UBIMET

HIGH RESOLUTION

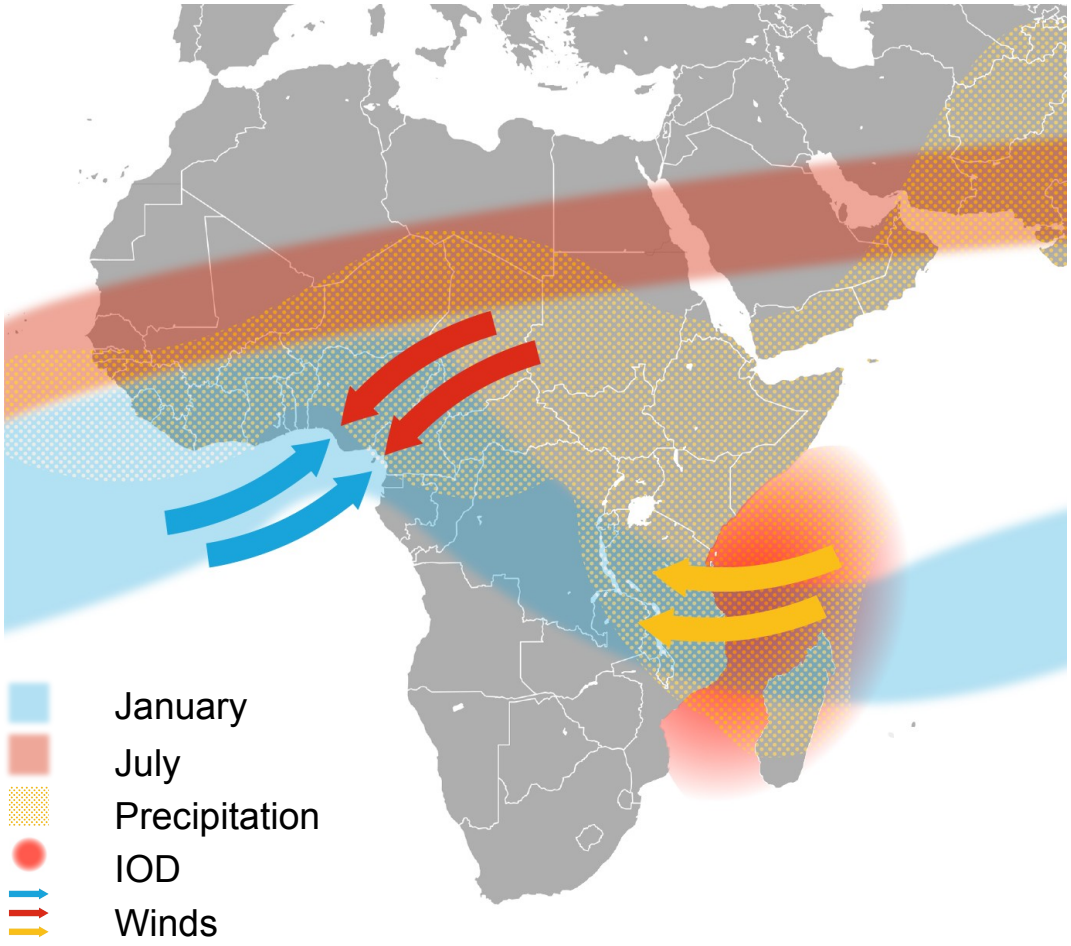
WEATHER DATA AND SERVICES

UBIMET
WEATHER MATTERS

Weather matters

WEATHER INFLUENCES ALL ASPECTS OF EVERYDAY LIFE

- **Weather Patterns**
  - Droughts, sand/dust storms
  - Heavy rainfalls, flash flooding
- **Caused by**
  - Monsoon
  - Harmattan
  - Tropical Cyclones
  - Intertropical Convergence (ITCZ)
- **Affected by**
  - El Niño / La Niña
  - Indian Ocean Dipole (IOD)



Who we are

WE STAND FOR THE HIGHEST PRECISION

FS Private Trust | **RED BULL** | **CS Private Trust**

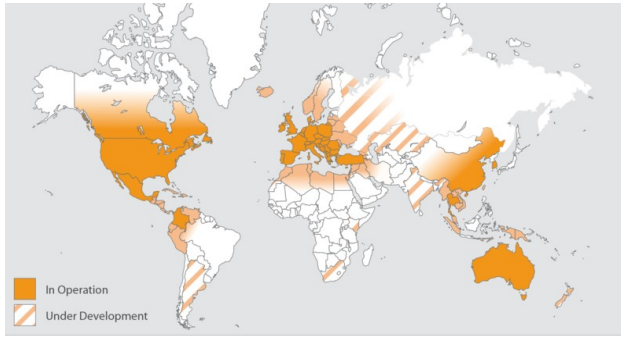
- Established 2004, with focus on high-precision technology
- Led by the founders, global strategic partnership with Red Bull
- ISO 9001 certified weather service provider with headquarters in Vienna and branch offices around the globe (e.g. New York, Melbourne)
- Innovation leader in offering severe weather warnings

BUREAU VERITAS

Base Layer 1: Observation Network

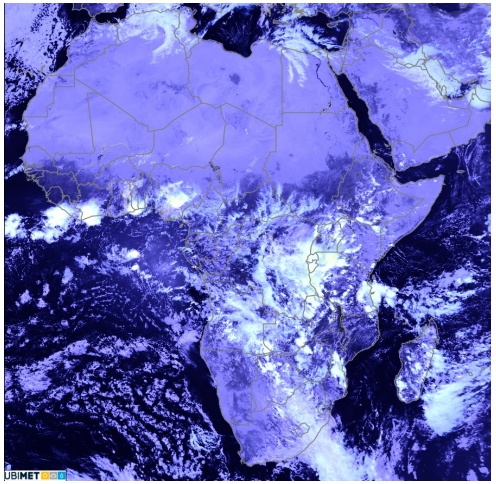
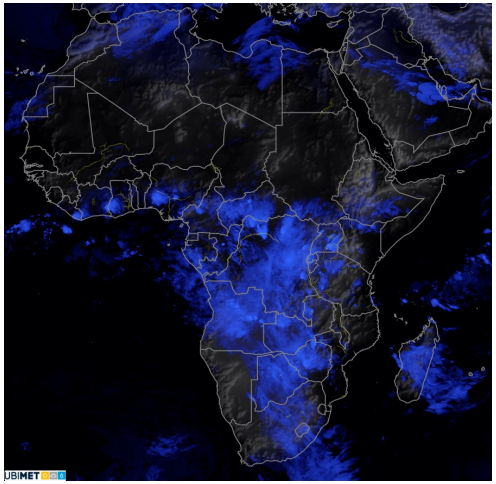
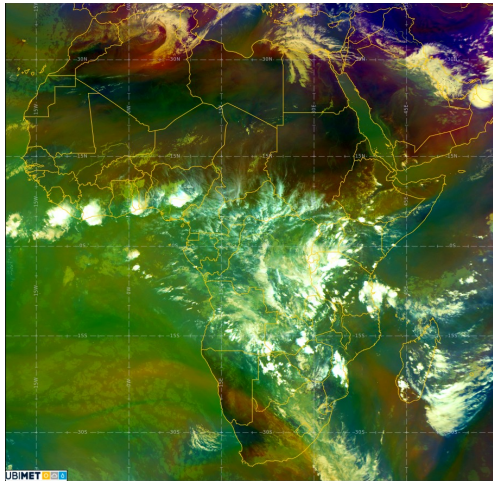
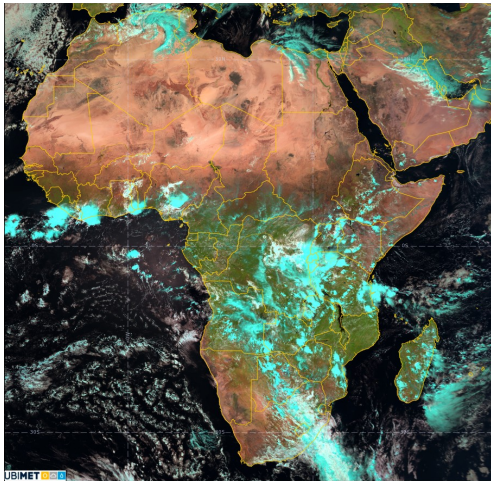
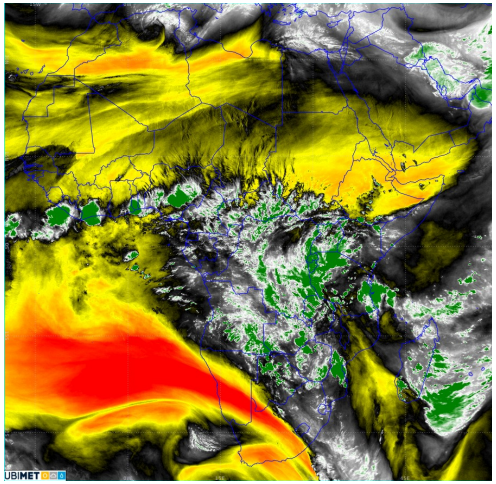
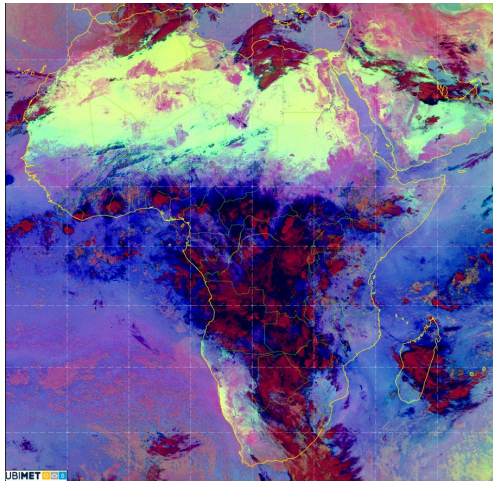
GLOBAL NETWORK OF HIGH PRECISION WEATHER INFRASTRUCTURE

- **Own Lightning Detection System**
  - Patented 3D position heading
  - Currently completing Nepal roll-out
- **Satellite Network**
  - Access to all major available satellite services
  - Analysis of different channels to derive parameters
- **Weather Stations**
  - Dense network of meteorological sensors
  - Precise wind, precipitation and temperature forecasts
- **Weather Radar Systems**
  - High resolution and street-level rainfall detail views
  - Rapid data updates and precise early warnings



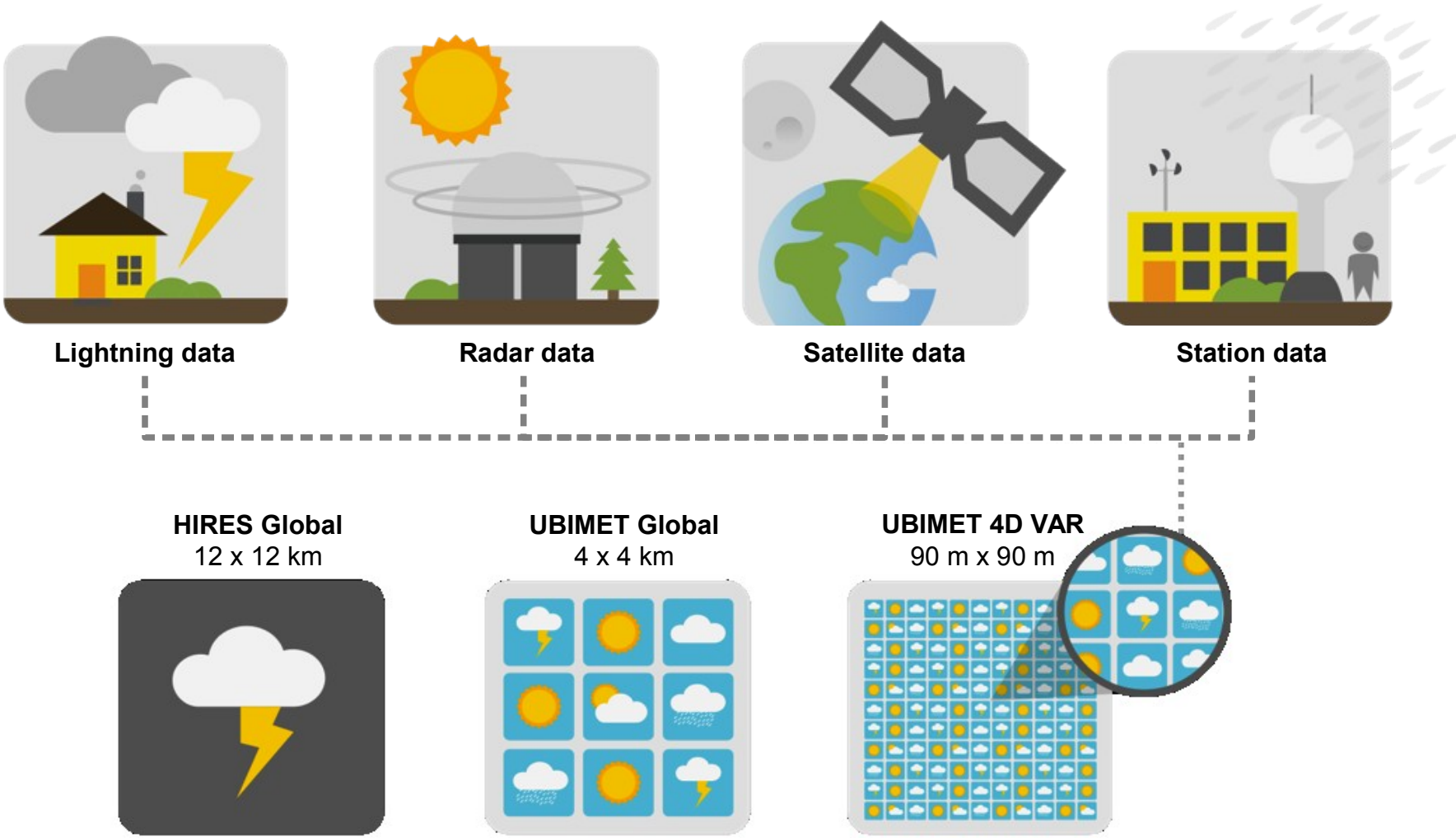
Base Layer 1: Observation Network

DERIVING ADDITIONAL PARAMETERS FROM OBSERVATION DATA

Base Layer 2: Own Weather Model

4D VAR DATA ASSIMILATION



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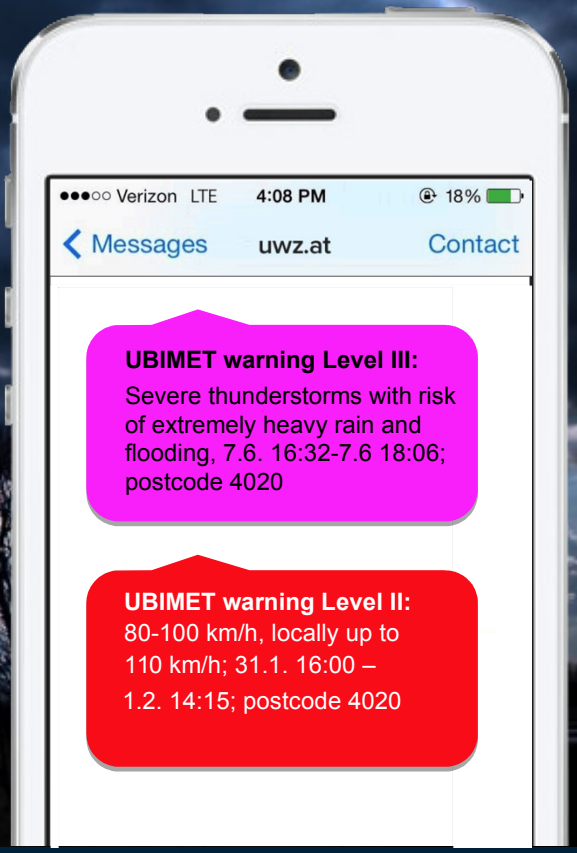
SEVERE WEATHER WARNING



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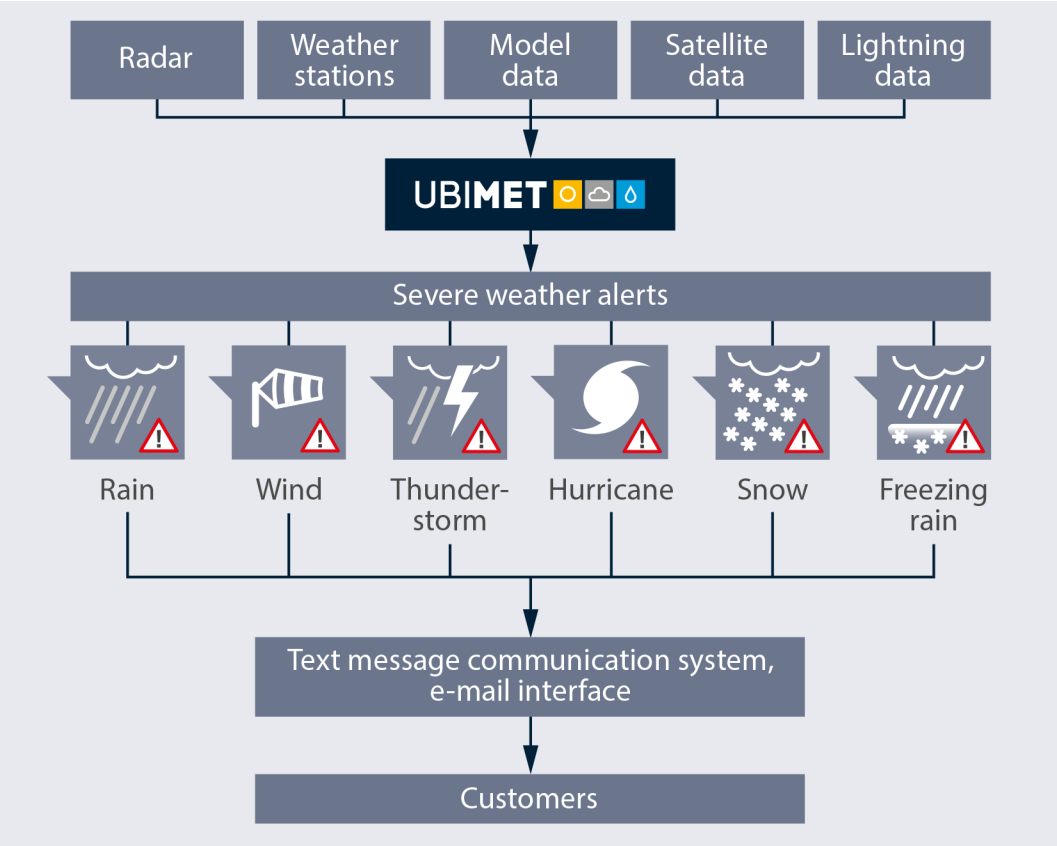
Base Layer 3: Severe Weather Warning

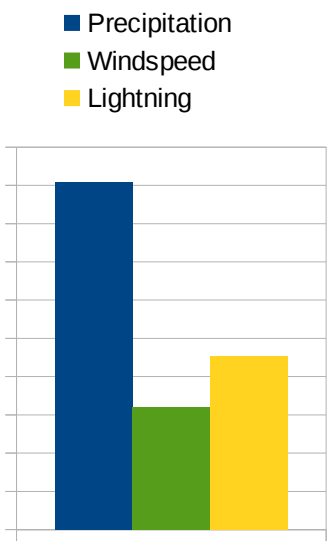
ALERT-SYSTEM



- **Input data**
  - Observations
  - Weather Models
- **Alert Generation**
  - Type of alert
  - Geographic region
  - Timing information
- **Message Transport**
  - Identify customers
  - Media selection
  - Text generation

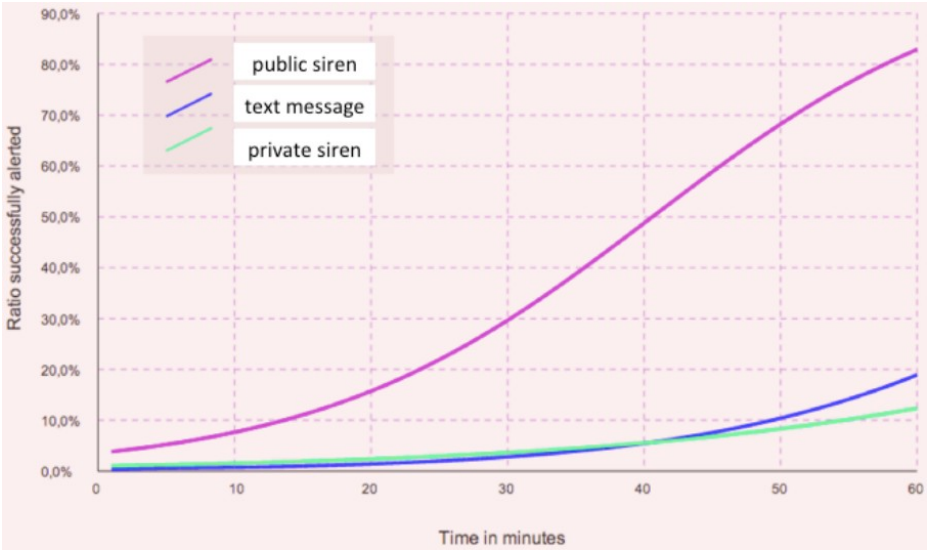
Base Layer 3: Severe Weather Warning

OPTI-ALERT



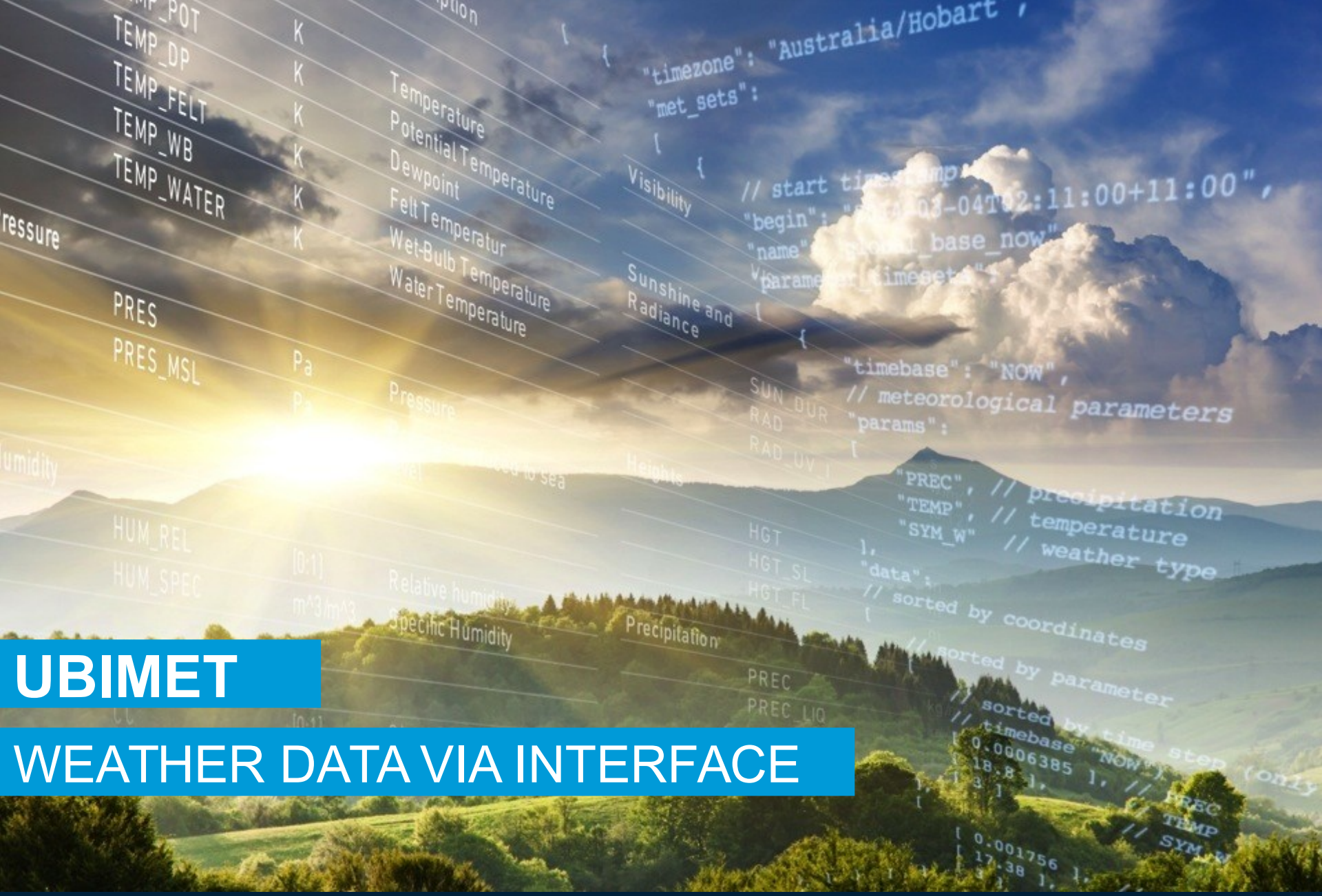
Classification

- Extreme
- Severe
- Moderate



Klafft, M. (2014). Current Issues in Crisis Communication and Alerting, 85. https://www.researchgate.net/publication/263350476_Current_Issues_in_Crisis_Communication_and_Alerting

- **The choice of the alerting tool should correlate with the age of the recipients.**
- **The alert message should correlate with the area of residence.**
- **The choice of the alert sender should correlate with the respective „national trust context.“**



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WEATHER DATA VIA INTERFACE

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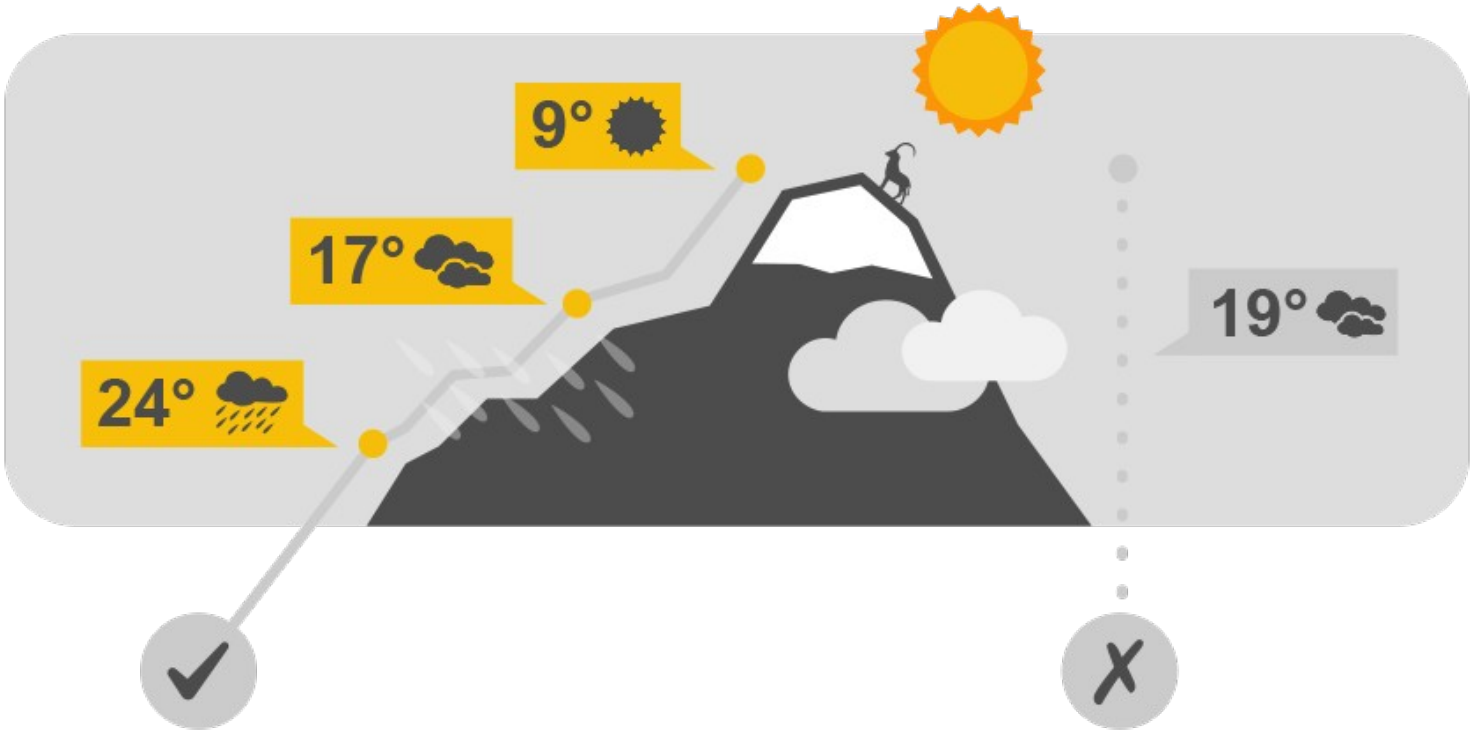
UBIMET Connect: DEMO

OUR POINT OF DIFFERENCE



PRECISE PINPOINT FORECASTS.
IN REAL-TIME. ON DEMAND.

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WEATHER COCKPIT

Live Weather
- Rain radar & lightning detection
- Animated Forecasts

Individualized Alerts
- By SMS
- When limits are exceeded

CSV Export
- Export forecast values as csv file
- Save settings for future exports

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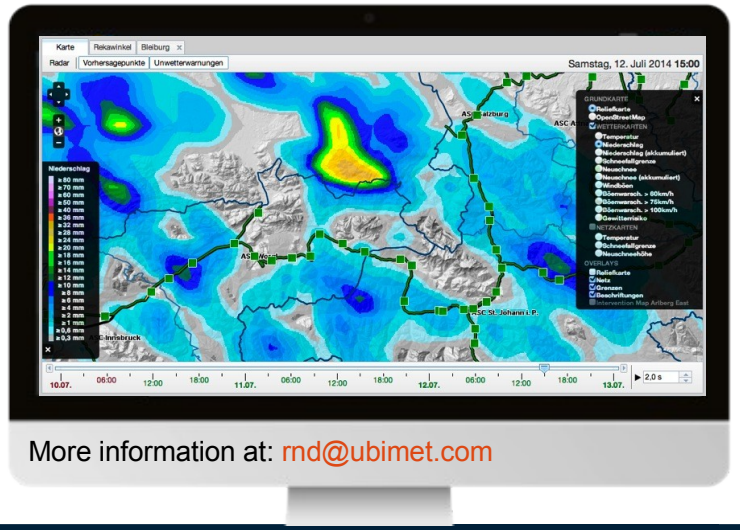
MobComWeather

INNOVATIVE NEW DATASOURCES FOR METEOROLOGY

Utilizing signal quality data of cellular radio networks for precise precipitation nowcasts.

- **Input data**
  - Signal quality of radio links
  - Transmission loss
  - Packet loss between base stations and mobile radios
- **Methods used**
  - Intelligent pattern analysis
  - Classification algorithms
- **Outputs used as**
  - Input to weather nowcasting models
  - Improving its regional and temporal precision
  - Regions with limited or without any rain radar



More information at: rnd@ubimet.com

UBIMET WEATHER MATTERS

Weather should be no coincidence

BETTER INFORMATION = BETTER DECISIONS

+ EXPERTISE

- Professional experience in various sectors
- Exceptional data quality in real time
- **International team of meteorologists, physicists, mathematicians, biologists, geoscientists, IT experts**
- One-stop-shop for our customers

+ GLOBAL & LOCAL

- **Tailored and locally adapted customer solutions**
- Stable shareholder structure: two private trusts and Red Bull
- Worldwide access to weather station data

+ INNOVATION

- Market leader in severe weather warnings
- **Development of cutting-edge technologies**
- On-going development of future-focussed services
- Customer solutions for increased efficiency and cost reduction

+ QUALITY MANAGEMENT

- **In house R&D department**
- Continual enhancement of weather models, products and forecasting techniques
- Extensive cooperation with the Fraunhofer Institute
- ISO 9001 certification

BUREAU VERITAS

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