#SWTW22-25

# Increasing transparency in wafer test probecard maintenance processes through targeted KPIs

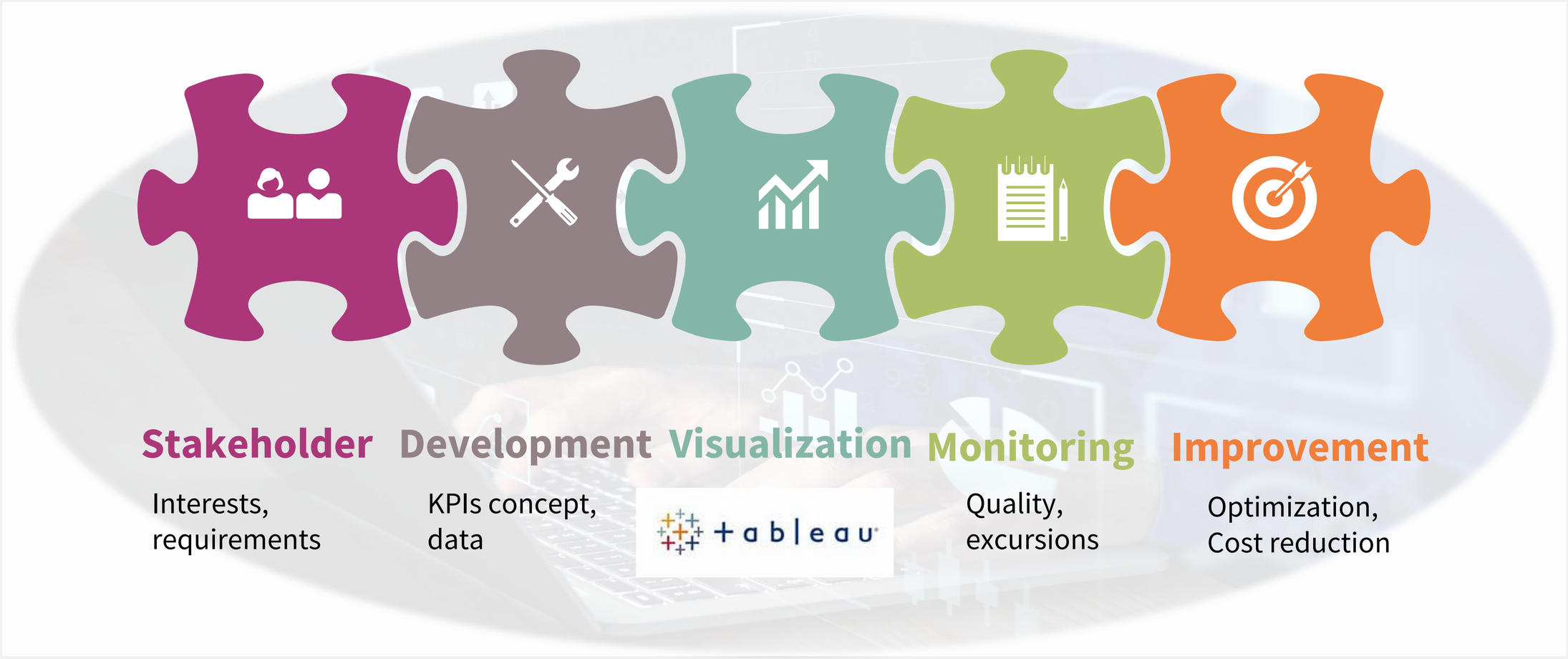
Veronika Haehnel, Lasse Meyer (Infineon Technologies Dresden)

## Introduction

With the development of new, targeted Key Performance Indicators (KPIs) for probecard maintenance processes in wafer test, the transparency of these processes can be increased.

An increased transparency results in:

- Simplified identification of improvable or critical processes
- Monitoring of the development of process quality through continuous KPIs
- Easily accessible cost of ownership data




Before KPIs can be developed, the interests of all involved parties must be considered and analyzed. After the creation of the KPIs, the **visualization via Tableau** is needed to make the KPIs simply understandable.

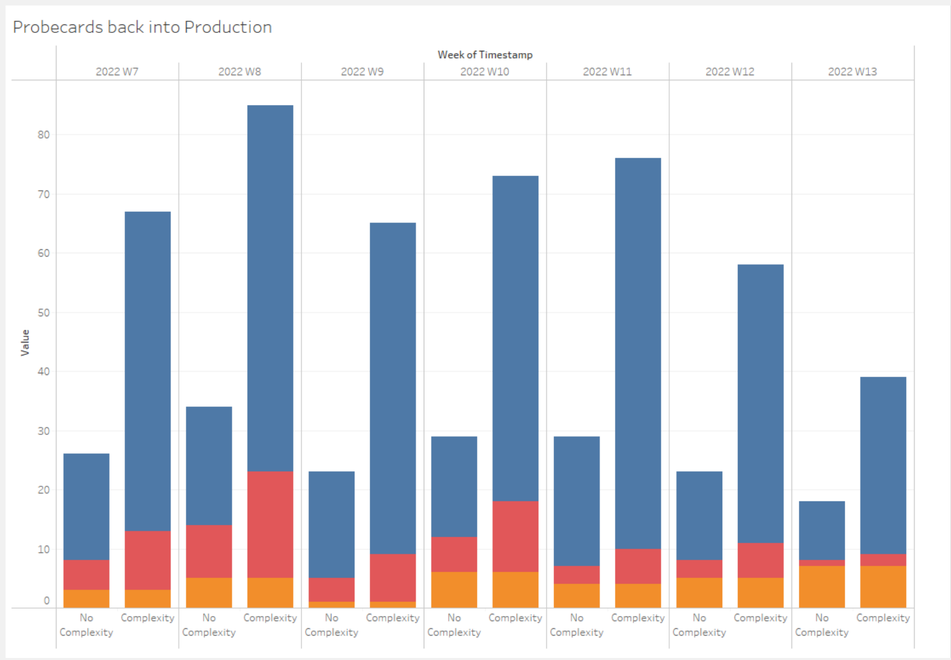
An example is a KPI for probecard operating costs from combining lifetime from probecard database, repair costs (procurement) and respective wafer volume, which would enable transparent evaluation and possibilities to **reduce the financial load**.

Furthermore, the development and consideration of a probecard's complexity or its maintenance in KPIs is a way to increase **transparency**.

## Innovative Core

The innovative core of the new KPIs is the combination of several existing parameters (repair costs, lifetime) and new parameters as the complexity of probecards. Therefore, it must be acquired, how to define the complexity:

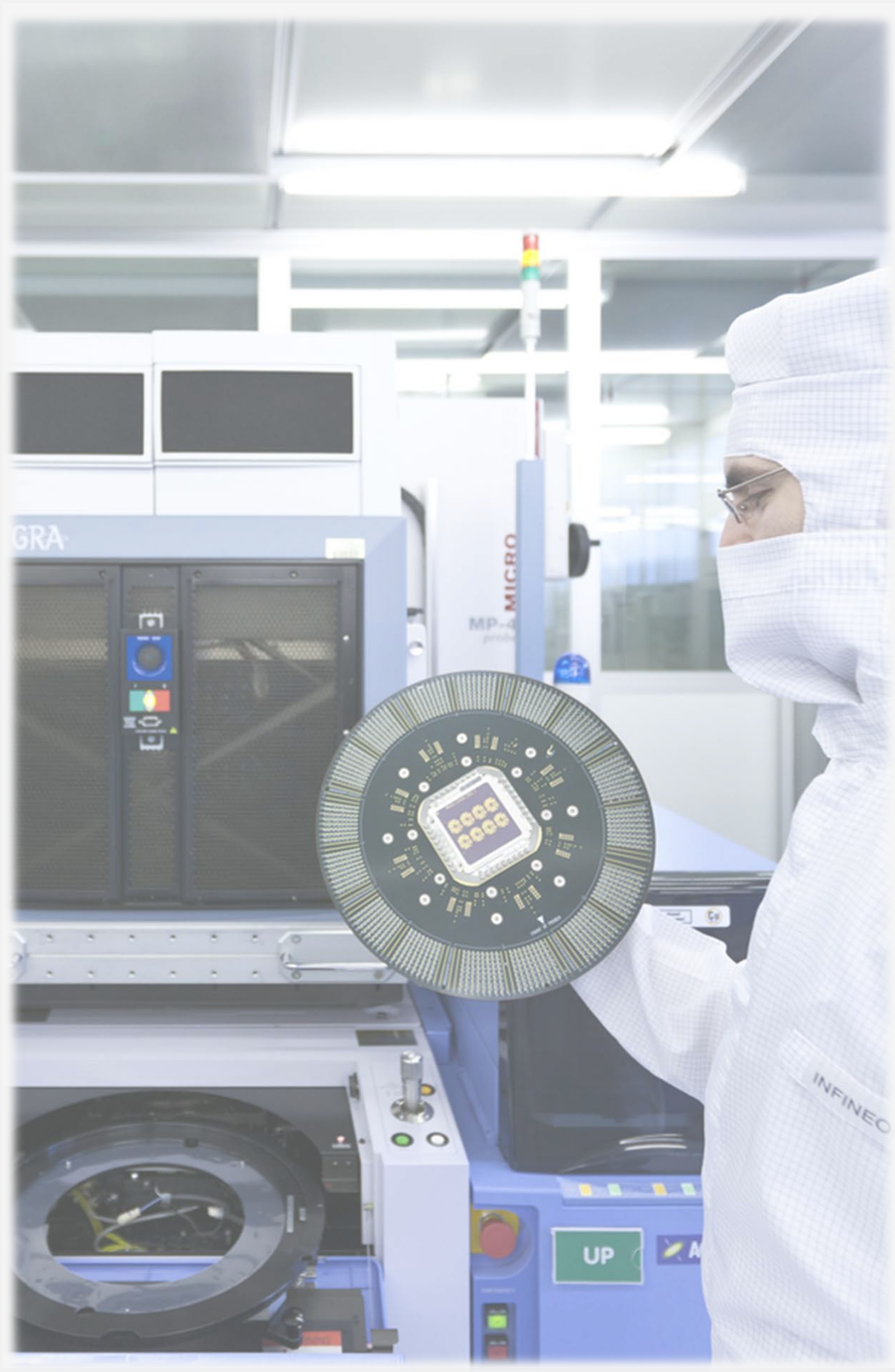
- Amount and type of probecard components
- Type of needed maintenance measures

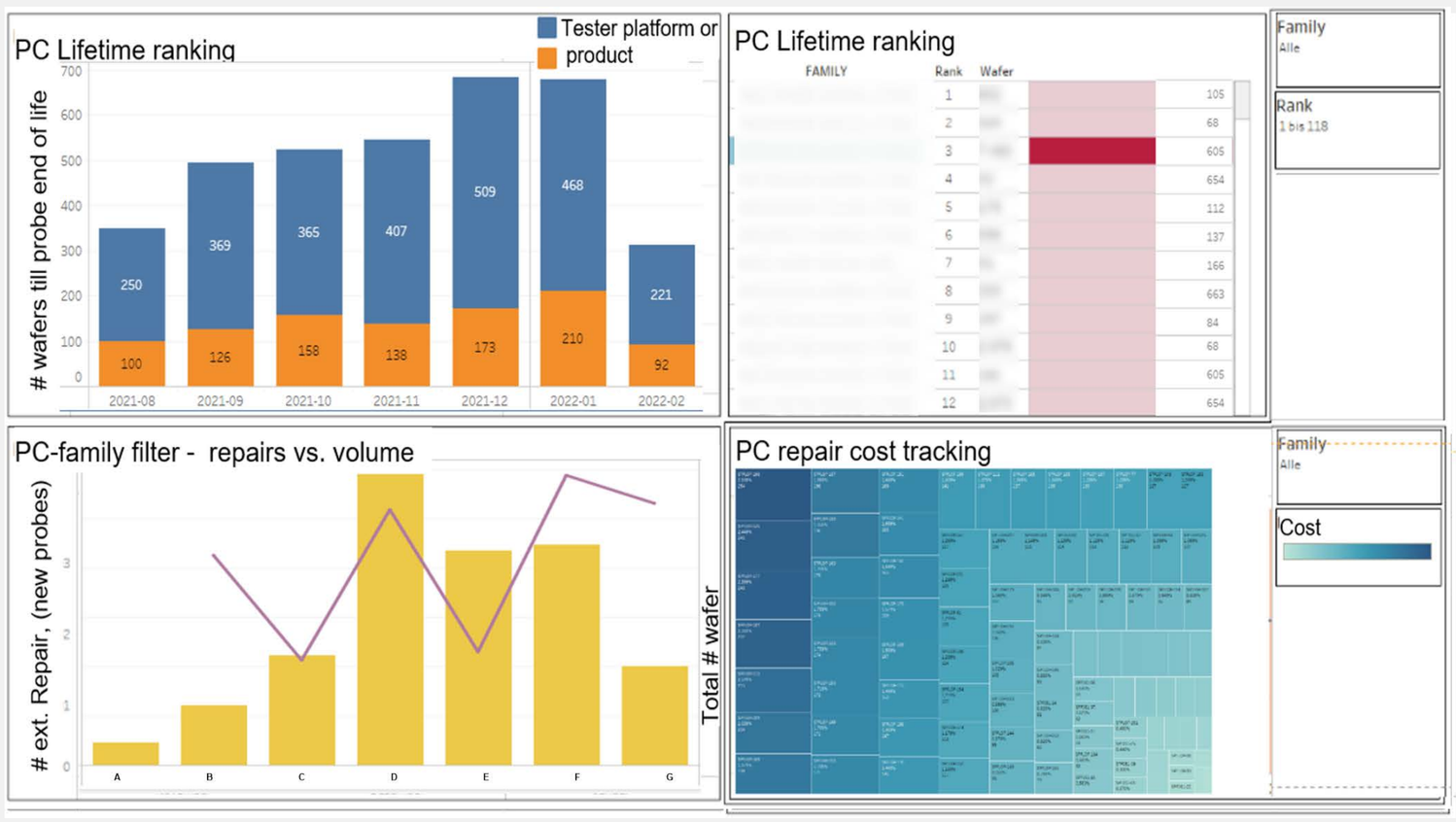


## Key Benefits

An increased transparency for maintenance processes leads to:

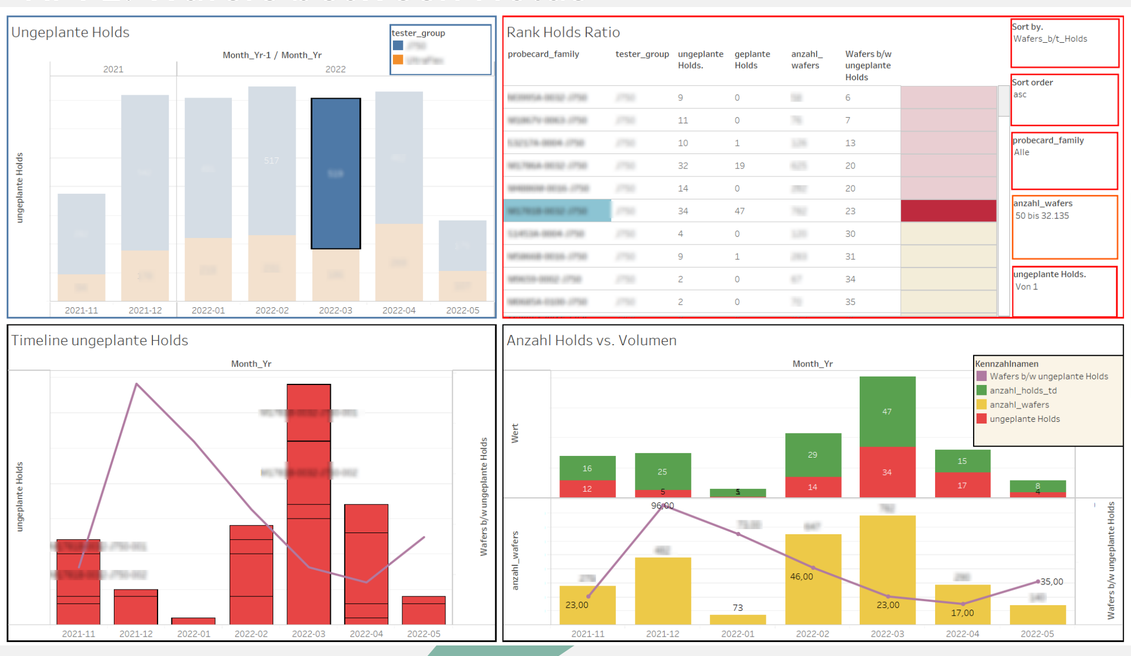
- Easier identification of possible process improvements
- Higher efficiency of maintenance processes
- Reduction of setup times and costs






## Further KPI usage

KPI 1: Wafers between Holds



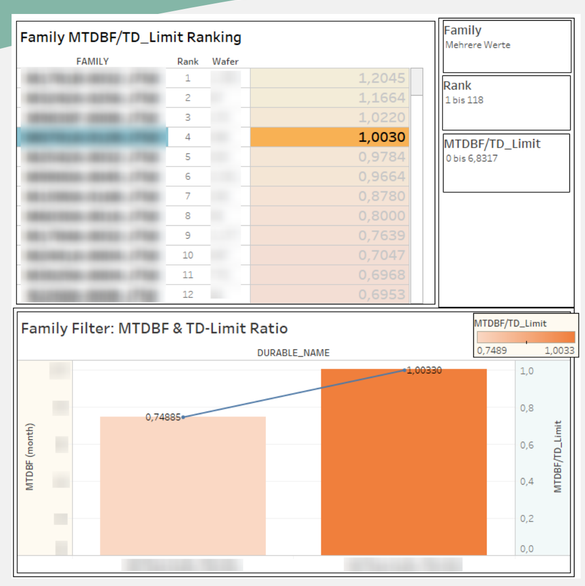

**KPI 1**

The new KPIs build on the existing “KPI 1” and “KPI 2” for Probecard Performance.

**KPI 2**

**Future KPI**

KPI 2: MTDBF / TD Limit
(Mean Touchdowns between Failures)




The new KPIs are mainly based on the same databases, but need additional data, for example for implementing the probecard complexity, which has to be developed first.

## Questions?

If you have any questions, please contact:


| Veronika Haehnel | Lasse Meyer |
|---|---|
| Staff Engineer | Master Student |
| veronika.haehnel@infineon.com | lasse.meyer@infineon.com |