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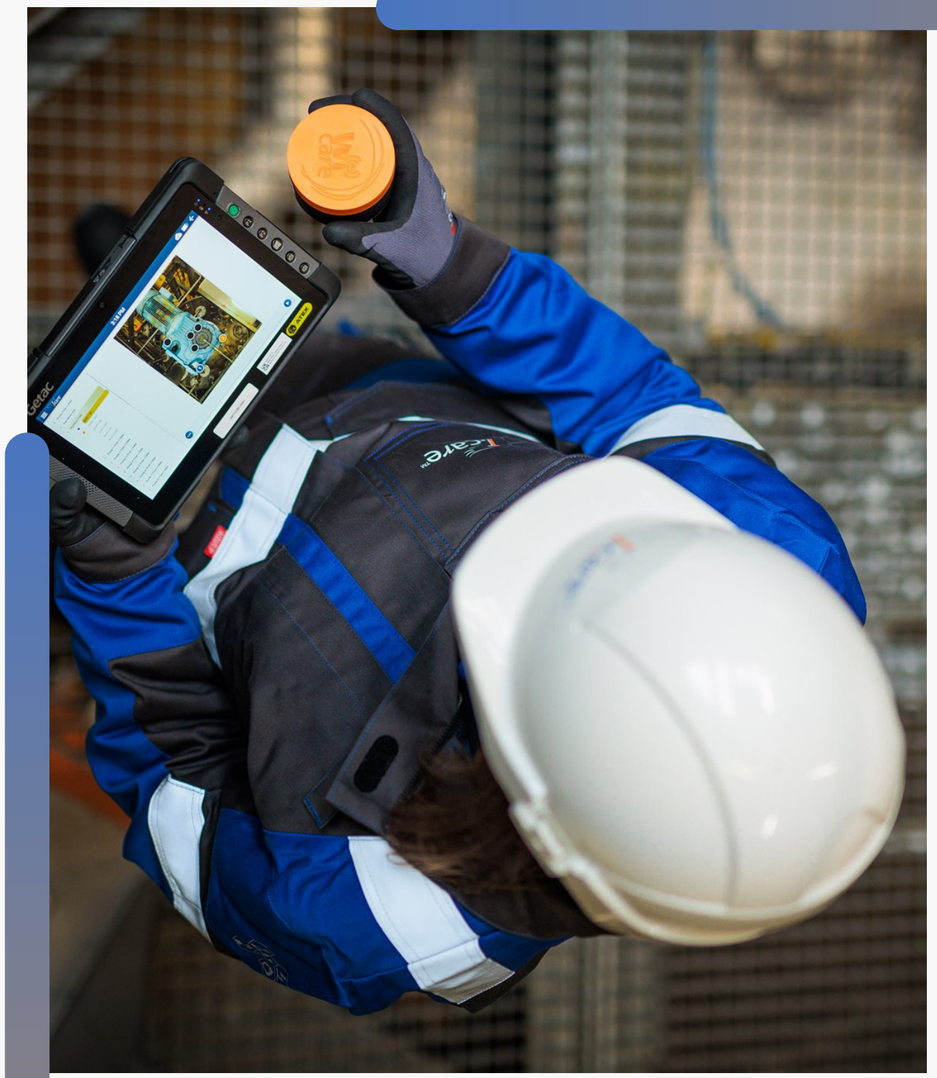
WHY DIGITAL MAINTENANCE TRANSFORMATIONS OFTEN ARE FAILING!

Tom Rombouts
Peter Hendriks

Digitalization in industry

Industrial digitalization includes the entire industrial process, including resource extraction, supply chain management,maintenance, production, and delivery of goods.

'At I-care we want to increase performance by digitizing projects that we do manual today.'



Supply chain/ Delivery of goods

There are various standard software solutions for digitalization of these processes.

Maintenance / Production

It is very complex to find a off the shelf solution for the digitalization of production and maintenance

Failing of digital transformations

Companies often start with the process of digitalization.
What you see is that clients use the right methods but not in the right way.

- No synergy top to bottom
- Team & processes not ready
- Trying to digitize all processes at once
- Digitalization based on original theoretical design
- To many suppliers

How to overcome this challenge

5 steps to overcome this challenge

Full commitment of management. When there is budget there is commitment

Get your team and processes at the right level

Go for quick wins

Analyze with existing data. don't look at design but also look at the process and context

Select the right partner(s).

Alternative Methodology

Digitalization of you Reliability plan with I-mining and an failure analysis .

Reliability Engineering
Reliability Centered Lubrication
Predictive Maintenance
Data Analytics

Maintenance data

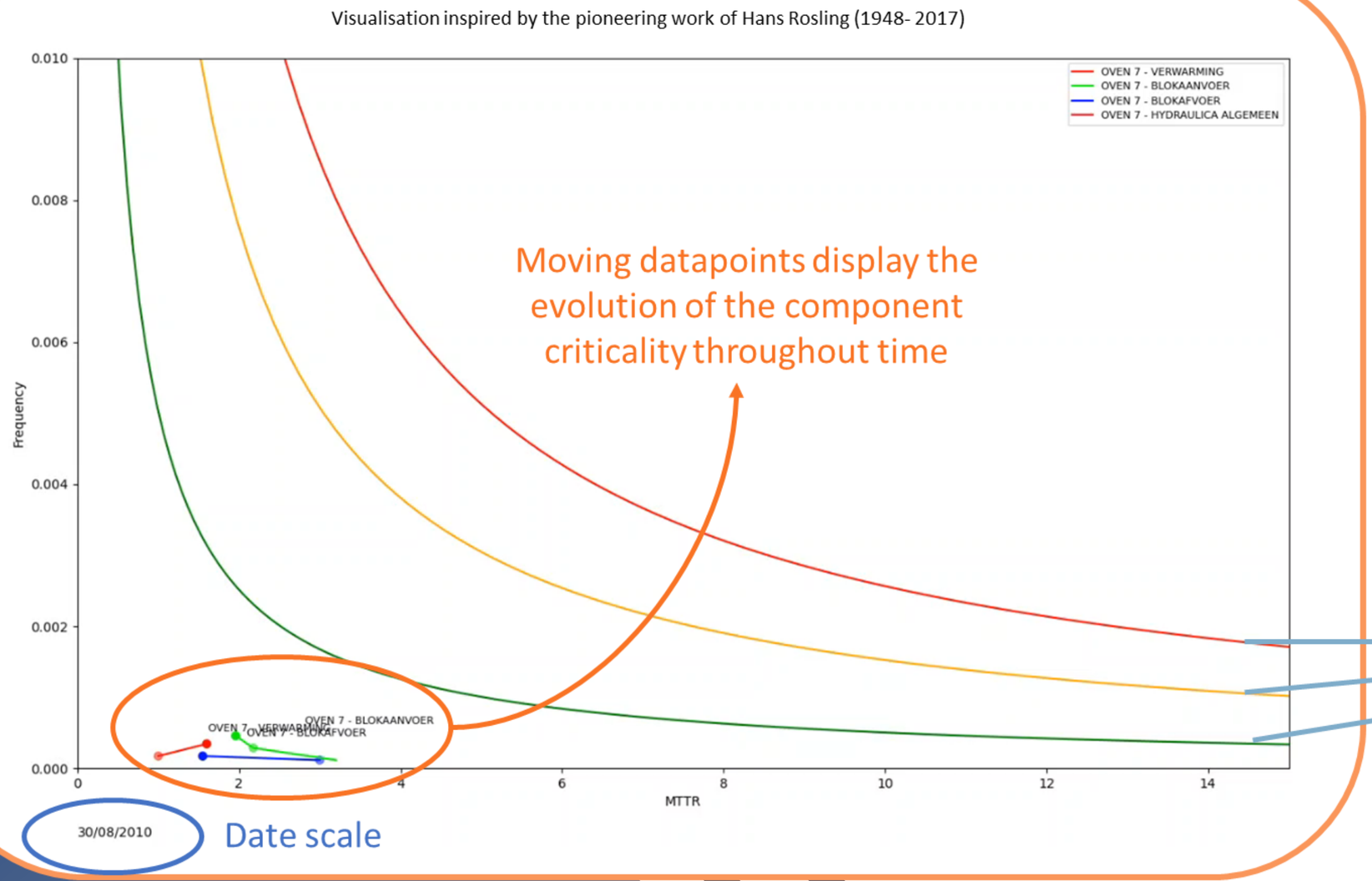
+

Process data

Digitalization

I-mining

I-mining



Analysis of 10 years CMMS data - 47.000 closed work orders – Business Case Identification based on equipment reliability data

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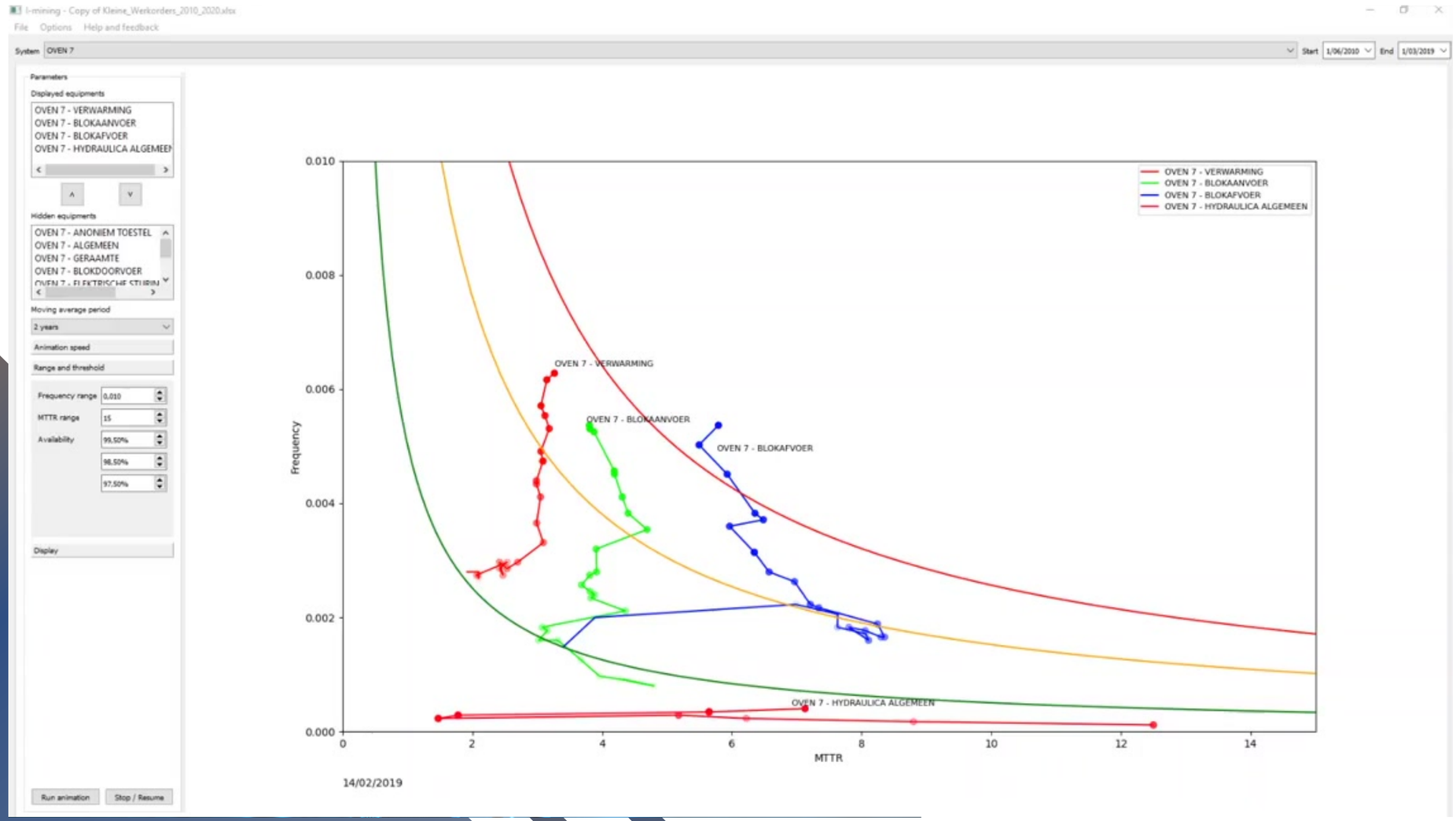
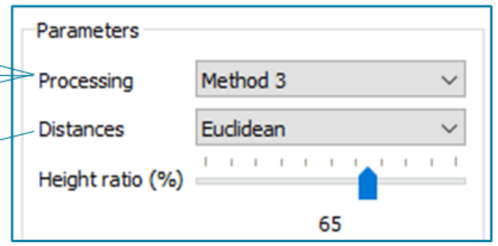
I-mining

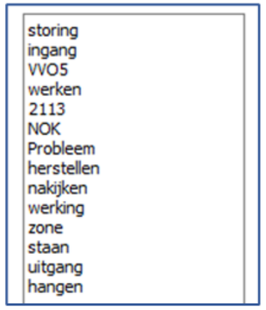


I-mining

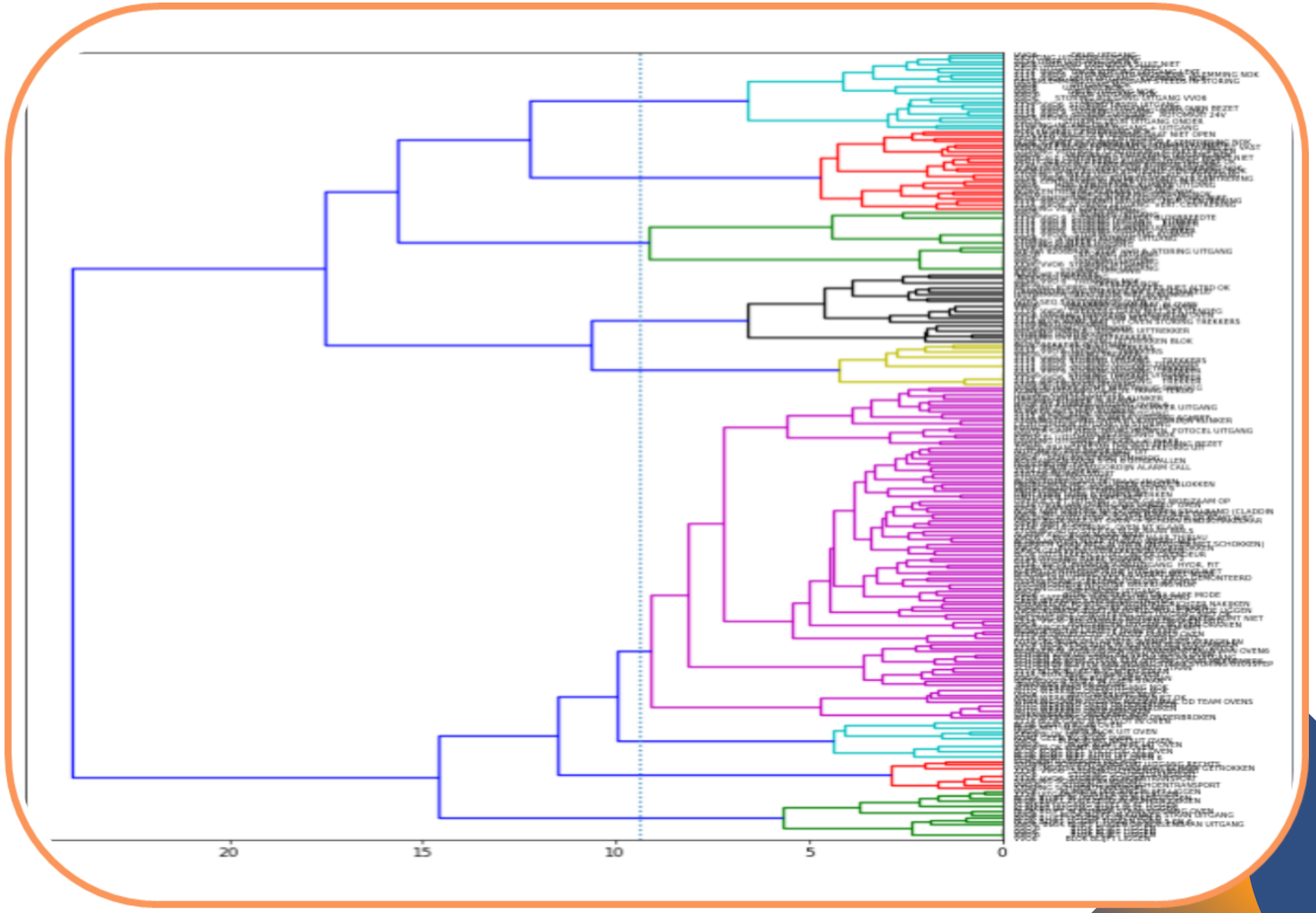
Matching Full words
Similar Word bases
Similar Phrases



The user can manipulate the clustering algorithm based on a simple to use interface



Using a Blacklist, the user can highlight or ignore terms in the clustering process. This to increas the clustering relevance for further analysis



I-mining

In Depth Cluster Analysis

The user can select what cluster is most interesting for further analysis. This cluster can be picked from the pareto chart.

The technician feedback of the intervention is analyzed by an NLP algorithm, displaying the most relevant words in a Word cloud.

This visualization can be used for further Root cause analysis and triggering focused improvement projects.

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Alternative Methodology

Digitalization of your assets

Collect

- Sensor - Proces - Historians

Connect

- Store & connect data
- Open platforms become the standard

Manage

Maintenance approach

Reliability engineer

Data approach

Data scientist

Predictive Maintenance 4.0

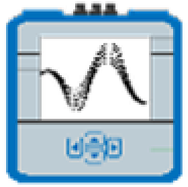
Analyze

- Transform information into relevant insights
- Insights at your fingertips

MEASURE
Predictive Maintenance
is predicting tomorrow's condition based on today's data in order to avoid unplanned maintenance and reduce overall maintenance costs

COLLECT

Connected devices, sensors & historical data



CONNECT

Enable access to multiple data sources, standardized industrial connectivity, IoT protocols

MANAGE

Ingest data, enrich data, big data processing & machine learning

ANALYZE

Gain insights from the data, apps & real-time analysis, real-time alerting

IMPROVE
Prescriptive Maintenance
is an agile asset maintenance strategy using predictive analytics to increase output while decreasing risks by optimizing planning and scheduling

Thanks!

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