

**solukon**





Nick Turner

as Head of Programme  
Management Office at  
MATERIALS SOLUTIONS...

... describing the rise and impact of automated depowdering in general

In 2017 we had **2 people** working in machine setup and Manual Depowdering. In 2020 we have **4 people** working in Machine setup and automated Depowdering with double the quantity of printers and we are generating **more than 3 times the quantity of parts** we were in 2017.



Nick Turner

as Head of Programme  
Management Office at  
MATERIALS SOLUTIONS...

... describing impact of automated depowdering **with Solukon**

As our technicians work on both the print setup and the depowdering, we have not directly substituted roles by having the Solukon machines, however as the machines are automated, **it allows the technicians to be available for more than 3 hours per build for other value adding build setup activities** in the factory that were previously spent on manually Depowdering.

# Smart Powder Recuperation (SPR<sup>®</sup>)

Systems for automatic depowdering



SFM-AT200

Cleaning envelope  
300 x 300 x 230 mm<sup>3</sup>  
60kg



SFM-AT300

Cleaning envelope  
350 x 350 x 430 mm<sup>3</sup>  
60kg



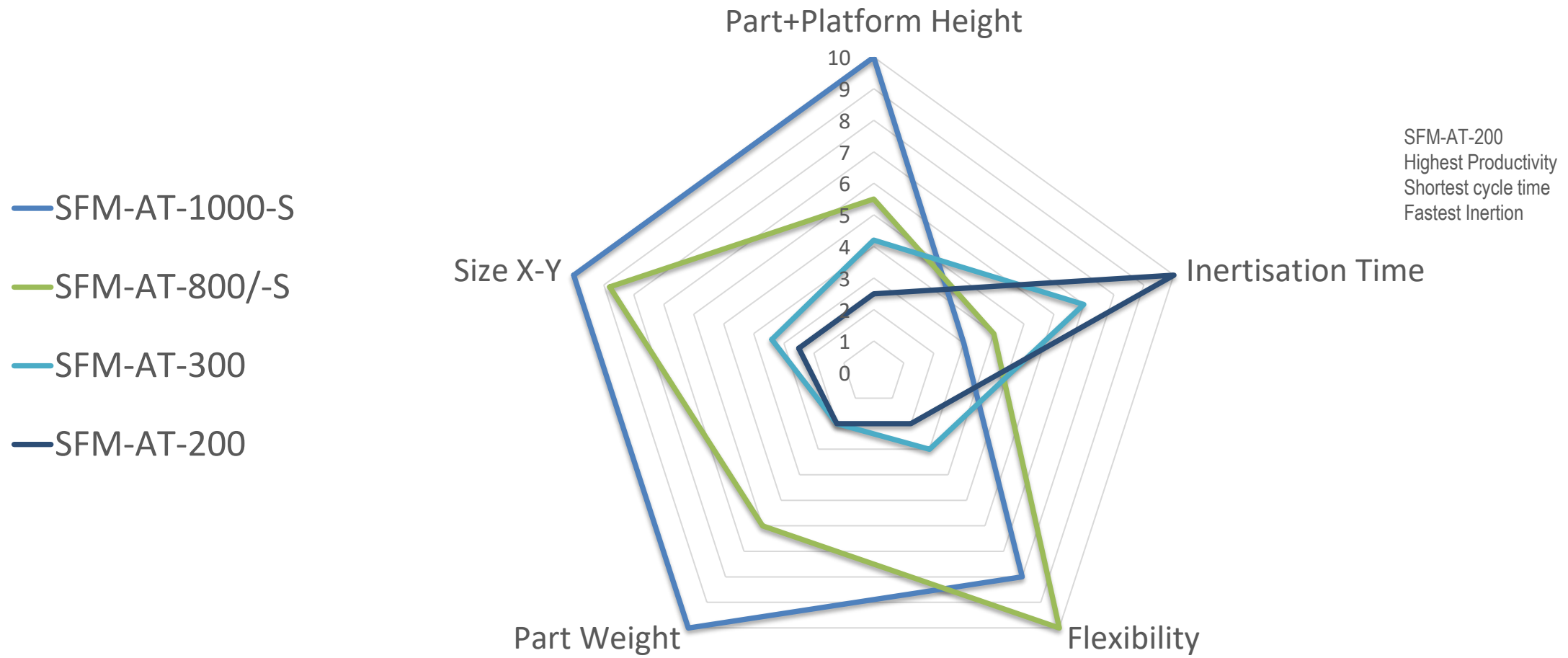
SFM-AT800

Cleaning envelope  
800 x 400 x 550 mm<sup>3</sup>  
300kg



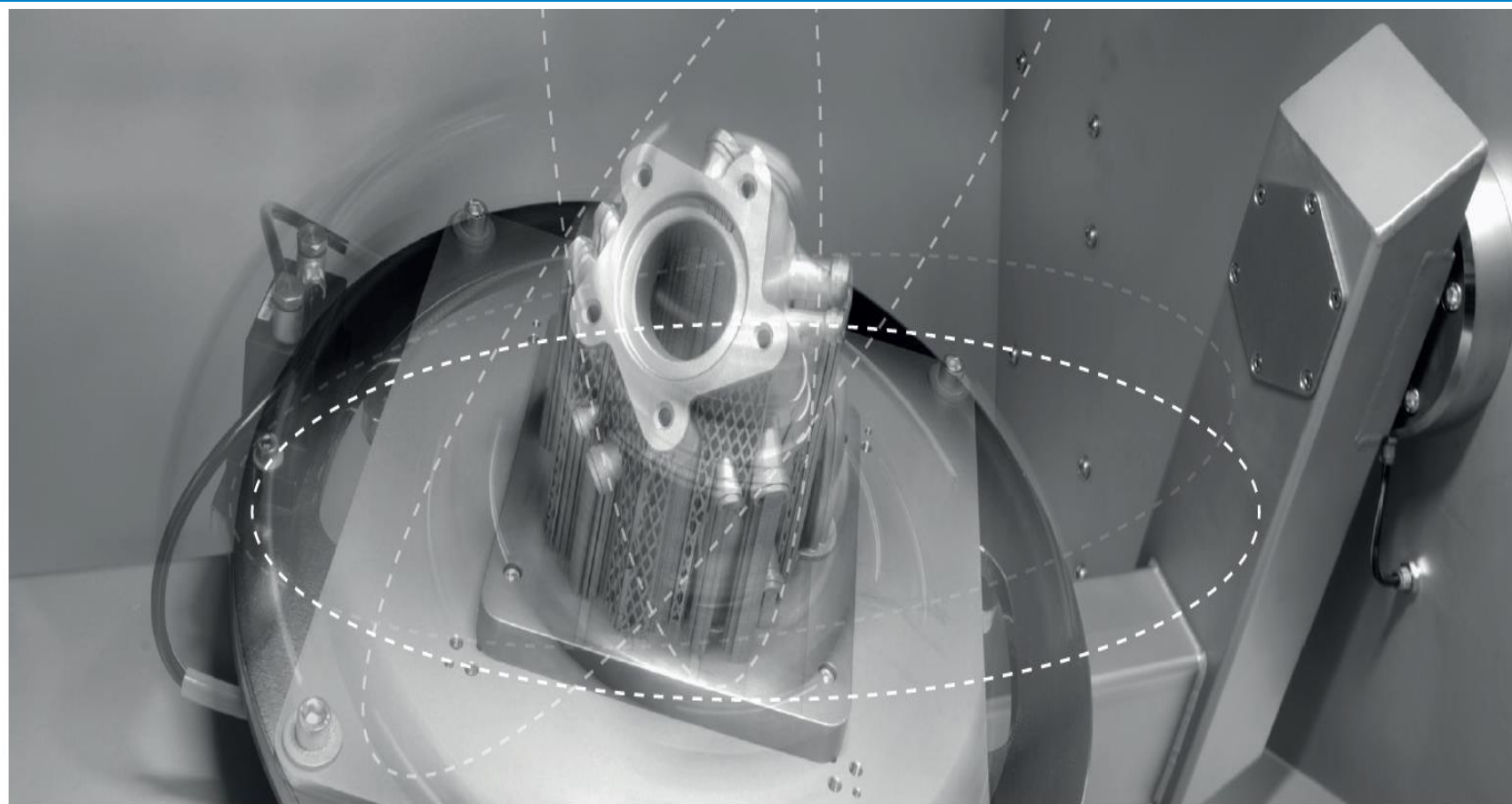
SFM-AT1000

Cleaning envelope  
600 x 600 x 1000 mm<sup>3</sup>  
600kg



# Smart Powder Recuperation (SPR®)

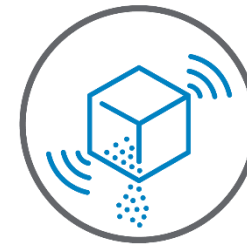
Automatic depowdering



Automatic depowdering



Programmable 2-Axis  
Movement



Powder Fluidization with  
Controlled Vibration



Protected Atmosphere

# Smart Powder Recuperation (SPR ®)

Automatic depowdering



## Automatic depowdering



+ Time saving up to 90%



+ Contamination free powder-recovery



+ Protection from hazardous dusts

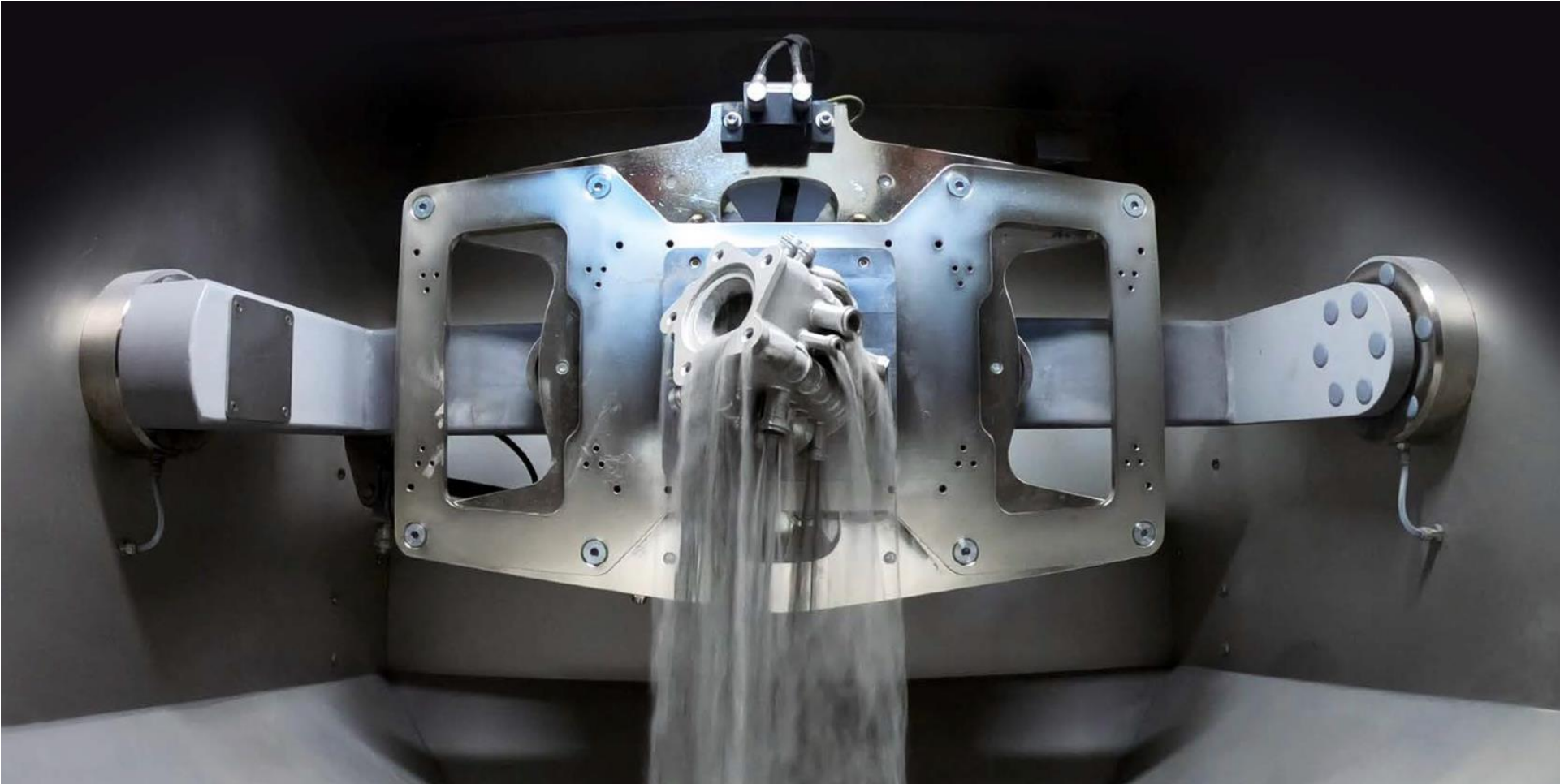


+ Protection from dust explosion



+ Reproducible cleaning results

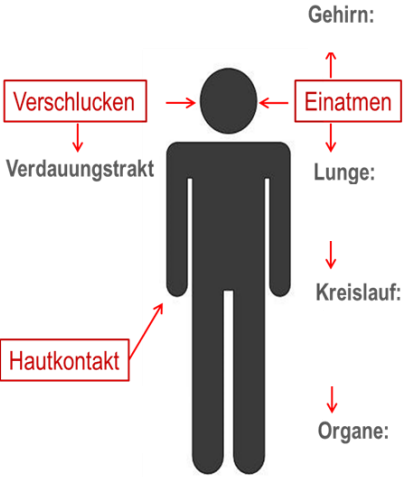








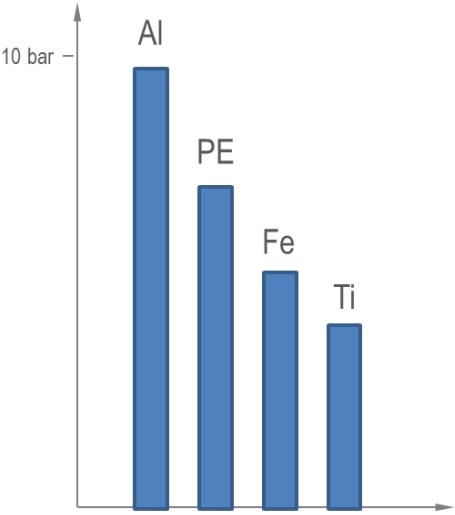
Health issues



Absorption of fine matter



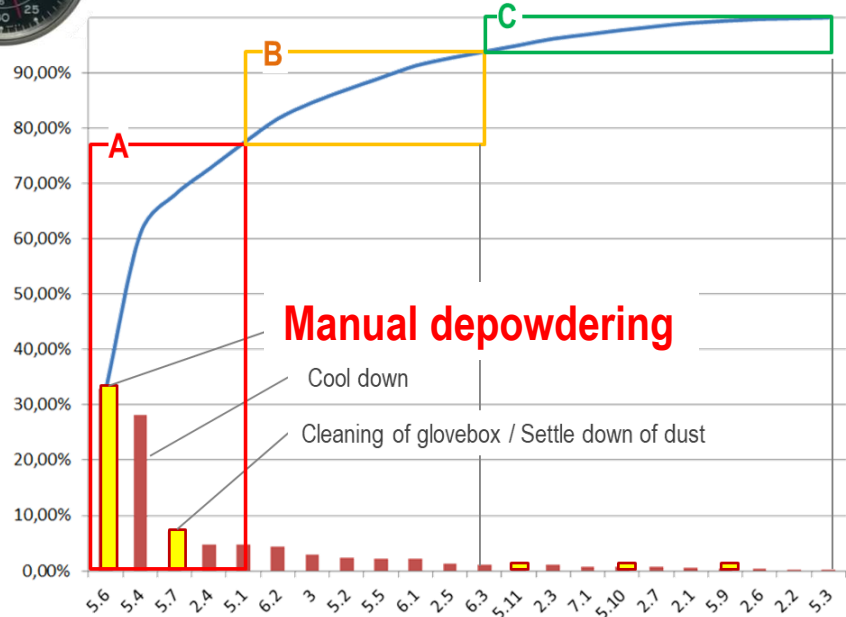
Explosion hazard



Explosion pressure of particulate materials



Loss of time



Postprocessing ABC-analysis

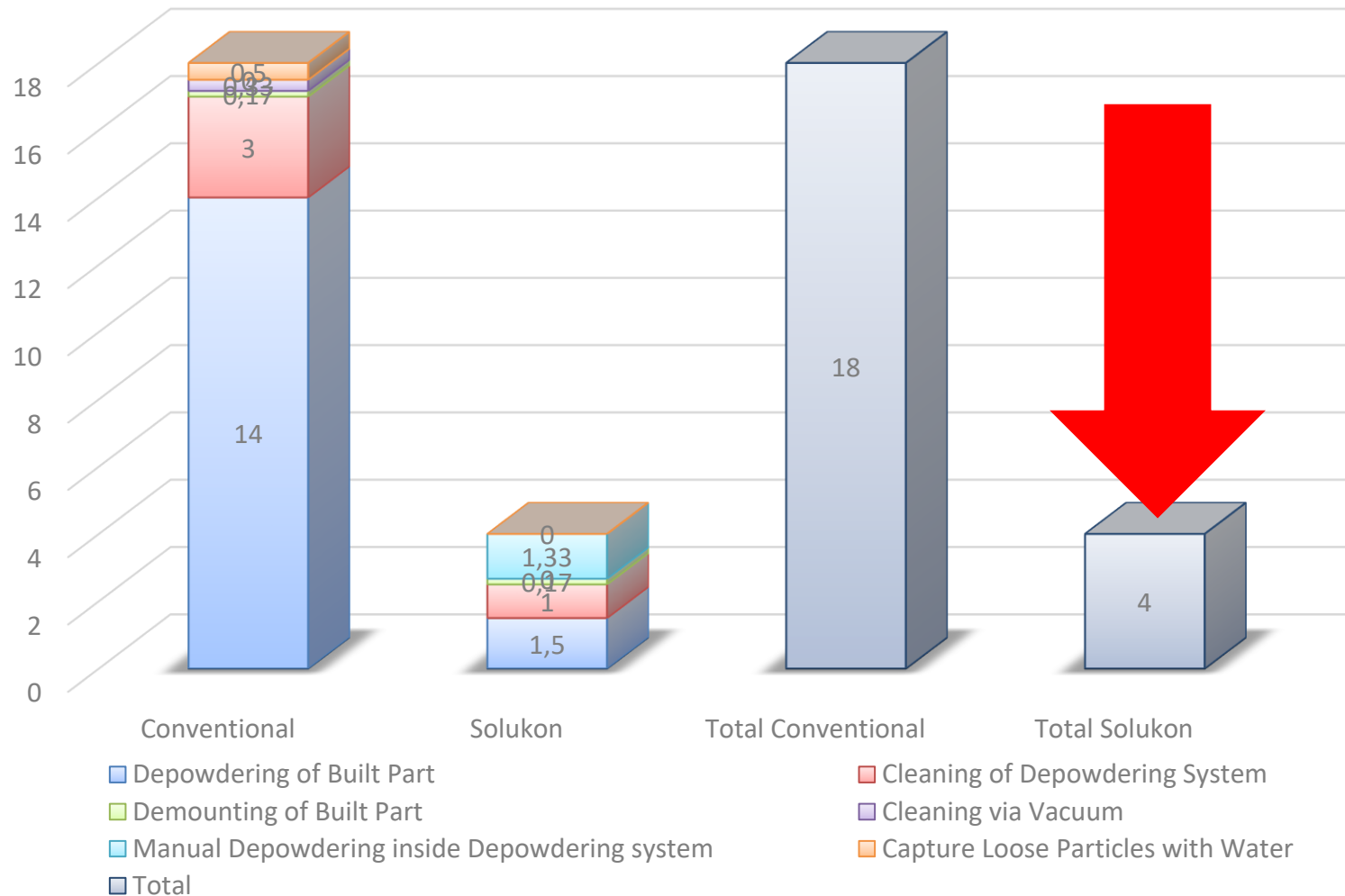
ABC-Analyse

time [%]	category
80	A
15	B
5	C
times concerning unpacking	

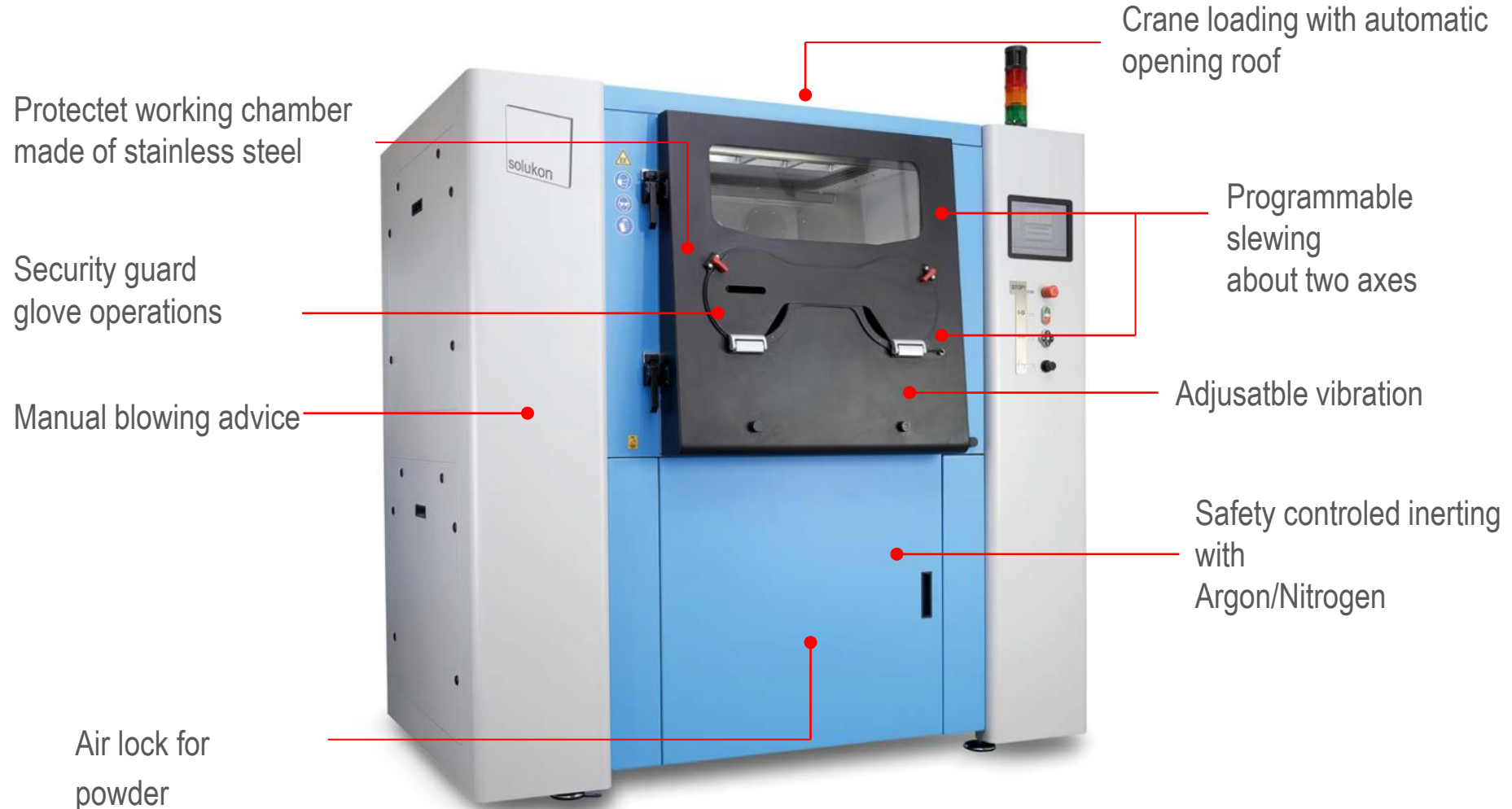
— single times  
— Summarized times

# Smart Powder Recuperation (SPR ®)

Time saving through automatic depowdering

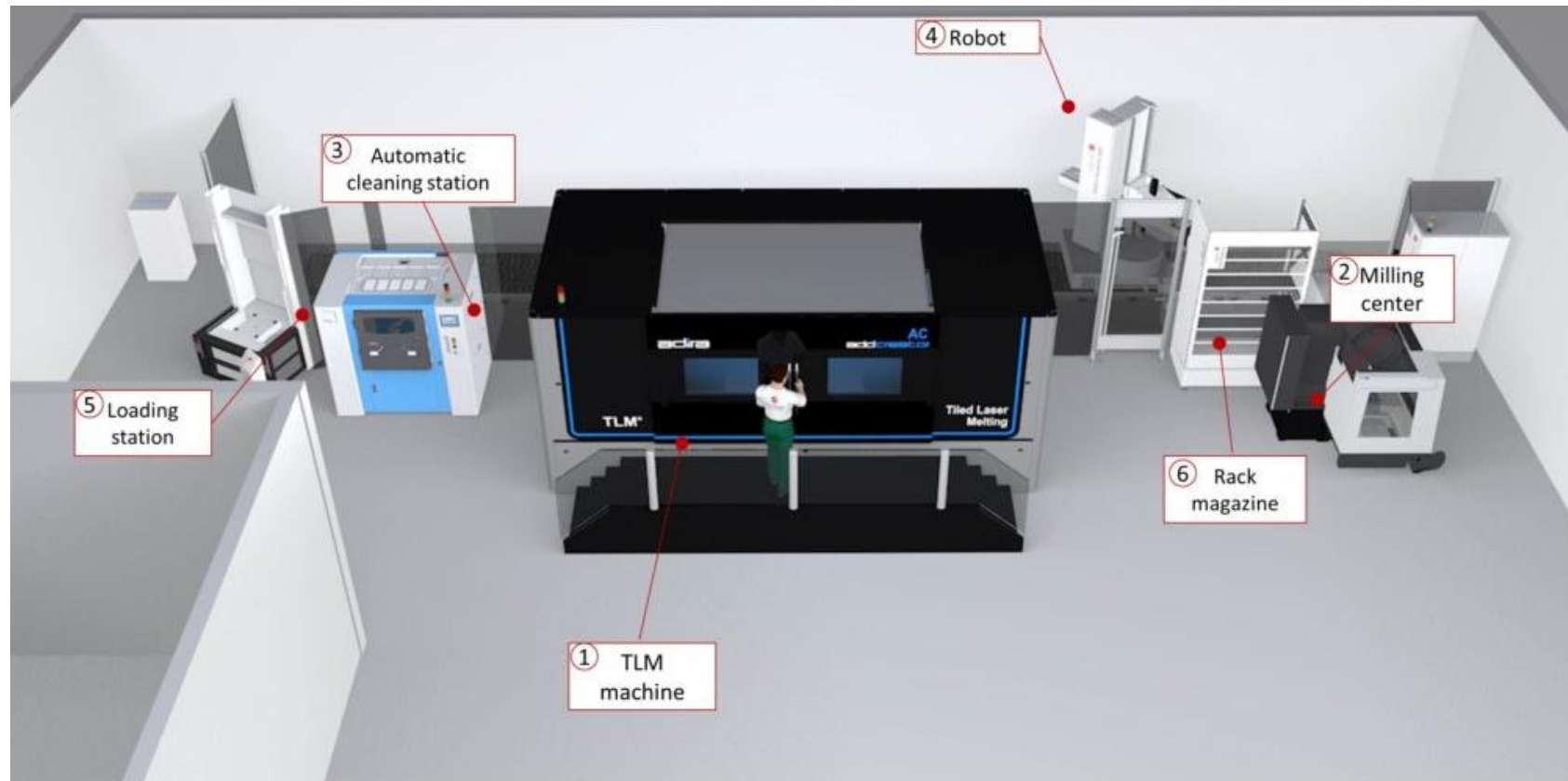


SFM-AT800



# Smart Powder Recuperation (SPR ®)

## Hyprocell Projekt



① SLM machine (Adira Addcreator)

② Milling center (Haas 3-axis VF-2)

③ Cleaning station (Solukon AT800)

④ Robot (Erowa ERD 500)

⑤ Loading station (Erowa ERD 500)

⑥ Rack magazine (Erowa ERD 500)

Quelle Hyprocell: <http://www.hyprocell-project.eu/>

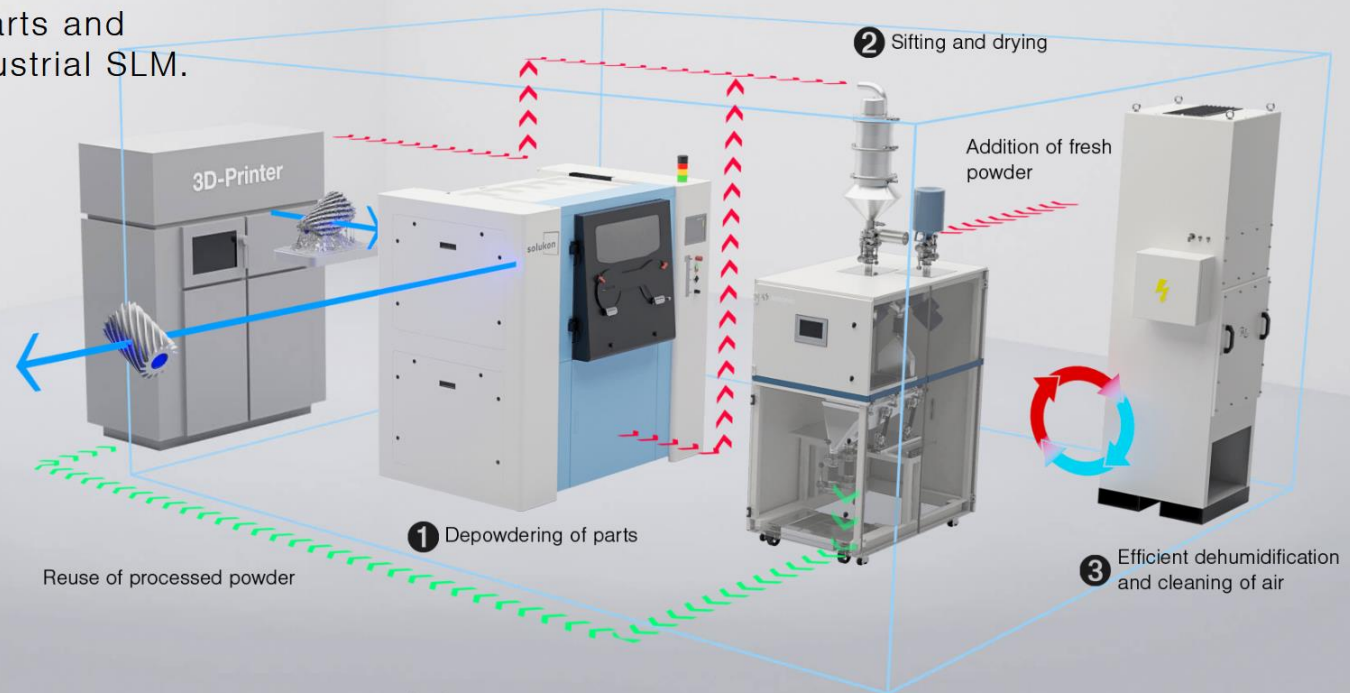
# AMP<sup>+</sup>

*Automated & Clean Powder Processing*

Automated depowdering of parts and conditioning of powder in industrial SLM.

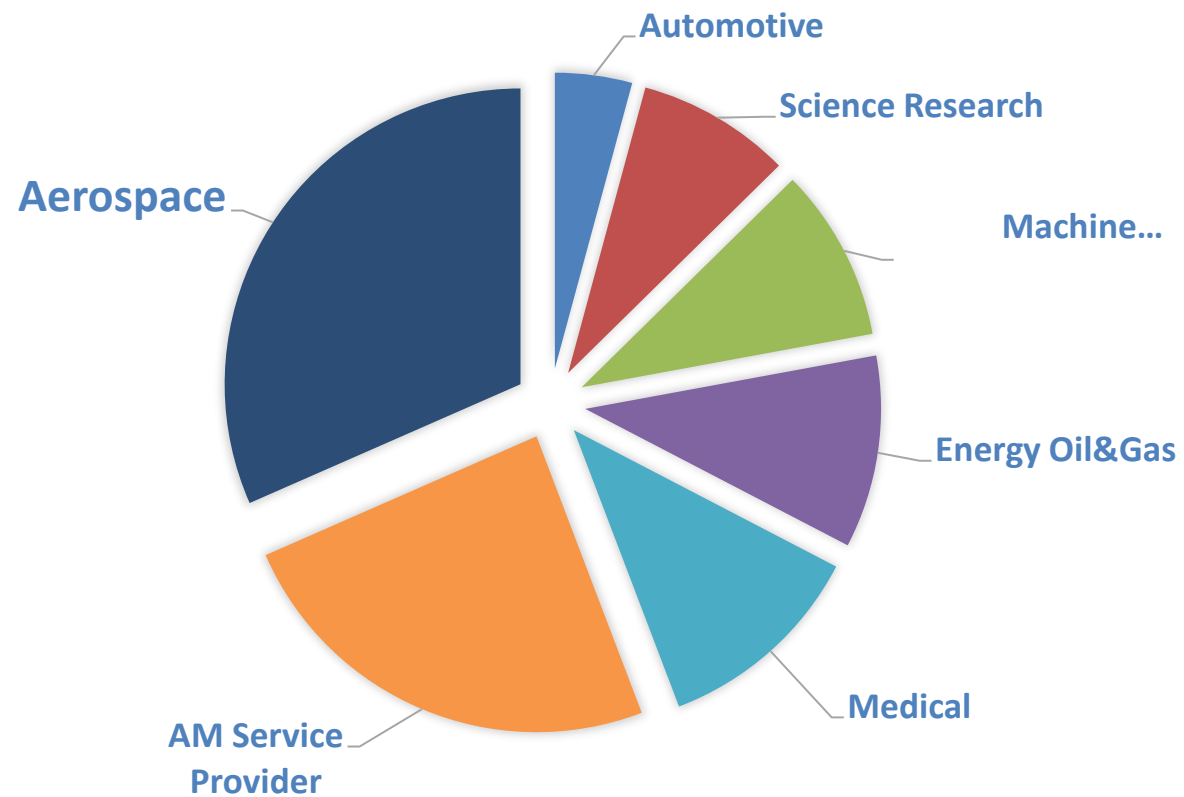
Safe & Clean.

- 1 **solukon**
- 2 **assonic**
- 3 **ULT**  
UMWELT-LUFTTECHNIK



# Smart Powder Recuperation (SPR<sup>®</sup>)

## Verticals Reference Customers





# Smart Powder Recuperation (SPR ®)

Our customers



**SIEMENS**



**Honeywell**  
Aerospace

**voestalpine**



**DAIMLER**



**oerlikon**  
am



**HOFMANN**  
IHR MÖGLICHMACHER



**POLY-SHAPE**  
addiCtive manufacturing®



**toolcraft**

**AMEXCI**



**Fraunhofer**



**FKM**  
LASER SINTERING  
Prototypes · Series · Outsourcing