



>>> ABOUT QUANTUM

Quantum is a [global technology partner](#), delivering solutions tailored to solve business challenges.

Our broad expertise with data analytics and high-end software engineering skills allow us to [deliver data-driven software products](#), lessening the development time and budget.

>>> ABOUT SOILMATE

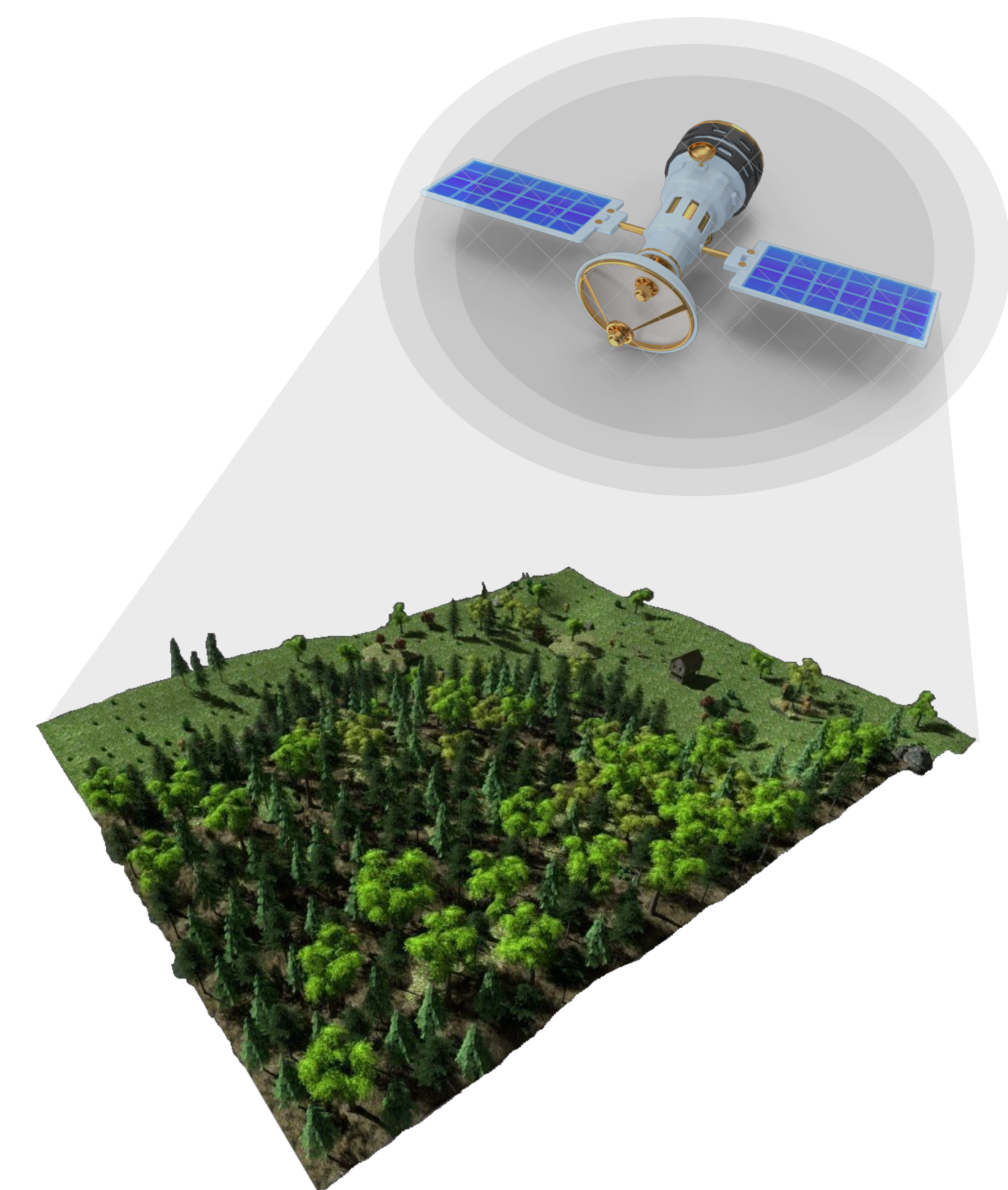
Soilmate.ai is a [geoanalytical platform](#) providing automated analytics on a large scale.

Powered by AI and remote sensing data, SoilMate can process large areas of land, [deriving specific insights and spotting trends with best-in-class quality and scalability](#).

>>> BACKGROUND

Forests play a crucial role in carbon storage and oxygen release on Earth, yet their involvement in the carbon economics cycle is limited. Forest managers face challenges accessing carbon offset funds due to project cycles and measurement methods.

We propose a simple way for forest managers to obtain additional resources for proper forest growth and management by providing carbon certificates for trading.



>>> THE SOLUTION

[Soilmate.ai](#) is a web service that generates carbon certificates through remote nondestructive measurements. These certificates are based on the annual change in tree carbon bonded.

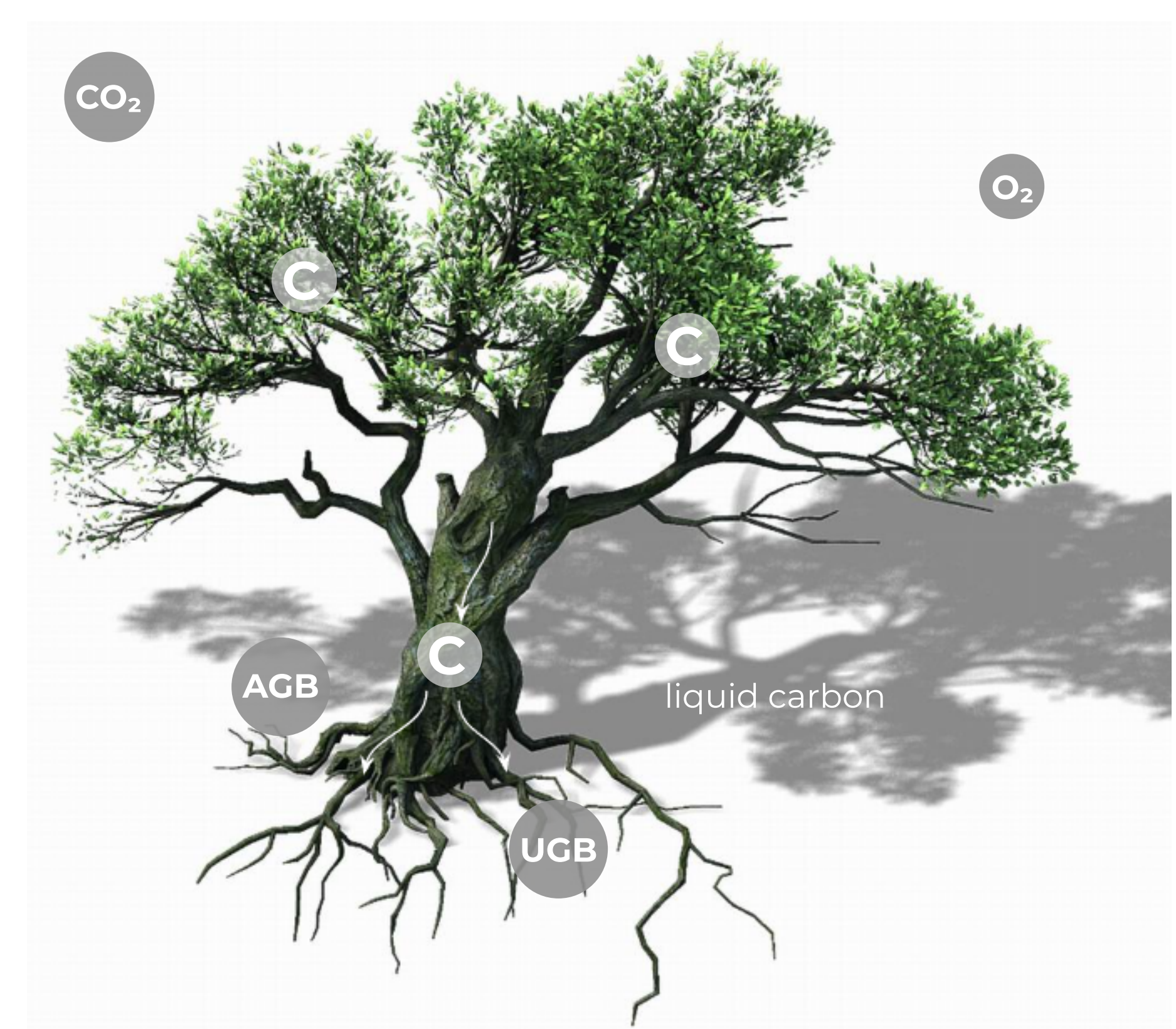
To obtain the certificate, users need to provide their land plot shapes and confirm ownership.

Additionally, we provide per-pixel data as supplementary information, enabling users to identify problem areas and plan forest maintenance effectively.

>>> TECHNICAL APPROACH

Our calculations are based on the widely used AGB (above-ground biomass) measurement method. However, this classical method has certain limitations as it does not include UGB (underground biomass) and liquid carbon circulating in trees.

In collaboration with experts, we have developed an [advanced adAGB\(c\)](#) method that incorporates additional features. To obtain measurements, we utilize [multispectral satellite images](#) and [consider factors such as forest type, climate zone, weather conditions, temperature, and humidity](#). This innovative approach achieves an [accuracy level of 80-95%](#).



>>> LET'S GET IN TOUCH

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