

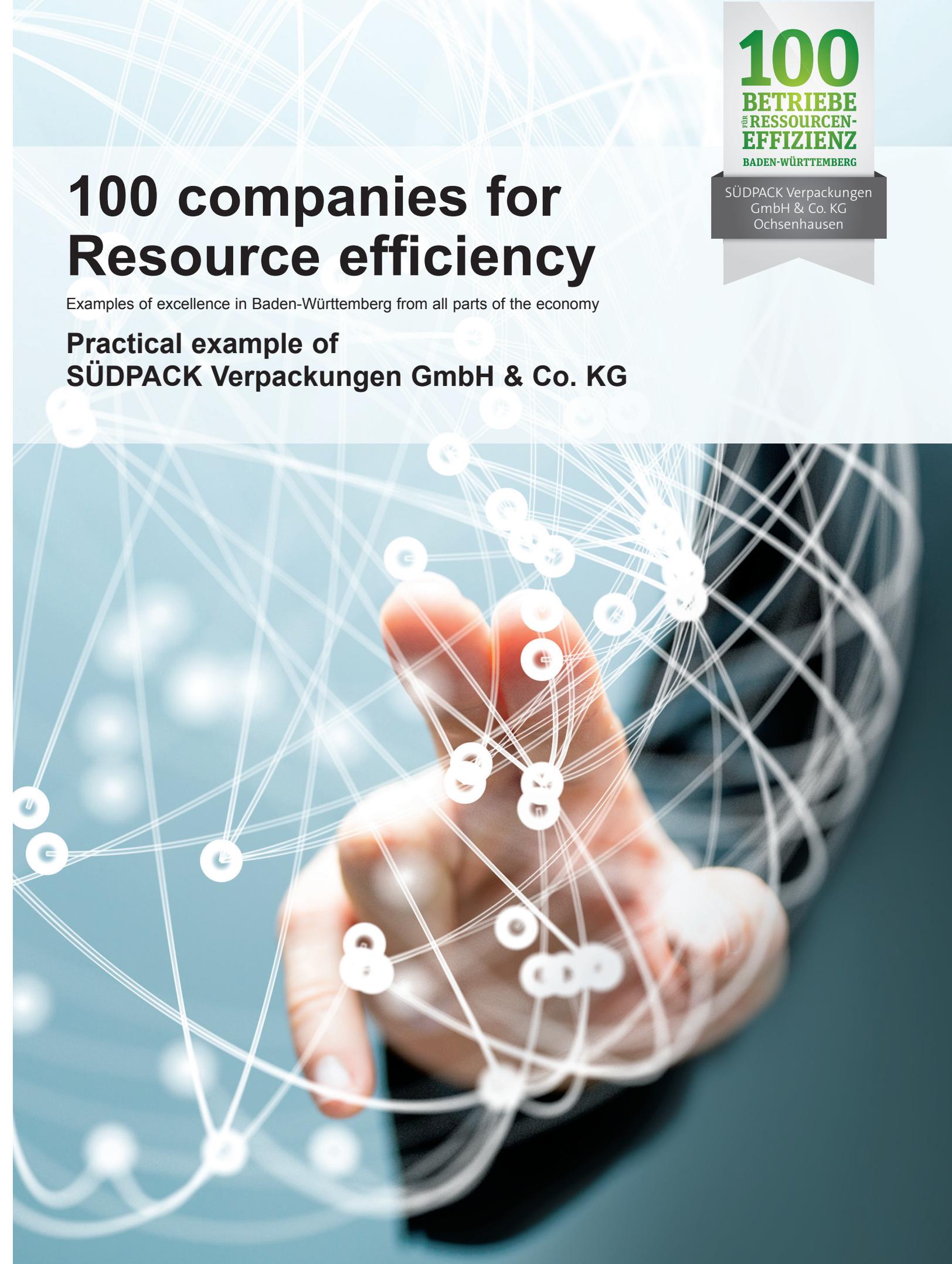
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**BETRIEBE**  
FÜR **RESSOURCEN-**  
**EFFIZIENZ**  
**BADEN-WÜRTTEMBERG**

SÜDPACK Verpackungen  
GmbH & Co. KG  
Ochsenhausen

# 100 companies for Resource efficiency

Examples of excellence in Baden-Württemberg from all parts of the economy

**Practical example of  
SÜDPACK Verpackungen GmbH & Co. KG**



# SPQ – Impressive results in reducing resource consumption

## SÜDPACK Verpackungen GmbH & Co. KG, Ochsenhausen

Engineering/Process Technology:

Production and finishing of high-performance films and packaging materials for the food, non-food and medical goods industries.

Action:

Implementation and optimization of a new, highly resource-efficient printing technology for films

### Initial situation and target

SÜDPACK Verpackungen GmbH & Co. KG, based in Ochsenhausen in Upper Swabia, has specialized in the production and finishing of high-performance films for various industries for more than 50 years. These high-performance films are used, for example, in the production of food packaging and are printed according to customer specifications as part of the finishing process.

Due to the fast-paced nature of the food industry, there is an increasing demand for smaller batch sizes and greater flexibility while maintaining high quality. Furthermore, the market is increasingly determined by strong cost pressure as well as the demand for more sustainability.

Against this background, SÜDPACK has set itself the goal of revising the printing process and establishing a more sustainable printing technology on the market.

### Challenge

Printing processes are linked to high material and energy consumption due to ink changes, cleaning processes and press proofs. This is because the conventional ink buildup of printed images is based on four fixed basic colors and up to five spot colors, which usually have to be changed for each job, including anilox rollers. Material and energy consumption had to be optimized in such a way that the quality of the print was not compromised. The course for this was set during project development, where various challenges also arose. In addition to the content-related project development, cross-departmental standardization had to be developed and esta-

blished, as various departments were involved in the project. The technological changes, such as the standardized color palette, had to be implemented in the individual departments in a way that made economic sense.

### Idea

The foundation of the new technology was to be end-to-end standardization of press and process parameters and intelligent color management in the form of a standardized color palette. This was to save material and energy, while print quality was to remain very high.

### Implementation

Development and implementation were carried out over the last 20 months by a departmental and, in some cases, cross-plant project team comprising various skills and specialists from the individual departments. The Sales, SCM, Prepress, Press and Process Technology departments were involved. The result is the new Sustainable Print Quality technology (SPQ technology).

In prepress, all designs are now mapped automatically and stable process using a standardized color palette. With SPQ, the plate-making process can be water-based instead of using solvents. In addition, solvent consumption is also reduced with SPQ in the cleaning process. Thanks to the standardized color palette, the number of color changes and ink application, which leads to reduced ink loss.

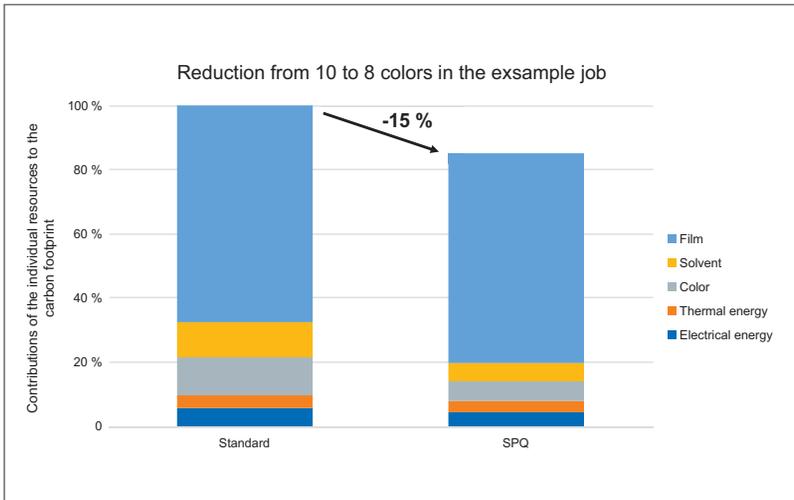
The high register accuracy and the standardized color management along the process chain lead to increased color consistency and thus to a considerable increase in the quality



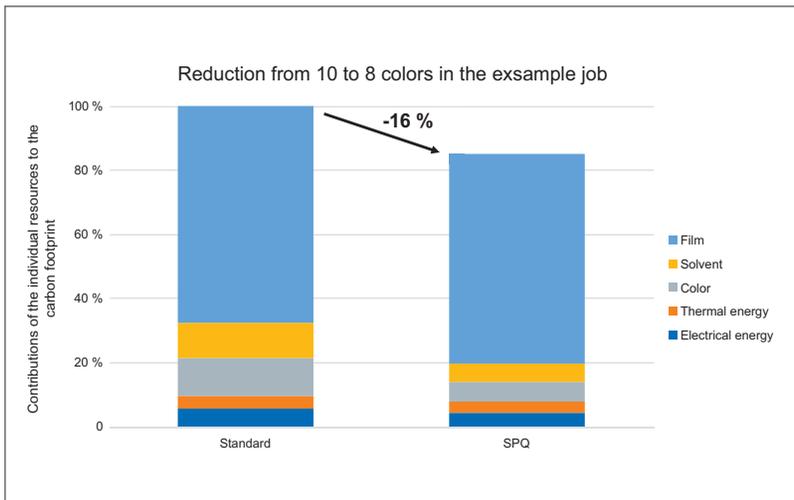
SPQ Printing machine

Image right:  
Media technologists  
in conversation





CO<sub>2</sub> savings by reducing from 10 to 8 colors



CO<sub>2</sub> savings by reducing from 10 to 6 colors

level. The print adjustments or print acceptances on site that were previously necessary become obsolete. SPQ technology has succeeded in reducing ink and solvent waste by more than 60% when converting multiple print images.

Since ink changes and anilox roller changes and mixing are eliminated, make-ready time is reduced by 25% compared to conventional printing, saving energy and labor time. Furthermore, film waste is reduced because less material has to be used during changeover and there is also less waste for the press proofs. Thanks to the standard color palette, colors need to be changed less frequently and ink application can be reduced. In addition, no special colors are used. These are built up and simulated using the fixed color palette. Less energy is required due to

the smaller inking units and a lower drying effort.

The first pilot projects were carried out in 2021. Customer orders have been running since January 2022 and demand is increasing, which is why the implementation is being gradually extended. In the process, the switch to SPQ is being made in close consultation with customers. If SPQ is not technically possible for a particular print job, conventional printing will continue. Currently, the innovative printing technology is being implemented at both the Ochsenhausen site and the Klobuck site.

### Savings

The achievable savings with SPQ technology are illustrated with an example job. For an example job using 20 µm polypropylene film (OPP) and comprising 20,000 m<sup>2</sup> of printed film, 46% ink, 61% solvent and 4% film can be saved. On the energy side, the new technology can save 21% electricity and 20% thermal energy based on the example job.

The CO<sub>2</sub> savings in the example are 4 % for the film, 46 % for the ink and 57 % for the two solvents used for the print and printing plate. In the case of electricity and thermal energy, CO<sub>2</sub> savings of 21% for electricity and 20% for thermal energy can be achieved. This corresponds to CO<sub>2</sub> emissions of 0.25 t CO<sub>2</sub>e for this order.

The future potential is several million square meters of film per year. SÜDPACK assumes that most customer orders that do not want special effects such as gold or silver coating can be converted.

### Learning Objective

The SPQ technology represents both a technical innovation and an innovation within the industry. The learning through the SPQ project, besides the technical innovations, was not to lose sight of the goal, even if the implementation is more complex and difficult than it seems at first sight. But it is worth staying consistent and continuing to work. Because only with the courage to turn visions into real concepts and to think long-term will a sustainable future be realized. In the long term, SÜDPACK plans to use the majority of SPQ technology for the production of printed packaging films. In addition, the tech-

nology is constantly being optimized and further developed to bring quality and sustainability into even better harmony.

### Company

SÜDPACK is a leading manufacturer of high-performance films and packaging materials for the food, non-food and medical goods industries. Since its foundation in 1964 by Alfred Remmele, SÜDPACK has stood for top quality, innovative strength and technological leadership. The solutions ensure maximum product protection as well as other groundbreaking functionalities with minimum material input, which contributes significantly to improved consumer protection.

Headquartered in Ochsenhausen, Germany, the group employs around 1,700 people and manufactures at ten sites in Germany, France, Poland, Switzerland, the Netherlands, the USA and India. The production sites are equipped with state-of-the-art plant technology and manufacture to the highest standards, including cleanroom conditions. The worldwide sales and service network guarantees a high degree of customer proximity as well as comprehensive application technology support in more than 70 countries. SÜDPACK secures its leading position in the market through extensive investments in new technologies, in the product portfolio and in the continuous further development of the entire organization.



Head office of SÜDPACK Ochsenhausen



SÜDPACK Ochsenhausen

# SÜDPACK

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The “100 Companies for Resource Efficiency” project was initiated by the Alliance for More Resource Efficiency between the leading business associations in Baden-Württemberg and the state government. The alliance includes the Baden-Württemberg Ministry for the Environment, Climate and Energy Management, the Association of Entrepreneurs Baden-Württemberg e. V. (UBW), the Baden-Württemberg Association of Chambers of Industry and Commerce e. V. (BWIHK), the Association of the Chemical Industry e. V. (VCI), State Association of Baden-Württemberg, the Association of German Machinery and Plant Manufacturers Baden-Württemberg (VDMA) and the Central Association of the Electrical Engineering and Electrical Industry (ZVEI), State Office of Baden-Württemberg.

The project is being carried out together by the Institute for Industrial Ecology (INEC) at Pforzheim University and the Environmental Technology BW State Agency (UTBW). The examples presented were carefully reviewed and selected by a jury of members from the participating alliance partners.

The initiative shows how resource efficiency can be implemented in concrete terms and what benefits are associated with it. It supports existing resource efficiency activities in the country with concrete, presentable results and brings them to the operational level of action. This motivates further companies to join in. Over 100 examples of excellence have already received awards and been published in two books by Springer Verlag. The number of examples of excellence is to be continuously expanded. The aim is to build up a network of excellence that will radiate beyond Baden-Württemberg and underscore the performance of the local economy. To this end, the examples of excellence will be highlighted and presented in a representative, high-profile and exemplary manner.

**Further information about the project:**

[www.100betriebe.de](http://www.100betriebe.de)

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This example complements those already published in the following books

Mario Schmidt, Hannes Spieth, Joa Bauer, Christian Haubach: 100 Betriebe für Ressourceneffizienz, Band 1 – Praxisbeispiele aus der produzierenden Wirtschaft. Verlag Springer Spektrum 2017. [www.springer.com/de/book/9783662533666](http://www.springer.com/de/book/9783662533666)

Mario Schmidt, Hannes Spieth, Christian Haubach, Marlene Preiß, Joa Bauer: 100 Betriebe für Ressourceneffizienz, Band 2 – Praxisbeispiele und Erfahrungen. Verlag Springer Spektrum 2018. [www.springer.com/de/book/9783662567111](http://www.springer.com/de/book/9783662567111)

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**Baden-Württemberg**

MINISTERIUM FÜR UMWELT, KLIMA UND ENERGIEWIRTSCHAFT