

ALTRA (AIRZONE) SUCCESS STORY

AIRZONE

MADES

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ABOUT ALTRA (AIRZONE)

AIRZONE, a member of the Corporación Empresarial Altra business group (ALTRA), is a leading company in the zoning systems globally. Majority of zoning systems (75%) in Spain have originated from AIRZONE. The company believes in innovation and the development of new technologies. Its corporation works as a set of gears that synchronically create and develop quality products to achieve a more efficient world.

Having been established in 1997, the company is headquartered at Málaga TechPark. The company has over 20 years' experience of installing systems in all corners of the globe. Some of the notable

places where they export their products and services are United States, France, Greece, Ireland, Italy, United Arab Emirates, Spain, Jordan, Kuwait, Mexico and Portugal.

Three popular solutions from the company are Airzone central control unit, Airzone thermostats and cooling & heating systems. The goal of these solutions is to allow temperature control in each room for optimum energy efficiency. Owing to the company's commitment to innovation that has resulted in installation of various types of systems across the globe, they have received multiple awards. Examples are the European Business Award or the XIII Andalusia Research Award amongst others.



WHAT DID ALTRA NEED?

This case is relevant to company CEOs or managers who:

- Are concerned their company has lost control of the electronics supply chain
- Are wondering how to ramp up production to their expected demand levels
- Want to minimize production costs and position their firm as the best in value provision

Throughout its history, ALTRA has continued to evolve and innovate in a bid to better serve its customers. The company has completed many

projects, some extremely challenging. The following case is one of the most challenging the company has encountered.

— The Challenge

Our client, ALTRA recognized that their production was no longer adaptable to the prevailing circumstances. To meet or exceed expectations, our client's management approached us for elevation.

Like for many companies globally, the supply and value chain at ALTRA was adversely affected by the COVID-19 pandemic. The result was delays in deliveries and order compliance, which would affect business relationships.

You can recall that even before the outbreak, China and the US were embroiled in a tariff war. So serious

was this confrontation that Nintendo and other renowned electronic manufacturers were forced to relocate.

Even with the efforts to contain the pandemic in top gear, one may wonder why the industry is still on its knees. In March 2021, the trade body IPC performed a study that returned interesting insights. One of them is that the three most affected sectors in electronics manufacturing were **automotive, industrial** and **consumer electronics**.

The effects of the pandemic went beyond finished electronic products and parts. Even steel baskets were in the mix of this challenge. In short, every bit of the value and supply chain did and is still experiencing the effects of restrained movement for products and people.

Experts believe that these impacts will remain for some time. Think of all the product launches and new product design decisions that are pending as

stakeholders watch the curve. Collaboration with business partners overseas has been seriously affected.

McKinsey had already predicted a **run-out of electronics** stock after observing the trend of China factory shutdowns. Not even a rush to other Asian suppliers would control the risk.

These negative effects of coronavirus were felt across all segments of industrial production. In the EU, industrial production in March and April for 2020 fell by 12.2% and 27.2% compared to March and April 2019 respectively.

Analyzing the evolution in the first months of the pandemic, during the period between February 2020 and March 2020 there was a 10.9% reduction in production. This percentage increased up to 17.3% between March 2020 and April 2020.



Graph 1: Reduction from initial FCST to new FCST due to COVID

For ALTRA, the emergence of COVID in (March '20) resulted in a reduction in production planning by around 75% for several months (April and May 2020). ALTRA's forecast sales volume diminished by 50%. This implied that the firm had to adapt to the new situation and align to it, understanding the uniqueness of the new position.

A couple of months later, in June 2020, shutdown ended and contained orders materialized. Now Altra had to face the complete opposite situation but again an unplanned situation with the electronics provider, MADES. They had to produce twice as much as they were just a few weeks before. This was a recipe for struggle for the production team, and indeed the entire organization.



MADES had to adjust to the new situation and take the challenge that ALTRA presented us. First, to the tremendous reduction in relation to what had been planned and then to a new planning with increases that are difficult to achieve in a short period of time.

And always offering maximum flexibility to ALTRA, in case new production adjustments had to be made.

For MADES, achieving the objectives and complying with quality despite the difficulties is the greatest achievement of this project, which they managed to overcome with flying colors.

They needed to respond urgently and effectively. With sales volumes impacted by the unexpected situation and the resulting effect on suppliers and other plans, a unique countermeasure was necessary. MADES, a reliable partner in the electronic systems segment, reacted rapidly to

offer a solution that allowed ALTRA to achieve the new goal.

ALTRA's decision to work with MADES on this matter was simple. MADES has proven over time that it can support innovation in firms, both large and small. They have the expertise and skills needed for all manner of electronic projects. The fact that they have provided excellent results in the past made it a given that they would deliver even this time.

HOW MADES PERFORMED

— 1. Responding to sudden swings of demand

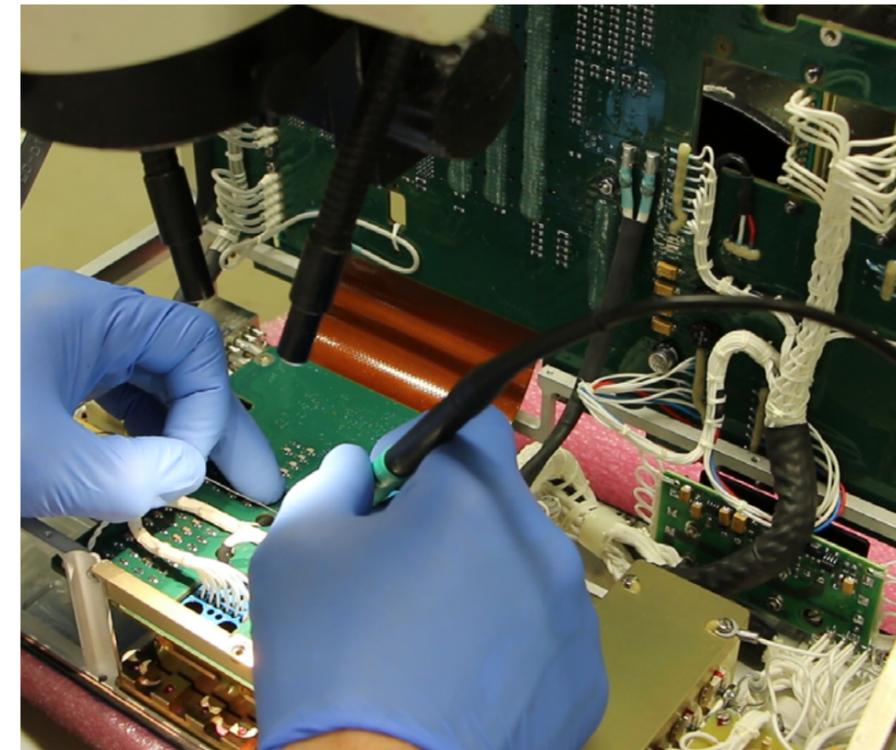
ALTRA had estimated a drop due to the COVID impact and replanned its forecast for MADES to align. However, that plan did not occur either. Consequently, MADES had to respond to major swings of demand, in some cases even above 200% as shown in the table below.



Graph 2: Increase of demand (actual deliveries) compared to New Forecast due to COVID

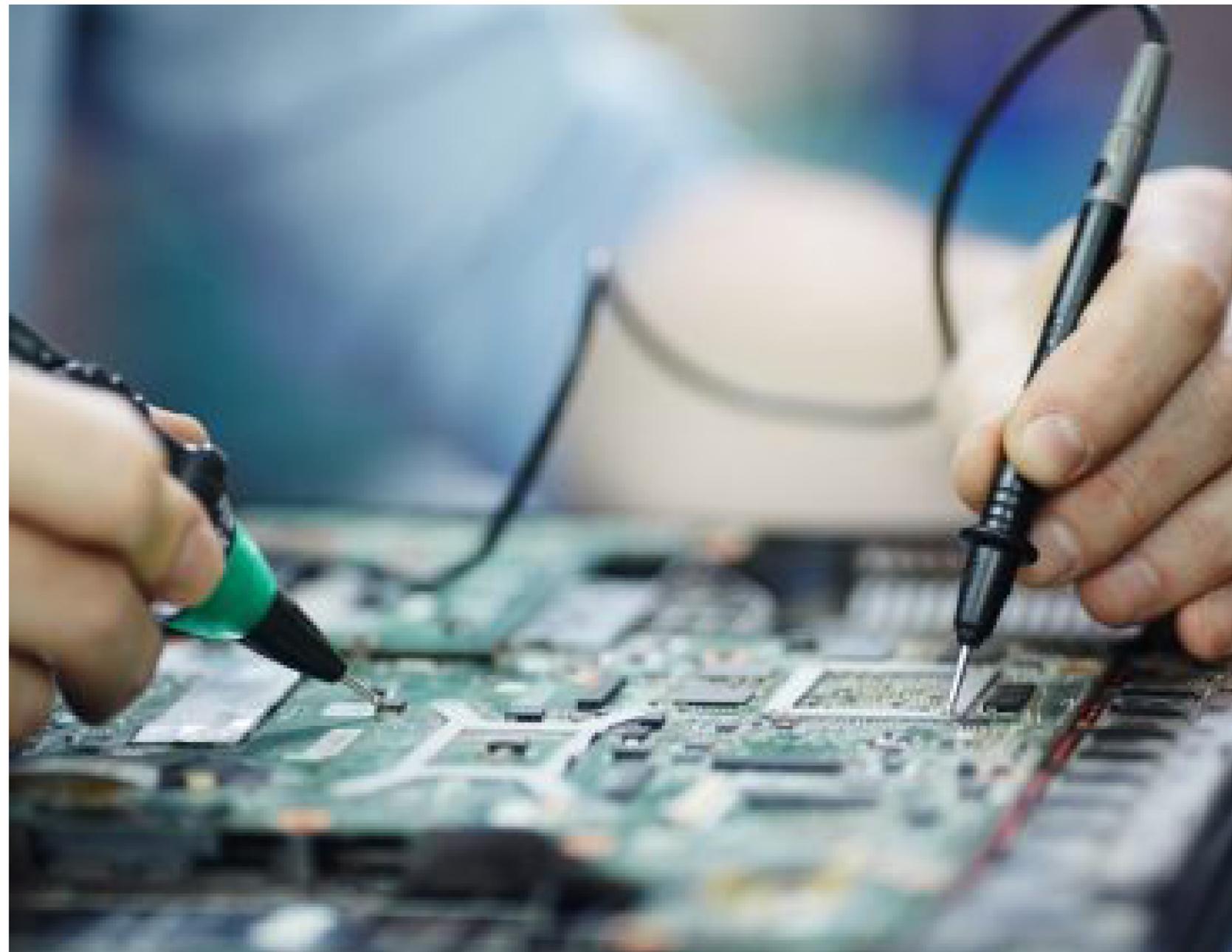
It can be seen that initially in April, orders were placed according to the COVID forecast without any deviation. ALTRA estimated a 79.96% reduction in orders and that was the case. However, reality was surprising and in June, ALTRA started to receive orders from end customers increasing demand rapidly.

These increases up to December were unprecedented and had a major impact on manufacturing planning. MADES had to accommodate internally these changes very rapidly to service ALTRA needs.



It is evident from the data that MADES was able to understand the initial situation of a drop in production and, above all, the subsequent unexpected increase in orders. The company was able to respond satisfactorily with a great deal of effort. They managed both adjustments with so much flexibility that no impact on price or project service was reported. Full control of the supply chain processes was key to adapt to the changing situation all over the year.

MADES demonstrated its reputation of capability to deliver beyond client's expectation even in the most demanding situations. Even without prior extensive preparation, the team managed to apply the most sophisticated production processes to the satisfaction of client's volume needs.



— 2. Additional Improvements: Identifying and solving technical issues

Additionally and from a more technical point of view, during some pre-series manufacturing, MADES also identified some voids in a Ball Grid Array (BGA) component thanks to a thorough X-Ray Inspection process as shown in the image below.

This technical solution was not linked to demand fluctuations by COVID, but MADES expertise allowed them to identify this problem and offer a solution and an additional improvement to the electronic systems for ALTRA.

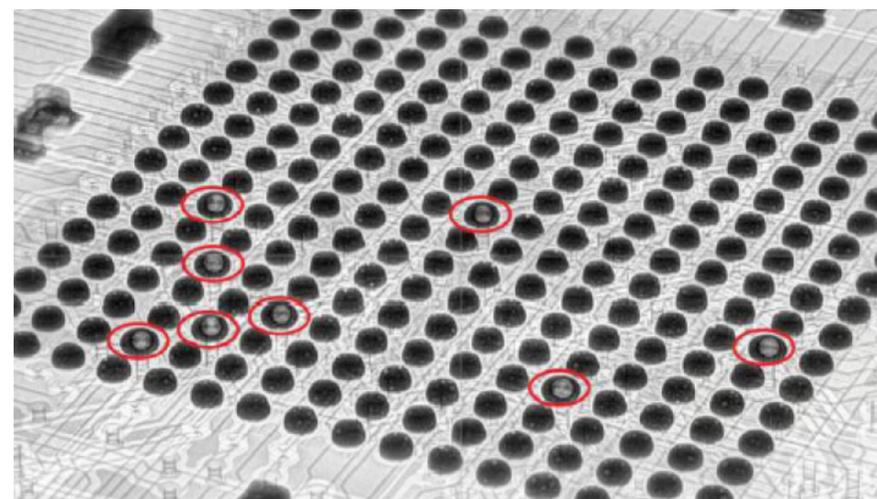


Figure 1: Repetitive voids in BGA

MADES technical team investigated and communicated a potential PCB design deficiency to ALTRA. MADES team worked closely with ALTRA's team and soon a PCB redesign was carried out to eliminate these voids as shown below. The mainstay of MADES' intervention was to mentor and collaborate with ALTRA's internal team to ensure sustenance and furtherance of the recommended improvements.

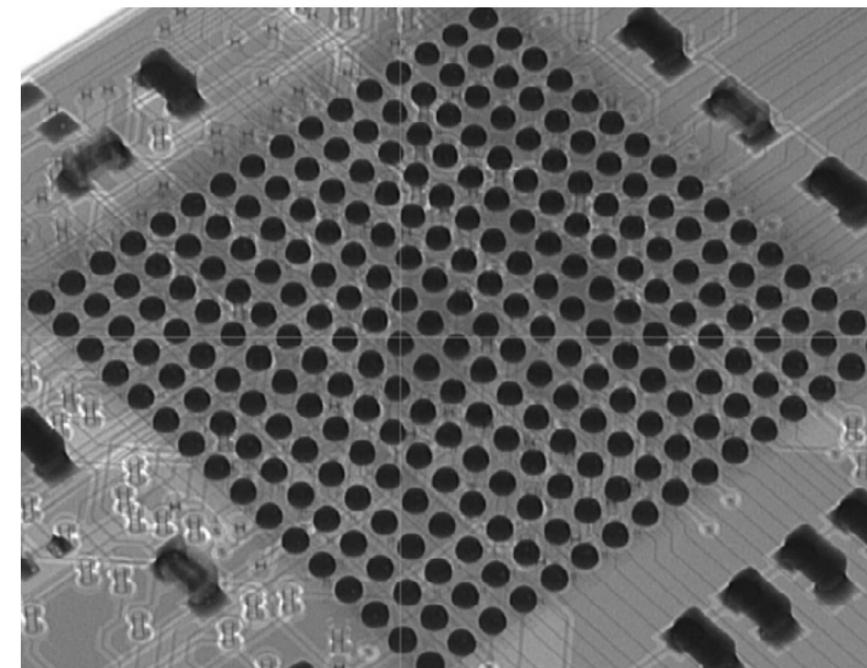


Figure 2: New PCB Design with no voids in BGA

— 3. Conclusion

Once again, MADES technical and project management expertise resulted in an improved product version. This professional and proactive approach ended up reducing cost of rework for ALTRA, product replacement and therefore maintaining a high-level customer satisfaction.

The partnership between MADES and ALTRA has brought many economic, social and political benefits. Here are some sentiments from some members of ALTRA:

“MADES has proved its capacity to adapt to the market fluctuations in situations of severe demand increases and decreases complying with planned datelines. For us, MADES is a good example of trust and collaboration”
- *Salvador García*. Purchasing and Logistics Manager Altra.

Lessons for other CEOs

- A well implemented production planning process can offer the much-needed flexibility during times of crisis
- Leveraging services provided by an experienced contract manufacturer can help optimize the cost and quality of the products.
- Maintaining the tag of “high value provider” calls for prompt solution to operational hiccups.

Interested in a more matured production planning for your firm? Do you want to learn how MADES can help speed up your production for better engagement with your suppliers and customers?

Share it with us via e-mail and one of our executive representatives will chat with you.

E-mail: info@maDES.es

ABOUT MADES

MADES is a Malaga, Spain based company that has been in operation since 1990. Initially as a subsidiary of Hughes Aircraft and Raytheon, and now operating independently within the AIAC group of companies, this company boasts of expertise in high reliability applications including aerospace, defense, industrial and other cuttingedge sectors.

It is a major supplier of electronic manufacturing services which include design, industrialization, manufacture, testing and integration of critical electronic systems both within Spain and internationally.

