi. The main article text reads: 'SINGAPORE - From spaced-out queues to enter malls to the use of alternate stools at hawker centres, safe distancing was largely in place across the island on Friday (March 27), as strict new regulations kicked in to limit crowds and minimise close contact in public areas. The temporary closure of entertainment venues did little to deter Singaporeans from venturing out, with healthy crowds observed at malls, hawker centres and supermarkets. Crowd control measures were in full force at several malls The Straits Times visited, with most sealing the majority of their entrances, including underpasses to MRT stations and other buildings, to control traffic flow. Starting Friday, malls, attractions and other public venues have had to limit their capacity and disperse groups of more than 10 or face penalties if they are found to have been a place of transmission for Covid-19. Those who intentionally sit less than 1m away from another person in a public place or on a fixed seat marked as not to be occupied or who stand in a queue less than the same distance away from another person will now also be guilty of an offence. If convicted, they can be fined up to \$10,000, jailed for up to six months, or both, under

Source: Singapore Times

Current

Crowd Controlled Market

Maximum Occupancy
15 people



Crowd Controlled Market

Maximum Occupancy
15 people



Reduced Entrances

- Simplify crowd control
- Reduce workforce for each entrance
- Reduce risk of employee health

Crowd Controlled Market

Maximum Occupancy
15 people

Market



Manual Counting

- Single entrance and exit
- Assign employee for crowd control
- 1-in and 1-out

Crowd Controlled Market

Maximum Occupancy
15 people

High Health Risk

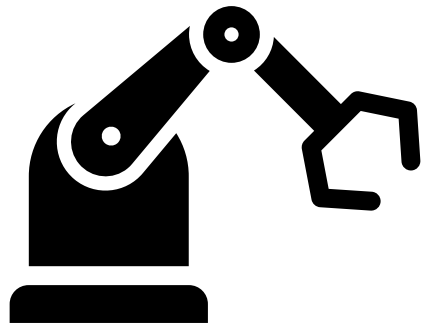
- Long time exposure to customer
- Queued line is difficult to remain social distance
- If infected, all staffs quarantined



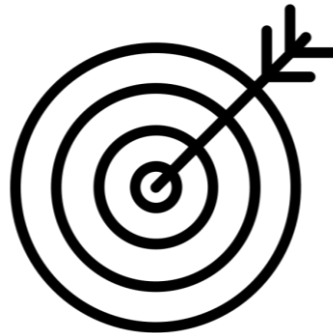
VIVOTEK Crowd Control Solution



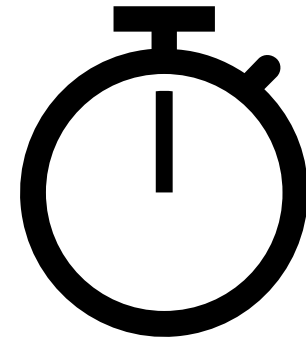
VIVOTEK Crowd Control Solution



Automatic

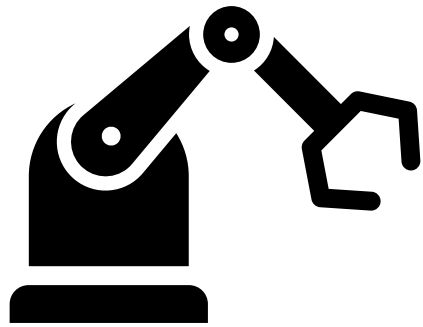


Accurate



Simple

VIVOTEK Crowd Control Solution



Automatic



Accurate



Simple

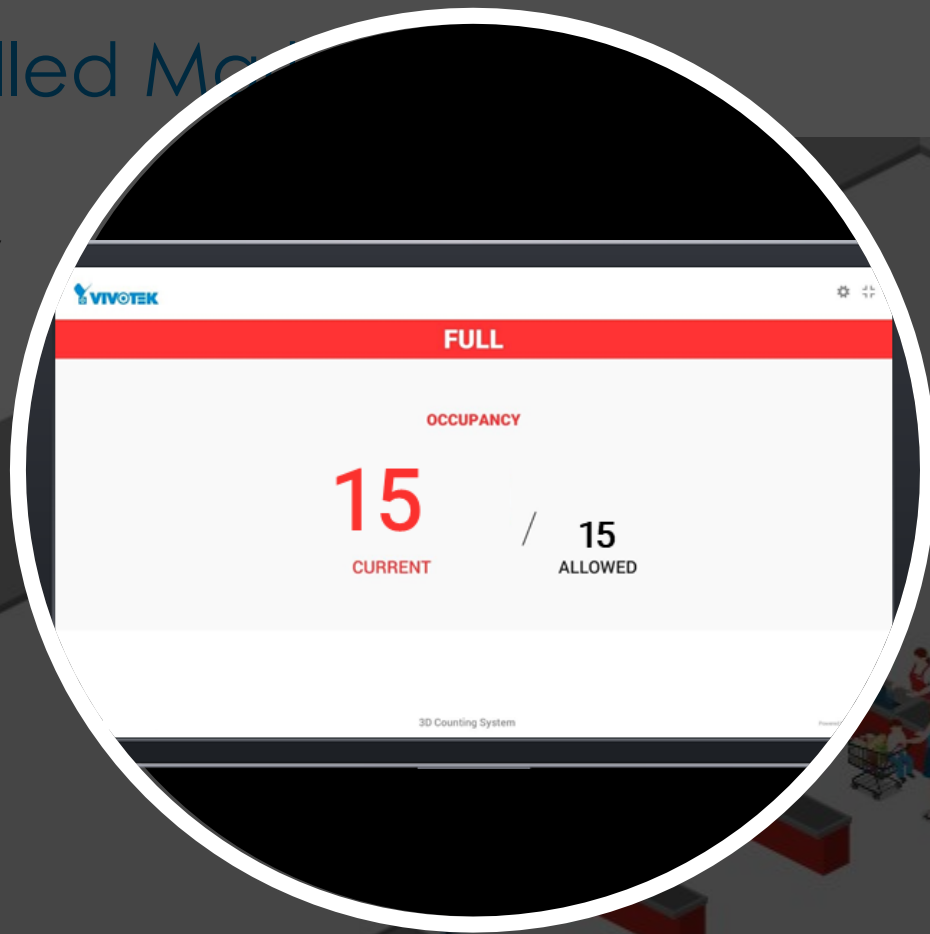
Crowd Controlled Market

Maximum Occupancy
15 people

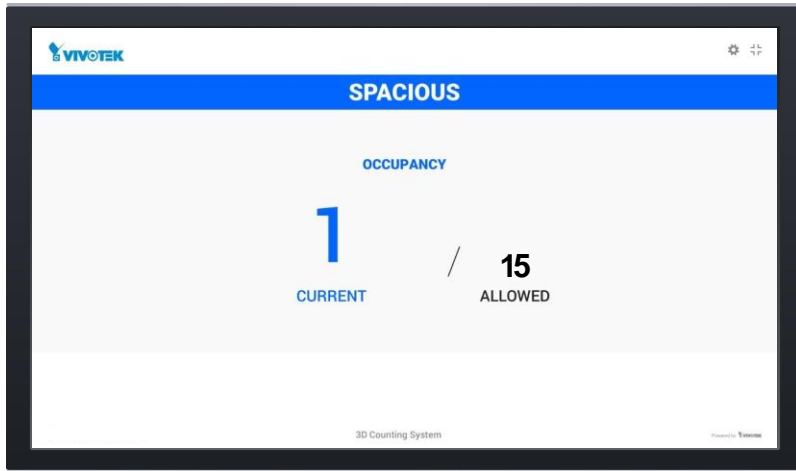


Crowd Controlled Management

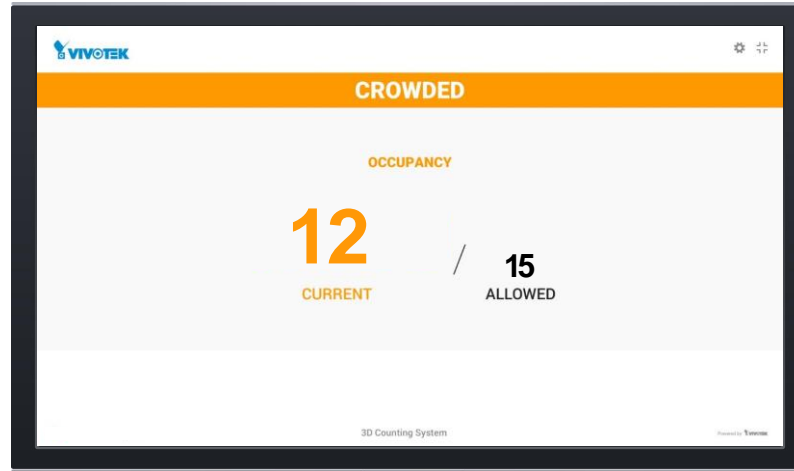
Maximum Occupancy
15 people



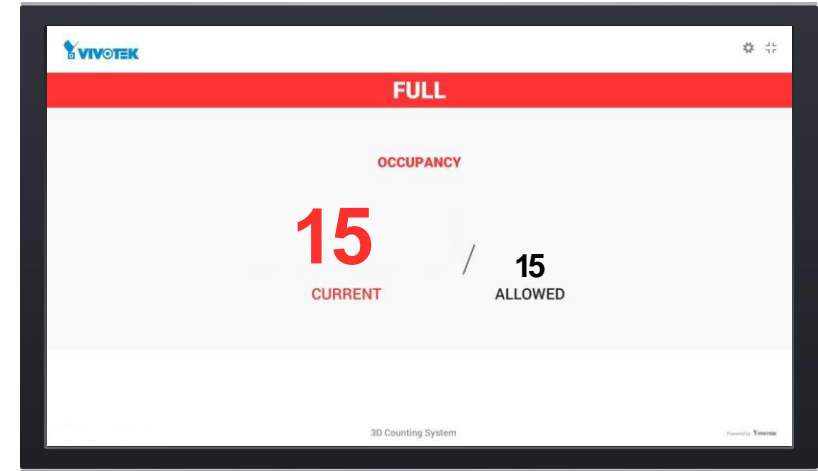
Cold-Warm-Hot Dashboard



Enter

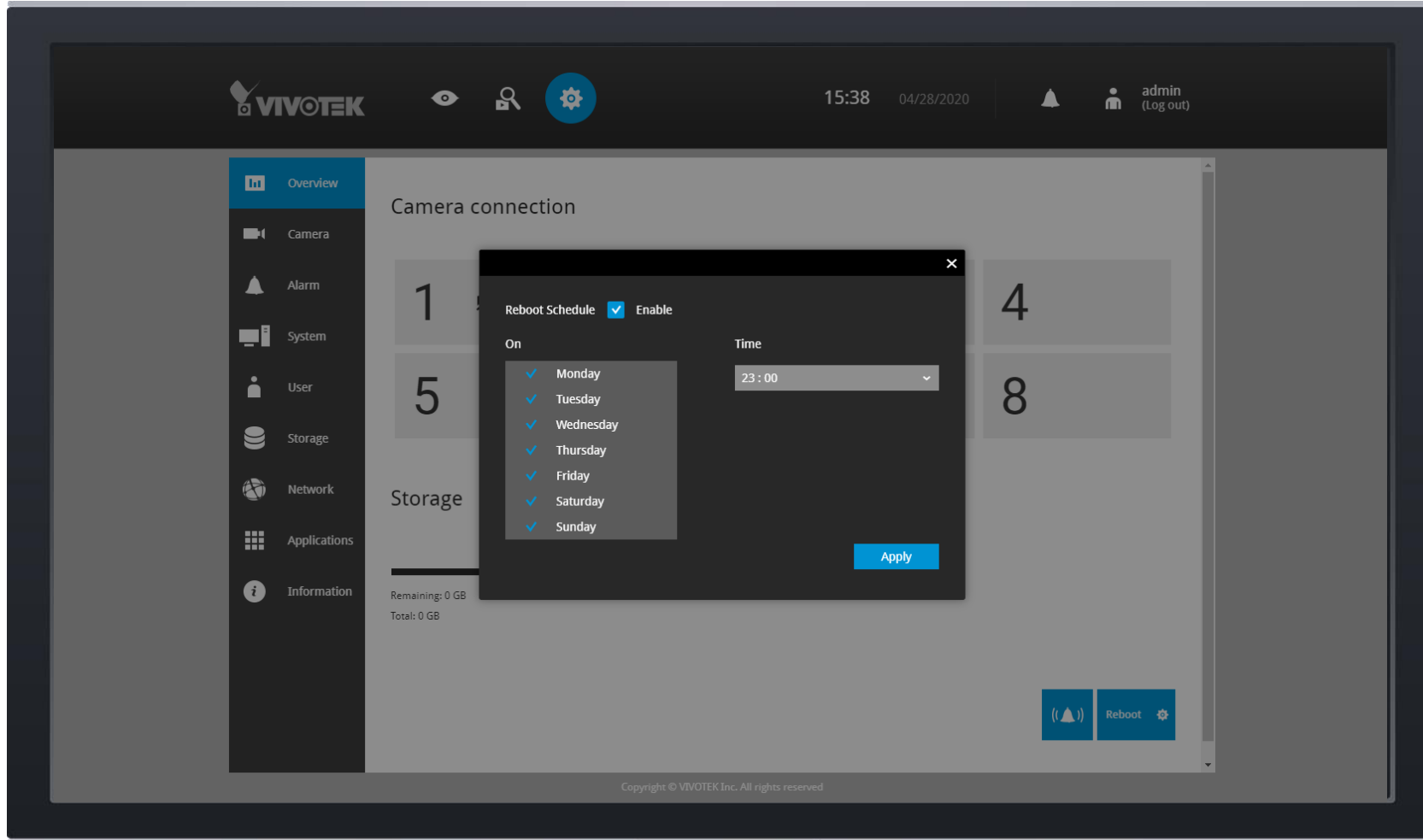


Control



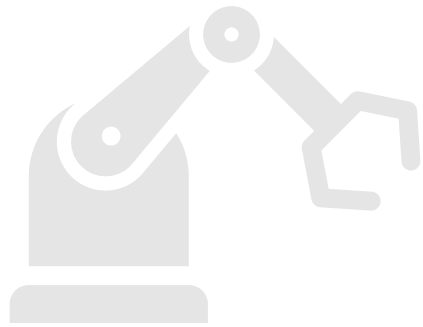
Stop

Auto Reset Count to Zero

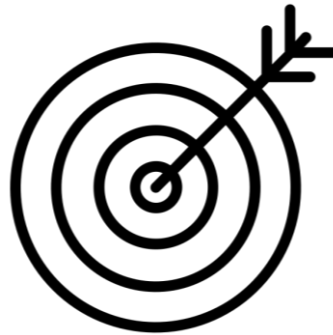


- Reset counter each day
- Automatic restart to counter page without configuration

VIVOTEK Crowd Control Solution



Automatic



Accurate

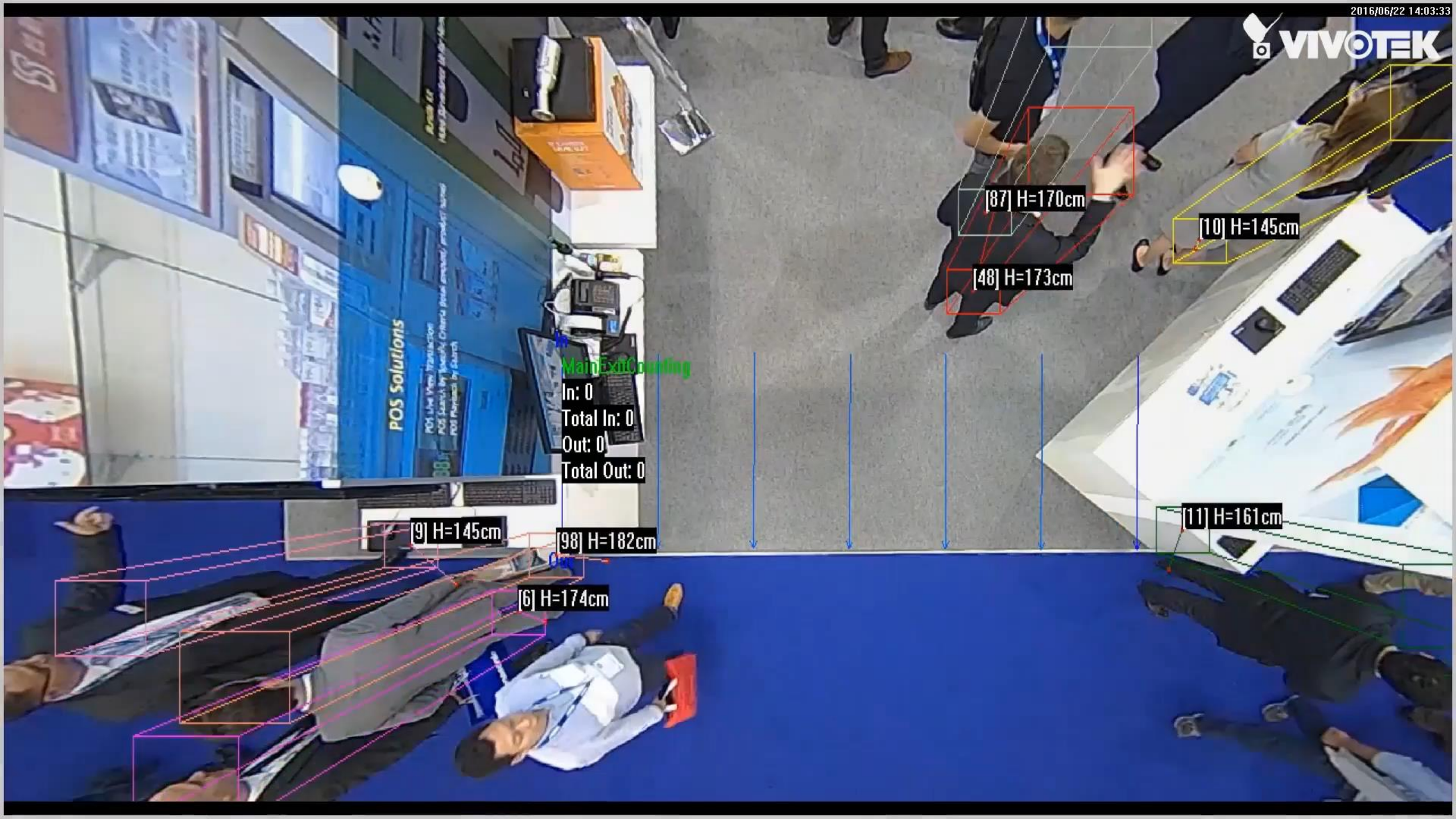


Simple

Counting camera

- VIVOTEK's 3D Depth Technology
- **Up to 98% counting accuracy rate**
- Real-time data
(system/counting/daily reports; time/region reports)
- Object tracking path
- **Filter carts, children and strollers**
- **Bi-directional counting on definable flow**
- Detection of U-turns to avoid double counting
- Not Influenced by shadows, reflections or glare conditions





Main Exit Counting
In: 0
Total In: 0
Out: 0
Total Out: 0

[87] H=170cm

[48] H=173cm

[10] H=145cm

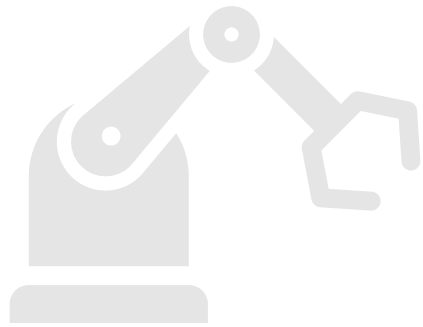
[11] H=161cm

[9] H=145cm

[98] H=182cm

[6] H=174cm

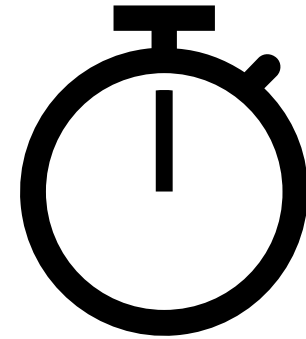
VIVOTEK Crowd Control Solution



Automatic



Accurate



Simple

Architecture



Counting camera

Power over Ethernet

Ethernet



AW-FET-060C-065

4-port unmanaged PoE switch



ND9312

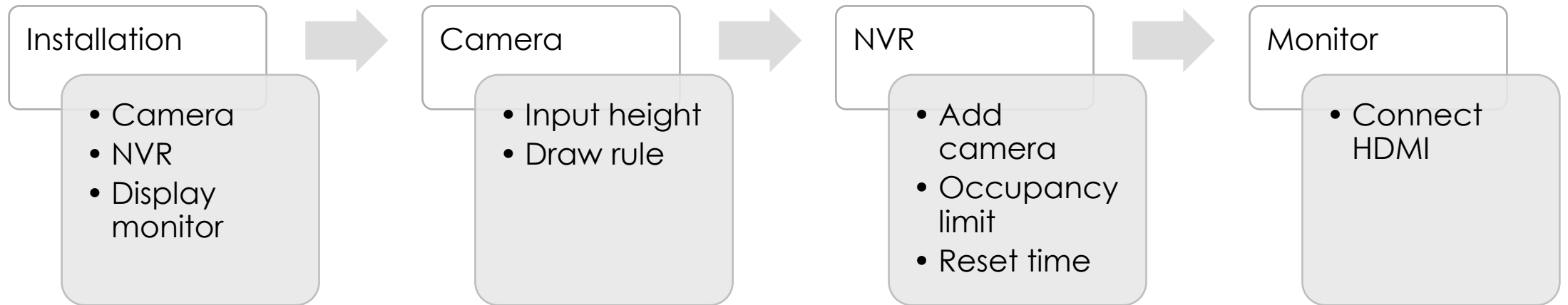
H.265 8-ch NVR

HDMI



Monitor

4 Phase 9 Steps



Before vs After



Crowd Controlled Market

Maximum Occupancy
15 people

Before



Crowd Controlled Market

Maximum Occupancy
15 people

After



Crowd Controlled Market

Maximum Occupancy
15 people

Market
Centralized
Entrance & Exit

Before



Crowd Controlled Market

Maximum Occupancy
15 people



Crowd Controlled Market

Maximum Occupancy
15 people

Market
Independent
Entrance & Exit

A 3D isometric illustration of a market layout. The central text reads "Market Independent Entrance & Exit". The scene shows a long aisle with several checkout counters on the right side. On the left, there are stacks of shopping carts and a line of people waiting. Two white callout boxes with black arrows point to specific entrance and exit points. The overall design is clean and modern, with a focus on clear traffic flow.

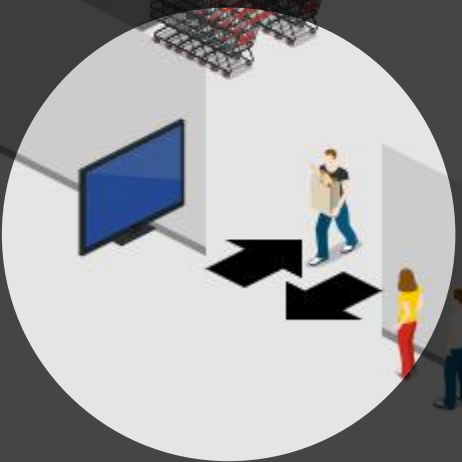
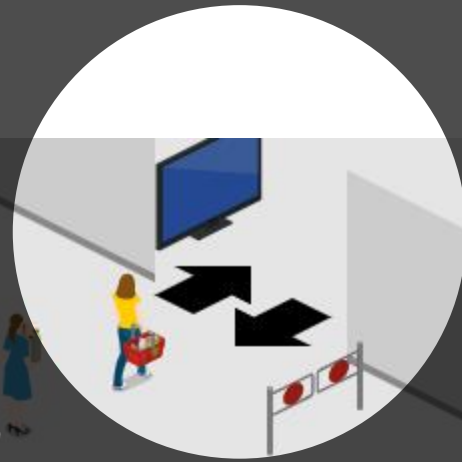
Independent entrance & exit

- Avoid crowd at single entrance and exit
- Counting camera at entrance and exit

Crowd Controlled Market

Maximum Occupancy
15 people

Market
Multiple
Entrances & Exits

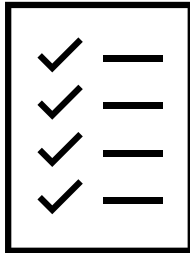


Multiple entrance & exit

- Avoid crowd at single entrance and exit
- Centralized crowd control system
- Dashboard at each entrance and exit

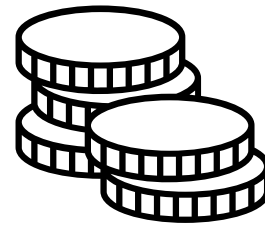
Benefit for all parties

Government



Regulations are followed

Store Manager



Cost is lowered

Customer

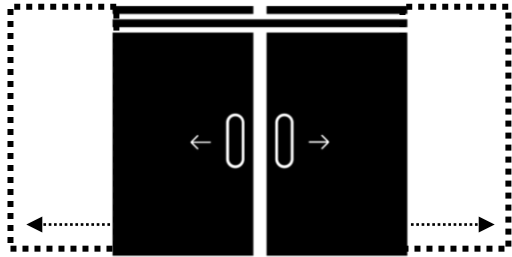


Store is safer

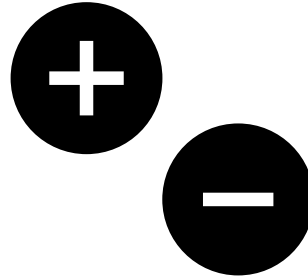
Extended Scenarios



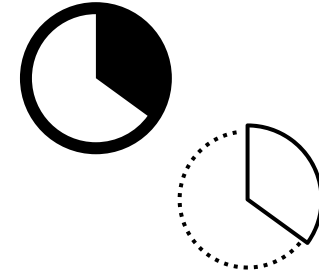
Extended Scenarios



Wide Door



Adjustment



Occupancy Mode

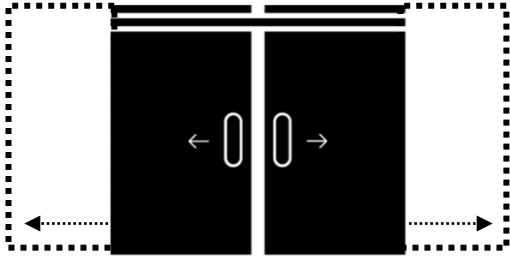


Language

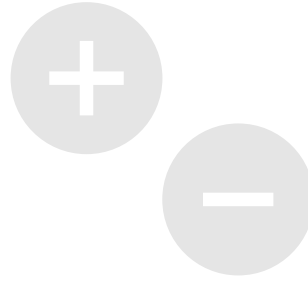


2021

Extended Scenarios



Wide Door



Adjustment



Occupancy Mode

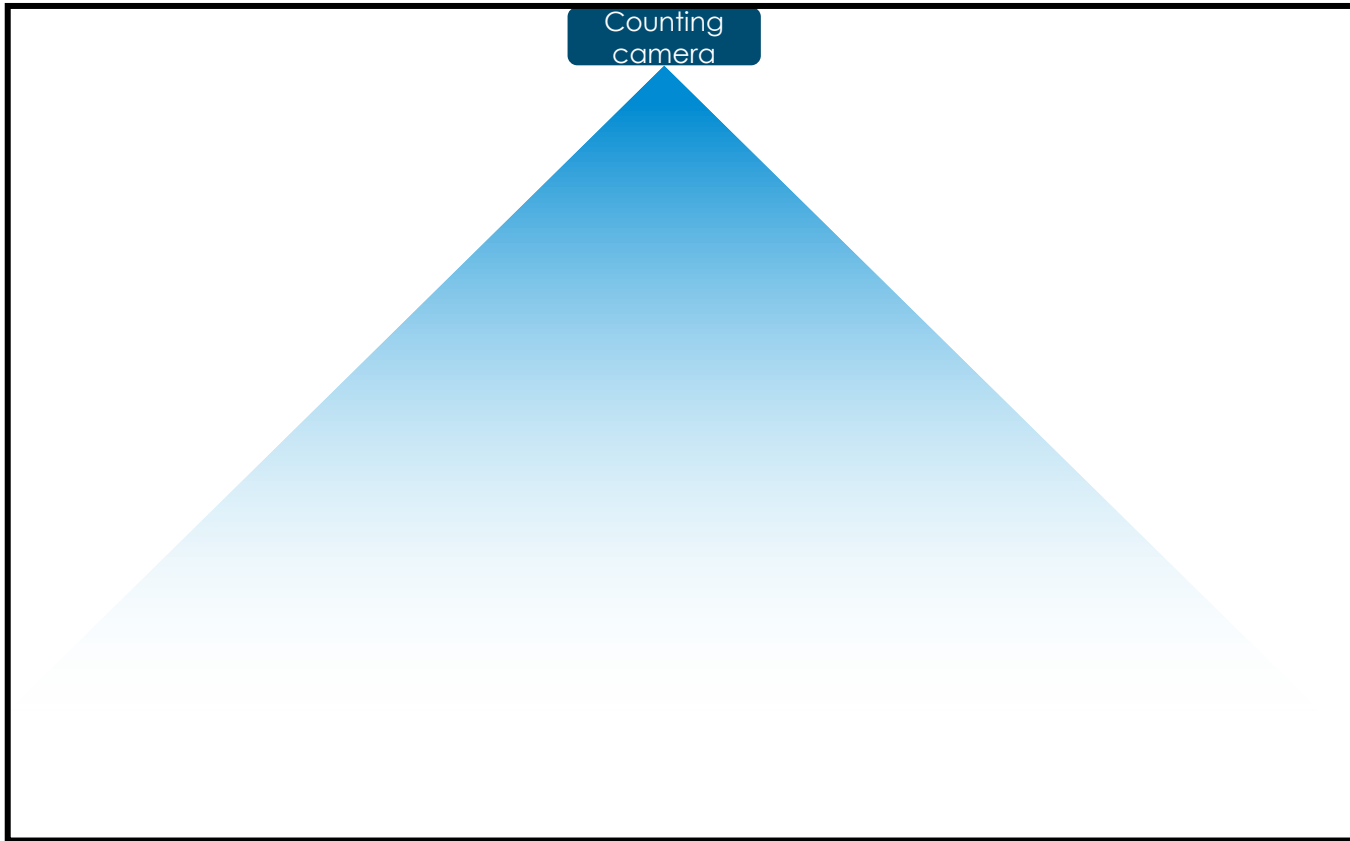


Language



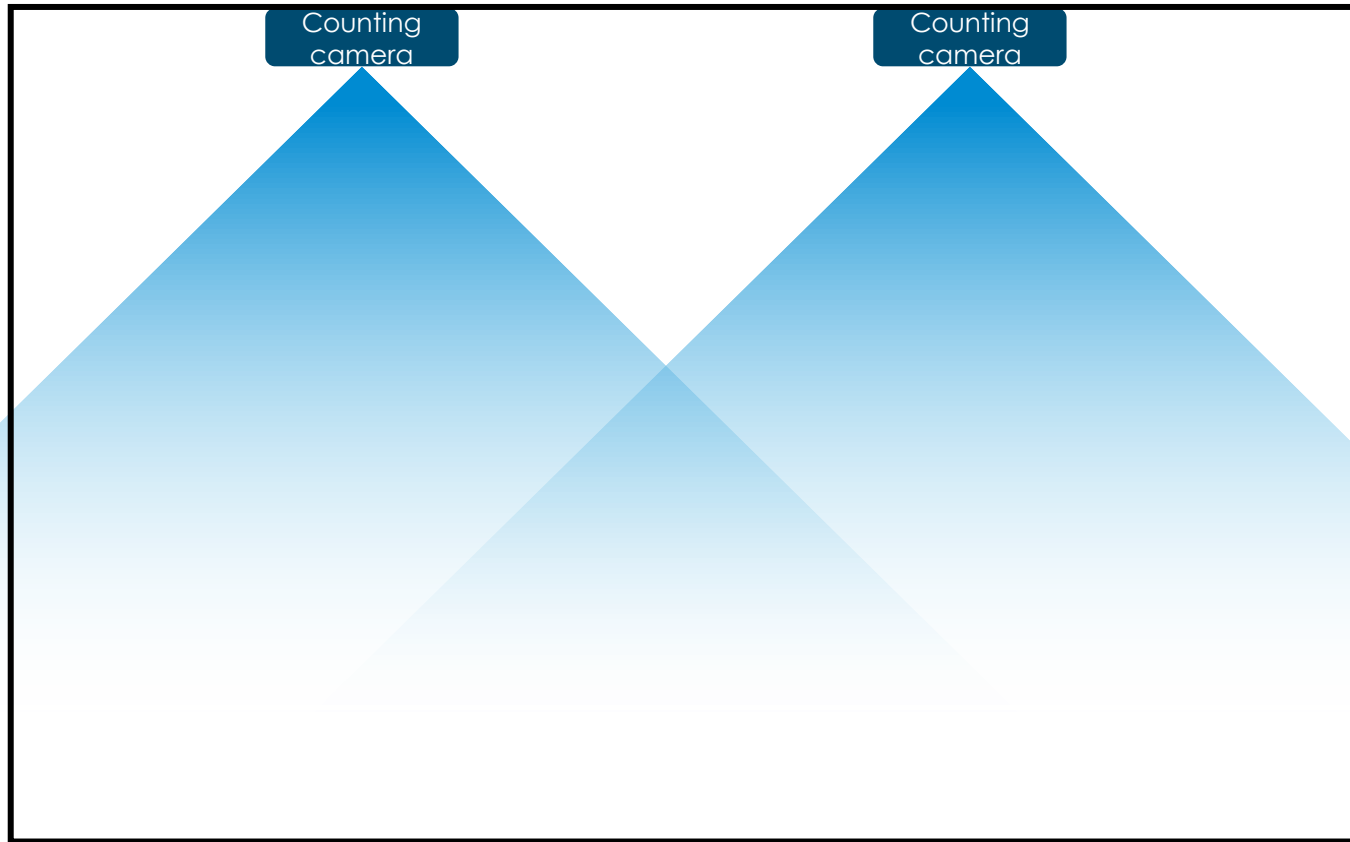
2021

Wider Door



What if the door width is wider than the FOV of single counting camera?

Wider Door

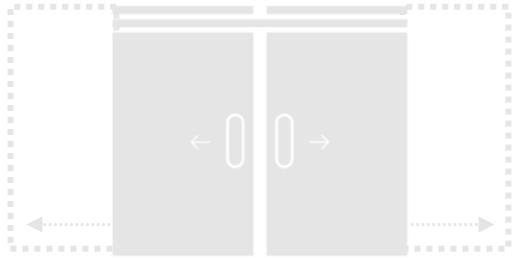


What if the door width is wider than the FOV of single counting camera?

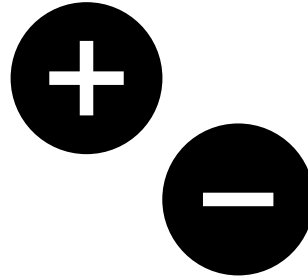
Stitch

multiple counting cameras together to cover the door width.

Extended Scenarios



Wide Door



Adjustment



Occupancy Mode



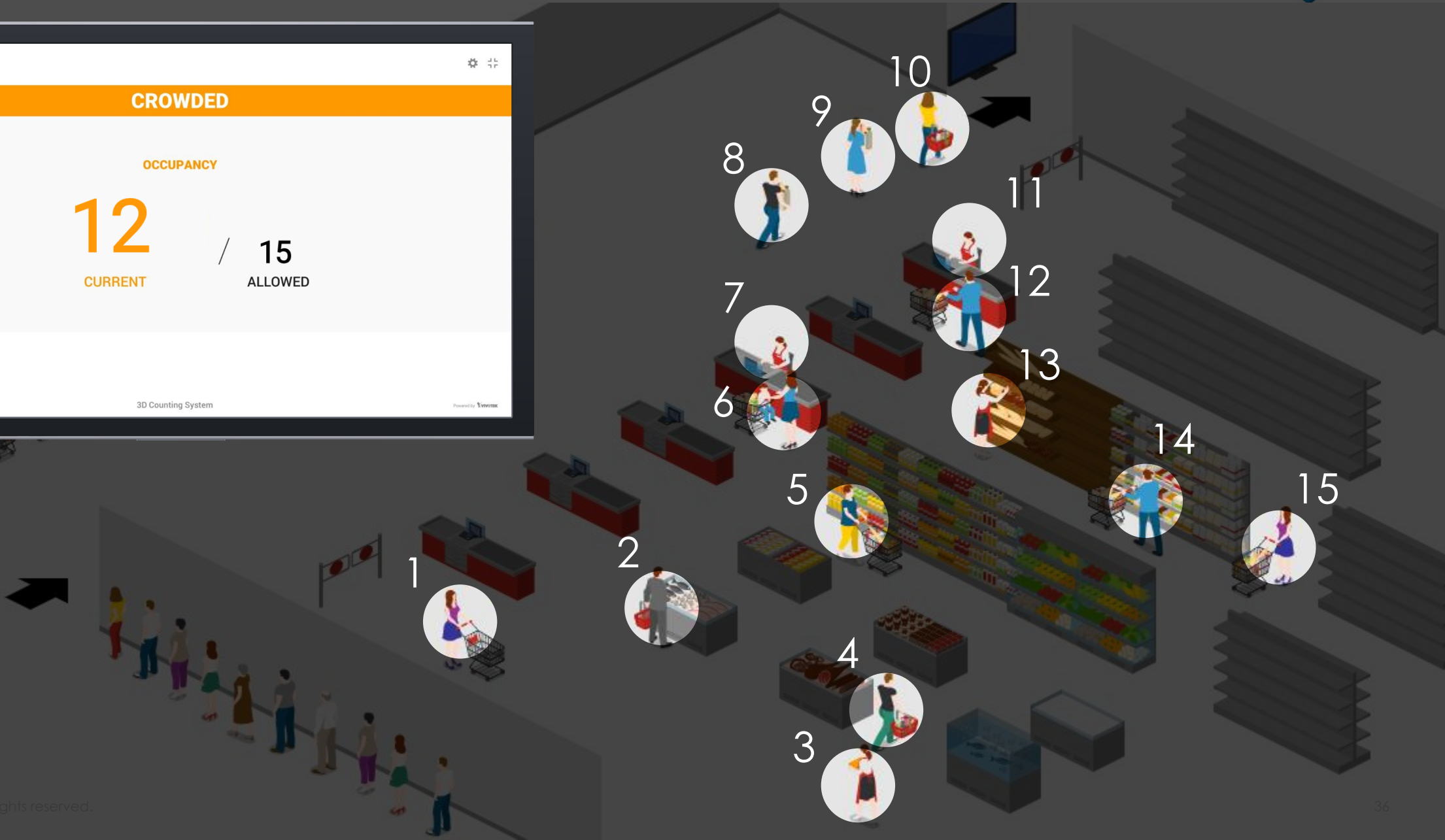
Language



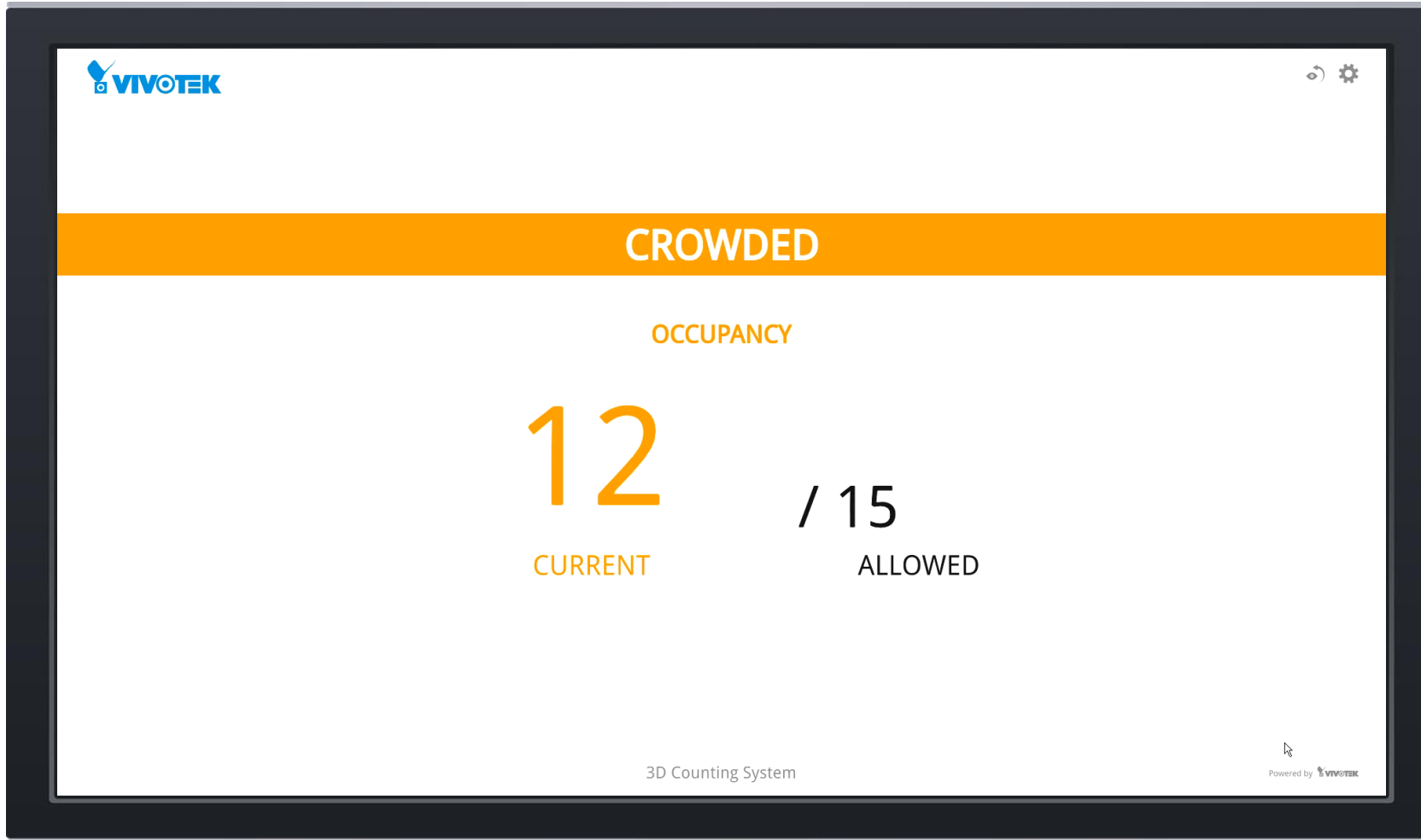
2021

Crowd Controlled Market

The interface displays the VIVOTEK logo at the top left. Below it, an orange bar contains the word "CROWDED". Underneath, the word "OCCUPANCY" is shown above a large orange "12" labeled "CURRENT" and a black "15" labeled "ALLOWED". At the bottom, it says "3D Counting System" and "Powered by Xtrams".

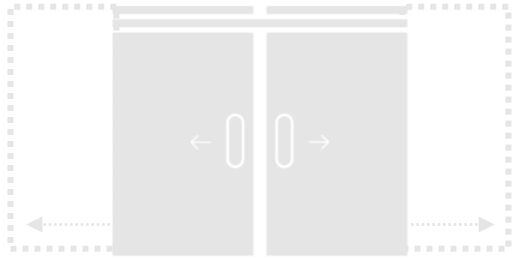


Manual Counting

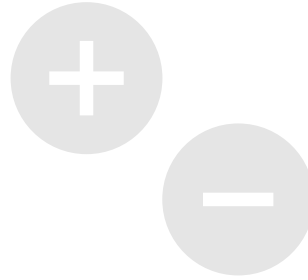


The screenshot shows a digital display interface for a VIVOTEK occupancy counter. At the top left is the VIVOTEK logo, and at the top right are icons for a camera and settings. A prominent orange horizontal bar across the middle contains the word "CROWDED" in white capital letters. Below this bar, the word "OCCUPANCY" is centered in orange. The main display area features a large orange number "12" on the left, with "CURRENT" written below it in orange. To the right of the "12" is a black slash followed by the number "15", with "ALLOWED" written below it in black. At the bottom center, the text "3D Counting System" is displayed. In the bottom right corner, there is a mouse cursor icon and the text "Powered by VIVOTEK".

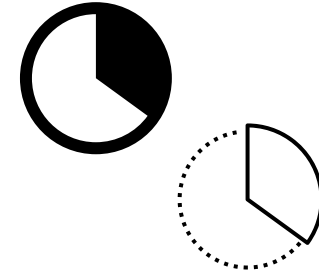
Extended Scenarios



Wide Door



Adjustment



Occupancy Mode

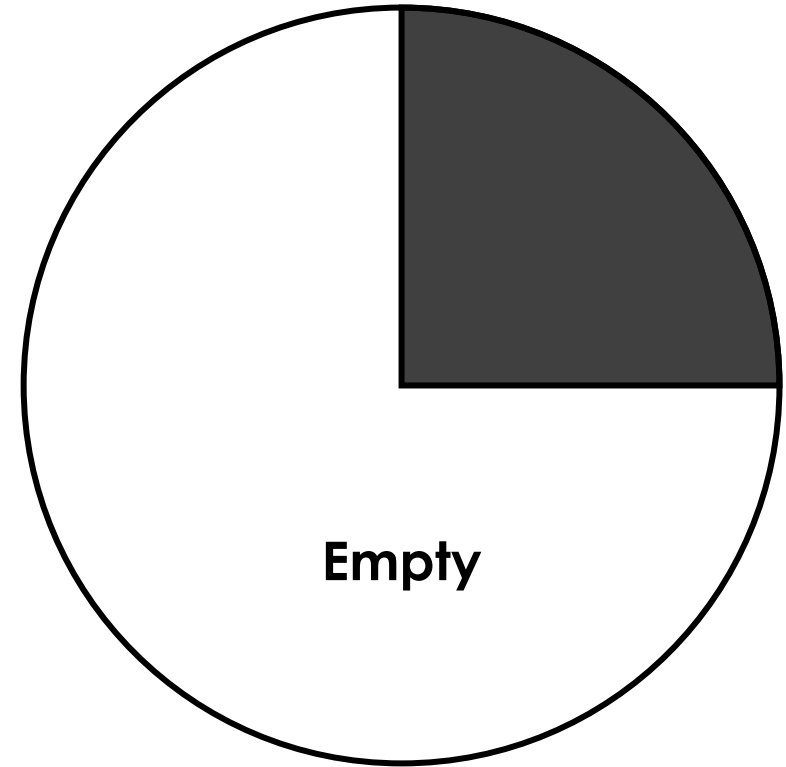
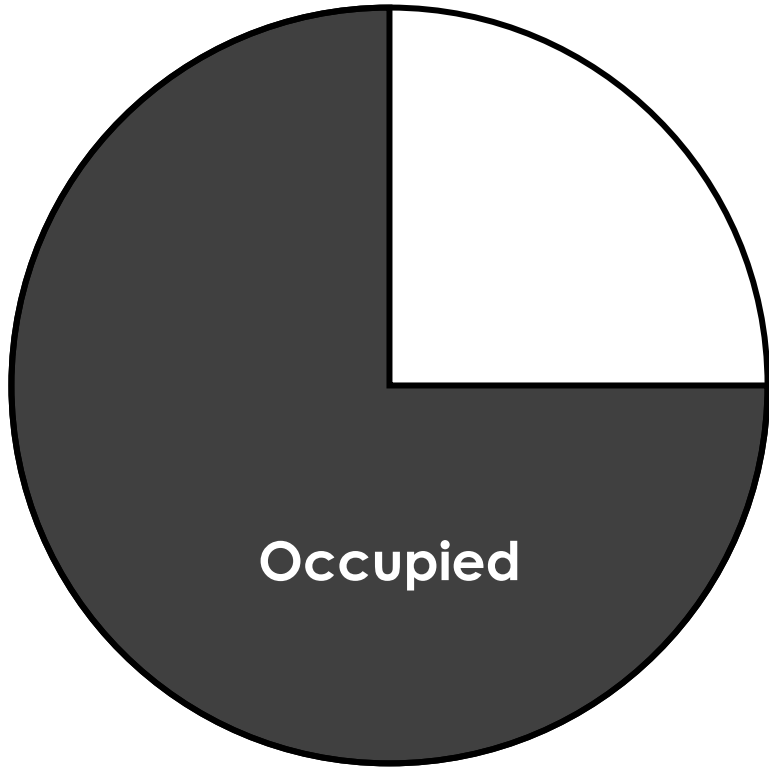


Language

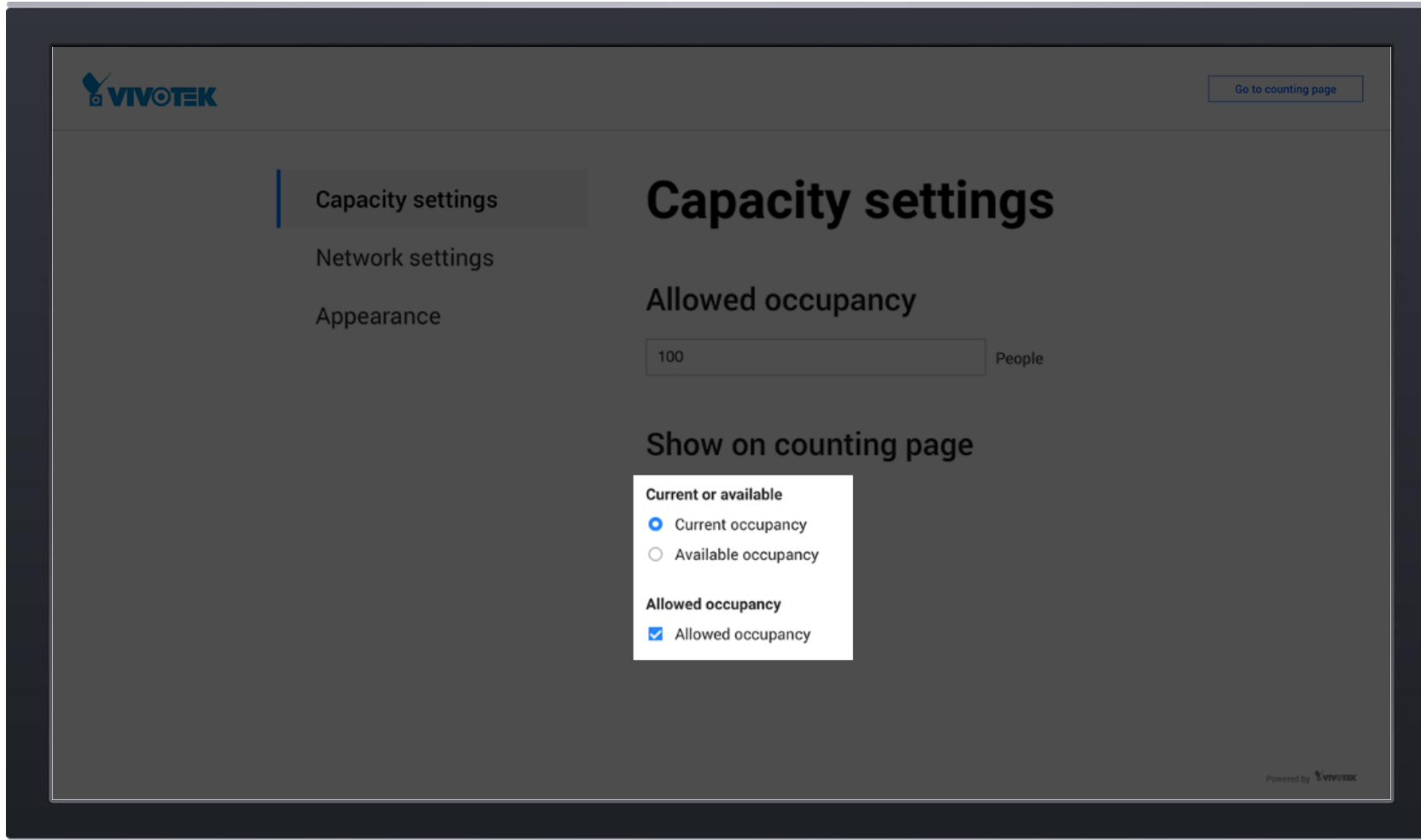


2021

Occupancy Mode

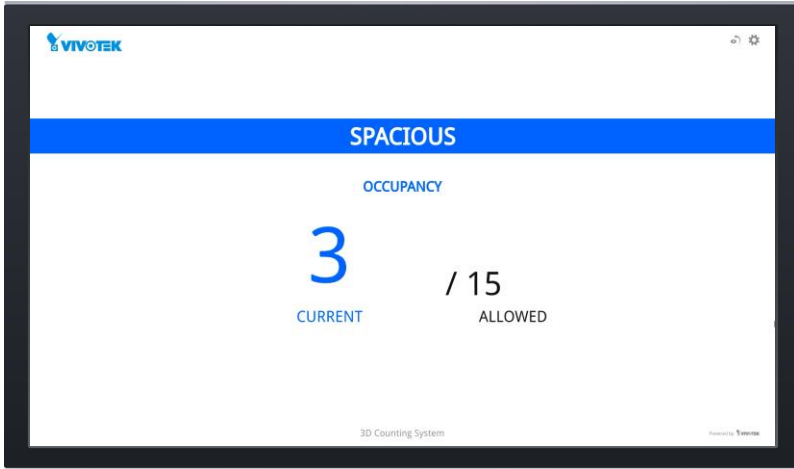


Display in Current or Available occupancy

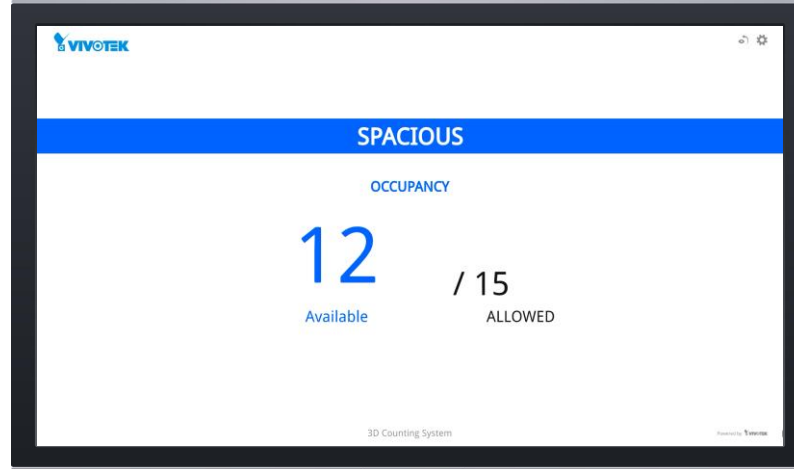


The screenshot shows the VIVOTEK web interface for Capacity settings. On the left is a navigation menu with 'Capacity settings' selected. The main content area is titled 'Capacity settings' and includes a 'Go to counting page' button in the top right. Under 'Allowed occupancy', there is a text input field containing '100' and the label 'People'. Below this is a 'Show on counting page' section with two radio button options: 'Current occupancy' (selected) and 'Available occupancy'. At the bottom of this section is a checked checkbox for 'Allowed occupancy'. The footer of the interface reads 'Powered by VIVOTEK'.

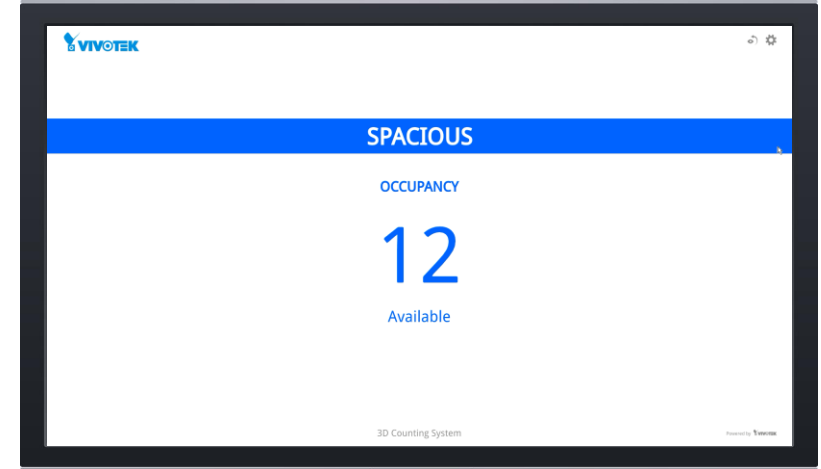
Display Mode



Occupied

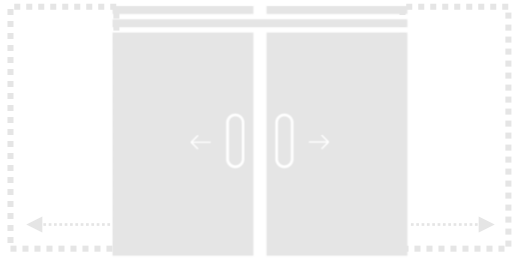


Available

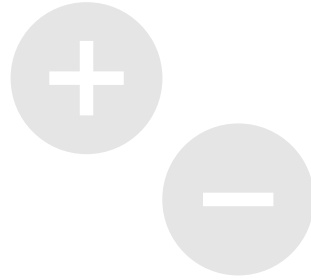


Simplified

Extended Scenarios



Wide Door



Adjustment



Occupancy Mode



Language



2021

13 Language Supported

Czech

English

French

German

Italian

Japanese

Korea

Persian

Polish

Portuguese

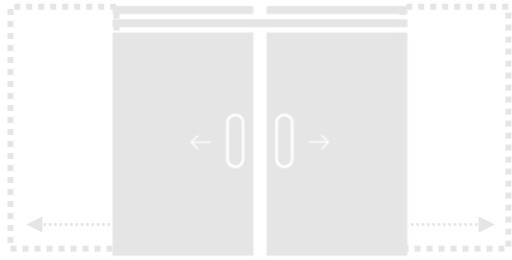
Russian

Simplified Chinese

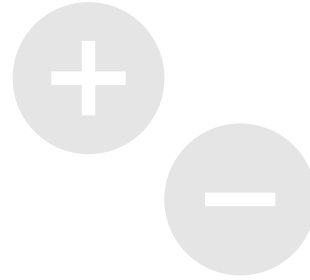
Spanish

Traditional Chinese

Extended Scenarios



Wide Door



Adjustment



Occupancy Mode



Language



2021

What happens after COVID-19 ends





ND9321

- H.265 Compression Technology
- Up to 8 Channel IP Camera Input
- HDMI Video Output up to 4K Resolution
- 1 x 3.5" SATA HDD
- Up to 8MP Camera Live View and Playback
- Trend Micro IoT Security
- Multiple Browsers Supported
- Live and Playback Fisheye Dewarp
- VIVOCLOUD App & Portal for 24/7 Viewing
- Compact Size with Fanless Design

***Crowd control solution does not require HDD installed.*



- Stores Long-Term Counting Data up to 2 Years
- Customize Counting Data Reports
- Supports Web Portal and App
- Direct Use of VIVOCLOUD Account
- Supports VIVOTEK Counting Cameras

In the future

Purchase Guide



Crowd Control Bundle Kit



Mouse included



Counting camera

100137200G



ND9312

100218100G



AW-FET-060C-065

100179400G

