

DIGITAL & LEAN TRANSFORMATION

LOOKING FROM BELOW, THROUGH THE
EYES OF SMALL / MEDIUM
MANUFACTURING COMPANY

GABRIELA KOPŘIVOVÁ

OTA HORÁK



WHO WE ARE?



Gabriela Kopřivová



Ota Horák

SpoluWorks® PERFECTA INTRODUCTION

Precise machining of complex parts with hard-to-please process requirements for customers from most demanding industries. Our products fly in the most popular passenger airplanes or drive on Mars in the MarsRover.

Some of our customers:

Philips Healthcare, NL/IL/USA - Airbus, its subsidiary Premium Aerotec, D - ABB Turbo Systems, CH
- Groupe Latecoere, F - EPIROC, S/D - Bottero, I - AMADA ,Japan





INTRODUCTION

Group of passionate lean consultants with strong expertise from various fields, such as steel industry, precise machining, aircraft, automotive, logistics and food industry. We help our clients to achieve cost reduction, increase process efficiency and cultural changes

Some of our customers:

Erreka Plast, Olomouc - Tatra Trucks, Kopřivnice - SpoluWorks Perfecta, Kyjov - Busch Výroba, Liberec -
Treboplast Tajo, Moravská Třebová - Magna Automotive, Mladá Boleslav

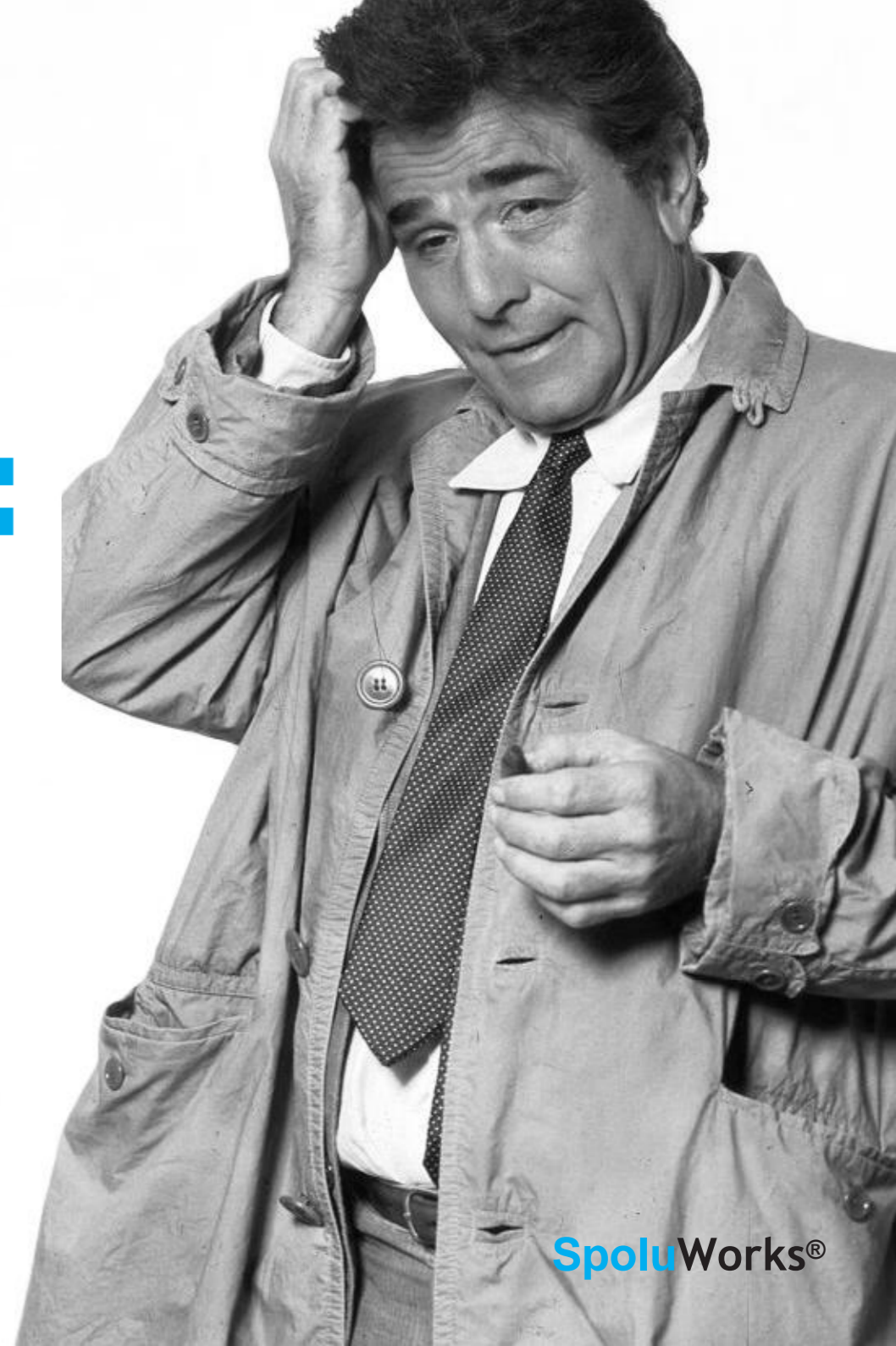


**DIGITALIZATION,
DIGITAL TRANSFORMATION
OR INDUSTRY 4.0 HAVE
THE SAME REPUTATION AS**

Mrs. COLOMBO:

**EVERYONE TALKS ABOUT THEM, BUT
SMALL AND MEDIUM-SIZED COMPANIES
HAVE NEVER SEEN THEM AND HAVE
NO IDEA WHAT THEY ARE CAPABLE OF.**

This is confirmed again and again by the surprised looks and excited whispers of the guests during the benchmark visits to our **SpoluWorks®**.

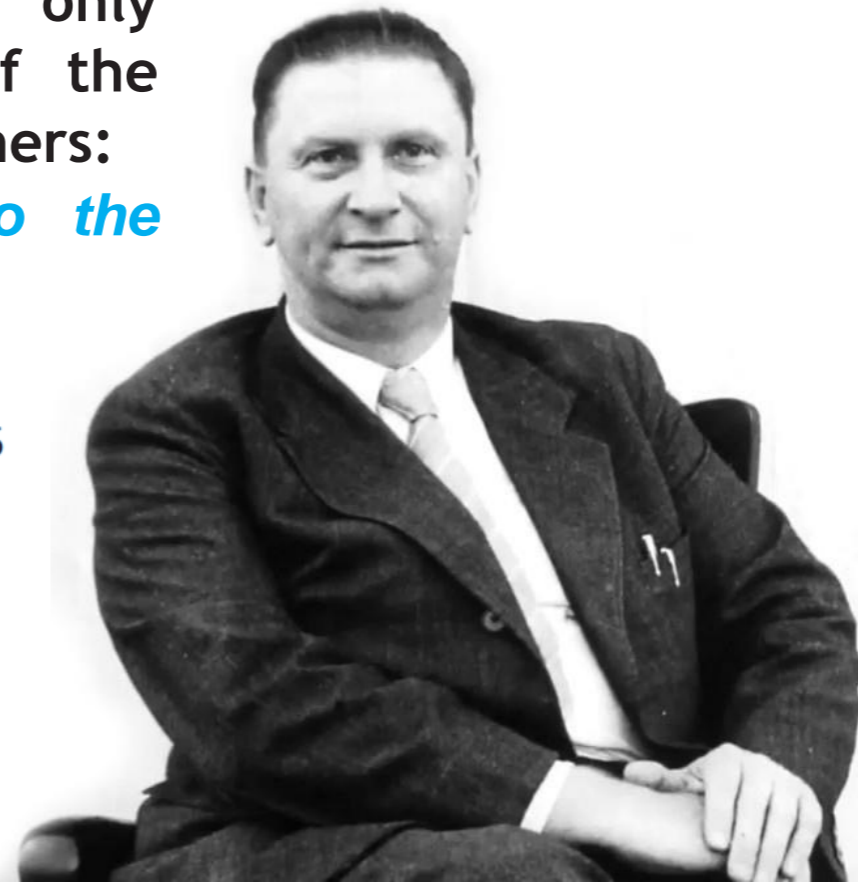


IT'S NOT A ROCKET SCIENCE:

definitions of digital transformation are only unnecessarily complicated translations of the easy-to-understand motto of the Bat'a brothers:

"Thinking to the people, hard work to the machines".

Bat'a brothers: the most famous Czech entrepreneurs that built a shoemaking empire with a global reach = **Bata Shoe Company**





In the words of the buyer of the dominant aerospace company:

„SpoluWorks is so far away in digitalization of manufacturing processes that none of the companies I visit come close to it.“



SUPPLIER PROCESS AUDIT result
by John Crane company.

Words of the auditor:

I think that I have never given a score this high to any company, which leads me to believe that you are doing it right.

WE SOLVE
**PREVIOUSLY
UNSOLVABLE**



PROBLEMS IN QUALITY MANAGEMENT:

1. Properly and timely performed in-process quality checks.
2. Our quality team previously had to deal with non-conformities reported from production within 24 hours, which too often was not enough for them. Now they have to do the same in 60 minutes ...

WE SOLVE PREVIOUSLY UNSOLVABLE PROBLEMS IN PRODUCTION:

1. Reduce the time needed to solve the same problems in case of repeated occurrence ...
SOLVED

2. Define the „digital twin“ of the product = its exact technological setting and accordingly shorten the identification of the cause ...
IN DEVELOPMENT



TWO
BASIC LESSONS,
WHICH WERE LEARNED
IN SpoluWorks® AT THE
COST OF GREAT EFFORT
AND WASTED INVESTMENT:



1. DIGITALIZED INEFFICIENT PROCESS IS ... IS STILL INEFFICIENT PROCESS

First, capture the current state of the process ideally then optimize it directly with non-digital tools. Only then adjust it so that it is ready for transformation into a digital process. Application of a suitable digital solution is just the famous last brush stroke.



2. IT DOESN'T HAVE TO BE AN INSANELY BIG INVESTMENT!

It is possible to proceed step by step, start where the potential for savings is greatest, and finance further steps from the actually realized savings.





LEAN TRANSFORMATION

HOW TO START?

AND CONVINCING A COMPANY WHICH NEVER FELT THE POWER OF LEAN?



https://www.youtube.com/watch?v=4rcQ50_4tmU (turn on the subtitles)

SMED

RESULTS

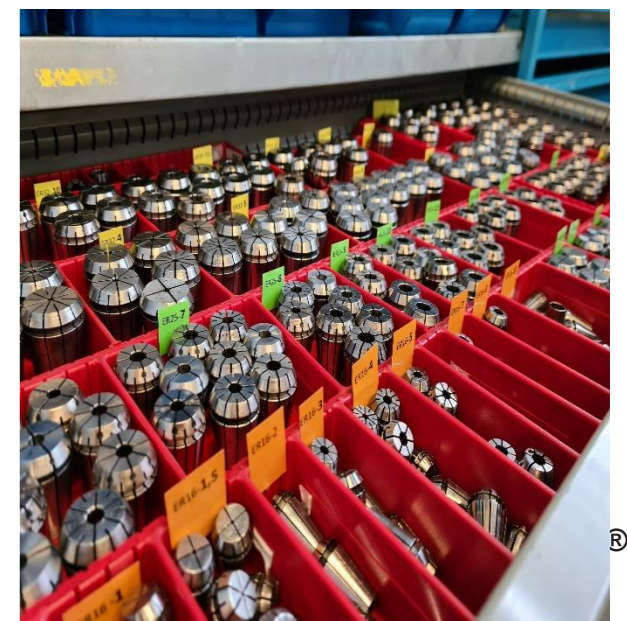
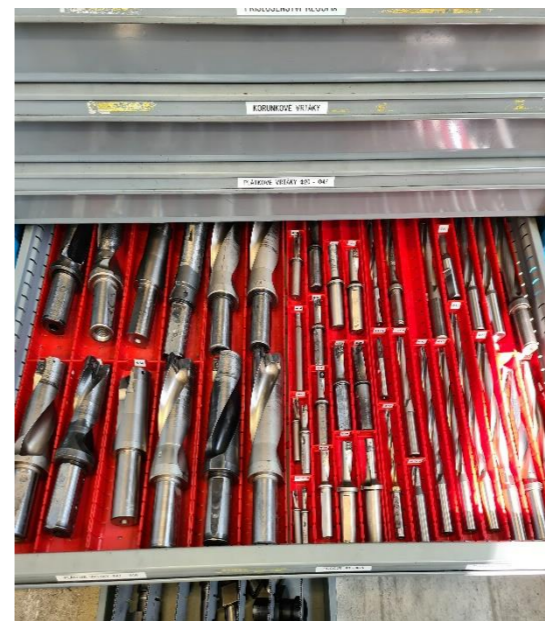
IMPROVEMENT ACTIVITIES:

- 1.) SYSTEM CHANGES
- 2.) WORK ORGANIZATION
- 3.) WORKPLACE EFFECTIVITY

IMPLEMENTED ON MACHINES:

MFC1, 2, 3, CNC4, CNC5

SEVINGS: 64 mins / work order

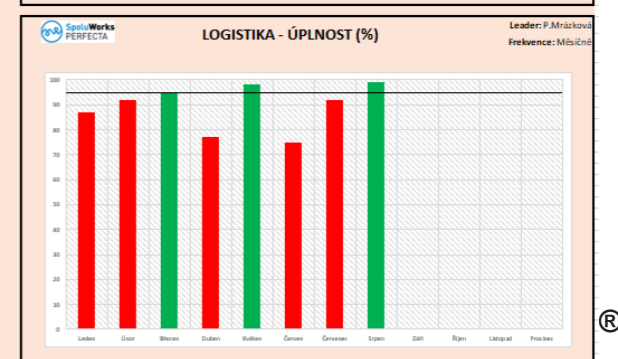
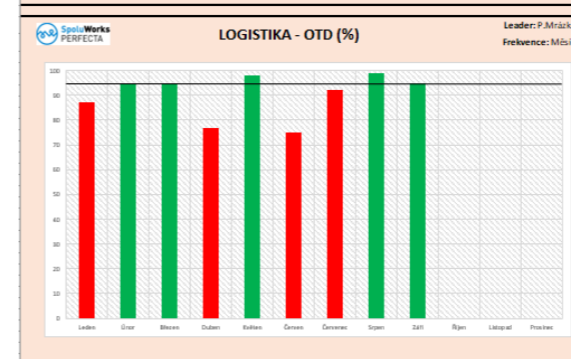
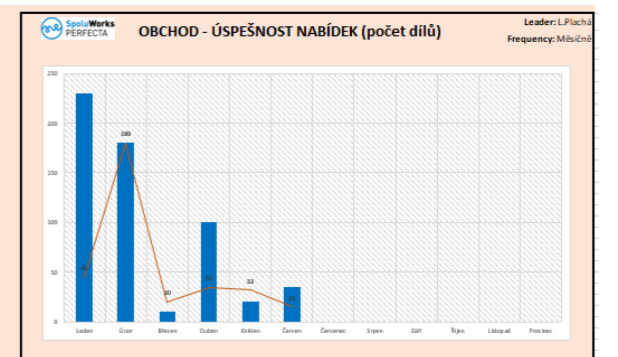
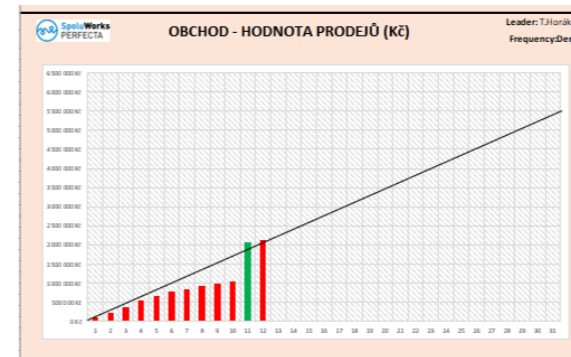
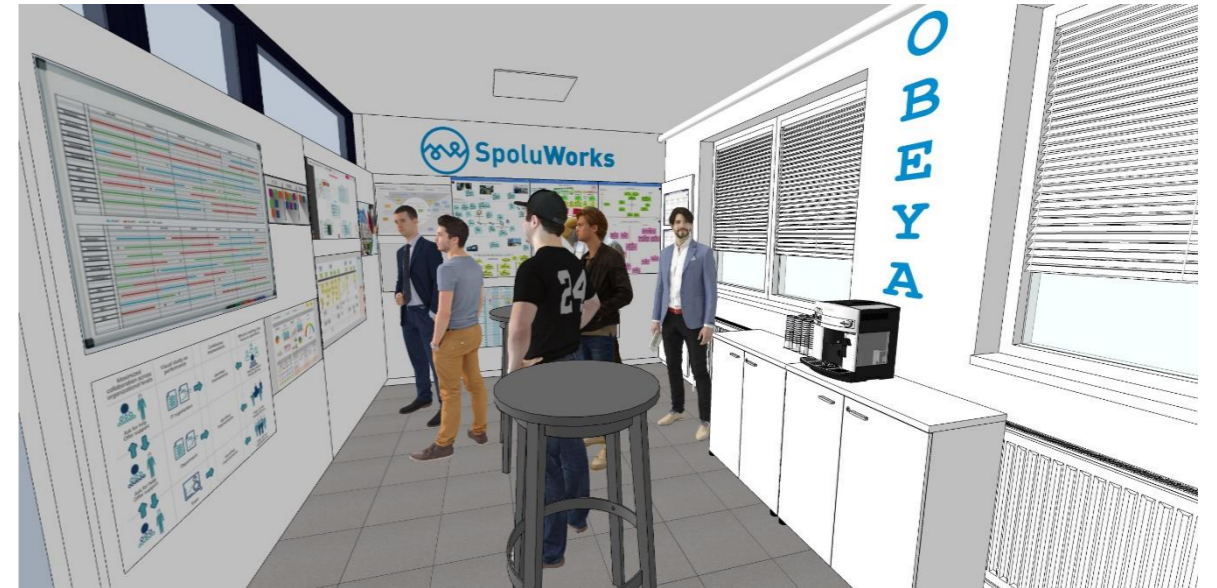


SHOPFLOOR MANAGEMENT

LISTEN

CAREFULLY

PREPARE YOUR STRATEGY, REQUIREMENTS,
DON'T IMPLEMENT METHODS WITH A RISK
OF FAILURE



AUTONOMOUS MAINTENANCE

IS A KEY ELEMENT

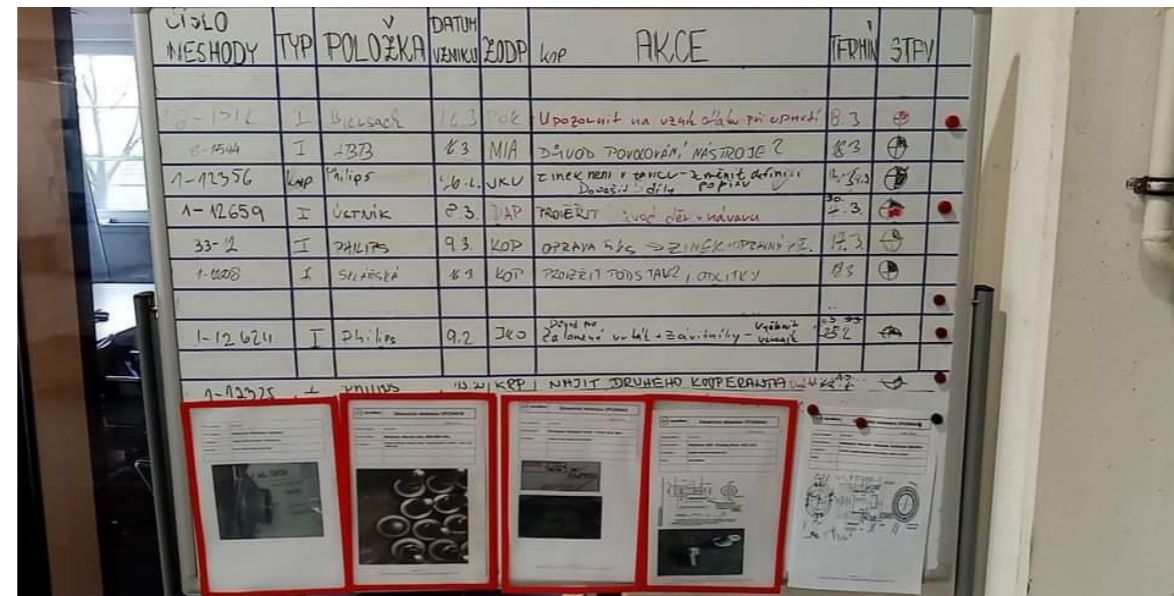
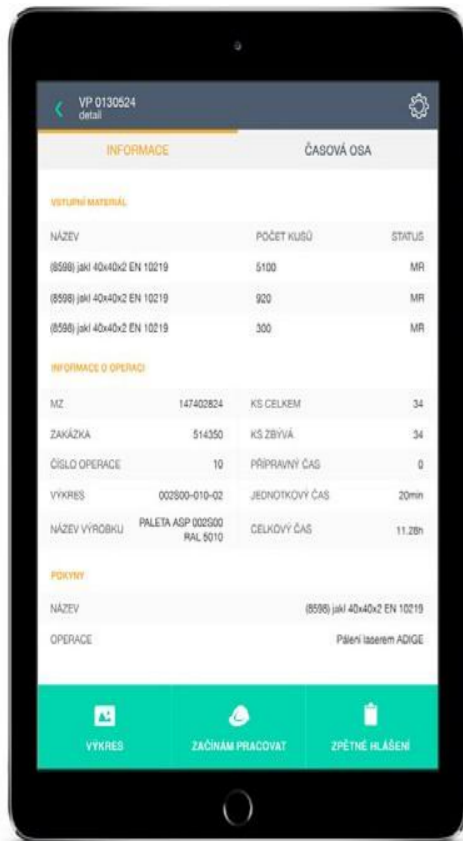


Použij OOPP	Standard autonomní údržby stroje Integrex MFC 3	SpoluWorks PERFECTA				
Část autonomní údržby	Čištění	Číslo standardu	SAU-01			
Krok	Co udržovat	Interval	Stav stroje	Popis činnosti	Pomůcky	Čas v min.
9	ATC výměník nástrojů	Týdně	Stop	Očistit od mastnot a špon	Čistič Simple Green, Mewa utěrka, stlačený vzduch	
10	Nástrojové oko	Týdně	Stop	Očistit od mastnot	Čistič Simple Green, Mewa utěrka	
11	Funkčnost zámku dveří	Týdně	Stop	Vizuální kontrola, kontrola funkčnosti	Bez pomůcek	
12	Vynašeč špon	Týdně	Stop	Vložit utěrky do dopravníku a projet dopravník dokola	Mewa utěrky - špinavé	
13	Tlačítka nouzového zastavení	Týdně	Stop	Vizuální kontrola, kontrola funkčnosti	Bez pomůcek	
14	Prostor zásobníku ATC nástrojů	Týdně	Stop	Očistit od mastnot a špon	Čistič Simple Green, Mewa utěrka, stlačený vzduch	
15	Vnější kryty stroje, ovládací panel	Týdně	Provoz	Očistit od mastnot, kontrola kompletnosti krytů	Čistič Simple Green, Mewa utěrka	
16	Filtr jednotky chlazení včetně	Týdně	Provoz	Sundat filtr, omýt teplou vodou	Teplá voda (sprcha???)	
17	Kapsy zásobníků držáků	Měsíčně	Stop	Vymout držáky z kapes, očistit a namazat kapsy a držáky	Mewa utěrka, olej Total Drossera	
18	Motor s filtrem odsávání splodin	6 měsíců	Stop	Sundat kryt, očistit kryt, vyměnit 2 filtry	Čistič Simple Green, Mewa utěrka, filtry	
Revize	Datum vydání	Vydal	Datum schválení	Schválil		
1	14.6.2021	Pavel Daněček	28.06.2021	Ota Horák		

POWER OF

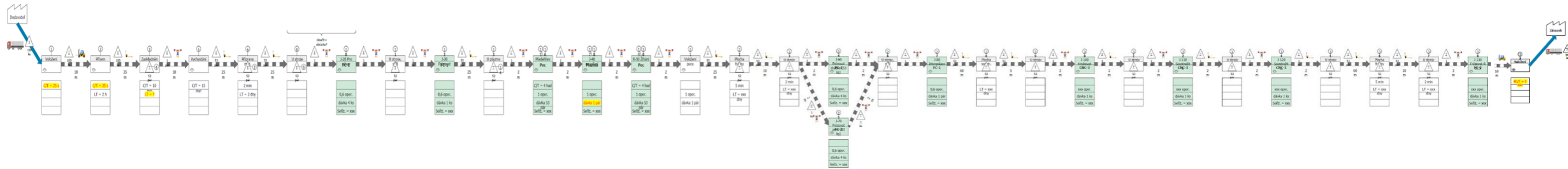
VISUALIZATION

LESS STRESS, MORE AWARENESS OF ACTIONS TAKEN, BUILD UP INTERESTS



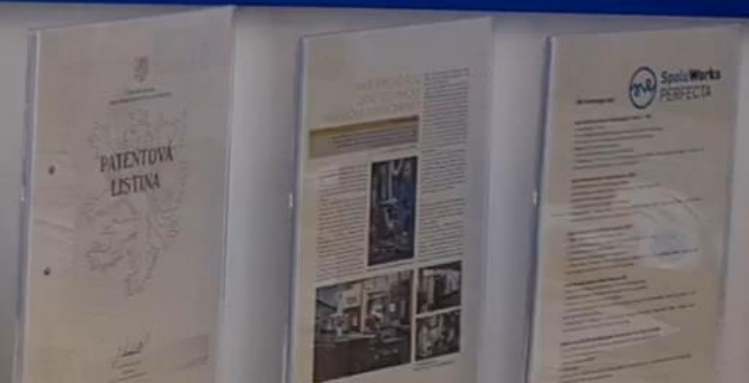
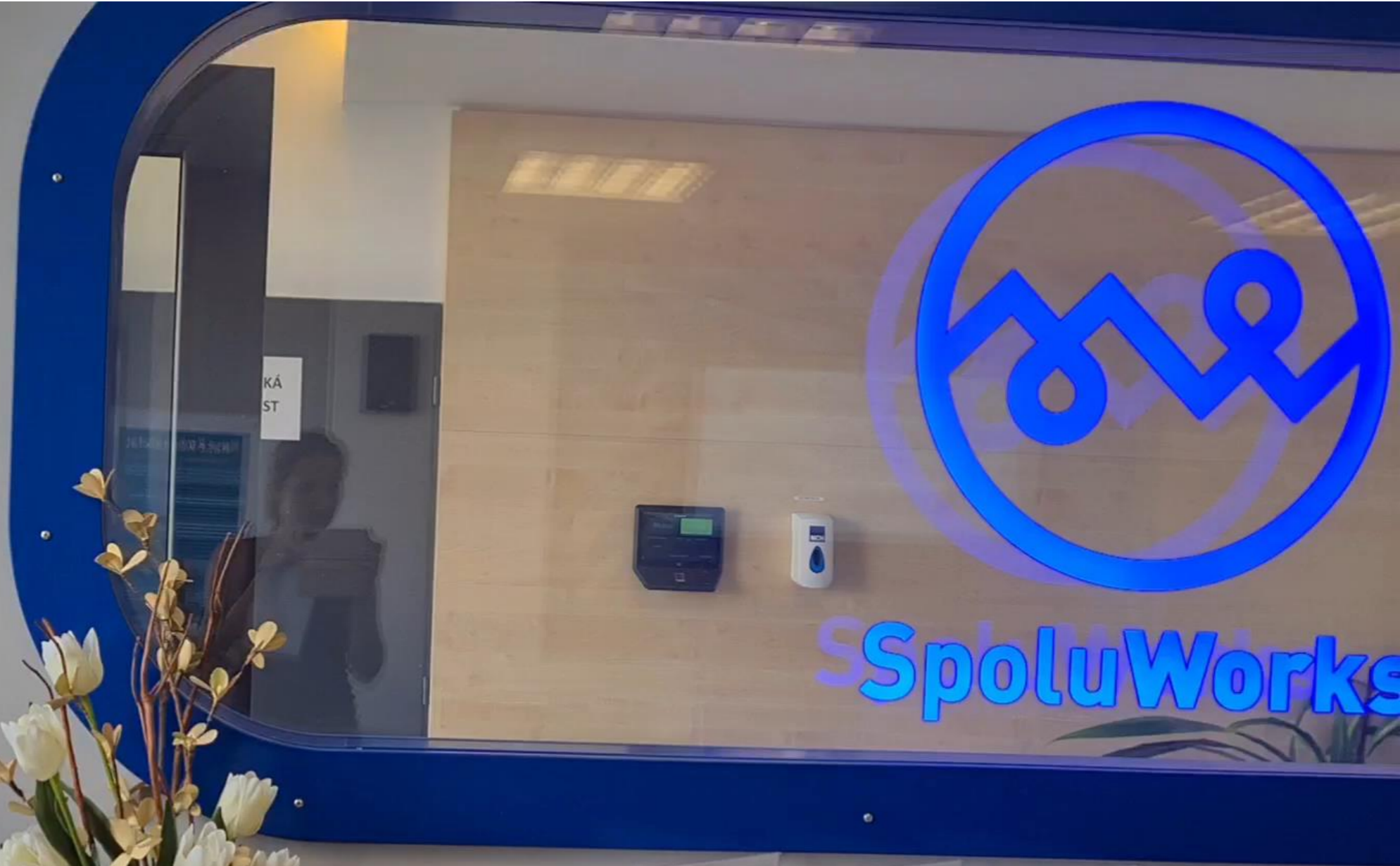
PROCESS

EFFICIENCY



Increasing the flexibility, reliability and repeatability of processes in a manufacturing company through combination of lean and digitalization = the only unique selling proposition when penetrating hi-tech markets á la aerospace or healthcare





WE INTRODUCE

(NOT ONLY)

SMALL AND MEDIUM-SIZED
COMPANIES TO

Mrs. COLOMBO

.. AT OUR SESSIONS, YOU CAN TALK
AND EVEN DANCE WITH HER ...



We are here to **support you**



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THANK YOU FOR
ATTENTION,

HAVE A NICE DAY!

