beryllis by AlixPartners

May, 2025

# DATA-DRIVEN OEE IMPROVEMENT

Unlocking Continuous Data-Driven Improvements

# PERFECT THE BASICS OF OEE IMPROVEMENT TO SAVE MILLIONS

The key to improve OEE is a structured problem-solving process and a good data understanding. In our projects, we see that both factors are often missing.

**OEE IMPROVEMENT** = **Structured problem-solving** X **Excellent use of data**

**Suppliers** are **burning millions** of Euros **with low productivity in production** due to **lacking methodology** and **data capability.**

**Identify problems** and prioritize countermeasures

**Derive actions** and **follow up** the implementation and with the results

**Transfer problem solving** into regular working mode

**Ensure** a **powerful data architecture** for data-driven OEE improvement

**Identify top loss drivers** per process step to prioritize overall actions

**Analyze production data** to derive effective measures

We combine **in-depth automotive, shopfloor,** and **digital expertise** to deliver **fast, impactful** and **sustainable** results

# WHY DATA-DRIVEN OEE IMPROVEMENT IS IMPORTANT!

We analyze production lines holistically to uncover improvement potentials. Solving bottleneck after bottleneck.

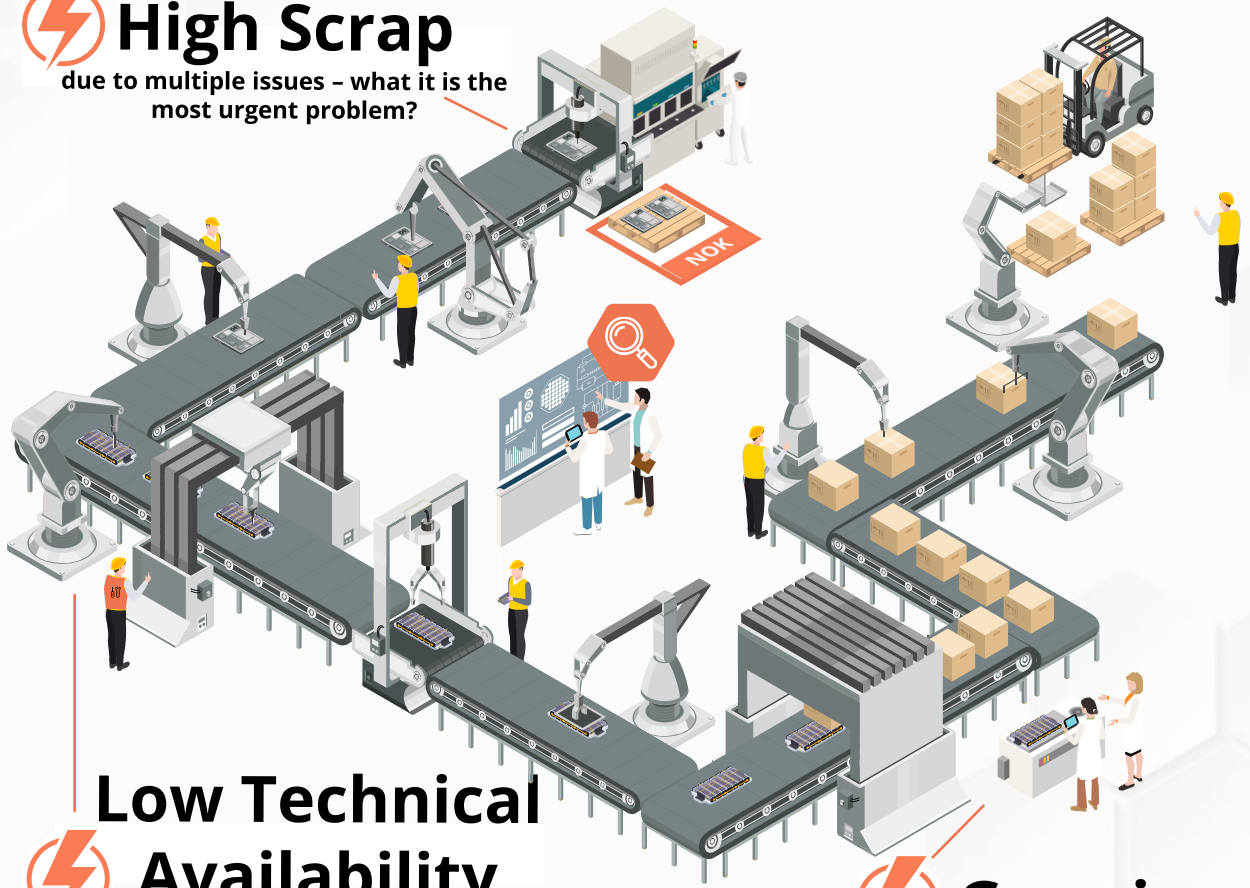
## Benefits of a data-driven approach

» **Live data reporting** to be implemented based on existing data structure

» Quick reaction enabled with **cross-platform reporting** and **smart alert** function

» If needed, **data structure requirements** can be **defined**, and implementation supported

**High Scrap**
due to multiple issues – what it is the most urgent problem?




**Low Technical Availability**
what causes downtimes?

**Gaps in Performance**
where is my bottleneck?

## COMMENTS

» We are able to analyze and improve **complex production lines**

» Identifying root causes for performance, scrap and availability issues require **in-depth knowledge of inter-relations between production stations**

» **What we do:** data-driven analytics combined with a structured approach on how to prioritize and tackle issues

Source: Berylls by AlixPartners

# REAL LIFE EXAMPLE: BENEFITS OF A DATA-DRIVEN PRODUCTION IMPROVEMENT PROGRAM

Our client (Tier 1) was in a critical situation with supply backlogs and production output below OEM demand - we supported with shortage management and sustainable stabilization of production output and quality.

## RESULTS

**5 Months**
**Project Timeline**
Improvement period for selected KPIs

**60%**
**Scrap Rate Reduction**
Scrap rate 12% to 7%

**18% Points**
**Uptime Increase**
Technical availability from 70% to 88%

**+85%**
**Output increase**
>1 year after SOP

**-20%**
**Organizational losses**
Organizational losses from 25% to 20%

## SELECTED MEASURES

- **De-coupling** of buffer stocks between bottleneck sections
- Laser welding: **elimination of contamination** at sub-supplier
- **Externalization** of faulty **process step** (sub-assembly)
- **Enabling rework** for screwing processes
- **Improvement of dispensing** material mass (leaning cycles)
- Optimization of **part positioning**
- Optimization of **shift handovers**
- **Reduction of empty takts** by organizational guidelines

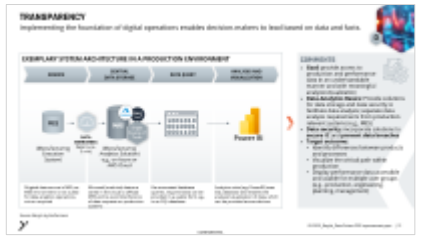
**Critical delivery situation stabilized** by **data driven improvement** of a highly complex production set-up

# **DATA-DRIVEN OEE IMPROVEMENT** (CONTINUOUS IMPROVEMENT CYCLE)

Sustainable performance enhancement through a data-driven continuous improvement cycle, focusing on output, scrap and downtimes.

**Methodology of individual improvement sprints (sprint duration approx. 4 weeks each)**

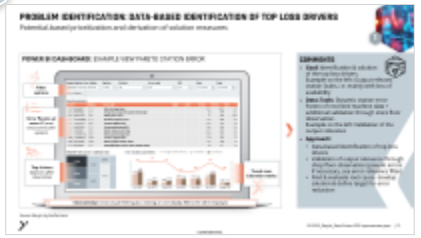
## 0 BUILD THE BASE: **GENERATE TRANSPARENCY**



» **Purpose:** Provide access to production and performance data in an understandable manner

» **Outcome:** Performance dashboards, available across systems/platforms with live data and alerts

## 1 PROBLEM IDENTIFICATION



» **Purpose:** Identification top loss drivers, e.g. station errors

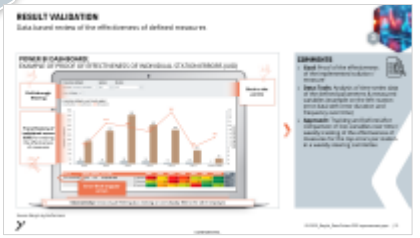
» **Outcome:** Integration of data analysis for scrap and downtime into daily routines; validation on the shopfloor

## 2 MEASURE DERIVATION & IMPLEMENTATION

» **Purpose:** Targeted identification & implementation of measures

» **Outcome:** Additional detailed analysis of (live) data such as process parameters and correlations, central tracking of measures, e.g. with elyvate[1], Jira

## 3 RESULT VALIDATION



» **Purpose:** Verification of the effectiveness of the implemented solution/measure

» **Outcome:** Tracking and before/after comparison of loss metrics over time, regular monitoring of the effectiveness of measures for the top errors

1: Digital Berylls Task Force Solution; for further information, click here: elyvate · digital task force solution
Source: Berylls by AlixPartners

# BERYLLS AS A TRUSTED PARTNER IN OPERATIONS AND DATA/TECHNOLOGY

**With our deep understanding of operations, we are aware the (data) challenges you are facing in production and support you in solving them with partners and proven track record.**

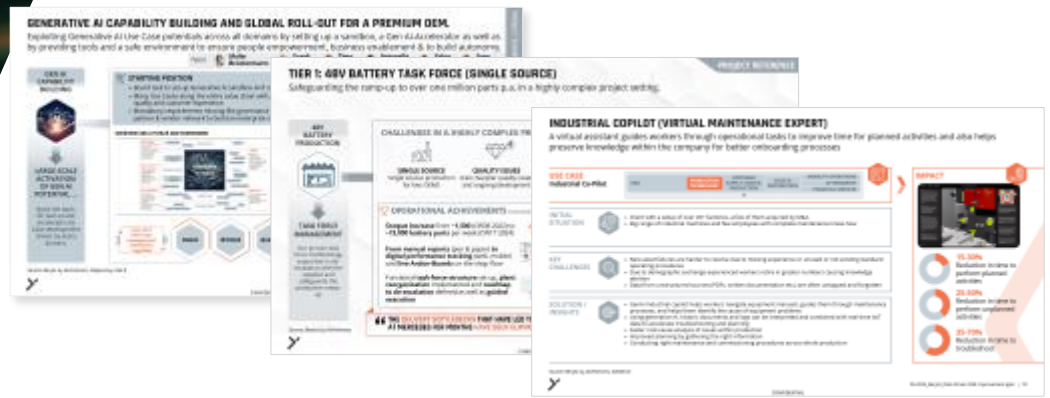
## OUR CAPABILITIES & TECHNOLOGY PARTNERS

- **Initial** System & Data Architecture **Assessment**
- **Shopfloor optimization** based on **data-mining solutions**
- ...
- **Design & Roll-Out** of **Data Mgmt.** and **Data Governance**
- **Implementation** of data-driven improvement
- **Training** of **data-driven** operations excellence **culture**

softserve

elyvate

## SUCCESSFUL PROJECTS (EXCERPT)




Source: Berylls by AlixPartners

## QUESTIONS YOU NEED TO ANSWER!

Do we know **what data is available** in our organization and do **we understand it?**

Do we know the **relevant data points** to facilitate data-driven optimization of our production?

Do we have **access to live production and quality data?**

How can I **derive issues** in production **from a large amount of data?**

How do we deduct **improvement measures efficiently**?

How do we **prioritize measures** to be most effective?

How do we establish **continuous improvement** processes **based on production data?**

To what extend to we rely on data to improve our production and **anker this in our culture?**


berylls by AlixPartners


## FRITZ METZGER

**Partner**

T: +49 151 17298381

fritz.metzger@berylls.com



## TIMO KRONEN

**Partner**

T: +49 170 2238992

timo.kronen@berylls.com



## STEFFEN HAGE

**Project Manager**

T: +49 151 72405074

steffen.hage@berylls.com