MiCROTEC

Let's innovate together!

Who we are

MiCROTEC is the global technology and market leader in intelligent wood characteristics detection to maximize value & resource efficiency for the wood processing industry.

What we do

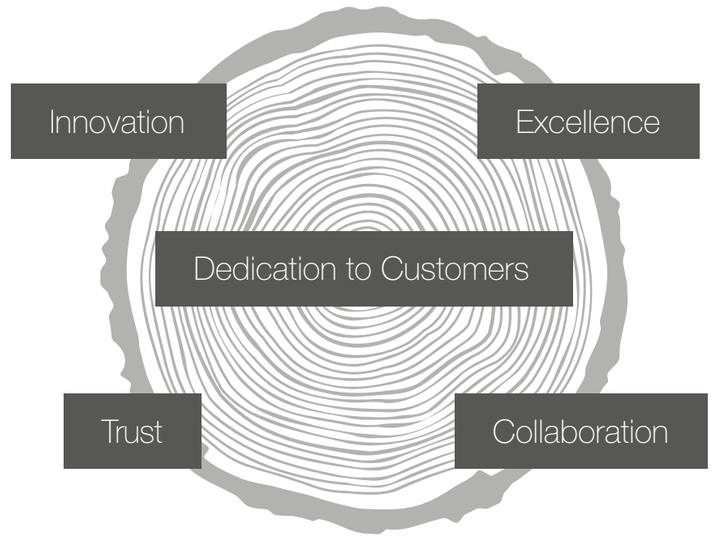
With a solid foundation and a dedicated passion, MiCROTEC provides world leading wood scanning solutions and excellent service to the industry.

Our Values

INNOVATING WOOD

Challenging the Status Quo

Setting the highest standards



Delivering reliably on commitments

Partnering & teaming up

Our impact on the sawmilling & wood processing industry

Where we are

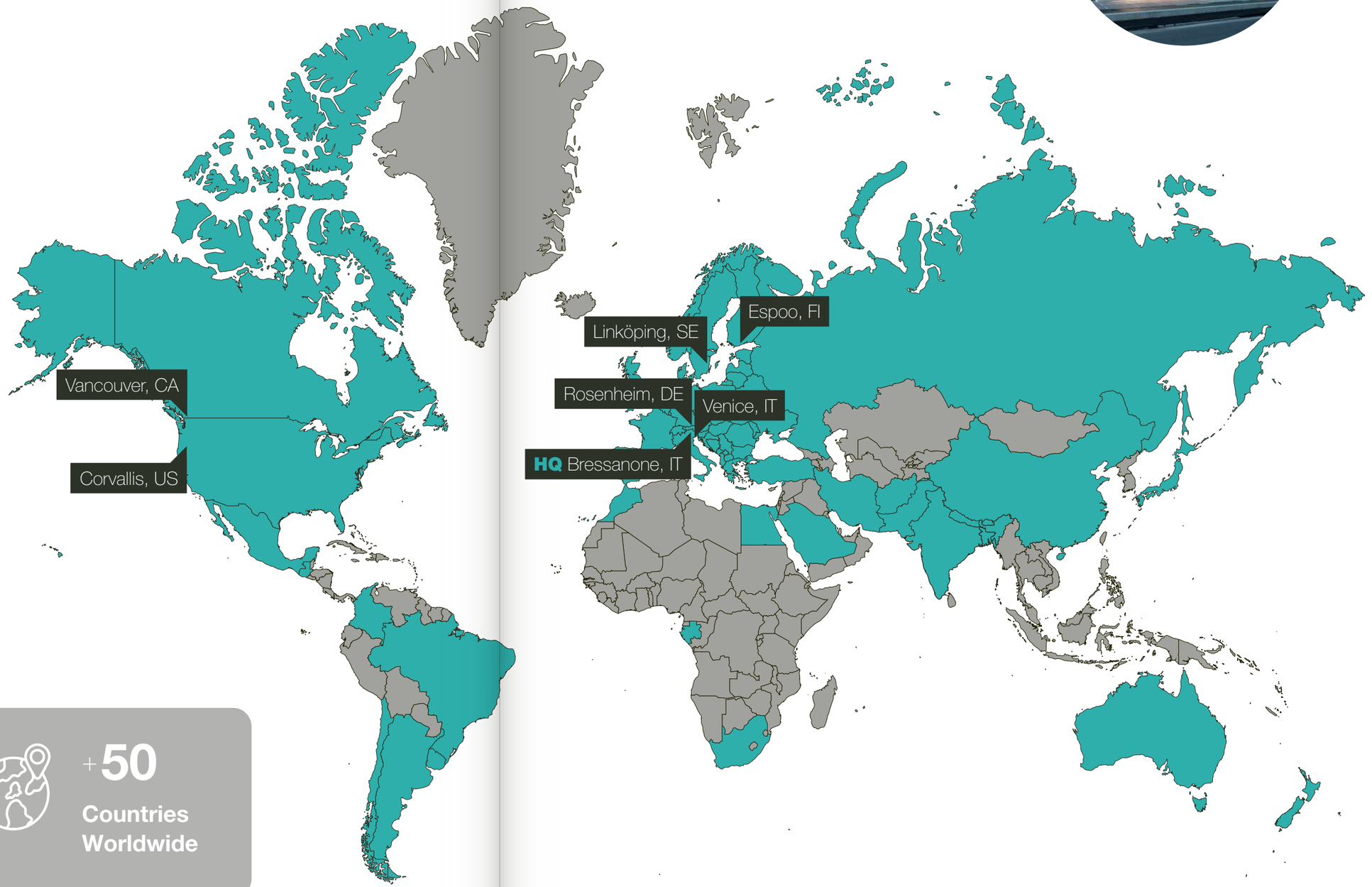
7
Locations

+400
Employees

36 years
Average age

+6000
Customer References

+50
Countries Worldwide



MiCROTEC Headquarters

Julius Durst 98
39042 Bressanone, Italy
T +39 0472 273 611
info@microtec.com

Milestones of History & Innovation

More Info

1980

MiCROTEC is founded on March 20th,1980, by Paul Durst, Hansjörg Thaler and Federico Giudiceandrea

1995

Implementation of X-ray technology for the support of image processing of knot recognition

2006

Incorporation of the company Bio Vision Venezia as the Italian MiCROTEC subsidiary in Mestre. MiCROTEC expands its operations worldwide

2013

Introduction of the in-house developed CROMETiC camera with digital sensors providing full HD images at ultra-high speed for all applications

2018

Acquisition of the Finnish sawmill scanner manufacturer FinScan

2020

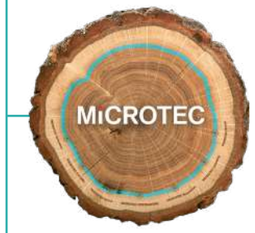
MiCROTEC celebrates 40 years in business with a major expansion and renovation of its headquarters in Bressanone

MiCROTEC acquires US company Lucidyne Technologies, Inc.

2022

MiCROTEC Ai

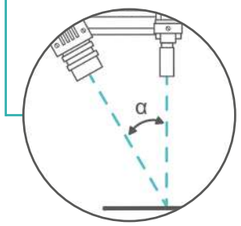
Introduction of the MiCROTEC Ai platform



Global one brand strategy: Woodeye, Finscan and Lucidyne are integrated under the corporate brand of MiCROTEC

1985

Introduction of the laser triangulation technique for 3D reconstruction of surfaces

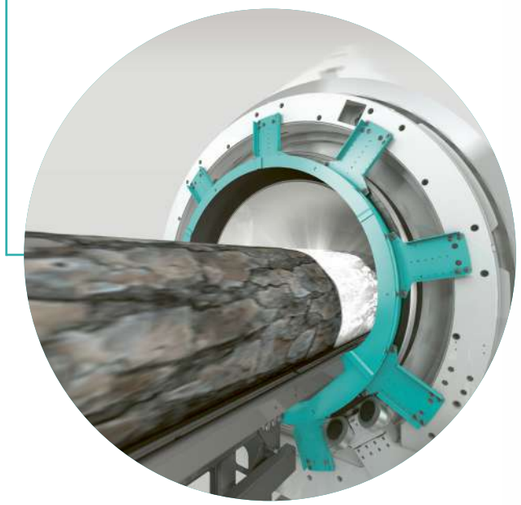


1999

First application of machine learning methods based on neural networks in image processing

2011

MiCROTEC officially presents CT Log, world's only computed tomography scanner for logs



2015

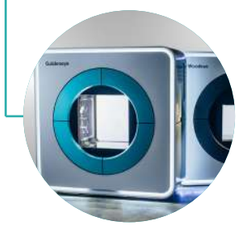
WoodEye, a Swedish scanner producer for remanufacturing applications, is acquired

2019

Introduction of the Digital Fingerprint concept and installation of deep learning AI on all quality scanning systems

2021

Introduction of the new generation of lineal quality scanners Goldeneye/ Woodeye



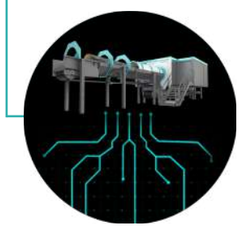
2023

Presentation of MiCROTEC Connect including Mill Manager for mill-wide value & recovery optimization

MiCROTEC Connect

2025

Implementation of CT Cross Training



Technology

More Info

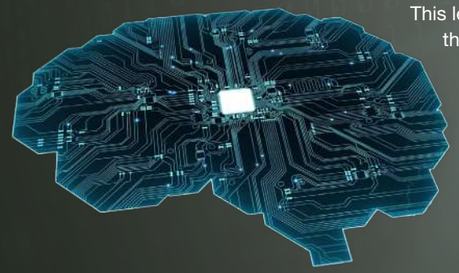
Innovative technologies

Every day at MiCROTEC, we invest in research and development to discover and provide the best solutions for our customers and the entire wood processing industry.

Our advanced technologies

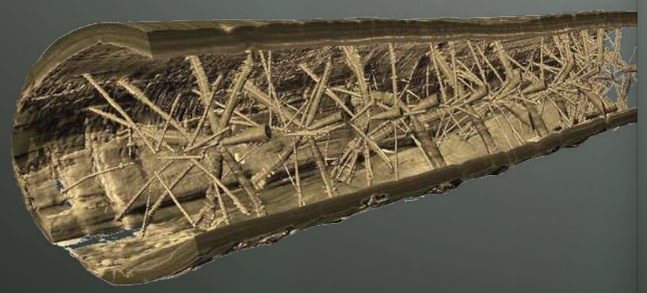
Artificial Intelligence (AI)

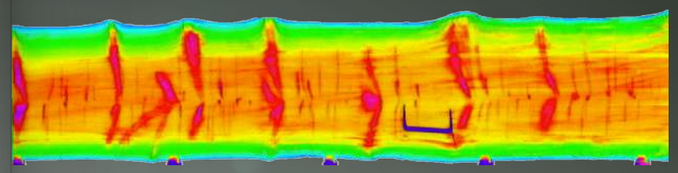
Artificial intelligence, with particular reference to the sub-fields of machine learning and deep learning, aims to create expert systems that make predictions based on input data previously analyzed by specialists. MiCROTEC's solutions include processing methods based on cutting edge AI/ML to leverage the possibility of the machine to mimic what an expert expects from the input. This leads to reliable detection results, allowing the system to adapt to a material with highly changeable physical and visible characteristics, like wood.



Computed Tomography (CT)

A computed tomography scan, or CT scan, is a technique used to obtain detailed images of the internal features of an object. CT scans are obtained through multiple X-ray measurements, taken from different angles. Our flagship scanner, CT Log, uses computed tomography to enable the full digital reconstruction and virtual grading of entire logs in real time.





X-Ray

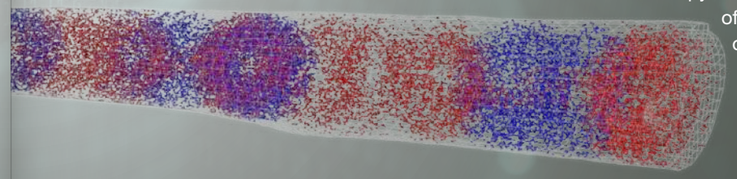
X-rays are a form of electromagnetic radiation, carrying much higher energy than visible light. X-rays can pass through most materials, including wood, fruit, and the human body. X-rays are used to generate images of the internal structures of lumber and logs such as knots, splits and resin pockets.

Laser Triangulation

In our scanners, we include dimensional scanning from laser triangulation to digitalize complex 3D shapes, such as the geometry of logs and lumber. The data obtained is used to calculate precise measurements of diameter, length, curvature and taper. Laser triangulation is obtained by pairing a laser source and a camera pointing to an object with a fixed relative angle. Exploiting the reflectance of the laser light on the object surface, the relative distance is calculated using trigonometry.

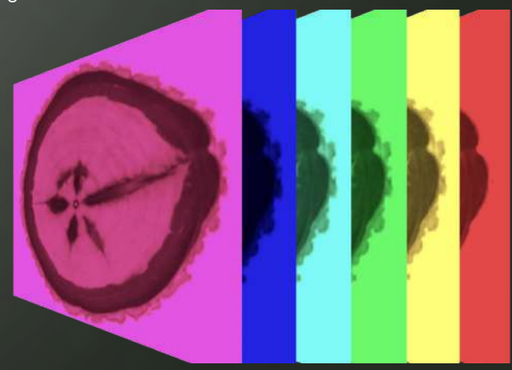
Stereoscopy

Binocular vision, such as human sight, is the type of vision that enables the three-dimensional perception of the surrounding environment. Stereoscopic imaging is the digital equivalent of binocular vision, where depth is reconstructed by combining a pair of images of the same scene taken from a slightly different point of view. MiCROTEC scanners use stereoscopy to obtain a digital reconstruction of three-dimensional scenes and objects.



Hyperspectral Imaging

The human retina collects color information by combining light intensity in three spectral bands, centered respectively in the red, green and blue (RGB) bands of the electromagnetic spectrum. Color representation in the digital world also follows this principle, and in most applications, color images are recorded using a camera that measures color as a linear combination of the same three basic colors (trichromacy or RGB imaging). Naturally, monitors and displays are RGB as well. When it is necessary to record color information more precisely, or if there is a need for higher spectral resolution, we use our proprietary hyperspectral camera to collect color information over hundreds of spectral bands.



Overall solutions

MiCROTEC is the only company offering comprehensive scanning & optimization solutions for the complete wood processing industry always committed to providing customers with the most valuable & sustainable wood utilization.
With MiCROTEC Connect all scanners can be connected, and logs and boards traced throughout the whole sawmill process.

CATEGORIES
- Log
- Lumber
- Overall

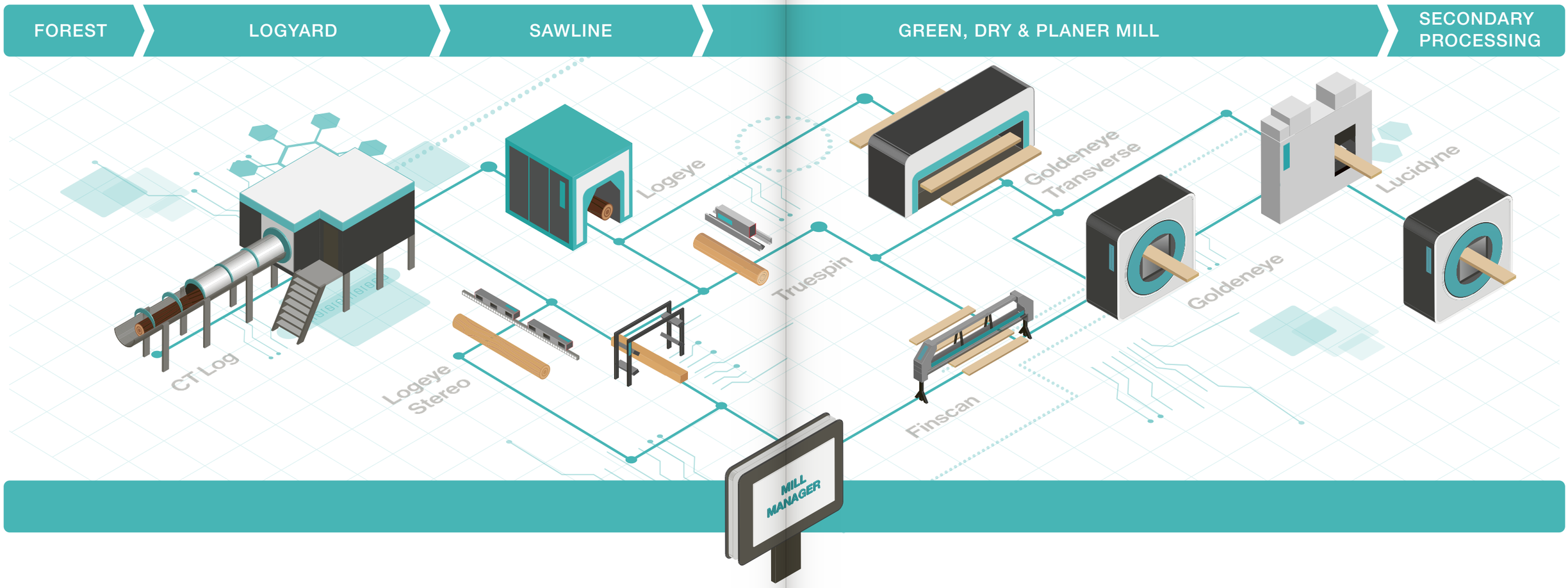
PROCESS AREA
- Logyard
- Sawline
- Green & Dry Mill
- Planer Mill
- Secondary Processing

SPECIES
- Softwood
- Hardwood

FEEDING
- Lineal
- Transverse

PURPOSE OF SCANNING
- Dimensional
- Quality
- Strength Grading

FROM LOG ⟷ TO FINAL PRODUCT



MiCROTEC $ustainability

MiCROTEC scanning solutions support the accurate measurement, sorting, and optimization of wood, enabling the most economical and sustainable utilization. Our unique scanning and optimization solutions ensure that the best value is extracted from every log.

Maximizing Value

CT Log detects all internal log characteristics and classifies virtual boards before sawing. Combined with MiCROTEC Connect, this Cut-on-Demand solution recalls the classification before cutting and enhances value up to 20%.

Minimizing Waste

This predictive solution optimizes logs already at the logyard, identifying the best fit for each target product early on. The result: for the same output volume, fewer logs need to be cut and transported — reducing truck traffic and emissions — while more CO_2 continues to be absorbed by the trees left standing.

Maximizing Value & Resource Efficiency

A real-world example from France

At a medium-sized sawmill, with an annual cutting volume of 400,000 logs, our MiCROTEC Connect solution enables the same output volume to be achieved with significantly improved sustainability:

20,000
fewer logs
cut per year

600
fewer trucks
on the road annually

300,000
kg of CO_2
absorbed each year by the trees left uncut

MiCROTEC
is your place to...

Connect with the world

At MiCROTEC, you become part of an international work environment where you can travel, discover new cultures, and collaborate with colleagues from around the world. Working on projects with a global impact broadens your perspective and accelerates your professional growth.

Advance your career

MiCROTEC supports individual career development by offering internal career paths, new challenges, and continuous support. This allows employees to build fulfilling careers aligned with their personal ambitions in a constantly evolving environment.

Learn and grow your skills

As we strive to make the most out of wood, we're committed to unlocking the full potential of our people. That's why we offer learning programs, specialization courses, and mentorship from industry experts – while staying closely connected to the latest advancements of industry innovation.

Have a healthy work-life balance

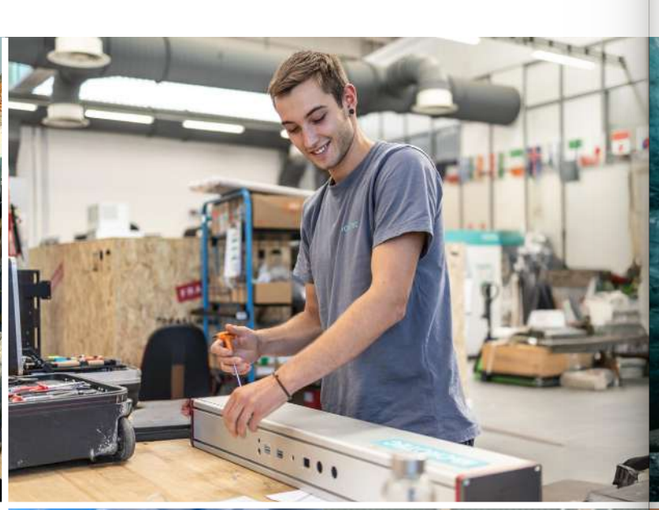
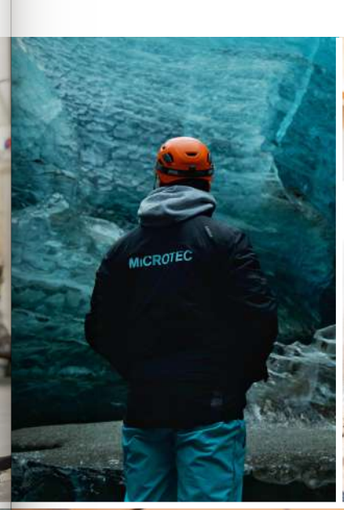
To support a balanced work-life lifestyle, MiCROTEC offers flexible working hours and the option to work from home a few days a week. We also promote employee well-being through various initiatives focused on health and physical activity.

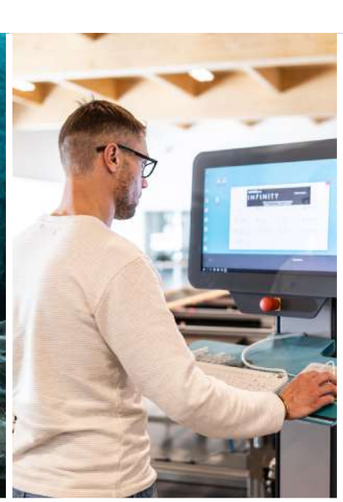
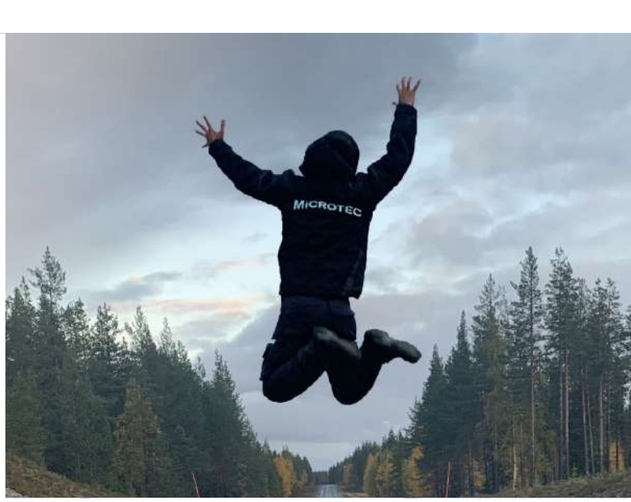
Connect and have fun together

Throughout the year, we organize a variety of employee events and activities that bring teams together beyond the workplace. We also support employee-led initiatives such as sports groups, after-work meetups, and social activities.

Make an impact for a sustainable future

Wood is one of our most valuable resources, and using it wisely is essential to building a sustainable future. At MiCROTEC, every employee contributes to maximizing the value and efficiency of this resource, enabling our customers to get the most from every piece of wood while minimizing waste.




What makes working at MiCROTEC special?

One of the things I enjoy most is the opportunity to travel. I've had the chance to visit places around the world I might never have seen otherwise, all while doing meaningful work: connecting with customers on-site and seeing firsthand how our technology makes a difference.

Ryan Aareskjold,
Operations, MiCROTEC Vancouver

Since starting at MiCROTEC, I've quickly grown from having little experience in the wood industry and related technology to feeling confident in my daily work. I see my growth here as a continuous journey where I learn something new every day, shaping my future by identifying the areas I wish to develop further.

Lina Bergström,
Spare Parts & Service, MiCROTEC Linköping

Thanks to MiCROTEC's wide range of solutions in the wood and food industries, my work experience has been incredibly diverse and stimulating. Today, in my role as a Team Leader, I try to make sure that each team member understands their role in the bigger picture, so we can grow together and achieve our goals more effectively.

Fabian Pahl,
Installations, MiCROTEC Bressanone

At MiCROTEC, innovation is driven by teamwork, expertise, and the freedom to think differently. We have great flexibility in the way we work, and thanks to our team's technical expertise and close cooperation with customers, we continuously develop and refine solutions that meet real needs.

Anna Oswald,
Product Management, MiCROTEC Rosenheim

From day one, I was impressed by the young and dynamic atmosphere at MiCROTEC. We work with dedication, but in a relaxed and informal atmosphere. There's a strong sense of teamwork and mutual support, which makes even the most complex challenges easier to face.

Marco Miola,
Lumber Operations, MiCROTEC Venice

I think cross-cultural communication is an important life skill to practice. In my role I regularly collaborate with colleagues from other locations, and I'm grateful for the growth that I've experienced due to being a part of an international team.

Evan Bright,
Proposal Engineering, MiCROTEC Corvallis

Who we are

BIOMETiC emerges in 2012 as a spin-off of MiCROTEC. The technology of the solutions MiCROTEC uses for scanning wood has been adapted to inspect fruit & food. In this way BIOMETiC provides the fruit & food industry with innovative solutions for the process and production optimization, which increases the added value of the final product.

What we do

As a high-tech company with passionate people, BIOMETiC develops innovative food inspection systems, fruit grading solutions, and software products for food safety and fruit quality control.

Some of our applications in the fruit and food industries

- Fruits & Vegetables
- Cannery
- Ice Cream & Confectionery
- Baby Food & Dairy
- Bakery
- Snacks & Olives
- Liquid Foods & Beverages
- Others

Mito

The unique 3D X-ray food inspection system

More Info

BIOMETiC

Leaders in food safety & fruit quality solutions

jobs@biometic.com

biometic.com

Do you love technology and innovation?
Are you curious and dynamic?

MiCROTEC is the right place for you.

Join a young, international team shaping the future of the wood processing industry.

Apply now at **microtec.com/en/careers**