# The pitstop approach to optimising metal decoration

*Modelled on the orchestrated teamwork found in Formula 1 racing, **Ralf Gumbel*** describes the benefits of similar training processes being used to improve productivity on metal decorating lines*

**Efficient production processes are essential for the long-term success of modern metal decoration departments in canmaking companies. Increasing price pressure from competition, alternative production methods such as labels and new types of packaging, as well as the increased complexity of manufacturing processes and higher quality requirements, often lead to inefficient routines creeping in, which often remain undetected for years.**

PMS Consult – a consulting firm specialising in printing and metal packaging – has been analysing production lines worldwide for many years. The evaluations consistently show that the greatest untapped savings potential are in the pressroom. With high-investment equipment, even minor process disruptions have a direct impact on overall productivity.

Experience from internal project documentation shows that waste can only be reliably identified if it is recorded directly on site. Even small, recurring deviations in cost-intensive metal printing systems have a significant impact on profitability.

## The print room as a central cost factor

In metal decoration, most deviations are not the result of technical deficits, but of poorly standardised processes. These include extended set-up times, inconsistent operating sequences, insufficient material provision or avoidable waiting times between individual process steps.

For example, if a pallet of material is placed in the printing room by the stacker driver with the material shifted, it is not the responsibility of the printing team to stop the machine in order to restack the ▸

material. This task must be carried out in advance by other personnel while the printing machine is in operation.

In production optimisation, the initial focus is on a holistic view of all processes: including interfaces with other departments, quality of incoming goods, order sequence, time recording and visualisation. In a later phase, 'pitstop' training follows as a targeted optimisation of the set-up processes. Only through a comprehensive analysis of the pressroom organisation, and consistent detail optimisation, can time and cost savings be achieved.

Non-value-adding activities ('Muda') quickly add up to significant losses in every day production. At the same time, many companies lack suitable key performance indicators (KPIs) to transparently display these losses. Practice shows that an objective analysis is essential to determine the actual potential of a production line.


## The four-step approach

PMS Consult relies on an established four-step model to identify and realise efficiency potential:

### *1: Print production check – identification of waste*

The first step is a systematic analysis of production using the print production check. Depending on requirements, this takes the form of a compact quick check or a detailed investigation lasting several days. Time recordings, photo and video-based documentation and all relevant process data are collected.

The aim is to clearly identify the main cost drivers, measure process disruptions and make an objective comparison with industry standards. Immediately after the survey, companies receive a meaningful initial evaluation including clearly defined areas for action.

### *2: Analysis phase – evaluation of options for action*

Based on the data obtained, a structured analysis is carried out, taking into account both technical and organisational factors. Problem areas are divided into categories such as organisation, process design and external factors.

PMS Consult then develops scenarios with before-and-after simulations, draws up action plans and proposes alternative production methods. The decision on implementation is made by the company.

*"Pitstop training enables precise analysis and optimisation of each individual process step – comparable to the meticulous support given to top athletes"*

*Ralf Gumbel, PMS Consult*

### *3: On-site implementation – increasing efficiency in real operation*

The implementation phase takes place directly in production and includes, among other things:

Optimisation of set-up processes

- Improvement of incoming goods inspections
- Optimisation of the team structure
- Adjustment of gripping and movement paths
- Standardisation of material provision
- Benchmarking against manufacturer values

Close cooperation with the production team ensures practical solutions that have an immediate effect.

### *4: Key figures and audits – ensuring sustainability*

Company-specific KPIs are developed to ensure long-term efficiency gains. Regular audits are used to review progress, validate results and continuously adapt processes.

This continuous monitoring ensures transparency and the long-term effectiveness of the measures introduced.

## Pitstop training

Pitstop training is a special feature that has been very well received within the industry and by customers.

This training concept follows the principle used in Formula 1 motor sport: optimum processes are created through clear role allocation, precisely rehearsed movements and regular training.

Specifically, the training includes:

- Detailed analysis of existing set-up processes
- Definition of clear team roles
- Development of a standardised process flow
- Intensive training directly on the line
- Consolidation of processes during ongoing operations

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athletes. The reference to Formula 1 is deliberate: it is not only technology and performance that determines success, but also strategy, competence and teamwork. PMS Consult applies these principles to the printing setup process. A well-coordinated team that consistently implements clearly structured processes fully exploits the technical potential, regardless of the age of the machines.

This does not mean that just anyone goes to the printing press to change the plate or that anyone carries out the stack change. Instead, as in Formula 1, the racing car enters the pit lane at a predetermined time, and the team is ready with fixed roles for tyre changes or refuelling to complete this in the shortest possible time.

As part of the pitstop training, an ideal sequence is developed, adapted to each machine type and then intensively practised. Since technical steps may vary, all movements are defined individually and practised in the optimum sequence. Precise timing, repetition and synchronisation with automated machine functions are essential elements.

The result is further reductions in set-up times, improved team performance and increased efficiency, so that in many cases investments in new machine technology can be delayed. Reports from field document successes show 20 to 50% faster set-up processes, more stable workflows and a noticeable reduction in the workload for staff.

PMS Consult offers a free online print production test to assess a client's competitiveness. After completing the test, clients see an individual evaluation and can optionally request a comparison with the industry average.

## Conclusion

In today's printing industry, process optimisation is not only a business management tool, but also an essential strategic success factor for remaining competitive. Anyone who believes that print shop managers are capable of handling such projects on the side is usually mistaken – I know from experience that most don't have the time for it. While it is common practice to hire coaches in sports, the team that generates revenue for you is often neglected.

The holistic approach offered by PMS Consult is a structured overall concept for sustainable optimisation that ranges from detailed analysis to practical implementation and verifiable results.

The combination of technical expertise, a practical approach and innovative training methods – including pitstop training – increases the efficiency of the pressroom. This model could be a tool that enhances technical performance, process stability and economic success.

**More information from Ralf Gumbel, managing director of PMS Consult pms-consult.com*