Using Live Oak Trees as a Blueprint for Surviving Hurricanes | Think Like a Tree Transcript

[Gentle music]

We know more about how the natural world works than ever before.

On-screen: [Biomimicry = Innovation inspired by nature.]

It's kind of a perfect storm for nature-inspired innovation.

During Hurricane Katrina, you would have thought that the live oaks on St. Charles Street would have died, when actually only four out of over 700 trees died. Why is that?

On-screen: [Live oak tree = Hurricane-resistant house.]

Well the trees, it turns out, the whole thing is a blueprint for how to survive hurricanes. Their trunk is spiraled so they flex in the wind and their branches are spiraled so they flex, and their leaves when the wind hits them they curl into the shape of a Fibonacci Sequence, which allows the wind to flow through with minimum friction so that the leaves don't get torn off easily. And even more importantly, under the ground, its roots are actually entwined with the roots of the trees next to it so when a hurricane hits a live oak in New Orleans it's not hitting one tree it's hitting a whole community.

So perhaps in rebuilding New Orleans to be more hurricane resilient instead of our individual peer foundations, we may think about foundations that have horizontal components that twine together with the foundations of the buildings next door so that you've got the wind hitting an entire community of buildings and not just one.

Architects and Engineers are beginning to explore this in other places. They're starting to think like a live oak tree to design buildings and homes that are safer and more resilient.

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End of: Using Live Oak Trees as a Blueprint for Surviving Hurricanes | Think Like a Tree Transcript

Video Duration: [01:31]