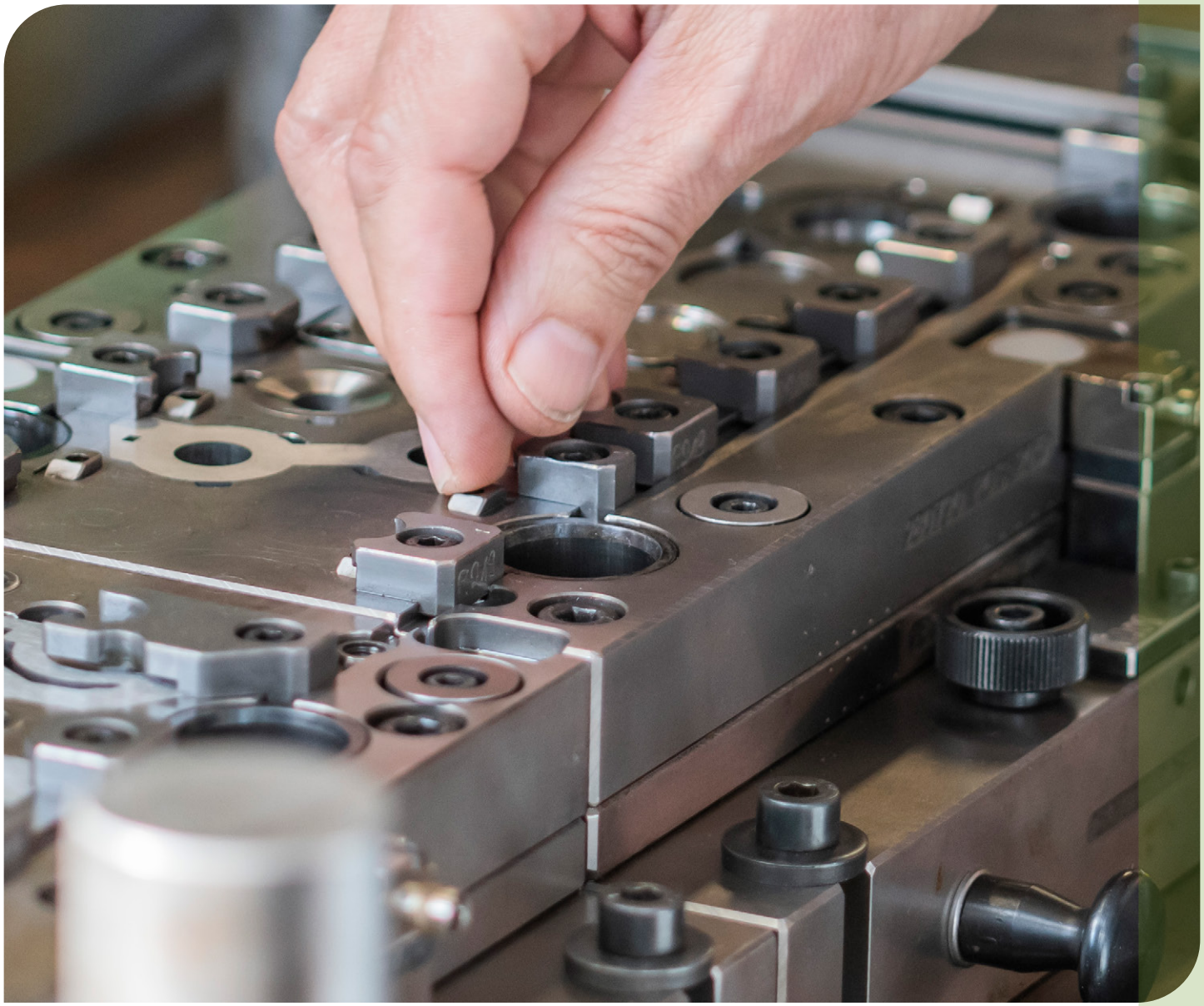
iT ENGINEERING
MANUFACTURING SOLUTIONS



Maintenance in the digital value chain

WE ENABLE SMART MANUFACTURING

Is this your way of performing maintenance?

Don‘t worry,
You are not alone.
But there is another way.

For example, with the digital maintenance process. This allows you to document all planned maintenance as well as fault-related repairs, including all components and spare parts used. Everything is entered seamlessly.

How does this benefit your production?

Digital documentation of the maintenance process with images **creates clarity**

Optimal information flow between production and toolmaking

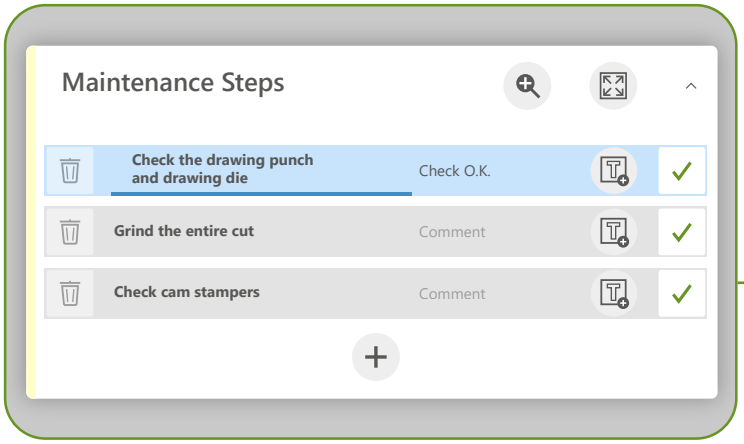
Easily derive tool analyses from digital maintenance data

Exact downtimes of the tools based on the recorded machine cycles

Documenting maintenance has never been easier

Maintenance or repairs can be easily initiated using a QR code. All necessary documents, drawings, work instructions, or videos are available digitally.

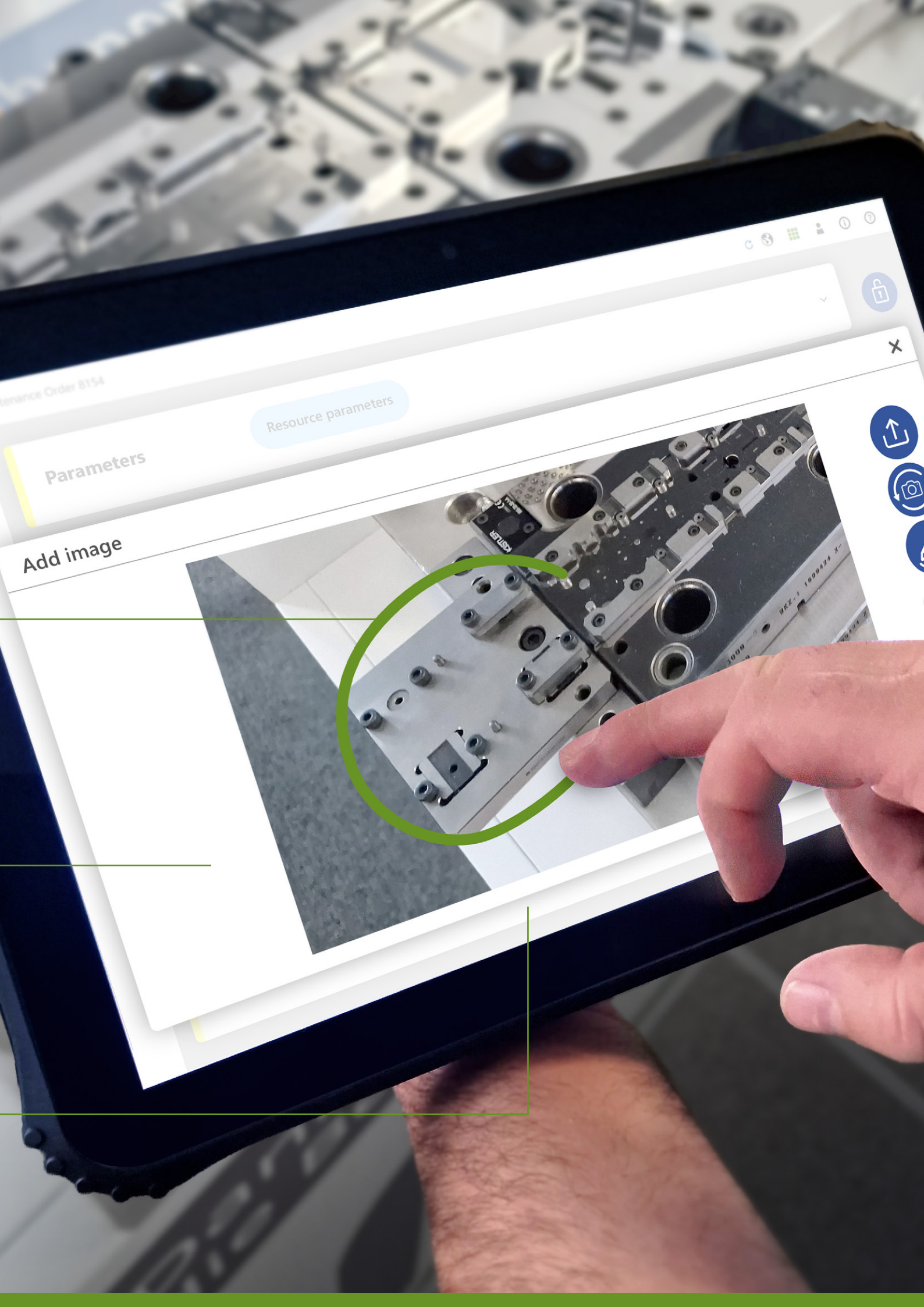
Depending on your preference, you can check off the maintenance steps you have performed using either the simplified or detailed checklist entry. Each maintenance task can also be supplemented with images and comments for optimal documentation. This allows you to track every step seamlessly.

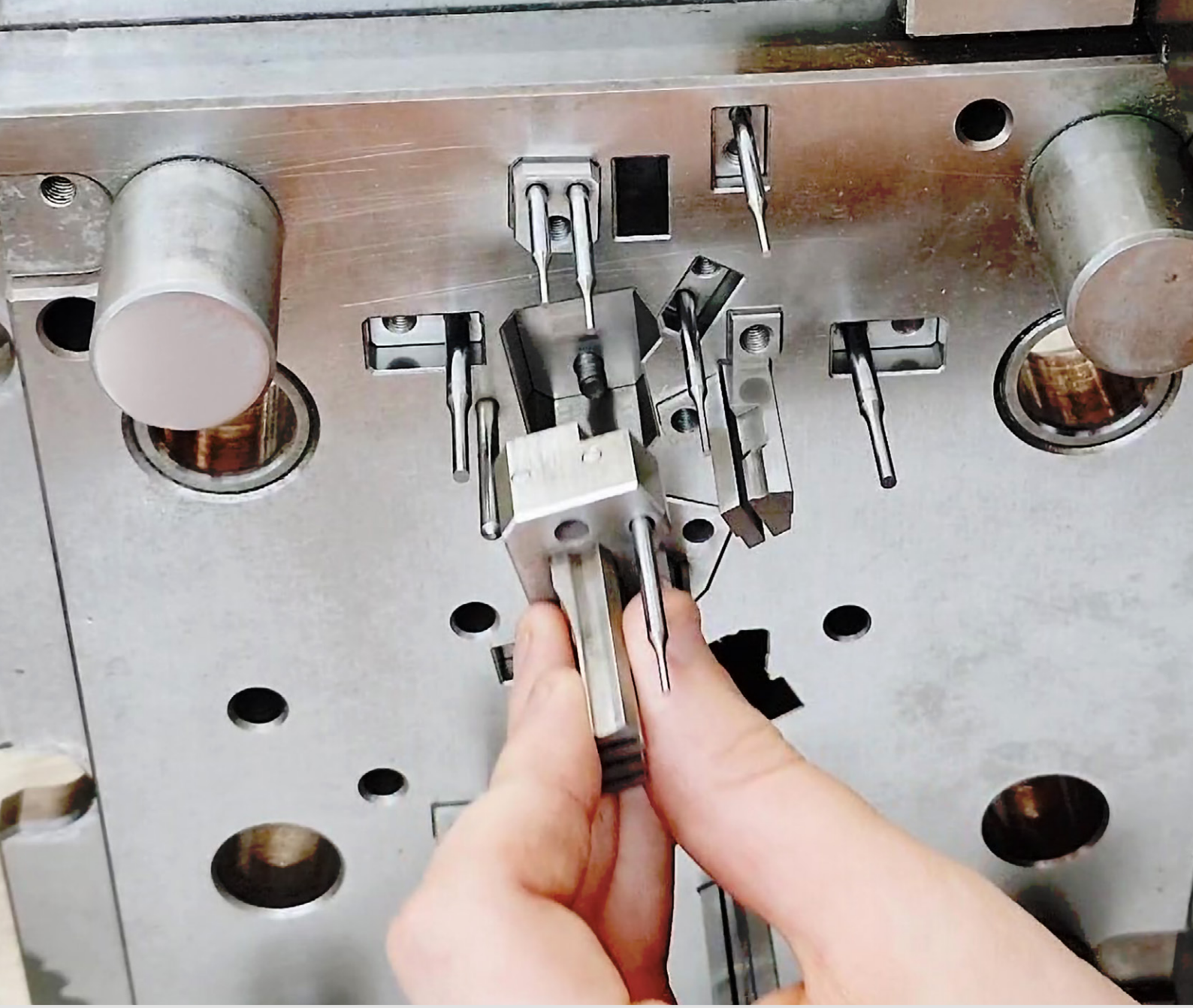


Take a picture and mark it

Select comments from text templates

Simply check off your checklist or maintenance schedule


Parameters
Resource parameters
Add image



Name	Number	Storage	Label	Description	Spare parts list	Minimum stoc
Base plate	E06372	Storage 3	GP-E06372	-	ETL-E06-003...	2
Top plate	E06837	Storage 6	KP-E06837	-	ETL-E06-006...	6
Clamping plate	**E06214**	**Storage 1**	**ASP-E06214**	**of ASP-2**	**ETL-E06-00...**	**2**
Lifter	E06063	Storage 9	H-E06063	-	ETL-E06-009...	5
Punch	E06845	Storage 7	L-E06845	of DIN 983526	ETL-E06-007...	2
Cutting die	**E06694**	**Storage 1**	**SF-E06694**	**of SF-24**	**ETL-E06-00...**	**2**
Insert emboss	**E06687**	**Storage 5**	**EP-E06687**	**of DIN 982534**	**ETL-E06-00...**	**3**
Cutting punch	E06378	Storage 10	SST-E06378	-	ETL-E06-010...	2

Full control over spare parts

Whether purchased spare parts or those manufactured in your own tool shop, your spare parts are always neatly stored and listed. Separate lists are therefore no longer necessary.

Manage inventory, costs, and storage locations at a glance. With digital spare parts management, you can always track which spare part is used where and how, or where it can be found and in what quantity.

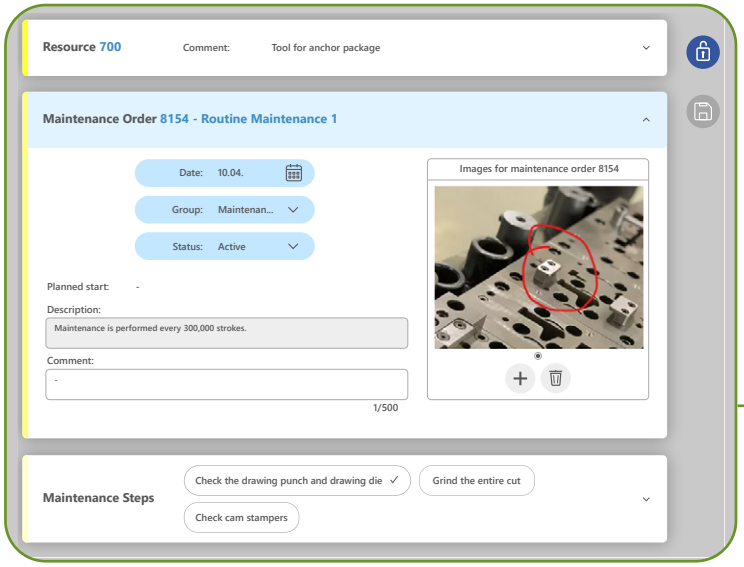
Simply select the required spare part from the list during maintenance and add it to your maintenance task. Thanks to automatic inventory monitoring, you can always see exactly which spare parts are available.

Stock	Warning stock	In-house / Purchased	Prize €	Supplier	Order stock	Details
6	3	Purchased	14,31	ETeile-Bauer	10	
10	8	Purchased	3,84	ETeile-Bauer	20	
3	**3**	**In-house**	**8,76**	**-**	**-**	
25	8	Purchased	3,07	ETeile-Bauer	40	
9	4	In-house	5,83	-	-	
3	**3**	**In-house**	**0,59**	**-**	**-**	
2	**5**	**In-house**	**11,68**	**-**	**-**	
9	5	Purchased	3,63	Teile Fritz	20	

The digital lifecycle card creates clarity

It allows all tool-related events, maintenance and repairs to be analyzed and tracked seamlessly.

This means that the entire service life of the machine or tool is documented in the history. Installed spare parts and their number can be traced exactly.

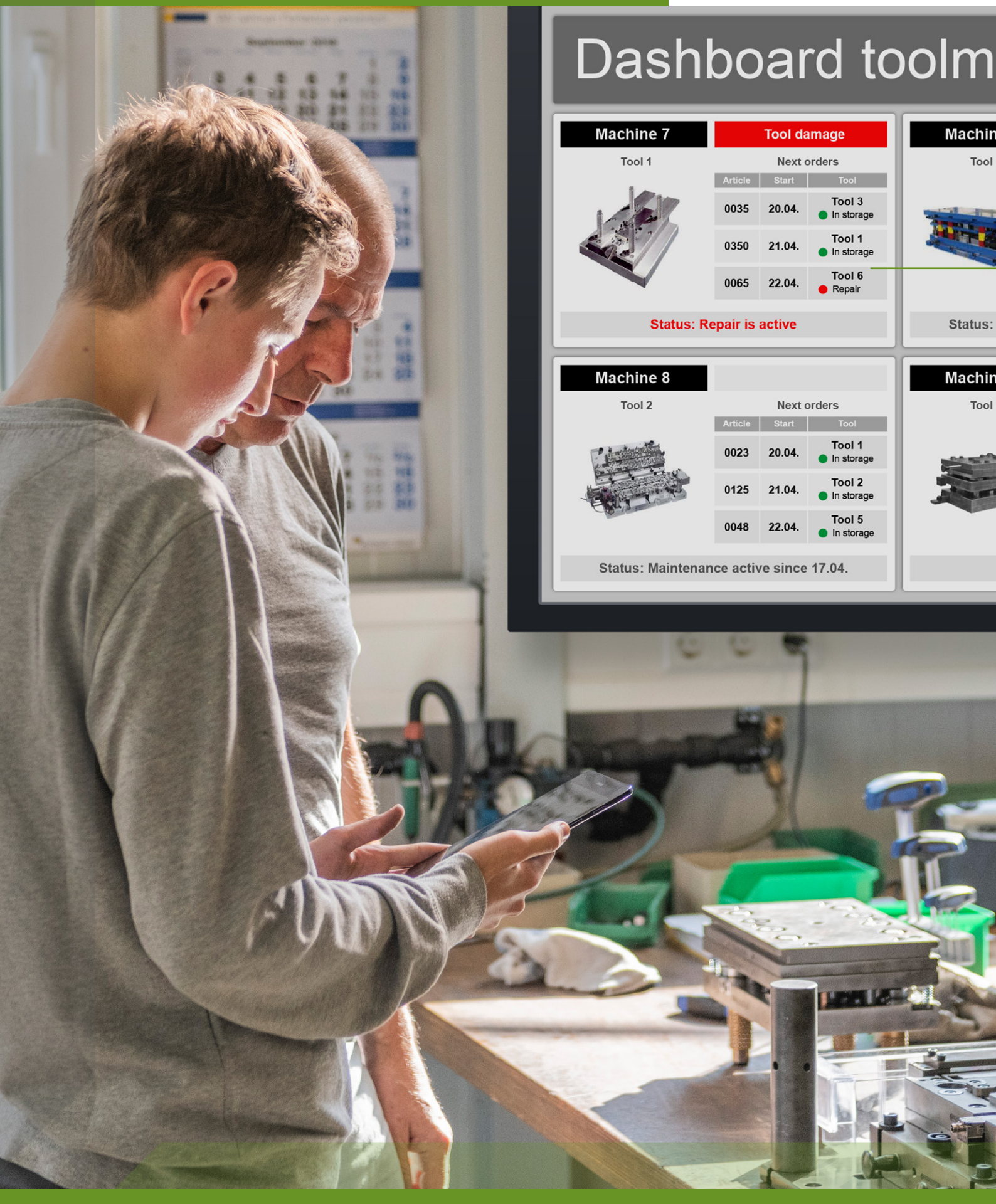


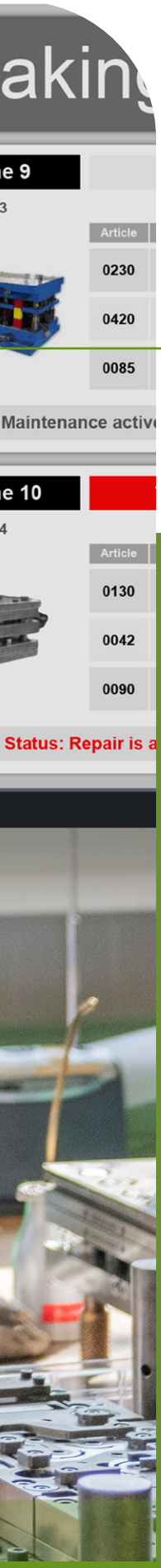
Easy access to all work carried out

Repair/ maintenance times + spare parts

Analysis of the most frequent repairs


Lifecycle card W-00007
Row
Date
Status
Quantity produced
Label
Maintenance name
Description
Target time Maintena.
1
22.11. 19:42:26
free
413,154
2
06.04. 07:29:41
in action
450,793
W 7984
Routine maintenance 1
Maintenance all 300,000 strokes...
122,235 [Clocks]
3
07.04. 09:08:23
in action
Measure
Check the drawing punch and drawing die
All drawing punches + drawing dies...
Spare part
Spare part
Spare part
3.1
3.1.1
3.1.2
3.1.3
3.2
3.3
4
07.04. 12:53:25
in action
532,885
Measure
Grind complete cut
All drawing punches + drawing dies...
Measure
Checking the cam embosser
ffff
5
07.04. 12:54:28
repair
R 7987
Tool repair
07.04. 12:54:26
6
07.04. 13:04:07
In action
533,030
07.04. 13:06:15
7
07.04. 13:06:17
Repair
533,030
R 7988
Tool repair
8
07.04. 13:07:43
In action
541,097
9
19.04. 08:20:31
In action
589,862
W 7993
Maintenance before storage
[Pcs.]
10
20.02. 16:10:13
In storage
589,862
W 7986
General tool maintenance
Dismantle tool, punching strip...
0 [Clocks]
11
21.04. 14:45:13
In storage
W 8014
Drawing punch
12
18.08. 14:27:25
In storage
R 8020
Repair bender
21.07. - 09:27:28
13
20.07. 10:43:04
In storage
W 8029
Maintenance before production
[Pcs.]
14
21.07. 09:27:28
In storage
15
21.03. 18:00:41
In storage
589,862
16
21.03. 18:00:41
In storage


Dashboard toolm
Machine 7
Tool damage
Tool 1
Next orders
Article
Start
Tool
0035
20.04.
Tool 3
In storage
0350
21.04.
Tool 1
In storage
0065
22.04.
Tool 6
Repair
Status: Repair is active
Machin
Tool
Status:
Machine 8
Tool 2
Next orders
Article
Start
Tool
0023
20.04.
Tool 1
In storage
0125
21.04.
Tool 2
In storage
0048
22.04.
Tool 5
In storage
Status: Maintenance active since 17.04.
Machin
Tool



The classic case: The machine stops due to tool damage. And stops. And stops...

The solution?

- Malfunction is displayed on the dashboard in the tool shop
- Maintenance can react immediately
- Clean documentation of measures, spare parts and times

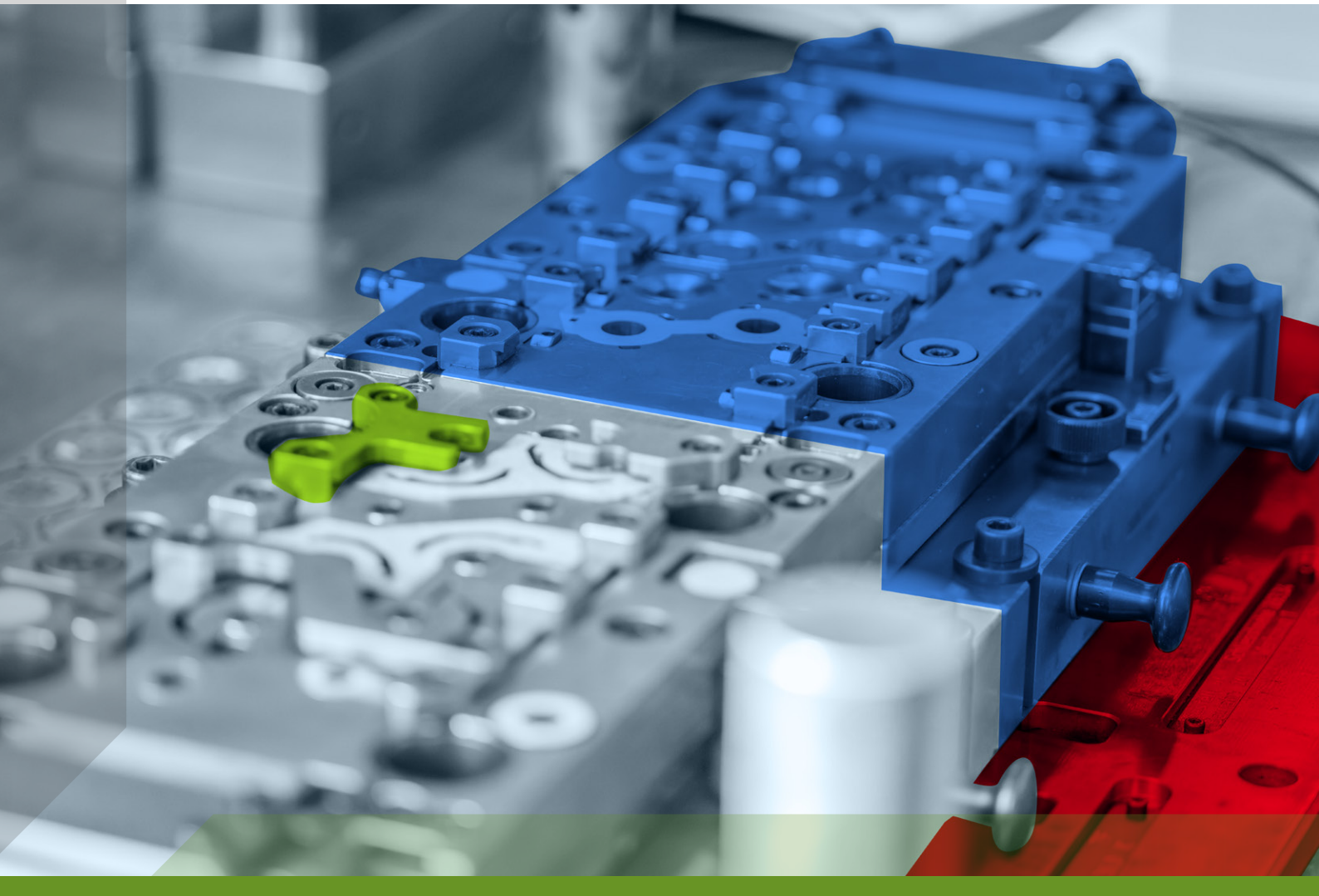
Optimize processes betw. production and toolmaking ...

... and thus simply increase machine running times. Everyone knows the current tool status and availability.

Exakt downtimes

In the digital maintenance process, the tool including all the tool components used in the required level of detail by the maintenance manager.

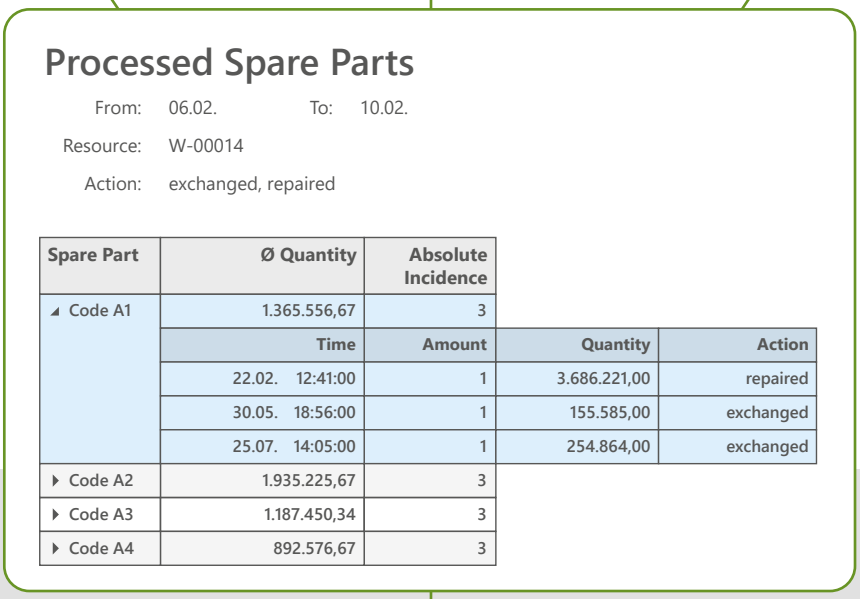
Your tool shop is informed when a maintenance cycle expires and the life cycle map is automatically updated. This forms the basis for complete documentation of a tool's entire life cycle.



Which tool sets are responsible for production losses responsible?

Which spare part is most frequently replaced?

How many benders to hold for a production?



Processed Spare Parts

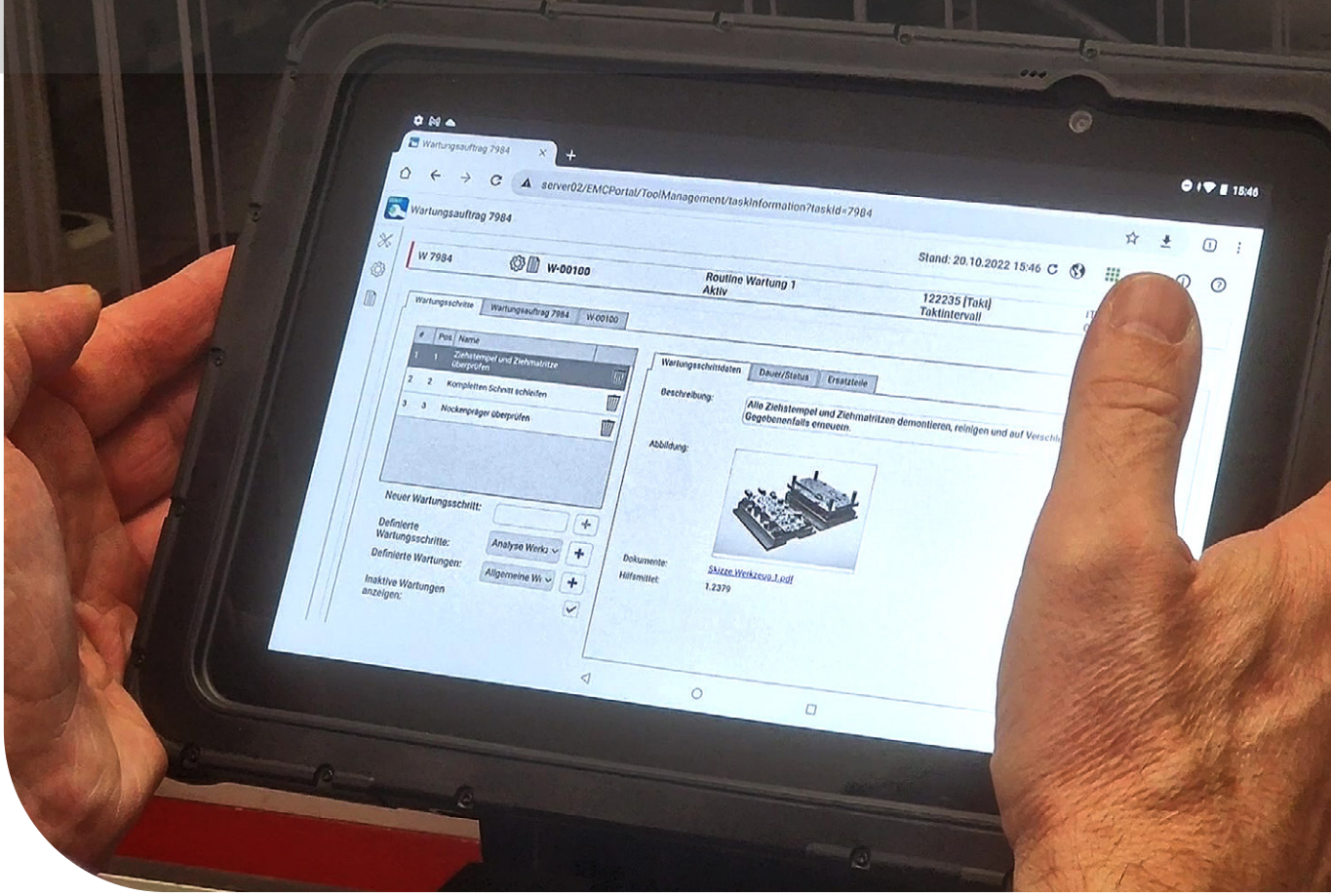
From: 06.02. To: 10.02.

Resource: W-00014

Action: exchanged, repaired

Spare Part	Ø Quantity	Absolute Incidence			
◢ Code A1	1.365.556,67	3			
	Time	Amount	Quantity	Action	
	22.02. 12:41:00	1	3.686.221,00	repaired	
	30.05. 18:56:00	1	155.585,00	exchanged	
	25.07. 14:05:00	1	254.864,00	exchanged	
▸ Code A2	1.935.225,67	3			
▸ Code A3	1.187.450,34	3			
▸ Code A4	892.576,67	3			

Turn digital tool data into knowledge



Successful digital rollout of maintenance

It‘s easier than you might think.

Used as stand-alone solution

or

in combination with machine data acquisition

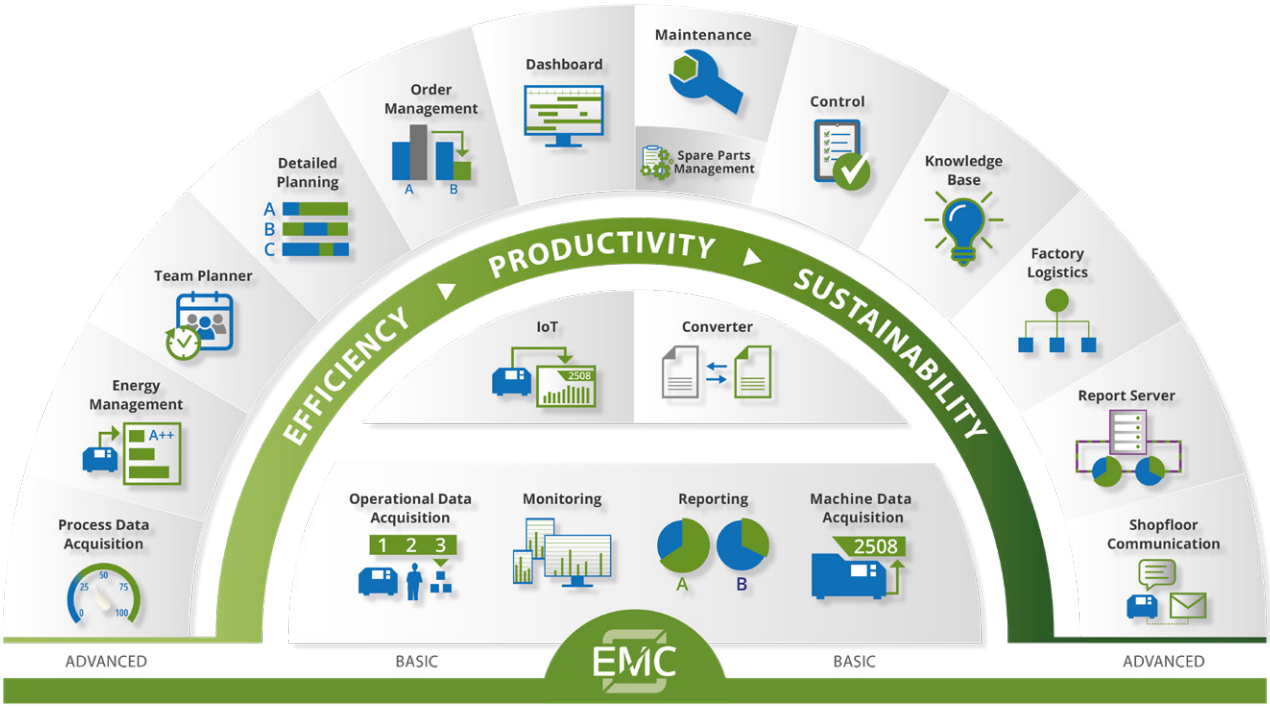
→ for a meaningful and up-to-date lifecycle card

→ for significantly higher data quality and thus better informative value of the analyses and reports

The solution for the digital factory

Our user-friendly MES Software EMC controls all digital processes on the shopfloor, from planning, implementation and maintenance to traceability, shipping, production orders and sustainable evaluation.

It adapts completely to your needs, integrates into your existing IT landscape and merges the data streams from ERP and shopfloor.



The modular architecture of the MES Software EMC offers you the freedom and flexibility you need to implement your smart networked production. Together with the central MES database, it forms the basis for customer-oriented implementation - step-by-step or holistically - individual modules or as a complete system.

No matter which solution you choose, with EMC you are always one step ahead and have the best possible transparency in production. All with the aim of increasing your efficiency.

iT Engineering Manufacturing Solutions GmbH is your provider of a well-developed Manufacturing Execution System in production management.

As an IT and MES expert in the metal forming industry and thanks to our large network of partners and memberships in associations (including VDFI and netzwerkdraht e.V.), as well as the best contacts with machine manufacturers, we know exactly how to obtain the important data and how to use it to digitalize processes and thus increase efficiency and productivity in manufacturing.

Our MES Software EMC acts as a central information hub and, by integrating the production data, ensures integration of production data for transparent production processes, flexibility and cost efficiency.

With a high level of technical and industry competence as well as many years of experience and expertise, we accompany you personally and step by step in transforming your production into a digital factory.

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