SERVICE BRIEF

Operational Blindness in Electronics Manufacturing

The hidden problems that erode competitiveness in electronics manufacturing – and why they are rarely visible from within

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What Does Operational Blindness Mean?

Operational blindness develops when people have worked with the same processes for a long time and therefore stop questioning them. What might once have been noticed as an unnecessary step, an inefficient route or a weakness gradually becomes accepted as normal. People know how something works, but increasingly stop asking whether it could work better.

In manufacturing, this can lead to unnecessary movements, outdated processes, excessive inventory and other inefficiencies remaining in place for years without being recognized as problems.

This is how problems can gradually develop in manufacturing operations that significantly affect competitiveness. They usually do not appear as a single incident but as a gradual loss of efficiency, flexibility and transparency. That is what makes them problematic. They reduce competitiveness without one clearly identifiable cause.

1. Typical Internal Problems

Excess Inventory and Tied-Up Capital

Safety stocks can grow unchecked over the years because no one takes responsibility for systematically questioning them. This ties up capital that is needed elsewhere and is rarely recognized as a problem in its own right.

Entrenched Processes

People who work with the same processes every day can eventually regard unnecessary steps and inefficiencies as normal. Processes are no longer questioned because they have always been done that way.

Knowledge Gaps and Inadequate Training

New employees are often introduced directly into existing processes without structured training. Knowledge is passed on verbally rather than documented and is partially lost whenever employees leave the organization.

Knowledge Concentrated in Individuals

Some employees deliberately retain knowledge in order to make themselves indispensable. While this may protect their own position in the short term, it creates dependencies that can become a risk when someone is absent or leaves the company.

Inefficient Manufacturing Flows
Layouts and material flows are often the result of historical development rather than deliberate planning. Intermediate steps, unnecessary movements and handovers that no longer serve a clear purpose nevertheless remain in place because they have never been reviewed as part of the overall process.

Lack of Process Standardization
The same activities may be performed differently depending on the shift or employee. This can lead to variations in quality and throughput without any single obvious cause.

2. How These Problems Develop

These problems rarely result from individual decisions. In most cases, they develop over many years as production volumes, product variants and staffing change without processes and responsibilities being adapted accordingly. What began as a practical solution to an immediate problem becomes a permanent habit because no one has the time to fundamentally review it.

Internal criticism of established processes is also rarely welcomed. Questioning existing processes can implicitly question the work of colleagues who have shaped them over many years. And when employees retain knowledge, this is often driven by understandable caution in an environment where their own position may not always feel secure, rather than by bad intentions.

3. Why an External Perspective Matters

The Problem
People who have worked in the same company for many years may no longer see their own processes objectively. Internal hierarchies and personal relationships can also make open criticism more difficult. An employee who openly points out that a colleague or manager has tolerated inefficient processes for years may risk personal conflict and potentially put additional strain on the working environment.

Our Approach
As an external party, we have no internal relationships to protect and no personal history tied to the existing processes. We compare what we see at a client with our experience across numerous manufacturing operations and openly identify what stands out without putting individual employees in the spotlight.

What EMS Strategy Group Can Do

Inventory and Working Capital Analysis
We review inventory levels and material flows to identify unnecessarily tied-up capital and show specific opportunities for reduction.

Process and Workflow Analysis
We assess manufacturing layouts and workflows independently and identify steps that provide no clear added value.

Knowledge and Training Concepts
We help document critical knowledge and establish structured onboarding and training so that essential knowledge does not remain dependent on individual employees.

Independent Assessment of the Manufacturing Organization
We assess structures, responsibilities and processes from an independent perspective and identify specific opportunities for improvement.

Many of these problems reduce competitiveness without being recognized as individual issues in day-to-day operations. EMS Strategy Group provides the external perspective needed to make them visible and address them systematically.

An Initial Conversation

Not every manufacturing operation requires a comprehensive analysis. In many cases, an initial conversation is enough to identify where potential areas for improvement may exist. If you have the impression that processes, inventory levels or dependencies have developed over the years and may now be becoming critical, we would be happy to discuss them with you.

EMS Strategy Group
Dirk Kaussen
dk@emssg.com
emssg.com

About the EMS Strategy Group

EMS Strategy Group supports industrial enterprises in the strategic and operational advancement of their electronics manufacturing. Our core expertise lies in the strategic relocation of manufacturing volumes, the selection of qualified EMS partners, the establishment of new production capacities, and the expansion of existing manufacturing structures.

Furthermore, we design resilient supply chain frameworks, conduct comprehensive risk assessments, and guide dual-sourcing strategies, with operational support through to a successful series production ramp-up.

www.emssg.com | LinkedIn: Dirk Kaussen

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www.emssg.com | LinkedIn: Dirk Kaussen

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