EFESO
MANAGEMENT CONSULTANTS

BOOST PERFORMANCE WITHOUT THE SPEND

Introducing the EFESO Performance Booster

Do More With Less: Proven Productivity Without Extra Investment

Across the Aerospace & Defense industry, companies face mounting pressure: rising energy and labor costs, supply chain disruptions, and growing wage inflation have pushed production costs to record highs. Meanwhile, capital budgets are tighter than ever, and CFOs are expected to deliver improved margins without the luxury of large investments.

So, how can your company significantly increase production performance without major capital expenditure?

INTRODUCING THE EFESO PERFORMANCE BOOSTER

A turnkey solution that delivers double-digit efficiency gains in just 4 weeks without requiring new CapEx. Our unique approach combines advanced video-based diagnostics and software-driven machine tuning to unlock hidden capacity in your existing infrastructure, delivering measurable results, faster cycle times, higher throughput, and reduced operational waste with a return on consulting averaging 26x.

9%
Output increase

31x
e.g. Return on consulting

4 weeks
Throughput time

TWO HIGH-TECH LEVERS TO UNLOCK PERFORMANCE

Machine-based video analysis	Software-based machine tuning
Visual capture of real-time operations	Adaptive feed control with real-time data
Multi-camera installation for deep analysis	Smart, self-learning software algorithms
Focus on tool optimization and non-productive time	Focus on cycle-time reduction without speed-limit changes
Best for bottleneck & problem machines	Best for process stability, wear reduction
+9% average output increase	+8% average output increase
26x average ROI	31x average ROI
4 weeks average project duration	4 weeks average project duration

TYPICAL USE CASES OF THE VIDEO ANALYSIS APPROACH

1. Bottleneck machines

Focus on a bottleneck process/machine in the manufacturing line, or a single bottleneck machine

Situation

A bottleneck machine in a chain with a downstream process

In short
- A known bottleneck machine
- Root cause and elimination of bottleneck necessary
- (e.g., additional external processing currently needed, as output is not sufficient)

Approach

Root cause was likely to be multi-causal, so a multi-stage solution approach was required. Firstly, we focused on processing time and off-time. Secondly, we carried out a tooling analysis. Lastly, we focused on processing time and off-time

Video analysis
- Initial assessment
- Focus on off-time

Result

In this instance, by quickly implementing program optimization, a direct saving of 16.3 sec was achieved

Measures
- Retract plane and path optimization
- Parallel Programming
- Program flow changes
- Part-change optimization

- 16.3 sec. (-11.4%-p)

- €112k p.a.

Optimizing the bottleneck machine in a production line typically leads to one of the biggest savings

2. Bottleneck machines with multiplicator

Video analysis of one reference machine, with carry-over to multiple similar machines

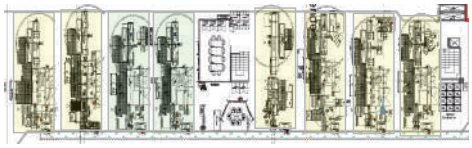
Situation

Setup of identical machines with the same program structure

Analysis of machine A
- 33 ideas generated
- - 15.4 sec (-11%-p)

Approach

Use the multiplier effect by rolling out the savings from one machine (machine A) to all machines wherever possible.



The way forward
- Analyze the machining cycle and tool changes for machine A.
- Transfer the reduced cycle time to all the networked machines

Result

Seamless transfer of results was possible in this case

In a nutshell:
- 8 machines upgraded
- resulting ratio leveraged

- 11%-p

- €313k p.a.

Optimizing a machine with several same machine settings typically leads also to one of the biggest savings

3. Problem machines

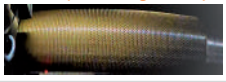
Machines where immediate solutions are required, and special tasks are involved

Situation

In September, a broach needle broke, leading to a 3-week analysis with no clear outcome. Two more breaks occurred in October, resulting in €100k of damage. Now, a high-speed camera system will be used to capture and evaluate the issue, focusing on kinetic force analysis.

At the core
- €100k damages
- Inconclusive 3-week analysis

Break seen at the top row of teeth (on the right side)



Approach

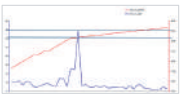
Table movement likely
- The process involves filming the system using high-speed cameras and analyzing individual images of the recorded footage
- By using two cameras, it's easier to spot any abnormalities

Camera 1: ***Roughing***

Camera 2: ***Smoothing***

Result

Conclusion: Wear on the drives (ball screw) at a height of 1720mm



Root cause fixed
- Shifting the switching point to 1650mm
- Eliminated vibration and noise
- Stable process, no eruption of teeth detectable

n/a

- €250k p.a.

Cut-check & video analysis enables troubleshooting of problem machines in the shortest possible time

4. Optimization tooling

E.g., combination tools, optimizing cutting geometry and materials with best-in-class tool know-how

Situation

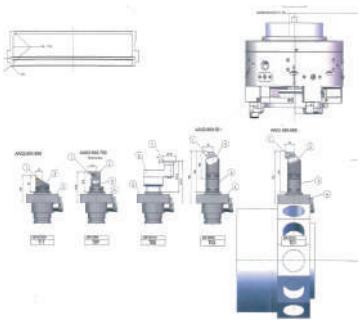
Initially this machine was a bottleneck in the machinery network.

Moreover, the processing time was too long.

In short
- Processing time was too long
- Consequently, external processing in the value chain was required

Approach

Change of processing time
- Tool-cutting, edge-plate optimization
- Iterative improvement loops
- Tool-change optimization



Result

Service life optimization of the tools is still ongoing.

Interim statement
- After the first tool tests, 7,7 seconds (- 4,9%-p) were saved by changing the cutting process

- 7.7 sec. initially

- €48k p.a.

With video analysis, we also optimize the tools and tool changes

5. Fault analysis at 'end-of-line'

Analysis of event video observations with visual analysis of automation processes

Situation

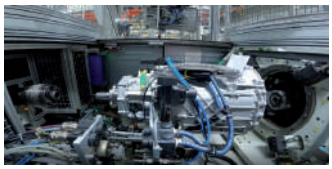
End-of-line test-bench automation failures
(test bench #1, assembly)

At the core
- The bottleneck was in the test bay
- Influence on OEE (Overall Equipment Effectiveness) of assembly and test bay

Approach

Video analysis of event observations with visual analysis of automation processes

Camera 1:



Camera 2:

Camera 3:

Result

Video material captured **5 malfunctions** and generated documentation of incident sequences, alongside information on **potential causes and influencing factors** for the issues.

Continuous improvement
- using short repeat sequences, optimizing processes,
- and retaining cost-effective equipment for incident reduction and process enhancement.

OEE + 15%-p

n/a

With video analysis, even machines that are susceptible to faults can be analyzed

Machining initiative at one plant: results

Video analysis

52	-11%	€4.3m	3 months
Number of machines analyzed	Cycle-time reduction in average	Savings per annum.	Payback period, in months

Machine tuning

48	-8%	€3.1m	3 months
Number of machines software installed on	Cycle-time reduction, on average	Savings per annum	Payback period, in months

As of today, the Machining initiative at the plant has generated an ongoing annual cost saving of €7.4m

As a next step, we would suggest a site-visit to see one of our many projects

I. Reference-site visit

… to see a 'Performance Booster' project in action

Showcase

- Site visit of a running project
- Live demo with production machine(s) to demonstrate the starting position, as see the added value that 'Performance Booster' measures can add
- Talk with client

1 day

II. Piloting

…of a 'Performance Booster' project

Proof-of-concept

- Definition of suitable machinery for the piloting phase – with leverage potential for a global rollout
- Setup of piloting team (customer, EFESO)
- Execution of pilot, impact evaluation and estimate of overall benefit for you

4-6 weeks

III. Project

…planning and execution for relevant production lines

Tangible results

- Setup and detailed planning of project (mixed team from customer, EFESO)
- Execution of project incl. business plan development (benefits, investments, etc.)
- Transformation roadmap and rollout planning
- Sign-off with management

12+ weeks

IV. Delivery & Rollout

…of 'Performance Booster' globally

Global leverage

- Setup of global rollout team (factories, countries, regions)
- Execution of global rollout
- Tracking and reporting of deliverables and generated impact
- 'Lessons learned' feedback loops created to optimize roll-out program on the fly

12+ months

SEE IT TO BELIEVE IT

In capital-intensive industries like Aerospace and Defense, CapEx decisions often come with long lead times, stakeholder risk, and strict compliance requirements.

The 'EFESO Performance Booster' is a proven, replicable method that has delivered millions in annual savings and double-digit performance gains. All without major investment.

Let us show you what's possible.

THE AUTHORS

Jost Kamenik
Member of EFESO's Group Executive Committee
Managing Partner Global Business Group Discrete Manufacturing

Florian Roth
Managing Director

Dominik Wichmann
Senior Principal

EFESO Management Consultants is a global leader in operations strategy and performance improvement. We work closely with clients across a broad range of industries to deliver real results tailored to their unique needs. Our end-to-end services integrate industrial AI, digital solutions, sustainability, and people development. With expertise spanning manufacturing, supply chain, procurement, capex, R&D and product services, we drive transformation through 1,500+ projects annually in over 75 countries.

Powered by deep industry knowledge and a commitment to lasting impact, EFESO works closely with global brands, mid-sized companies, and private equity to build resilience and future-ready operations.

Real Results, Together

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