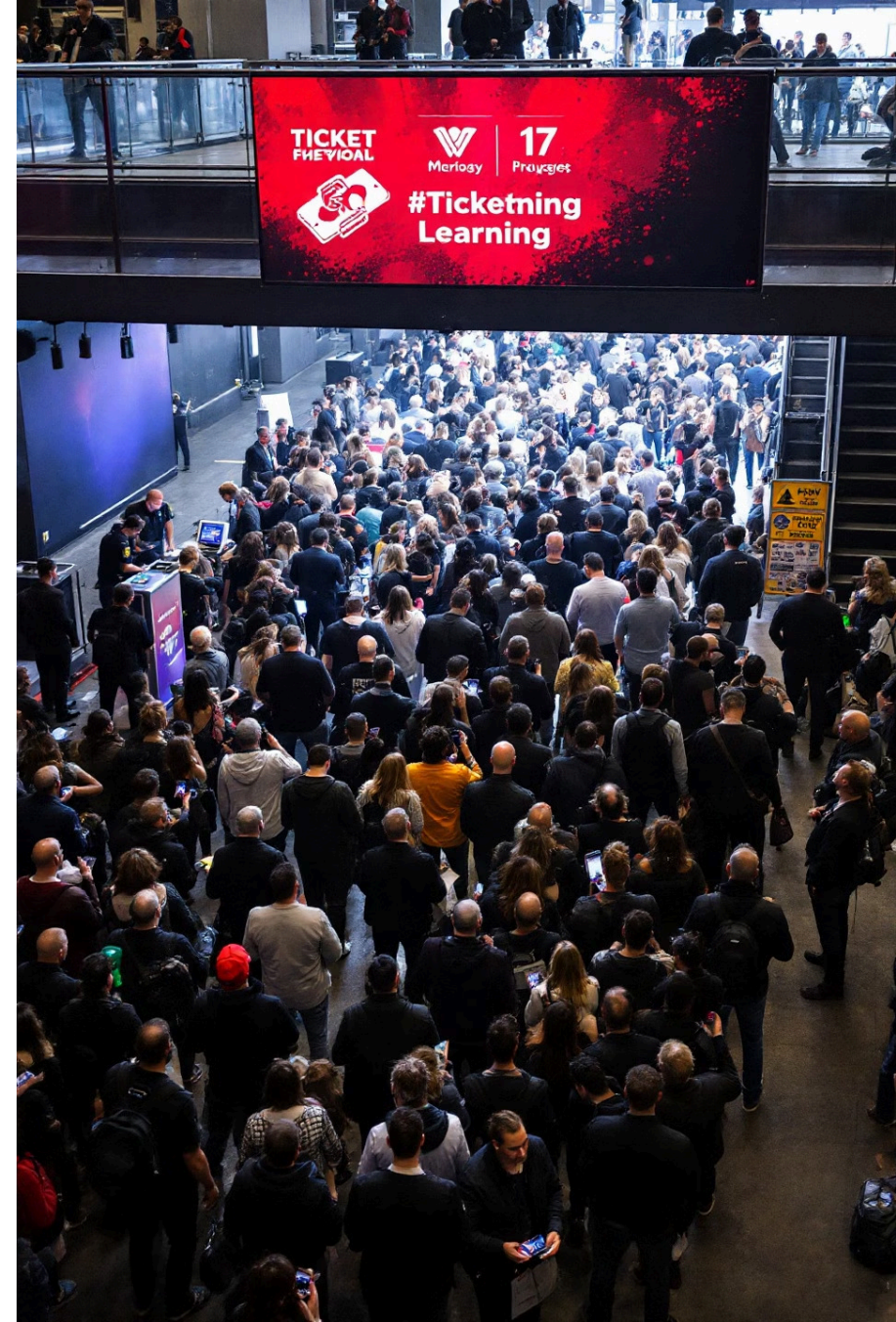


The Entry Capacity

The entry capacity is the number of people that can enter the event, typically calculated for a 1-hour window. Many factors impact this number:

- Number of ticket-scanning staff working
- Number of operational turnstiles
- Whether wristbands need to be exchanged for tickets
- Duration of the search process
- Efficiency of the queue management system
- Weather conditions
- Arrival profile of attendees (how early they come to the event)
- Information provided in advance

LOTS of things affect the entry capacity.



The Holding Capacity

The holding capacity is the number of people that can fit inside the venue. It's calculated using the available square metre (m²) area and the number of people allowed per m².

If we have 100m² available and we are happy to allow 0.5m² per person, we can fit 200 people inside.

While the calculation itself is straightforward, determining the usable area and space per person can be complex.

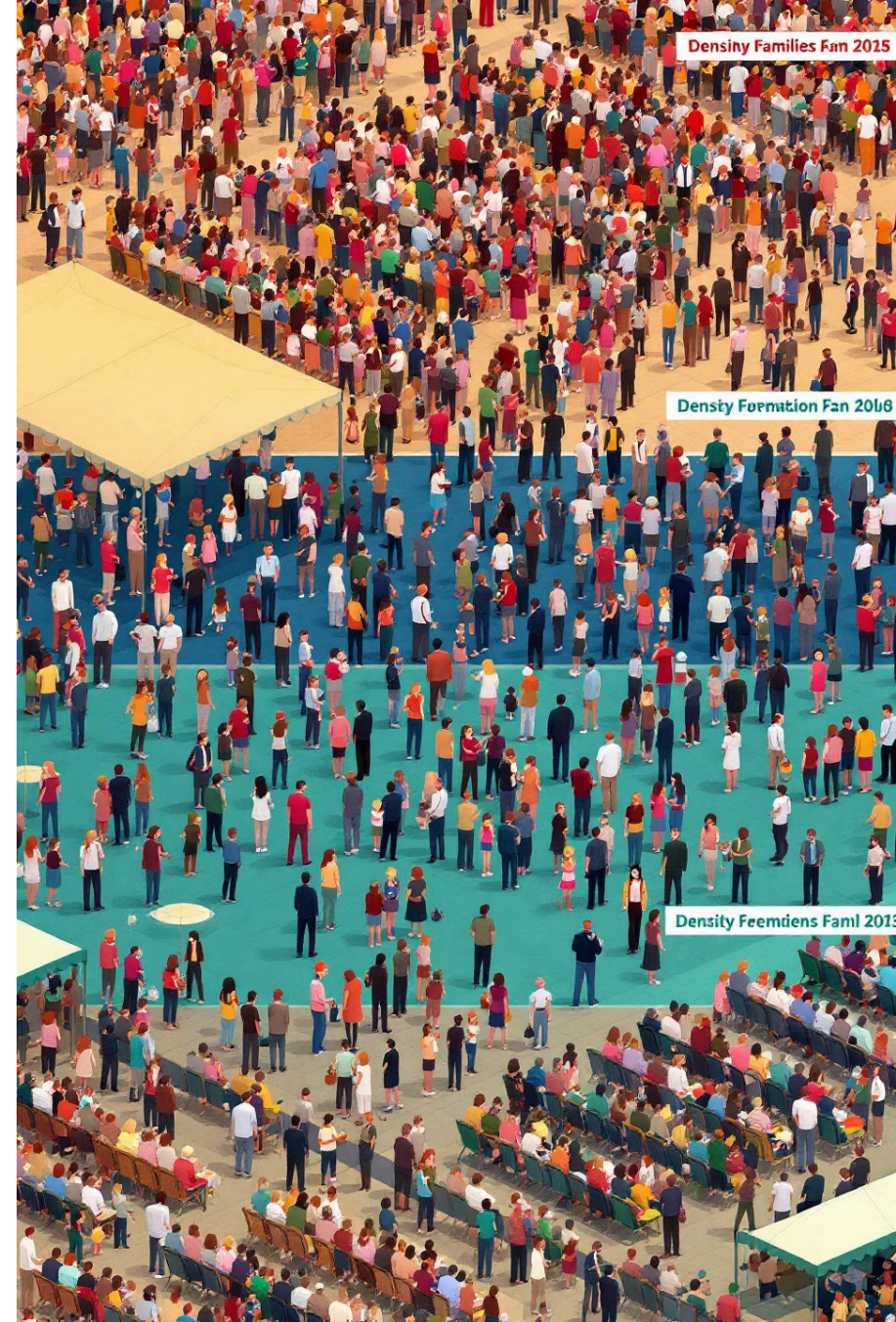


Factors Affecting Holding Capacity

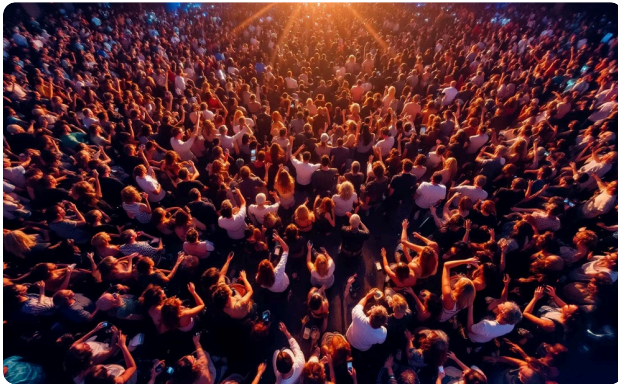
Several factors can affect the usable area and space per person:

- Is all the physical floor space actually usable for attendees?
- What is normal behavior for attendees at this event?
- Will there be a mosh pit situation?
- Is it a seated event or are people free to move around?
- Will people need less space right up near the stage?
- **WHO** will be in the audience? Families with buggies? Adults? Children?
- Will the weather affect the space people use?

There is a **LOT** to consider here.

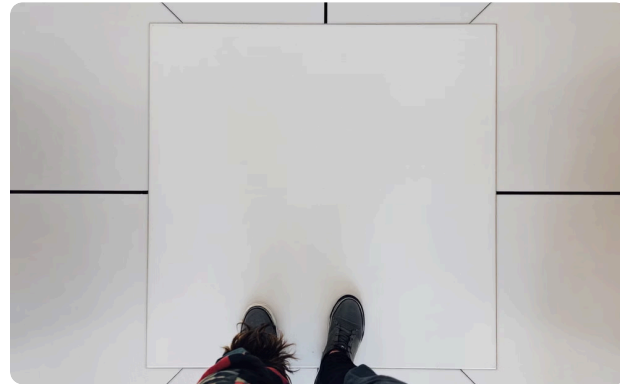


Standard Density for Standing Crowds



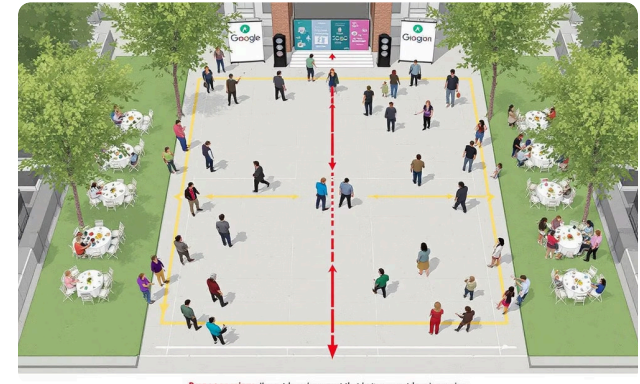
Standard Crowd Density

2 people per square metre is the standard comfortable density for standing crowds at events



Visual Reference

0.5m² per person means two people can comfortably fit in each square metre of space



Spacing Guide

This standard density allows enough room for comfort while maximizing venue capacity

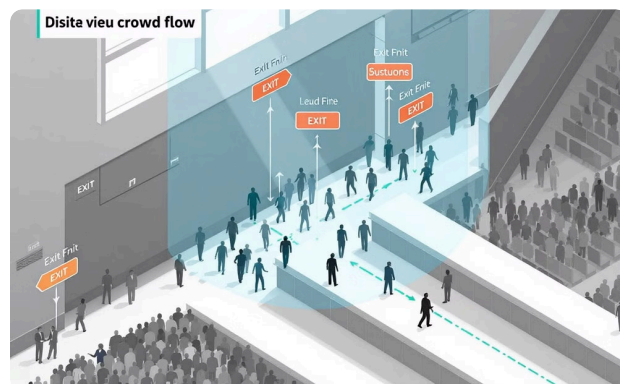
The Exiting Capacity

The exiting capacity determines how many people can exit the venue under normal operations within a set timeframe, typically calculated for a 1-hour window.



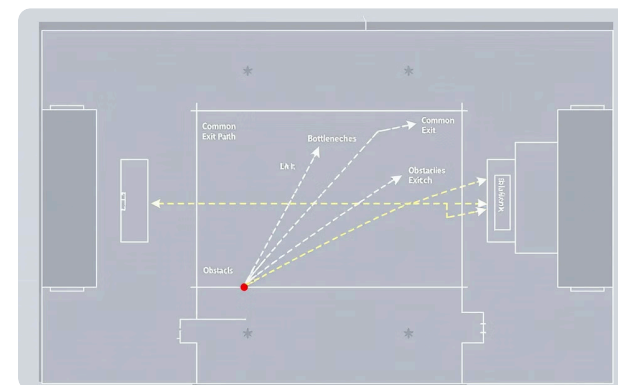
Exit Point Design

The number and width of exit points directly impacts how quickly people can leave. Multiple wide exits allow for better flow than fewer narrow exits.



People Flow Rates

The speed and density at which people can move through exits affects the overall exiting capacity. This varies based on exit design and crowd behavior.



Exit Path Challenges

Obstacles and bottlenecks in exit paths can significantly reduce flow rates. Common issues include narrow corridors, sharp turns, and poorly placed barriers.

The Emergency Exiting Capacity

This is the number of people that can evacuate in an emergency situation.



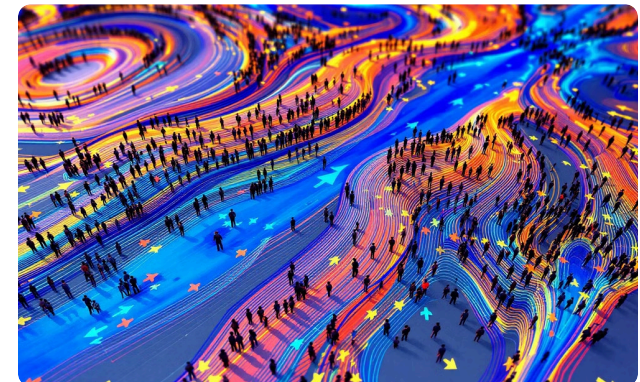
Time-Critical Evacuation

Emergency evacuation must be completed within a specific timeframe, typically between 2.5 to 8 minutes



Place of Safety

Evacuees must reach designated safe areas such as carparks, protected corridors, or nearby fields



Capacity Calculation

Complex calculations determine maximum occupancy based on evacuation time and safe area capacity

Determining Final Capacity

The final capacity of a venue is determined by the most restrictive of these four calculations:



Entry Capacity

How many people can enter through available entrances



Holding Capacity

Maximum number of people the space can physically hold



Exiting Capacity

How many can exit under normal conditions



Emergency Exit Capacity

How many can evacuate in an emergency

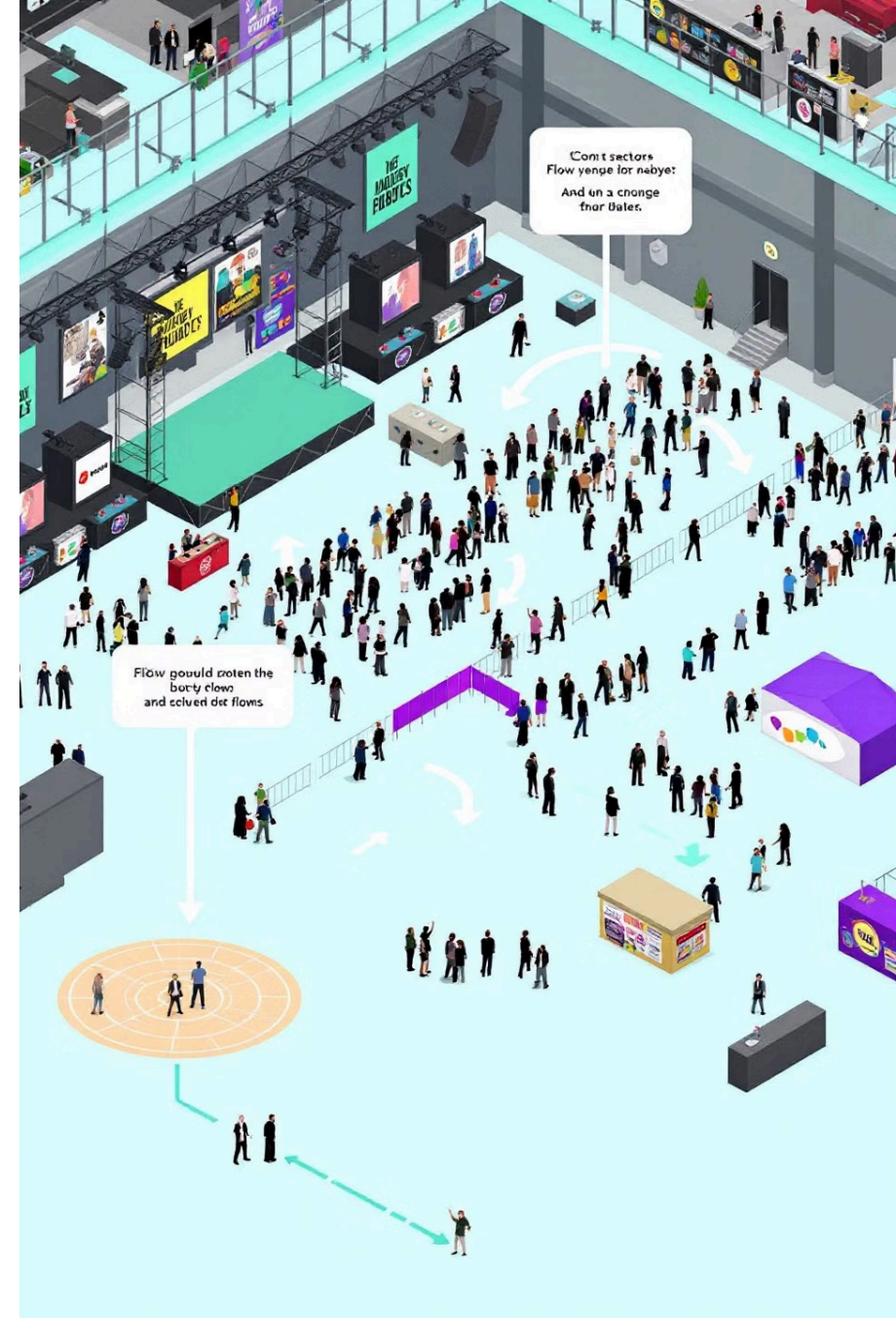
To determine the final capacity, calculate all four numbers and use the **LOWEST** figure as your maximum capacity limit.

Additional Considerations for Capacity

Here are some potential considerations that can affect the usable space and capacity:

- Space taken up by the stage
- Barriers in front of the stage
- Front-of-house position blocking people's view
- Bar area and queueing space
- Merchandise stall space
- Realistic expectations of space usage
- Typical behavior of attendees for this event/act
- Need for aisles
- Accessible platform space

LOADS of things take up space at events.



Emergency Exits Considerations

Ensuring emergency exits are usable is crucial. Often, event setup can compromise some exits, affecting the Emergency Exiting capacity.

TOP TIP

Quite often, the Emergency Exiting capacity is the lowest of the calculations.

So, **ANYTHING** that affects that calculation is **KEY**.



Common Issues Compromising Emergency Exits



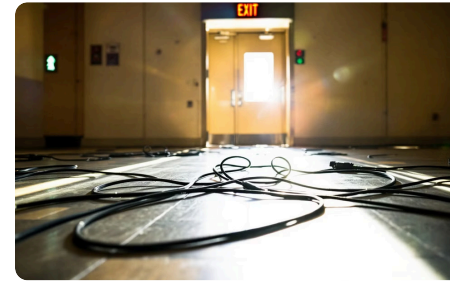
Blocked Access

Venue management sometimes keeps exits locked or allows vehicles to park outside blocking exit paths



Crowd Flow Problems

Retail stalls and extra bars can create queues that block crucial exit routes



Infrastructure Issues

Cables trailing across exits and stage setup can make exit routes dangerous or inaccessible



Poor Visibility

Venue dressing blocking signage and inadequate lighting can make exits hard to identify - a LOT can go wrong here

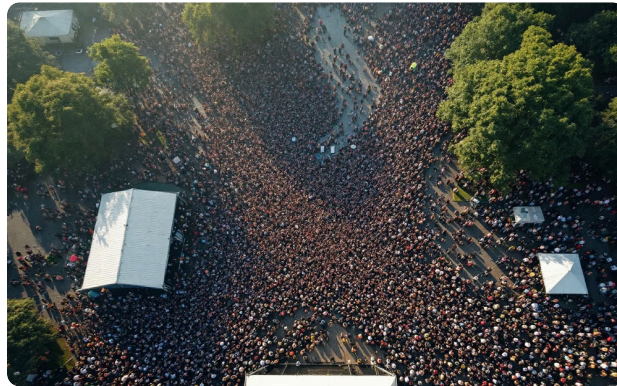
The Art and Science of Crowd and Event Safety

Calculating event capacity involves more than just numbers - it requires expertise, observation, and understanding:



Experience Matters

Professional expertise and judgment play a crucial role in ensuring event safety



Understanding Crowds

Knowledge of how crowds move and behave is essential for effective capacity management



Venue Insights

Regular work at a venue provides valuable understanding of how people typically use the space

Venue Usage Patterns

Understanding how a venue is typically used can inform capacity calculations:



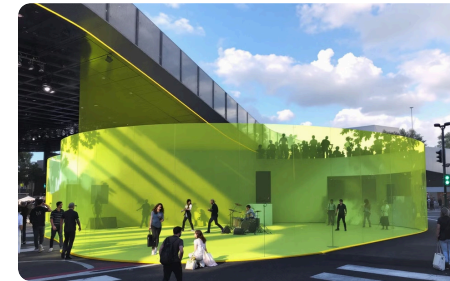
Restroom Areas

Areas near toilets often see reduced occupancy due to environmental factors



Bar Zones

Bar areas rarely reach maximum density due to natural queue formation factors



Visibility Factors

Corner spaces with poor sightlines to the stage typically remain underutilized



Event-Specific Usage

Space utilization varies significantly based on the type of performance



Timeline Variations

Crowd density changes notably between support acts and main performances



Audience Demographics

Different audience types utilize venue space in distinct patterns

Front-of-Stage Density



Front Zone: Highest Density

At the very front, expect more than 4 people per square metre. Concert-goers here actively choose and accept this tight packing to be close to the action.



Middle Zone: Medium Density

The middle section typically sees around 2-3 people per square metre - a more comfortable density for most attendees.



Back Zone: Comfortable Spacing

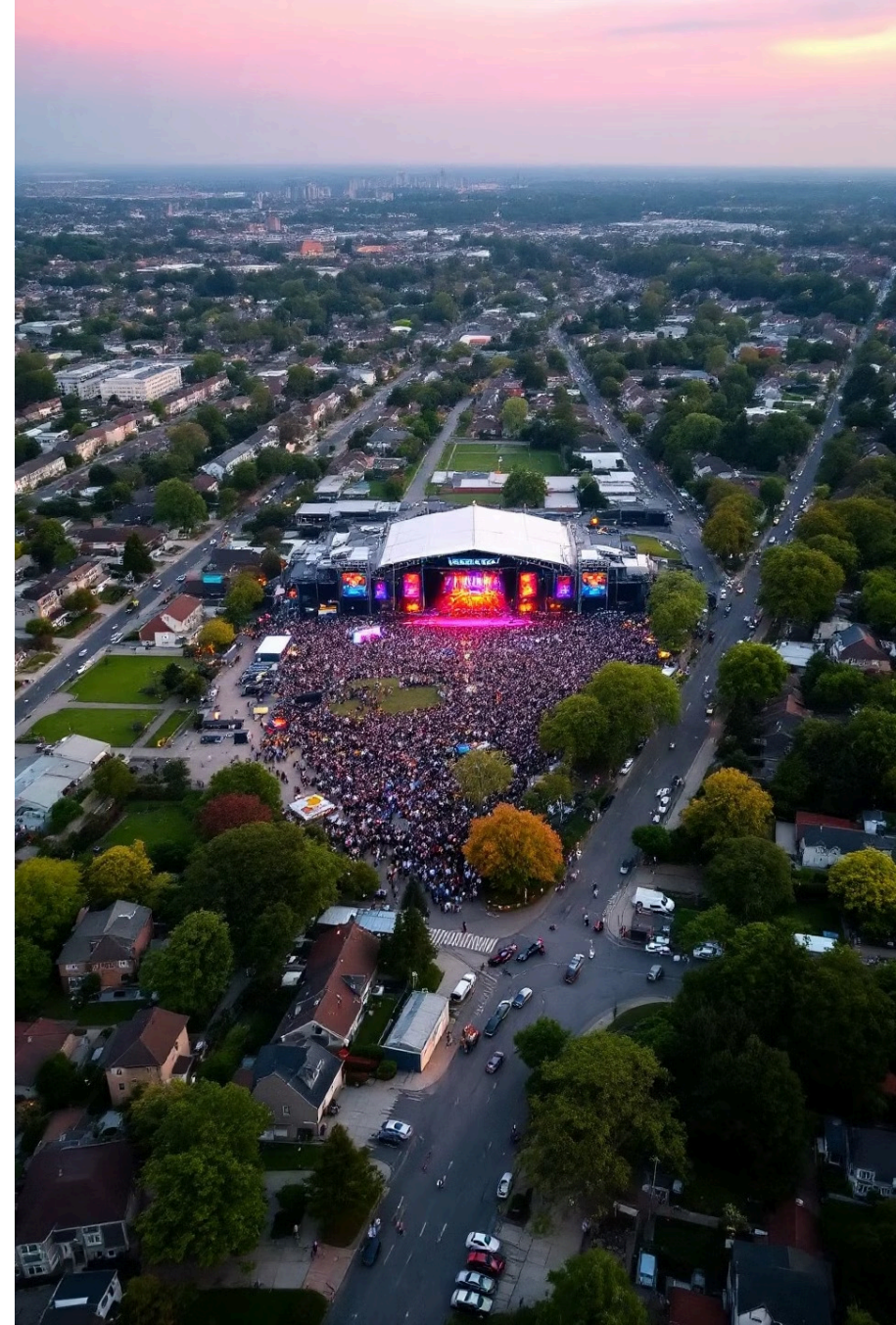
The rear sections maintain lower density, usually less than 2 people per square metre, offering more personal space.

TOP TIP: Understanding these density patterns is crucial for accurate capacity calculations.

Considering Impact Beyond the Event

One of the most often overlooked **5 Core Considerations** is the impact on people **NOT** at the event.

We need to think **BEYOND** our event and consider how it might affect others in the vicinity.



Case Study: Meeting House Square, Dublin



Venue Overview

Meeting House Square is an outdoor event space in Dublin's Templebar district, featuring a large outdoor stage and courtyard space. The venue can comfortably accommodate 1000 people for events.



Access Points

The square features 3 strategic entry/exit routes, crucial for managing crowd flow and emergency egress during events.



Capacity Management

A restaurant opening directly onto the square seats 200 people. For safety, the square's event capacity must be reduced by 200 to ensure safe emergency egress for restaurant patrons.

Considering Non-Event Participants



Christmas Lights Events

Holiday events often pack main streets while shops remain open, creating potential safety concerns



Shop Evacuations

When shops need to evacuate, a packed street can block crucial emergency exit routes



Mixed-Use Considerations

Events must account for regular business operations and emergency procedures of nearby establishments

TOP TIP: Always consider how event crowds might impact the safety and operations of surrounding businesses and their customers.

Importance of Considering Non-Participants

We always need to consider those NOT at our event and how we might be impacting them.



Local Residents

Event noise and crowds can significantly impact nearby residents' daily lives and rest



Nearby Businesses

Events can affect customer access and normal business operations



Emergency Services

Critical emergency vehicle access must be maintained at all times



Public Transportation

Event crowds can impact regular transit operations and access points

Failing to consider these factors can lead to serious safety issues and community relations problems.

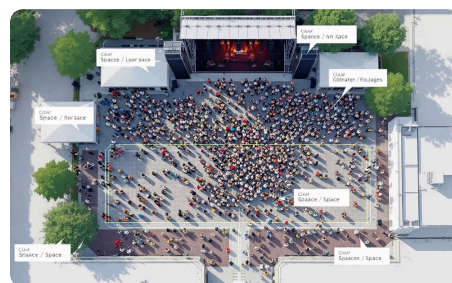
Conclusion: Holistic Approach to Event Capacity

Calculating event venue capacity requires a comprehensive approach that considers multiple interconnected factors:



Entry Capacity

Managing efficient and safe flow of attendees into the venue through designated entry points



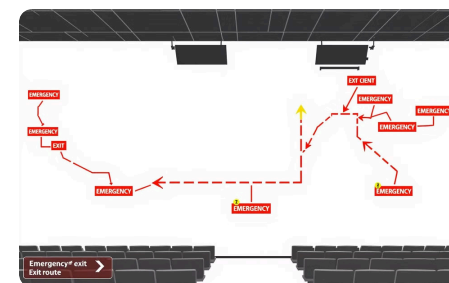
Holding Capacity

Maximum number of people that can safely occupy the event space



Exiting Capacity

Normal flow of attendees leaving through standard exits



Emergency Exiting

Rapid evacuation capability during emergency situations



Community Impact

Effect on surrounding businesses, residents, and public services

By carefully considering all these factors, event planners and safety professionals can ensure safe, enjoyable, and successful events while minimizing negative impacts on the surrounding community.