ARIA TECHNOLOGIES

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A single concern: modelling our atmospheric environment

Air quality: software, systems and applications

Industry

Emission inventories • Stack design • Effect of thermal Plumes on the plant • Impact studies • Mapping of ground concentrations and depositions • Evaluation of human health impact • Evaluation of odours • Propagation of biological agents (legionella) • Effects of meteorology on plant operation • On-line supervision and forecast systems.

–> BSC, BUREAU VERITAS, ITALCEMENTI, SUEZ, TOTAL, RENAULT

Urban and regional

Highly structured dynamic emission inventories • Mapping of emissions from industry, traffic and natural sources • 3D meteorological modelling and forecast • Simulation of the chemical reactions in the atmosphere • Mapping of concentrations • Evaluation of health risks • Evaluation of emission reduction scenarios • Forecasting air quality at urban or regional scale • Design of integrated simulation and forecast systems for cities.

–> AIR AURA, INEA (BRAZIL), EU, RENAULT, CITY OF PARIS

Risk

Risk assessment • Toxic releases : maps of effects • Fire plumes • Propagation of radioactive releases • CBRN risk management • Source term estimation by inverse modelling • 3D simulations with building effects in urban environments • Real-time emergency response systems.

–> APSYS, CNES, CEA, DGA, INERIS, US-DoD

Climate

Greenhouse gases (GHG) inventories • Emission estimates through inverse modelling • Climate services • Forecast of extreme events: heatwaves, cold snaps, heavy rains, hurricanes • Climate downscaling • Forest fires • Climate vulnerability • Combined effects of climate on air quality: urban heat islands (UHI), etc. • GHG measuring, reporting and verification (MRV).

–> ANR, CLIMATE-KIC, GDF-SUEZ, VEOLIA, TOTAL

Renewable energy

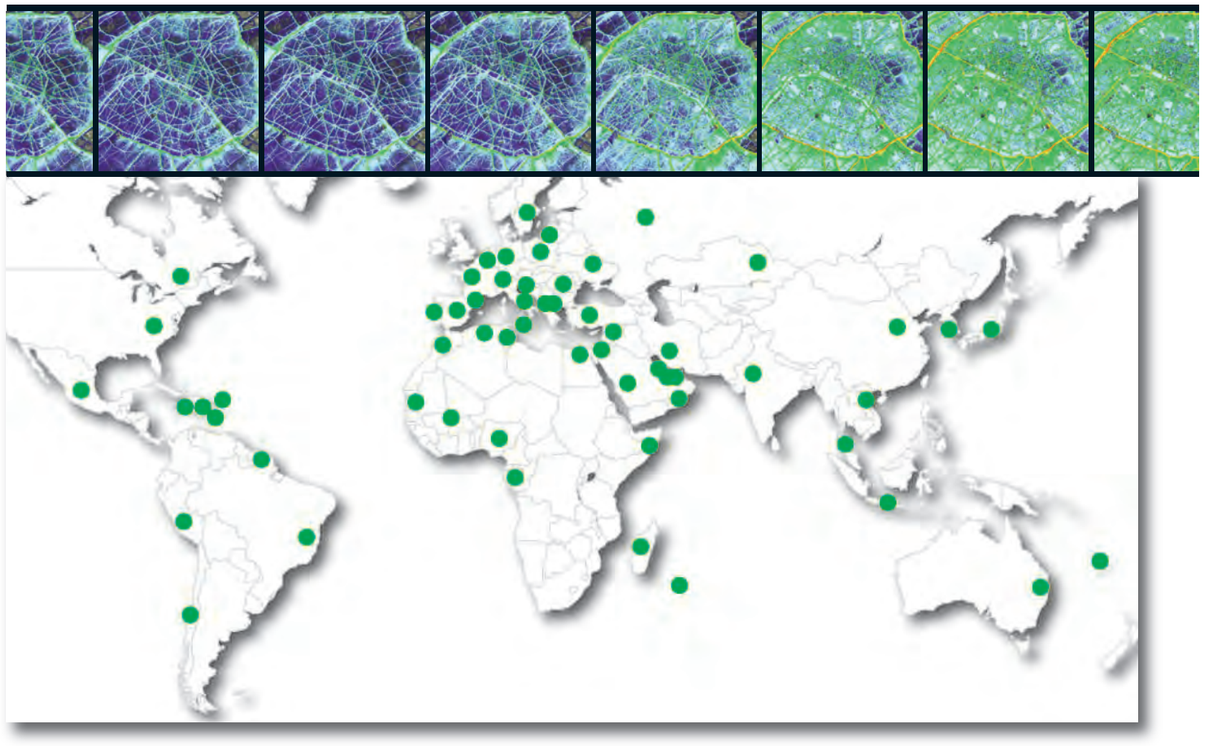
Wind atlases • Micro-siting • Lidar measurement • Windfield forecast for wind farms • Forecast of sun exposure potential.

–> EDF, JANUS (JAPAN), NEXTERA, UNIVERSITY OF MONCTON (CANADA), LEOSPHERE

Founded by a group of researchers from the French electricity board EDF, ARIA Technologies has played a pioneering role in the global development of atmospheric modelling. The original group has grown into a team of engineers drawn from various fields of atmospheric sciences, who have placed this knowledge-based SME at the cutting edge.

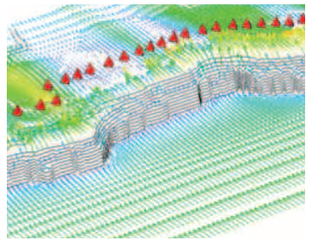
ARIA Technologies collaborates with key French and European organizations involved in monitoring air quality — regional air quality management bodies, CEA (atomic energy), CNRS (national research institute), INERIS (environmental safety), METEO-FRANCE (weather) KIC-Climate, ENEA — and with a large number of well-known international partners.

A reference in France and worldwide



ARIA Wind

System for calculating and optimising wind potential

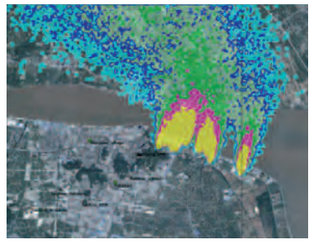


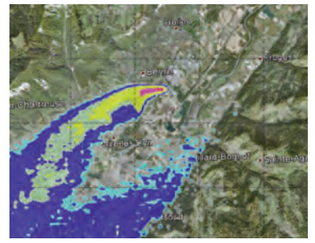
ARIA Impact

Software for studies on the impact of industries and vehicular traffic on air quality

ARIA View

Air quality surveillance system for industrial sites



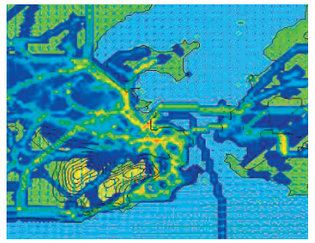


ARIA Impact 3D

3D software for studies on the impact of industries and vehicular traffic on air quality

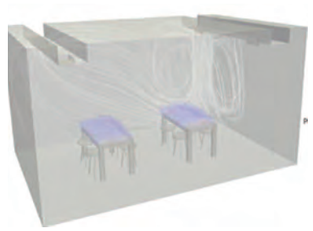
ARIA Regional

System to analyse and forecast air quality at urban and regional levels



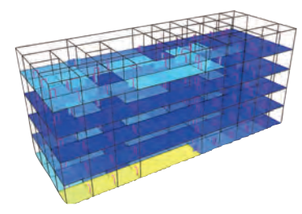
ARIA City

GIS-embedded software for modelling air quality in cities



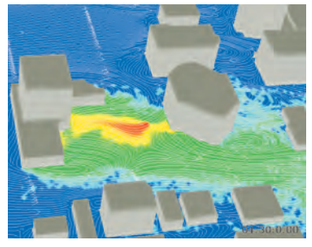
ARIA Local

Software for calculating air flow and dispersion at micro scale



ARIA Indoor

Software for the assessment of indoor air quality



ARIA Risk

3D software for assessing dispersion of accidental releases