

KARTOTRAK BENEFITS

Optimize your costs

- Adapt sampling programs according to real-time results.
- Anticipate soil volumes management.
- Minimize waste quantity.

Improve your decision-making process

- Increase data value with optimal data quality control.
- Assess the risk of exceeding remediation levels.
- Base your decision on an adequate probabilistic framework.

Benefit from standard regulatory rules

- Implement MARSSIM tools for sample design.

Rely on a double expertise

- Geovariances' expertise based on +25 years experience in geostatistics and software development and on +10 years experience in applying geostatistics for site remediation optimization.
- CEA's acknowledged know-how for radiological characterization and cleaning of radio-contaminated soils.

Strengthen your skills through a global service

- Top-quality services: technical support, training, consulting.

KEY ADVANTAGES

Get started at once

- Intuitive use.
- Easy data visualization.
- Customizable reporting.
- Comprehensive user-guide and technical references.

Share a unique software across the team

- Kartotrak® can be applied:
 - During the scoping or the characterization phase,
 - After the remediation to check the site compliance with cleanup regulations,
 - In post-accidental context to map the contaminated area,
- Kartotrak® can be implemented by a whole team within a company or across contractors:
 - By operators to load data, achieve a simplified data analysis and perform a first mapping,
 - By engineers to clean, analyze and process data,
 - By project managers or decision makers to visualize the global project and take decisions about the contaminated volumes to be remediated.

TECHNICAL FEATURES AND REQUIREMENTS

- High performances thanks to multi-core processing
- Fast software installation taking only a few minutes
- Minimum system requirements: 1 GHz x86 processor, 1 Gb of system memory, graphic cards and monitor capable of 1024x768 pixels
- Supported operating systems: Windows XP / Vista / 7, 32 / 64-bit

Using Kartotrak® for streaming data acquisition and mapping

Kartotrak® can be connected to a GPS and several measuring devices, allowing a real-time monitoring of covered areas for a quick survey.



Kartotrak is embedded in a 4-wheel drive truck (here, CEA VEgAS, vehicle for the radiological evaluation of site)

Thanks to Kartotrak®'s GPS connection, it's also easy to go on site, to measure the contamination concentration on a spot and to store its value in Kartotrak® database.



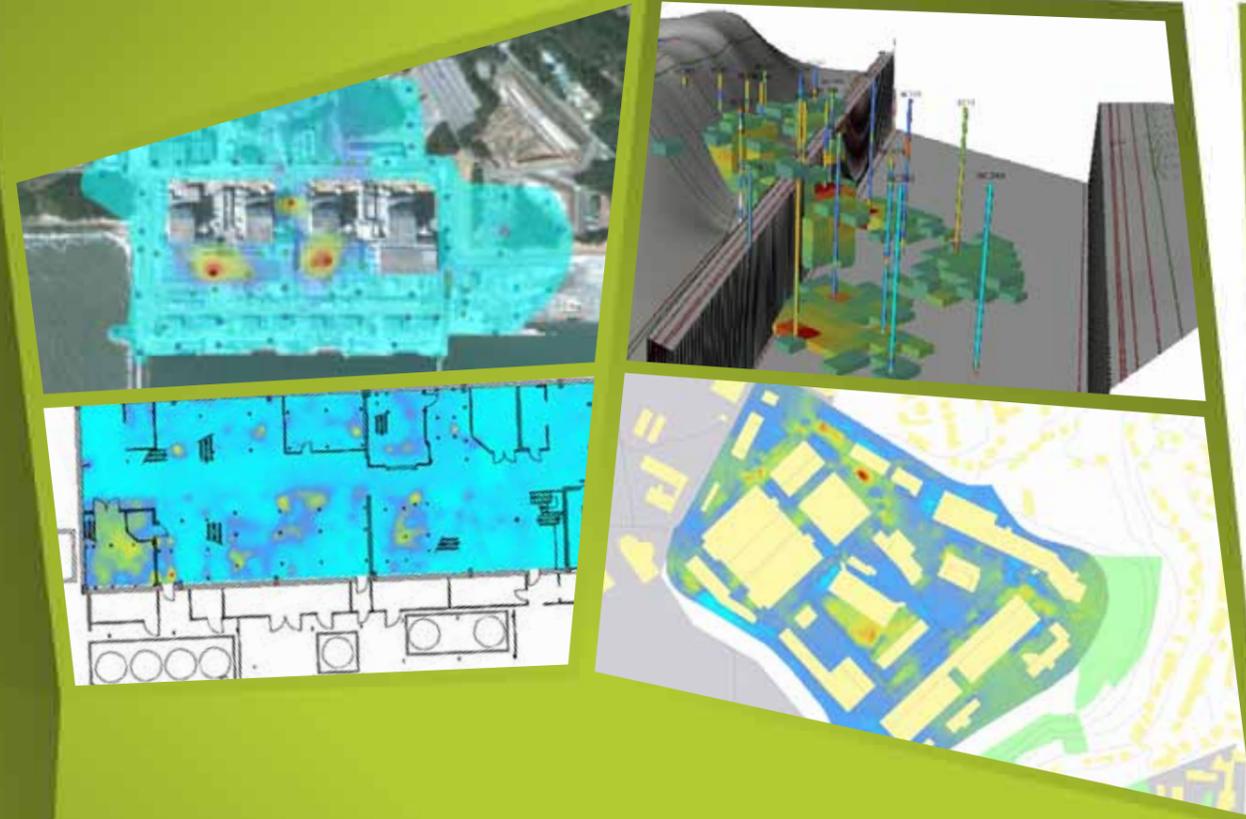
Kartotrak is used to store and locate measurements as they are acquired

Connectivity

Kartotrak® can connect with the following positioning and radiological data delivery systems:

- GPS with NMEA output
- NaI detector by ORTEC
- Germanium detector by CANBERRA
- DSP detector by SAPHYMO

Should your measuring device not appear in the above list, Geovariances offers development services to interface it with Kartotrak®.



MINIMIZING THE IMPORTANCE OF PRELIMINARY SITE CHARACTERIZATION MAY RESULT IN HAZARDS, UNEXPECTED AMENDMENTS AND ADDITIONAL COSTS DURING SITE CLEANUP.

Through Kartotrak® software, you:

- Increase your knowledge and understanding of the contamination
- Make use of all available data to improve decision-making
- Assess and minimize risks more effectively
- Benefit from best available technology and practice workflows



Integrated software solution for contaminated site characterization

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KARTOTRAK SETS NEW STANDARDS FOR THE CHARACTERIZATION OF CONTAMINATED SITES

As a player involved in environmental site characterization projects, you need to locate and estimate contaminated soil volumes confidently. Born out of a 10-year partnership between the French Alternative Energies and Atomic Energy Commission CEA and Geovariances, Kartotrak® is a comprehensive software solution designed for you.

Kartotrak® brings a cost-effective solution for thorough contamination diagnosis facilitating your decision-making process.

KARTOTRAK® PROVIDES AN INTEGRATED WORKFLOW WHICH CAN BE APPLIED FOR IN-SITU CONTAMINATION CHARACTERIZATION BUT ALSO FOR FINAL CONTROL AFTER REMEDIATION:

PREPARATION OF THE SAMPLING CAMPAIGN
Delineation of target areas

ESTIMATION AND MAPPING
Kriging and variance maps

RISK ASSESSMENT
Probability, quantile and confidence interval maps, in-situ volumes to be excavated

PRELIMINARY SAMPLING PLAN
Mesh definition, control of resolution and orientation

DATA ANALYSIS
Delineation of target geological layers, statistical and spatial analysis, variography

VISUALISATION OF RESULTS
Identification of areas requiring further action (under-sampled areas, hot spots, etc)

DATA ACQUISITION
On site real-time data acquisition or file import

DATA VALIDATION
Detection limits, duplicates and outliers management

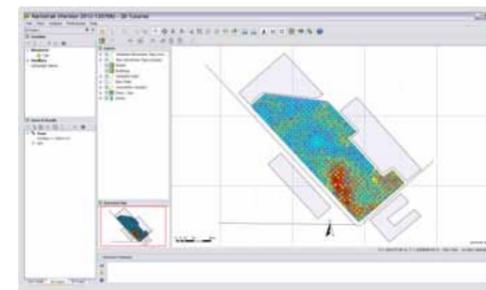
REPORTING
On the fly creation of report



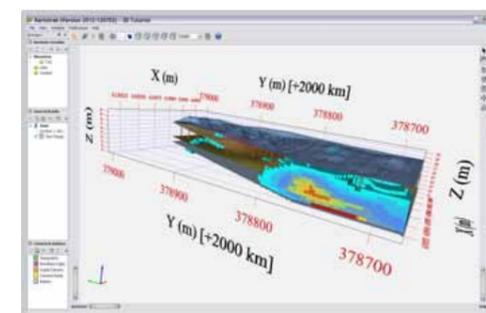
INNOVATIVE SOFTWARE SOLUTION

Kartotrak puts the contamination in its global environmental context

Kartotrak® is a Geographical Information System - based software giving you the power to collect and display appropriate information on the contamination vicinity. Computed maps are added to the view, so you know precisely the contamination extent and where hot spots are located.

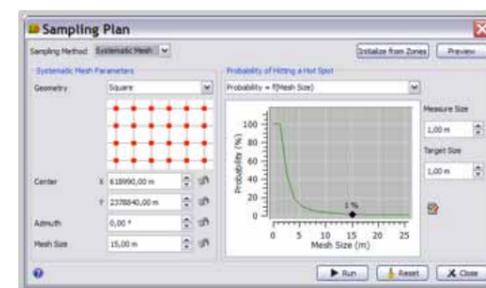


Through its 3D Viewer, Kartotrak® strengthens your understanding of the contamination by displaying a global 3D model of the study area.



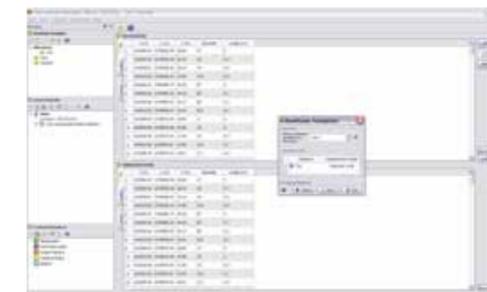
Kartotrak optimizes your survey design

Sampling acquisition and analysis represent a considerable part of the site characterization budget. Kartotrak® gives you the ability to wisely design your sampling survey in order to maximize information while minimizing investigation costs.

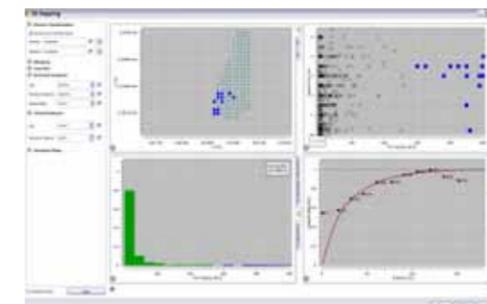


Kartotrak controls data quality before any further process

Kartotrak® provides an integrated database enabling the storage of 2D/3D data. Kartotrak® database organization makes the addition of new samples in an existing project easy and safe. The software lets you carefully check your data and edit values through clear spreadsheets. Your data is fully validated.

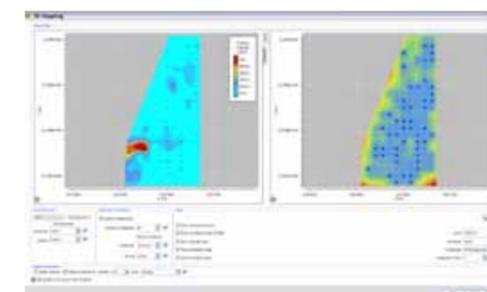


Kartotrak® offers high-value exploratory data analysis tools with interconnected statistical representations. You have the power to interactively check your data, analyze their spatial behavior and assess the correlation with other variables.



Kartotrak provides the probabilistic framework on which to found your decision process

Kartotrak® focuses on an efficient and simplified geostatistical workflow. The software delivers accurate and reliable interpolated maps with information on their reliability. Results also help in identifying areas which are sub-sampled or inside which contamination levels are highly variable.



Kartotrak® provides decision makers with the tools required for efficient risk assessment, helping you categorizing waste and anticipating the management of contaminated soil volumes.