

Detection

Evaluation

Decision

WIND

Execution

Logging

Review/restart

1. DETECTION – “Is wind becoming relevant?”

Input sources

- Forecast products (regional + site-specific)
- Nowcasting tools (radar extrapolation, short-term gust forecasts)
- On-site measurements:
 - Anemometers (mean wind + gusts)
 - Structural sensors (if available)
- Field reports:
 - Moving structures, flapping membranes, dust, debris
 - Staff perception and crowd feedback

Trigger logic

- Forecasted gusts \geq *Trigger Level 1* within defined lead time
- Measured gusts \geq *Trigger Level 1* on site
- Rapid trend increase (e.g. +10–15 km/h within 10–15 min)

Output

→ Escalation to Evaluation

2. EVALUATION – “What does this mean for THIS event?”

Contextual assessment

Event phase:

Build-up / Live operation / Egress / Dismantling

Site exposure:

Open fields, hilltops, urban canyon effects

Temporary structures:

Stages, roofs, PA towers, video walls
Tents, marquees, inflatables, decorations

Crowd situation:

Density, mobility, shelter options

Risk differentiation

- Sustained wind vs. gusts
- Directionality (crosswind vs. headwind)
- Combined effects:
 - Wind + rain (slippery surfaces)
 - Wind + dust / loose materials

Output

→ Categorised risk profile per area and structure

3. DECISION – “What level of intervention is required?”

Decision levels (example logic – site-specific values required)

- Level A – Awareness / Preparation
 - Gusts approaching thresholds
 - Actions: tighten monitoring, pre-brief teams
- Level B – Restriction
 - Gusts exceed safe limits for certain structures
 - Actions: close or restrict defined areas
- Level C – Pause
 - Structural safety margins reached
 - Actions: pause performances, stop build-up or dismantling
- Level D – Stop / Evacuation
 - Structural integrity or crowd safety no longer ensured
 - Actions: stop event, initiate sheltering or evacuation

Decision authority

- Named responsible role (not “we monitor the weather”)
- Clear backup / substitution rule

Output

→ Formal decision with timestamp



4. COMMUNICATION – “Who needs to know what – now?”

Internal communication
Control room → operations, security, stage management
Clear, action-oriented language:
What / Where / From when / Until further notice

External communication
Artists / production teams
Public messaging:
Screens, PA, app, social media
Calm, instructive, consistent wording

Principles
One message – one decision
No interpretation required at receiver level
Output
→ Confirmed receipt by key stakeholders

5. EXECUTION – “Make the decision real”

Typical operational actions
Secure or lower structures
Shut down stages or technical systems
Establish restricted or exclusion zones
Redirect crowd flows
Suspend build-up or dismantling activities
Activate sheltering concepts if required
Monitoring during execution
Continuous wind observation
Feedback from field teams
Structural behaviour checks
Output
→ Decision implemented and stabilised

6. LOGGING – “Can we reconstruct this later?”

Minimum documentation
Time of detection and trigger exceedance
Data sources used (forecast + measurements)
Evaluation summary
Decision taken and by whom
Communication measures
Executed actions
Purpose
Legal defensibility
Organisational learning
Transparency for authorities and insurers
Output
→ Complete operational log entry

Detection

Evaluation

Decision

WIND

Execution

Logging

Review/restart

7. REVIEW – “What happens next?”

Short-term review

Are conditions improving or deteriorating?

Is escalation or de-escalation required?

Adjust measures dynamically

All-clear logic

Defined gust thresholds must remain below limits for a defined time

Technical re-inspection if relevant

Post-event review

Threshold adequacy

Timing and clarity of decisions

Communication effectiveness

Update wind action matrix if required

Output

→ Improved preparedness for future events