



Checklist 4.0

How to increase efficiency in your production with digital checklists

Used by leading companies



Paper-based processes: Efficiency killers in production

International competitive pressure, cost pressure, a shortage of skilled workers and increasing demands from customers or regulations are constantly interfering with the corporate value creation process.

Especially in **production processes** such as maintenance, assembly, quality inspection, etc., these *rapidly increasing challenges* must be mastered. Despite all the difficulties, your **operational employees** ensure added value for your company day after day.

Challenges



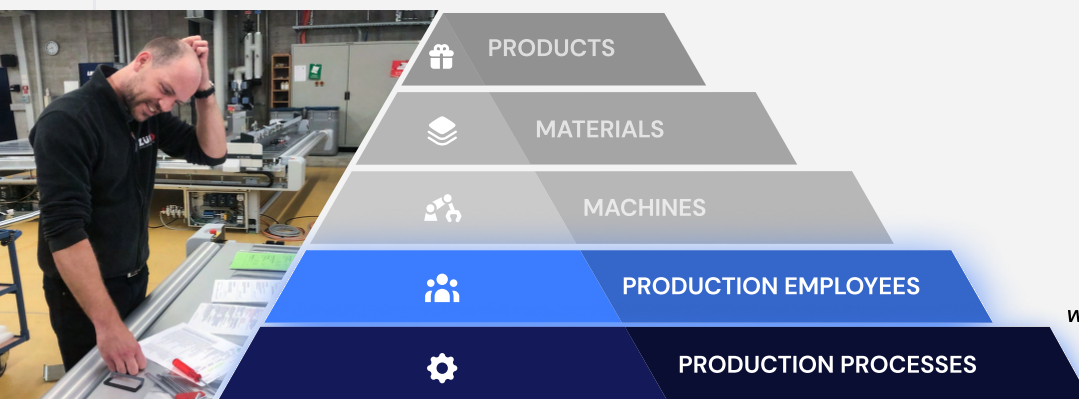
Competitive and
cost pressure



Skills shortage



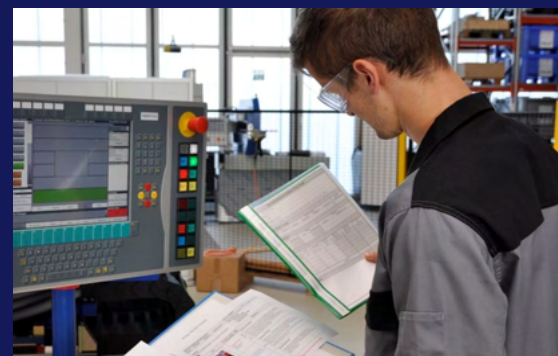
Increasing
requirements



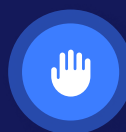
Value creation pyramid
with focus on processes
← and employees

While industrial companies have already understood that digitalization can help them meet the high demands, production employees continue to work **with paper-based work instructions and checklists**.

The status quo in production is often as follows:



Too much paper
in production



High manual effort



No standardized
process knowledge

The problems of the status quo through paper-based checklists

Whether in assembly, machine maintenance, quality inspection, incoming and outgoing goods inspections or audits:

Checklists pursue the goal of checking standards such as product quality, process conformity or machine conditions. In the paper-based version, however, these inflexible documents **generate a large number of operational problems and become real cost drivers.**

Checklists are often not used on their own, but require additional reference documents such as test instructions to illustrate test procedures or similar. However, more documents mean more interpretation and comparison work for your employees and **do not allow them to work efficiently.**

Another disadvantage often lies in the **immense manual transfer effort** involved when results documented on the checklist have to be entered manually into ERP systems or analysis software in order to make the data available digitally.

Checkliste Kupplungs Zahnrad und Kupplungsgrundplatte montieren					
Artikelnummer / Version / Part No.:		146789413			
Artikelbezeichnung / Description:		Kupplung			
Serial Nr. / Serial No.:		F-643304			
Chargen Nr. / Charge No.:		1302			
Pos.	Arbeitsgang / Production Step	Arbeitsanweisung / Working instruction	Hilfsmittel / Aid	Zeichen / Sign	Datum / Date
1	Kupplungs Zahnrad und Kupplungsgrundplatte auflegen / Place clutch gear and clutch base plate	AA43251		PK	08.03
2	Reibungsfreie Rotation des Kupplungs Zahnrads möglich / Smooth rotation of the clutch gear wheel possible	AA43252		PK	08.03
3	Montagescheibe und Kupplungs Zahnrad zentral auflegen / Place the mounting plate and clutch gear centrally	AA43253		PK	08.03
4	Kupplungs Zahnrad zentral aufgesetzt / Clutch gear wheel mounted centrally			PK	08.03
5	Mutter festgezogen mit ca. 100 Nm / Nut tightened with approx. 100 Nm		5-6734124	PK	08.03
6	Korrekten Positionierung der Einkerbungen der Kupplungs Grundplatte mit Kupplungs Zahnrad / Correct positioning of the indents of the clutch base plate with clutch gear			PK	08.03
7	Bilder aufgenommen und archiviert / Capturing and archiving images			PK	11.03
8	Prüfung erfolgreich durchgeführt / Test successfully performed			PK	11.03
Kommentar / Comment					
Montage wurde erzeugt über falsche Beschreibung in Skript, ca. 2 min Lösung. Bitte um AU prüfen kann					



Documentation on
paper checklist



Manual transfer
to software



Analog archiving



“The time of our well-trained and experienced employees is precious. They should not have to use this valuable time to search through paper-based documents.”

Claudio Sutter
Project Engineer Process Excellence
KraussMaffei



Analog problems solved digitally

Paper-based processes have a number of costly consequences that manifest themselves in practice as follows:

Inefficient execution of activities

due to non-employee-friendly work instructions and maximum checklists



Risk for loss of knowledge

due to unsecured knowledge of experienced employees upon retirement



Additional manual effort

in managing checklists and manual data transfer from paper to ERP/analysis software



Increased error and cost potential

because of complex and text-heavy information presentation



Slow CIP process

due to long pass-through cycles of adjustments caused by paper



Incomplete documentation and poor traceability

caused by a lack of control mechanisms in analog documentation and archiving processes



All of this prevents manufacturing companies from establishing more efficient and high-performance production processes to increase company growth.

The good news: digital checklists can be used to digitize employee-led activities and provide more comprehensible information as a real game changer in production.

“Automatically generated, variant-specific quality inspection protocols in Operations¹ reduce interpretation effort for our employees and thus increase the quality of our documentation.”



Walter Wittmann
Head of Assembly Line
Krones AG



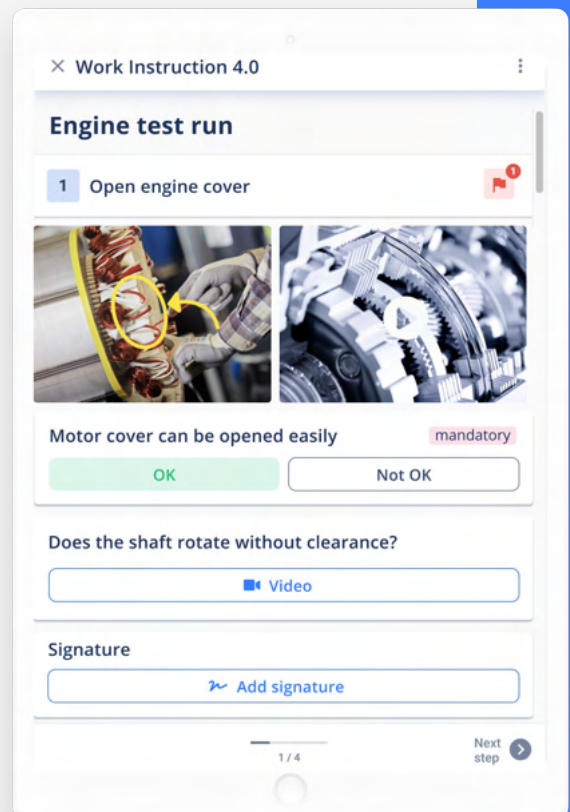
The interactive checklist 4.0...

...revolutionizes the way we work in production:

Unnecessary interpretation and comparison efforts due to paper-based document chaos from checklists and reference documents are a thing of the past.

Thanks to digital checklists, your employees can now **record results and findings directly via interactive input, sensor integration or integrated image and video recording.**

This gives you a clear picture of the actual incidents and conditions in production and you can use these findings to initiate improvement measures much more quickly.



Your advantages with digital checklists

Secured process knowledge

centrally and available at all times



Quick training

of employees through multilingual multimedia checklists



Cost and error reduction

through standardized processes and digital results capturing



Increased efficiency and speed

in the execution of activities through comprehensible information provision



Flexible process optimization

through quick adaptation and immediate provision of optimized content



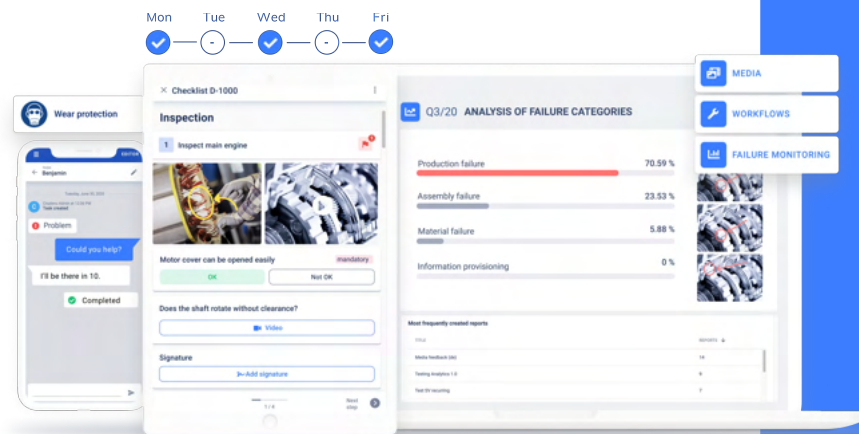
Increased verifiability

with seamless digital reports



A field-proven software

Operations1 not only helps to reduce non-value-adding activities in production, but also supports companies in **saving costs and unlocking previously tied-up time resources** so that they can be used to create value for more growth.



“The reduction in training times by 67% with Operations1 results in **annual savings of over € 2.2 million.**”

Steffen Paul
Head of Future Projects / REFA
POLIPOL

-67% TRAINING TIME



-60% MACHINE DOWNTIME



**Hirschvogel
Automotive Group**

“By using Operations1, we save **€250,000 per location every year.**”

Stefan Führer
Maintenance Leader
Hirschvogel Automotive Group



-95% EFFORT FOR DOCUMENTATION

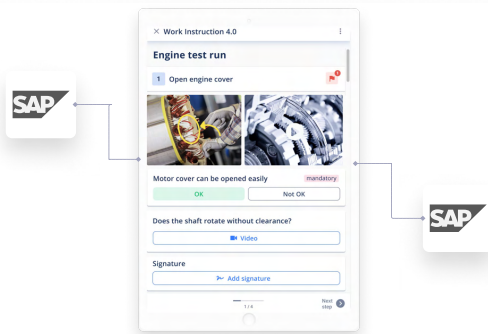


“Through Operations1 we save **over €180,000 per year.**”

Cyril Maurer
Head of Production and Test Bench
Soudronic

Soudronic

Always adding value – as a stand-alone solution or connected



Thanks to our integration solutions such as REST API, Operations1 can be connected to **leading systems such as ERP, ME etc.** on request. This allows you to exploit the full potential of your system landscape and your available order and process data.

Well advised and supported by our product experts

Take advantage of our team's years of experience and get in touch with our product experts:

- ✓ Discussion of your use case
- ✓ Analysis of existing problems in your process
- ✓ Presentation of solution options with the Operations1 software



"The Operations1 team very quickly conducted a convincing analysis of our current situation and found exactly the right answers to our challenges."

Markus Hölzl
Global CIO
Zünd Systemtechnik

ZÜND
swiss cutting systems

Extract of our customers



BOSCH



STABILO



LIEBHERR

DAIMLER TRUCK



JUNGHEINRICH



operations¹

Get into conversation with us

Use the exchange with our product experts to find out how you can benefit specifically from Operations1.



[Book a meeting](#)



www.operations1.com

