

# ARE YOUR MATURE TREES HEALTHY AND STABLE?

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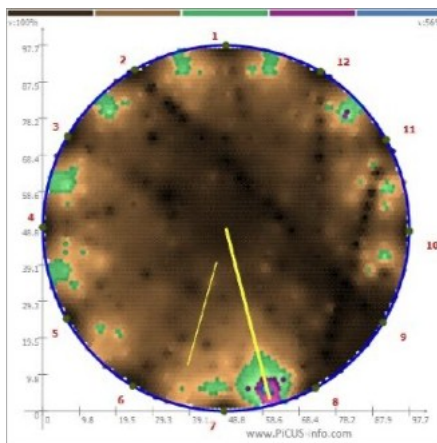
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After the extreme weather of January, anyone with trees still standing probably felt lucky. The unfortunate truth is that many of the failures were likely predictable by a qualified [consulting arborist](#). First, trees have 'body language' and indications that there might be a problem. Secondly, new processes and technology have changed the way risk is evaluated and the level of information that arborists can access.

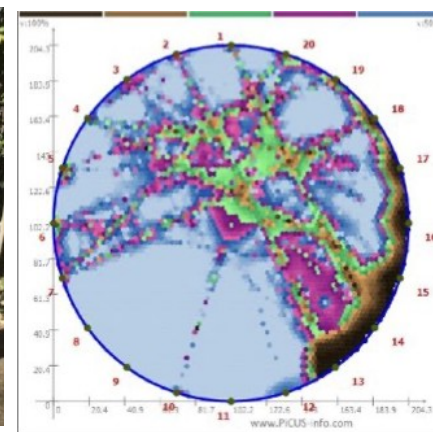
The [ISA Tree Risk Assessment Qualification \(ISA TRAQ\)](#) is a voluntary qualification program designed to train and assess candidates in a specialized field of arboriculture. With this qualification, an individual can be recognized by their peers and the public as a tree care professional who has specialized knowledge in tree risk assessment. This type of training includes methods of identifying risk and best management practices for options on what types of actions might reduce the risk.

Most analysis of trees, up until now, was from the outside. Drilling and resistographs were regularly used by arborists to get an indication of what might be inside. Sonic tomography allows us to assess the interior cellular structure of a tree.

As a [manufacturer of the equipment](#) explains, "Sonic Tomographs are instruments that detect decay and cavities in standing trees noninvasively.



*The ash tree (*Fraxinus* sp.) (above right) exhibits an old wound with a 'rams head' configuration. This type of wound would be interpreted as indicative that advanced decay exists within this tree and could result in a failure. A sonic tomography scan (above left) reveals that while the crack is visible (as a yellow line), the remainder of the tree is sound wood. The result of the scan allows the tree owner to keep the tree in place in the landscape and significantly reduces the worry that a failure will occur.*



*The beautiful 70" diameter cork oak (*Quercus suber*) (above left) exhibits minor outward signs that decay may be present. The scan (above right) reveals a serious level of decay is present and the tree is recommended for immediate removal.*

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The instruments measure the velocity of sound waves in wood. The acoustic velocity depends on the modulus of elasticity and the density of the wood itself. Most damage and disease causes fractures, cavities, or rot and reduces the wood's elasticity and density."

Risk Assessment methodology and sonic tomography can help tree owners determine the stability of their trees and the best management options for each tree. If you have a mature tree, be sure to have a qualified arborist provide an annual inspection and options for additional information that could help manage risk.

## References

- *PiCUS Tree Tomography Methods at a Glance*. Argus Electronic. 2015. [https://www.isa-arbor.com/events/schedule/resources/167/Gocke\\_Tomography.pdf](https://www.isa-arbor.com/events/schedule/resources/167/Gocke_Tomography.pdf)
- Smiley, T., and N. Matheny and S. Lilly. *Tree Risk Assessment; Best Management Practices*. International Society of Arboriculture. 2011.