

YOUR MICROWAVE SOLUTION SUCCESS JOURNEY

1 INTRODUCTORY CALL

While microwave energy has been used predominately in food processing for decades, demand for microwave technology is expanding rapidly across diverse industries thanks to its versatility and sustainability potential. Traditional magnetron-based systems have limitations that solid-state technology from Crescend Technologies overcomes. Processes that require high performance benefit significantly from its unique features and advantages. As industries shift towards decarbonization, microwave energy, especially when paired with renewable power sources, offers an effective, eco-friendly alternative to fossil fuel-based processes.

2 DIELECTRIC MATERIAL ANALYSIS

In-depth Dielectric Material Analysis. This phase builds confidence in your tailored solution by allowing us to evaluate your specific material properties before any capital investment. By confirming microwave compatibility upfront, you save resources and gain confidence in a successful implementation.

3 PILOT SCALE TESTING

Test of your material with our microwave systems on-site, providing you valuable insight into the viability of a microwave solution—all without the need for capital equipment investment.

4 PROCESS PARAMETER CALCULATOR

Analysis of the data collected to refine and define a microwave system tailored to your needs. This step provides precise process parameters essential for developing an effective pilot or commercial-scale system.

5 ELECTROMAGNETIC & THERMAL SIMULATIONS COMSOL

In some applications the materials, processes, and applicators require deeper testing, modeling, and analysis to ensure a successful microwave solution. Our in-house Simulations and Systems Engineer uses advanced 3D modeling to precisely analyze how microwave energy interacts with your material inside the applicator. This deeper analysis provides a clear set of requirements, ensuring the solution we recommend will meet your expectations. While real-world variations can occur, you can be highly confident that our microwave solution is designed to deliver optimal performance for your specific needs.

6 BUDGETARY CAPITAL EQUIPMENT COSTS

By this stage in your microwave solution journey, we have established a high level of confidence in the viability of a microwave system for your process. You'll have the information you need to present the capabilities and benefits of this solution to other stakeholders with assurance.

7 FINALIZE QUOTE AND PURCHASE

By this stage in your microwave solution journey, we have established a high level of confidence in the viability of a microwave system for your process. You'll have the information you need to present the capabilities and benefits of this solution to other stakeholders with assurance.

8 ONSITE COMMISSIONING

With your equipment delivered and infrastructure ready, we begin the commissioning process to integrate and optimize all system components: hardware and software. We bring the system online and ensure it performs exactly as expected.

9 POST-COMMISSIONING SUPPORT

After commissioning, your system will be fully optimized, performing precisely as designed. Our solid-state technology is built for reliable, continuous operation, but we understand that unexpected issues can arise with any equipment. Our commitment to support extends well beyond commissioning, ensuring your peace of mind and long-term system success.