

# Operational Management in Crowd Control: A Case Study of Concerts at ICE BSD City

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## Abstract

This study analyzes the implementation of crowd management at international concert events held at the Indonesia Convention Exhibition (ICE) BSD City. Using a qualitative survey approach through observation, interviews, and documentation, the research evaluates nine key indicators of crowd management: crowd behavior, security management, risk management, venue layout, venue capacity, barricade placement, emergency procedures, holding areas, and building facilities. The findings show that crowd management at ICE BSD City is generally well implemented, supported by strong coordination between concert promoters and venue management. This collaboration ensures audience safety, smooth crowd flow, and overall comfort during events. However, several potential risks, such as crowd disturbances involving popular artists, artist cancellations, demonstrations, and bomb threats, are still likely to occur and require continuous mitigation through enhanced coordination with security authorities and adherence to international standards. The study also highlights the importance of structured planning, including risk assessments, layout management, and the availability of adequate emergency facilities. Limitations of this study include the small sample size and the focus on a single venue, which limit the generalizability of the findings. Future research is recommended to broaden the respondent pool, include comparisons with other venues, and examine the role of technology-based crowd management systems to provide a more comprehensive understanding of crowd control practices in large-scale events.

Keywords: Concert Events; Crowd Management; Management Event; Operational Management.

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## I. Introduction

Event management can be understood as activities aimed at gathering a group of people to organize celebrations, marketing events, or reunions, as well as being responsible for designing the event and all aspects of its implementation (Tafarannisa et al., 2021). For an event to run effectively and efficiently, five steps must be considered: research, design, planning, coordination, and evaluation. The research stage is for determining the event's needs, the reasons for holding the event, and the community's expectations. The design stage is where ideas are presented that will serve as the event's main theme. The planning stage is carried out after analyzing the conditions and situation in the design stage. The planning stage involves budget allocation, venue and location selection, and other equipment for the event. A technical meeting is usually held during the planning stage. Next is the coordination stage, which is carried out so that the design and planning can be done by the people involved in the event, and to minimize miscommunication in the event implementation process (Handayani et al., 2023). The evaluation stage is used to review the event's progress from start to finish. This evaluation will produce data and information that can be used for planning similar events in the future. However, others argue that the stages of event management consist of planning, organizing, implementing, and supervising (Asnur & Yuliana, 2020; Chukwu, 2023; S. H. Putri et al., 2024).

Throughout November 2023, there will be at least 30 (thirty) music events, including concerts and orchestras. There will be 12 (twelve) concerts, 12 (twelve) festivals, 3 (three) orchestras, 2 (two) musicals, and 1 (one) fan meeting held in Indonesia. Looking at the growth of MICE events and music events as shown in the data above, it can be said that organizing music events or concerts is a very promising industry. Therefore, the phenomenon is the emergence of many new concert promoters due to the high demand for professional concert organizers. Given the emergence of new promoters, organizing events poses significant challenges, including crowd management (Xie et al., 2025). An example is the *Berdendang Bergoyang* event held on October 28-30, 2022, at Istora Senayan Jakarta, where there was overcrowding, overcapacity, a stage layout that failed to account for spectator flow, and so on. The following is an opinion from an expert in Occupational Health, Safety, and Security (K3) regarding music events *Berdendang Bergoyang*, he said that mass security management is not yet well understood, not only by the public, but also by organizers, event organizers, and the government as the authorities. This includes stakeholders who are not yet aware of this issue.

Several examples of crowd management issues that occurred during a music festival in Jakarta are shown in Figure 1.



Figure 1. Portrait of Over Capacity Conditions at the *Berdendang Bergoyang* Event

Safety is a top priority at concerts, so concert promoters and venue managers must have a detailed understanding of how to manage crowds effectively. Given the above phenomenon, it is necessary to understand the strategies concert promoters and venue managers use to manage crowds at concerts, ensuring safety and comfort. Crowd management is the systematic planning and supervision of the movement and gathering of people in an orderly manner. It involves assessing people who check the capacity of a space before it is used (AlShaery & Khozium, 2019). Crowd management is also organized and supported, with planning and direction to ensure the orderly conduct of large mass gatherings. As part of crowd management, steps can be taken to direct the crowd behavior of a group of people. Crowd management practices involve accessing and interpreting sources, predicting crowd behavior, and deciding on the use of various possible interventions (Wijermans et al., 2016).

Before an event, crowd management involves planning and directing how the public gathers and

moves within and around the event location. Planning typically involves anticipating what might happen to a crowd in a given context and preparing for it. Thus, preparation includes designing the desired crowd behavior, predicting potential problems, and developing contingency plans to address them. Therefore, simulations and risk assessments are common tasks in the planning phase (Wijermans et al., 2016). Based on the theory outlined above, the planning phase of crowd management can be evaluated through several key indicators. These indicators include crowd behavior, namely the behavior exhibited by individuals at a crowded event, where participants have specific goals and share attitudes and views on specific issues within a crowded setting (Gong et al., 2020). Furthermore, security management is a crucial aspect in preventing potential criminal threats that could cause disruption, encompassing elements of data protection, integrity, authenticity, and access rights management.

Another equally important aspect is risk management, which is a series of procedures and methodologies for identifying, measuring, monitoring, and controlling risks arising from business activities or event management (Nursyamsiyah, 2010). Planning also requires attention to layout, namely the arrangement of various elements within a single area that function to support the smooth running of activities, both in the context of spatial planning and event operations. Venue capacity is also a key consideration, as it determines how many people the event location can accommodate. Capacity must be determined based on the expected number of participants to ensure the atmosphere is neither too crowded nor too quiet, and the room layout should support the flow of the event (E. B. K. Putri & Wibowo, 2025).

Furthermore, the placement of barricades serves as a security measure to control crowd movement and protect specific areas during the event. Emergency procedures also need to be systematically designed as a precautionary measure, enabling swift, precise, safe, and controlled handling in an emergency. Providing temporary shelters or waiting areas is part of the planning to regulate participant flow before they enter the main area. Furthermore, the facilities, including space, services, and supporting elements such as meeting rooms, halls, or courtyards, must be adequate to ensure the smooth running of the event. The importance of crowd management in organizing major events, such as concerts, cannot be overstated, as it helps prevent unwanted incidents. Therefore, research on crowd management is necessary so that the results can serve as evaluation material and a reference for event organizers to improve the quality and safety of their activities.

## II. Method

This study employs a qualitative approach with a survey research design aimed at understanding context through detailed, in-depth descriptions of conditions in a natural setting and actual phenomena occurring in the field (Fadli, 2021). The research was conducted at the concert venue ICE BSD City, Tangerang Regency, Banten, which was selected because it is one of the preferred venues for international concerts. Since its opening in 2015, ICE BSD City has hosted more than 40 international artists, making it an ideal location for research on crowd management. Data collection methods included (a) observation (direct observation), (b) interviews, and (c) documentation. The research sample comprised two concert promoters with experience organizing international concerts at ICE BSD City, one venue representative who served as the building manager and concert sales manager, and concert attendees who had attended international concerts at ICE BSD City or other venues for comparative purposes.

## III. Results and Discussion

### 1. Crowd Management at ICE BSD

The organization of an event is always expected to run smoothly and be under control. Crowd management is an important component of event organization. The phenomenon that occurs is that crowd management at events, especially concerts, often does not run smoothly. This harms the organizer's image and even the nation's image during an event. Therefore, it is necessary to know, understand, and implement proper crowd control.

Since 2015, ICE BSD City has been the venue of choice for events, especially concerts. Various K-pop concerts featuring Korean idols have been held at ICE BSD City, including Super Junior, Big Bang, EXO, SNSD, Seventeen, BTS, Blackpink, NCT 127, G Dragon, and others. In addition to Korean concerts, many Western concerts have also been held at ICE BSD City since 2015, including Michael

Buble, Katy Perry, Selena Gomez, Joey Alexander, Paramore, Charlie Puth, John Mayer, Westlife, Lany, David Foster, and others. Given the large number of events held at ICE BSD, it is necessary to have knowledge and implement effective crowd control measures from start to finish so that everyone involved in the event feels safe and comfortable. The analysis for crowd management at the current concert at ICE BSD City uses nine indicators based on crowd management theory, including:

1. Crowd Behavior
2. Security Management
3. Risk Management
4. Layout
5. Venue Capacity
6. Barricade Placement
7. Emergency Procedures
8. Holding Area
9. Building Facilities

### 1.1. Crowd Behavior

Crowd behavior is the behavior exhibited by individuals in a group that shares a common goal. The behavior displayed in a crowd is conscious and more socially organized, so it can be said that crowd behavior is a type of activity carried out by a large and organized group. Unique social norms guide this behavior; in short, it is a combination of like-minded individuals, anonymity, and shared emotions that drives it.

The results of interviews with promoters, building managers, and audience members show that the crowd behavior observed at concerts held at ICE BSD City (Table 1) is generally moderate, with the risk of crowd chaos in crowd management still low. The following is the crowd behavior data:

Table 1. Crowd Behaviour

Types of Crowd Behavior	Description
Not eating or drinking	Willing to skip meals and drinks to queue for the front row
Using a lightstick	Willing to buy expensive light sticks so that fandom friends can use them during concerts
Make-up	Makeup before entering or in the holding area
Hold the banner	Usually prepared by the fandom or concert promoter for use during the concert event.
Holding in urine (to the point of wearing diapers)	Willing to wear diapers so as not to miss watching their idol
the same air	Willing to stay outside the concert area, even without a ticket, as long as they can breathe the same air as their idol.
Singing together	Singing with idols in the concert area
Stay overnight in the venue area	Staying overnight to get to the front of the line
Wearing clothes in the colors of your fandom	Trying to wear clothes in colors that match their idol's fandom

### 1.2. Security Management

The success of a concert depends heavily on how security is managed at the event. Good security management will undoubtedly enhance the event organizer's image. Therefore, security management is considered very important, including how promoters, venues, and other security personnel manage the security process from audience arrival through the end of the concert.

Concert security management is a security system designed in advance and in detail by the organizer to ensure everyone's safety during a concert event. Based on the summary of interviews with the

promoter, building manager, and audience, it can be said that concert security management is relatively safe because both the promoter and building manager work together to plan security in various areas at ICE BSD City. Table 2 shows the areas where the promoter and the building manager provide security.

Table 2. Security Management

Concert Security Management	Promoter	Building Manager
Outdoor area outside the ICE venue (outdoor ring outside ICE)	No	Yes
Area before the queue (outdoor ring inside ICE)	No	Yes
The initial check-in queue area for ticket holders	Yes	No
Baggage and body check queue area	Yes	No
Ticket inspection queue area	Yes	No
Holding area	Yes	Yes
Concert category lane area	Yes	No
Concert area	Yes	No
Backstage artist area	Yes	No
Loading area	Yes	Yes
Basement area	No	Yes

### 1.3. Risk Management

Risk management in event planning is very important, as it helps identify potential risks that may arise during the event and affect both participants and the event itself. The application of risk management is believed to reduce the risk of failure in organizing an event. Based on the summary of the results of interviews with promoters, building managers, and audiences, it can be concluded that the risk of holding a concert at ICE BSD City is relatively high, because of the 8 (eight) risks identified, 4 (four) of them have occurred during the concert, as shown in Table 3.

Table 3. Potential Risks

Potential Risks	Result
Fire	Never
Earthquake	Never
Artist cancellation	Has happened (promoter)
Terrorism	Never
Bomb threat	Has happened (can be overcome with coordination between the Indonesian National Armed Forces and the police)
Audience disorder	Has happened (due to phenomenal artists)
Food poisoning	Never
Outside demonstration	Has happened (can be overcome with coordination between the Indonesian National Armed Forces and the police)

### 1.4. Layout

Layout is a plan that involves decisions regarding the arrangement and layout of an economic activity center required by each facility that has various processes (Krajewski et al., 2015). The layout of a concert is one of the factors that contribute to the event's success. In organizing a concert event, layout is very important because it affects the flow of visitors from the beginning to the end of the event, the facilities for event information, and the safety and comfort of concertgoers. Based on a summary of interviews with promoters, venue managers, and audience members, the concert layout at ICE BSD City was well managed. This is reflected in Table 4, among other things.

Table 4. Layout

Layout Item	Information
Entrance Gate	Good, you can see when dating
Queue flow	Neat, the path is visible when dating
Holding area (merchandise, activation, etc)	Spacious and adequate for waiting
Food beverage area	Spacious and many food and beverage booths
Concert Area (festival/grandstand)	Good, the view is still not far from the stage
Backstage area	Good, not visible to the audience

### 1.5. Venue Capacity

Venue capacity is a building's ability to host an event. Building capacity can be measured in various units of people, depending on the existing layout. With building capacity, promoters can also determine the target to be achieved from a concert. The results of interviews with promoters, building managers, and audience members provided an appropriate (more or less accurate) analysis of the capacity of the ICE BSD City building. The data are shown in [Table 5](#).

Table 5. Venue Capacity

Exhibition Hall	Promoter	Building Manager
Per 1 exhibition hall	Capacity of 5,000–6,000 (depending on stage size) per hall	Festival capacity: 8,800 per hall Seating capacity: 5,280 per hall

### 1.6. Barricade Establishment

A barricade is an object or structure that forms a barrier or obstacle to control, block the way, or force traffic in a desired direction. The concert barricade itself is a transverse fence made of iron that separates the audience from the artist's stage or from concert equipment. Barricades are used to manage the crowds that surge during concerts. The various types of barricades commonly used at concerts are: a) Stage Barriers; b) Gubeng Barricades; c) Mojo Barriers; d) Rowing Barricades. Based on summaries of interviews with promoters, venue managers, and audience members, it was found that the most commonly used type of barrier at concerts at ICE BSD City is a proper, safe barrier. The types of barriers are shown in [Table 6](#).

Table 6. Types of Barricades

Types of Barricades	Description
Stage Barricade	Prepared by the promoter to divide the stage area from the audience
Mojo Barrier	Prepared by the promoter to divide audience categories within the concert area
Gubeng Barricade	Prepared by the promoter to cover the artist and backstage areas, as well as other restricted areas
Rowing Barricade	Prepared by the promoter for the queue line to enter the check-in area and before entering the concert area

### 1.7. Emergency Procedures

Emergency procedures are guidelines for handling emergencies to prevent or reduce further or greater losses. In organizing events, emergency procedures must be in place for both the venue and the promoter ([Cepu, 2007](#)). Based on interviews with promoters, building managers, and audience members, the analysis of emergency prevention measures for organizing concerts at ICE BSD City is considered good ([Table 7](#)).



Table 7. Emergency Checklist

Emergency Check	Status
Safety Video	Available, used in two languages
Fire Hydrant System	Available (existing from the venue)
Fire Truck	Available (prepared by the promoter)
Fire Sprinkler System	Available (existing from the venue)
Alarm	Available (existing from the venue)
Lightweight Fire Extinguisher	Available (existing from the venue and additional from the promoter)
Evacuation Route	Available
Assembly point	Available
Medic Room	Available (existing from the venue and additional from the promoter)
Ambulance	Available
Nearest Hospital	Available

### 1.8. Holding area

The holding area is a waiting area for concertgoers prepared by the promoter before entering the concert area. The holding area usually features several activities, such as photo booths, activation areas, and queuing lanes to the concert area, depending on the category. The holding area is prepared so that concertgoers can enter the concert area in an orderly manner. Based on the summary of interviews with promoters, venue managers, and attendees, the analysis of the concert venue's waiting area at ICE BSD City can be considered satisfactory. The data are shown in [Table 8](#).

Table 8. Holding Area

Waiting area	Information
Adequate capacity	Yes, according to the audience capacity
Air conditioning	Yes, the air conditioning works well
Food beverage area	Yes, and the area is very spacious
Activation area	Yes, and prepared by the promoter
Photo Booth	Yes, and prepared by the promoter
Restroom	Yes, and also added by the promoter
Prayer room	Yes
Merchandise area	Yes
Category queue lines	Yes

### 1.9. Building Facilities

Building facilities are the facilities and infrastructure owned by the building that can be used by everyone who uses the building ([Rakuasa & Somae, 2022](#)). Building facilities for a concert event is an important component, as everyone attending the concert will use them. It is imperative that a building have public facilities, such as toilets, prayer rooms, air conditioning, medical rooms, and others. Based on the summary of interviews with the promoter, building manager, and audience, the analysis of the ICE BSD City building facilities is reasonable. The data are shown in [Table 9](#).

Table 9. Facilities

Facilities	Information
Rigging Point 2 ton/ 9m	Available in every hall
Floorload capacity 2 ton /sqm	Available in every hall
Parking capacity	Available and very spacious (outdoor and basement)
Holding area	Available and very spacious

Facilities	Information
Food beverage area	Available and very spacious
Toilets	Available and somewhat lacking (promoters will add portable toilets)
Prayer room	Available
AC	Available and cold
Lift	Available
Medical room	Available and promoters will add more
Secretariat room	Available
Loading Dock	Available

Interviews with concert promoters, building managers, and audience members indicate that crowd management at ICE BSD City is generally effective. This is in line with event management theory, where the stages of event management consist of planning, organizing, implementing, and supervising (Asnur & Yuliana, 2020).

The planning stage for promoters includes in-depth analysis of crowd behavior, layout design, security management, and barricades. The organization, implementation, and monitoring stages include applying the venue's maximum capacity, implementing emergency procedures, maximizing the use of venue facilities, and using holding areas in synergy with the venue. Based on the interviews conducted, all items in the above stages were well executed by ICE BSD City, indicating that crowd management functioned well. The preparations made by the promoter and the venue complemented each other, enabling the concert to run smoothly.

In line with the stages of planning, organizing, implementing, and supervising the event, this supports the theory of crowd management, namely that it is a security practice in which a large group of people, or a crowd, is managed to reduce and prevent incidents of violence and conflict. This involves managing the behavior of others, especially those who are disorderly, to prevent them from causing violence at significant events. In this case, security practices are the main priority in crowd management. The indicators studied are items used to support the security process at a concert. Based on the above results, the security practices and crowd management at the concert at ICE BSD City were good, safe, and comfortable. This is because most of the security indicators studied performed well during the concert at ICE BSD City.

#### IV. Conclusion

This study shows that crowd management at concerts held at the Indonesia Convention Exhibition (ICE) BSD City has been generally well carried out. This is evident from the implementation of nine key indicators: audience behavior, security management, risk management, layout, venue capacity, barricade placement, emergency procedures, holding areas, and building facilities, most of which received positive assessments from promoters, building managers, and audience members. The synergy between promoters and ICE BSD management has proven to be a key factor in maintaining security, comfort, and the smooth running of international concerts.

However, this study also identified potential risks that still need to be anticipated, including audience chaos, artist cancellations, and external security issues such as demonstrations and bomb threats. This emphasizes the need for comprehensive risk mitigation strategies and for raising awareness among all parties concerned about international standards for crowd management.

The limitation of this study is its relatively small sample size, comprising only two promoters, one venue manager, and several audience members, which limits generalizability to all concert venues in Indonesia. Therefore, further research is recommended to expand the scope of respondents, add new variables, such as crowd management support technology, and compare with other venues to produce a more comprehensive picture.

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## Declaration

The authors declare that this manuscript is original, has not been published previously, and is not under consideration for publication elsewhere. All authors have approved the final version of this manuscript and agree with its submission to the intended journal.

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