

# Weather Services at Sport Events

/ BEAT THE ELEMENTS WITH KNOWLEDGE



**VAISALA**



# The Tension is in the Air



*The stakes are high. Tens of thousands of spectators have gathered on site ready to share the excitement. Millions more follow the media at home and at work around the world. Everything is ready after years of preparation with huge investments in facilities, support and marketing by the organizers. Authorities are in place to ensure safety and security. Athletes and teams with lifetimes of dedicated training are warming up. The eyes of the world are focused.*

## Then the Elements Decide Differently

Rain, wind, thunderstorm, snow, ice, fog, extreme temperatures. Risking accidents and injury, general safety, travel, logistics, schedules, comfort and enjoyment. Endangering revenues, reputations, event prestige, sponsorships and advertising deals. And for many, the future.

At Vaisala, our job is to level the playing field in your favor when it comes to weather. As the leading global provider of weather measurement solutions we help you beat the elements with knowledge.

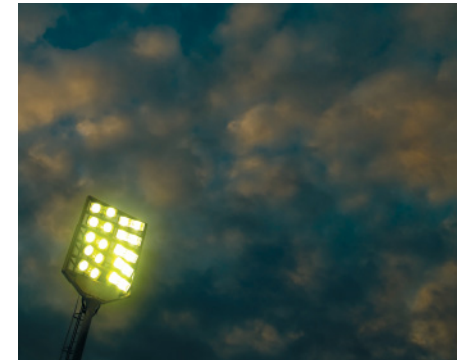
# Be Prepared

## Every Outdoor Event is Weather-critical

The Olympics, the Superbowl, the Champions League, Masters Golf, Formula 1 or Indianapolis. Basically, the success of every event from mega-sized down to a local junior league tournament depends on the weather. Disappointments may differ in scale and value, but not in intensity.

## Forecasts for Success

Weather cannot be avoided, but it can be adapted to. Weather services with accurate forecasts play a major role in ensuring smooth and successful sports events, providing high value for all the stakeholders across the board. It's about the right timing and being prepared – there is a big difference between disruption and timely schedule changes.



## Knowledge for the Right Choices

Weather information is crucial for the athletes, teams and organizers. From avoiding potential heat stress or cold injury to gear choice, equipment settings and performance strategy. From track-and-field javelin to ski-jump turbulence timing to sailing wind tactics to Formula 1 tyre selection to effective safety precautions – the list covers everything.

Sometimes success doesn't even need much and is ensured by bringing along an umbrella and an extra pullover. But you need the information.

Organizers and authorities increasingly recognize the strategic need for weather information. They demand more accurate local forecasts as well as richer real-time information of the prevailing conditions around the venues. The key-element in creating accurate weather forecasts is real-time weather observations. Knowing the prevailing conditions of temperature, wind, precipitation, humidity, atmospheric pressure etc. is an absolute must in order to produce weather forecasts. Without this information it is not possible to provide needed weather services to the users.



# Map Out Your Weather Strategy



- 1** Automatic weather station for measuring local weather conditions (e.g. wind) and to support local weather forecasting.
- 2** Automatic sounding station for measuring atmospheric data for weather forecasting models.
- 3** Weather radar for measuring and forecasting precipitation and for forecasting movement of storm cells to provide early warnings.
- 4** Airport weather observation systems to support aviation.
- 5** Wind profiler to provide wind data from higher atmosphere to support aviation and also to support carrying out the events.
- 6** Lightning detection sensors to provide information about intensity and location of lightning strikes.
- 7** Road weather sensor to provide information about road weather conditions.
- 8** Traveler information system for alerting motorists to dangerous road conditions ahead.





# Let's Work Together



### Strategic Business

Event related weather demands put more pressure on local weather organizations, but they also open new opportunities for growing and critically valuable service businesses.

What is needed is capability – establishing multifaceted high-resolution observation networks collecting weather data to study local weather conditions, usually 2 to 3 years before the event.

This enables creation of forecast models with acceptable accuracy and also helps to choose the best locations and configure them optimally.

### Vaisala Solutions and Information

Vaisala works closely together with basically every weather organization in the world. Providing measurement equipment and full solutions for forecasting, now-casting and real-time information for over 120 countries from pole to pole. Weather radar, radio sounding, wind, lightning, moisture, visibility and surface measurement systems as well as information systems with workstations and displays.

Based on over 70 years of experience, we offer knowledge: everything from world-leading sensors to integrated

solutions to real-time data as a service – depending what is the best solution for your strategy.

# Event Weather Impact

### Extreme temperature

Extreme heat may cause serious problems with certain sport events. Heat stress generated by high temperature can be dangerous for athletes and it should be prevented. Preliminary information about heat conditions is essential for competitors and teams when preparing for events with long-running exertion.

### Strong winds

Strong winds are especially problematic at sailing competitions. In the worst case events must be postponed in order to assure the safety of the competitors. Real-time wind measurements around the sailing venue are an absolute must to ensure that the competition can be carried out successfully and safely.

### Heavy rain

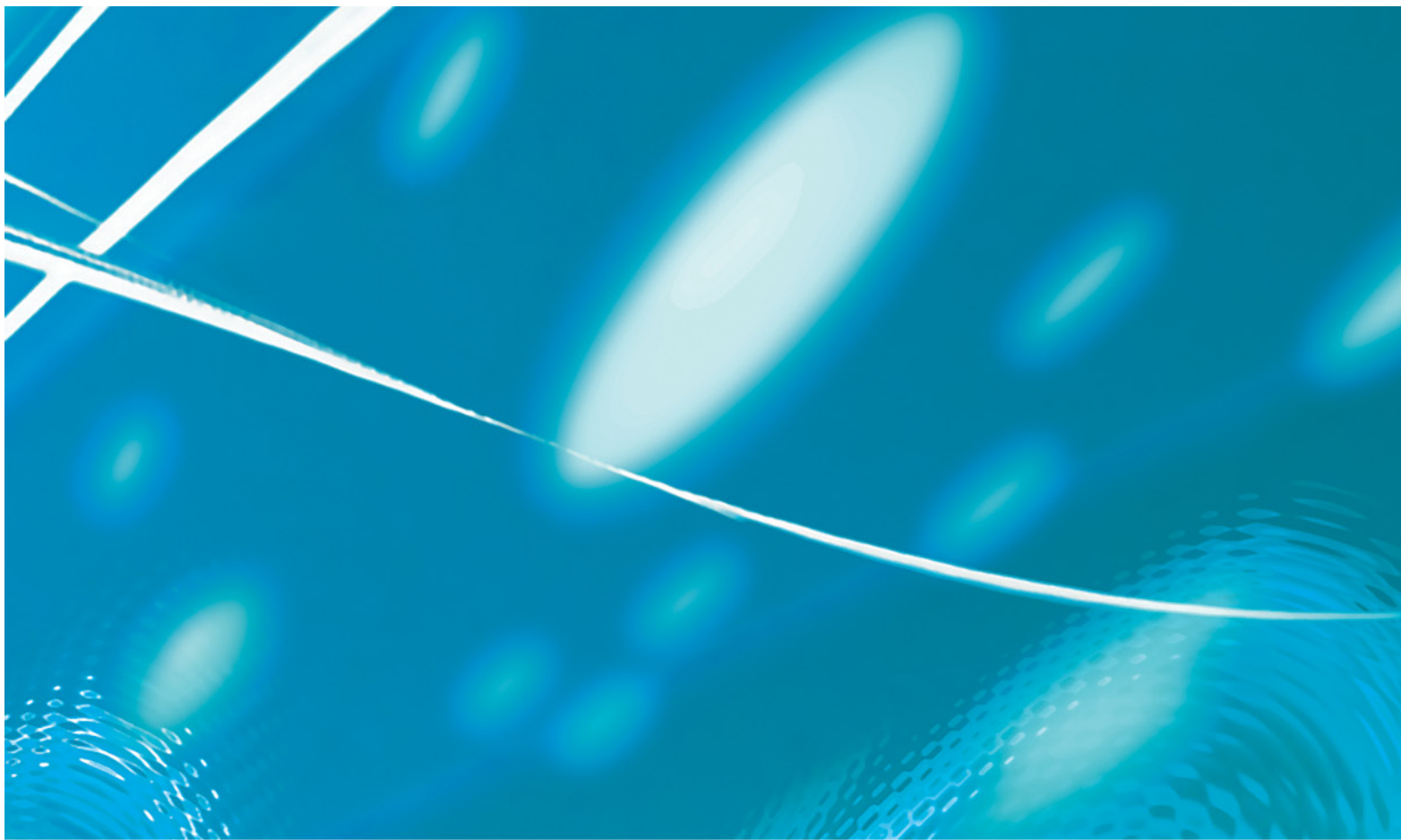
Intensive rain is a problem not only to athletes, but also to spectators. Athletes must be aware of predicted rain conditions in order to choose the optimal gear for the event. Equally, spectators require information about possible rain periods so that they can prepare themselves.

### Thunderstorms

Thunderstorms pose a major risk not only for events, but also to local transportation and logistics. Lightning and associated strong winds are extremely dangerous and must be well predicted beforehand. This is especially important with operations requiring aviation and during open field competitions. Also, equipment failure and disruptions in broadcasting are possible.







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