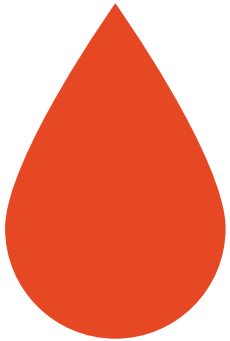
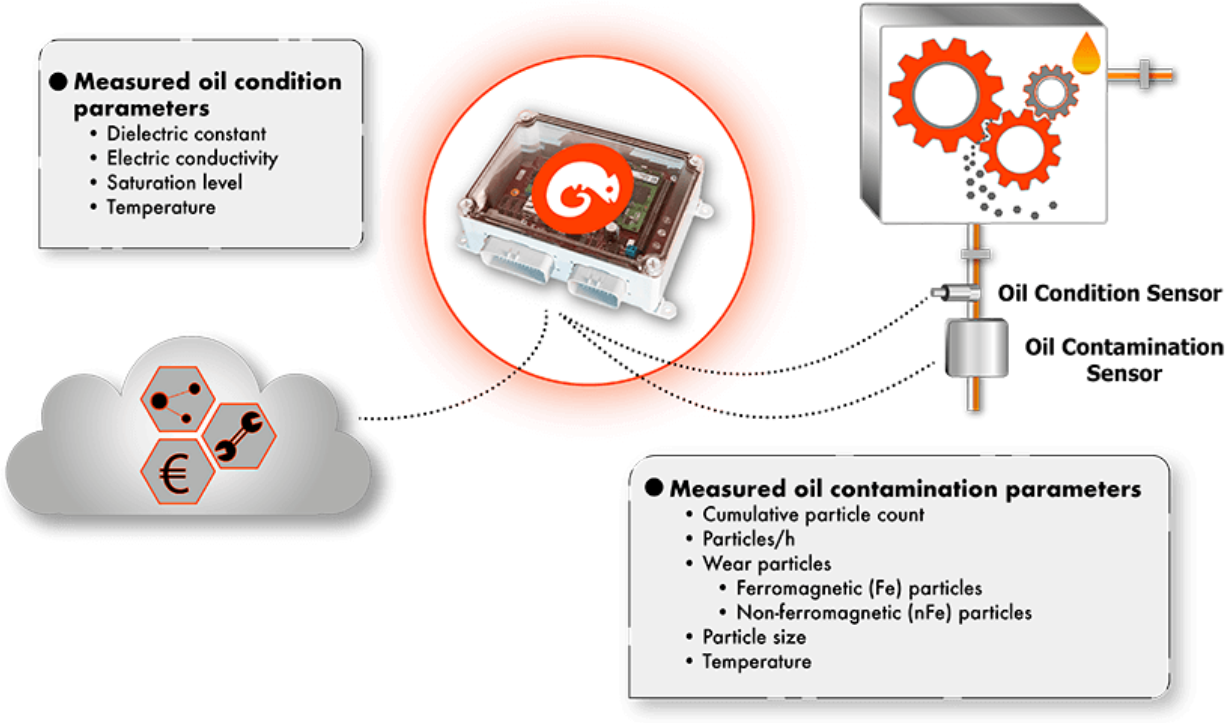
Condence concept: Condence Basic Oil Monitoring



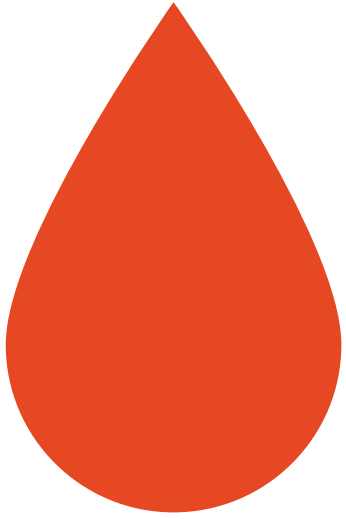
Condence concept: Oil Monitoring

When assessing machine health via oil monitoring there are two main categories to focus on. The condition of oil itself and the possible contamination particles in the oil.



Condence concept: Oil Monitoring

Valuable health indicator



Lifeblood of Engines
Oil carries a lot of valuable health data in it being **too valuable health parameter to be ignored**. Oil monitoring can also be combined with other Condence CM methods like vibration analysis

Continuous & online
Based on continuous sampling (e.g. every 5 min) and edge computing technology
Maximised **time to react** even with fast evolving failures

Eliminating surprise / risk

- Unplanned work is more expensive
- Unplanned downtime is expensive

Enable condition based maintenance
Decisions and maintenance based on actual asset condition

- Know when you need to change the lubricant
- Know if temperatures start to rise or water is present in oil
- Know when metal to metal contact happens (wear debris)
- Remove unnecessary manual work (inspections, repairs & oil change)
- Minimise human error via automatic alarms and data availability (wrong type of oil or other surprises)

Monitoring view: Default dashboard structure

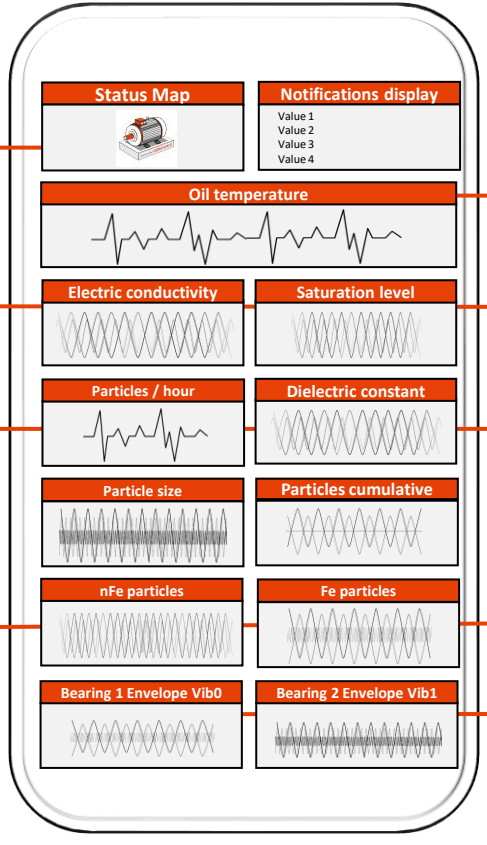
Condence components

Status Map
Image of what is being monitored, e.g. sensor placement and direction

Notifications Display
Displays what has happened / triggered thresholds during the selected time period. Easy configuration and adjustment of notifications in the cloud UI

Trend view widgets
Trend widget displays the calculated / sourced data as a line chart (one or more). Trend widget has plenty of tools available for further analysis and exports.

Activity Display
This period component displays summarised period data as a list view which can be expanded. The period component can be used for monitoring running hours of machinery with detailed information like motor starts and stops or in what times are the assets being used.



Default concept metrics

Oil condition indicators
- Dielectric constant
- Electric conductivity
- Saturation level
- Temperature

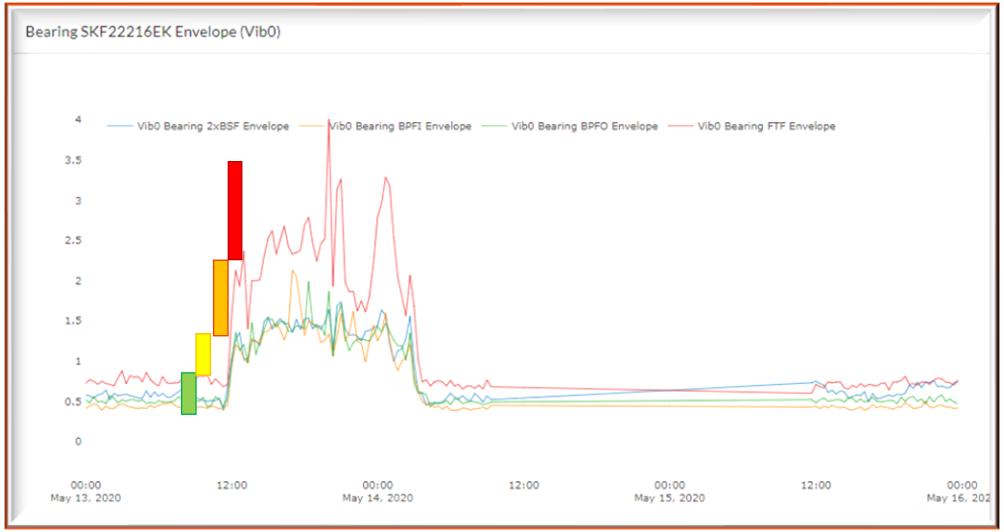
Oil contamination indicators
- Cumulative particle count
- Particles/h
- Wear particles
  - Ferromagnetic (Fe) particles
  - Non-ferromagnetic (nFe) particles
- Particle size
- Temperature

Condition based maintenance

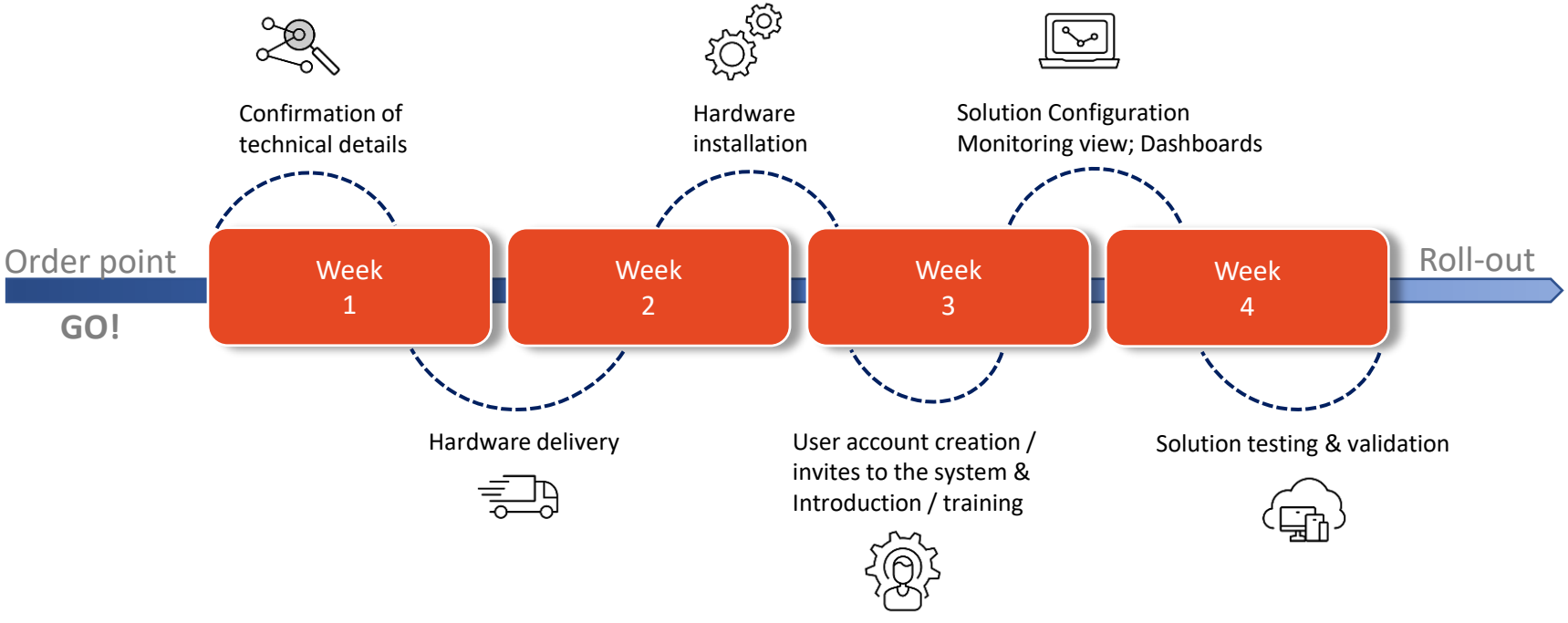
Create suggestive notifications

1. Set suggestive severities and thresholds for them
2. Automatic system notifications to trigger workflows
3. Notifications based on actual asset condition
4. Condition based maintenance (CBM)

- Maintenance action needed
- Plan for bearing check and lubrication
- Follow elevated vibration levels
- Normal vibration range



Delivery timeline



Read more at:
condence.io/applications/condence-oil/

Condence is a product of Distence Oy

Sinikalliontie 18 B, FI-02630 Espoo, Finland

sales@distence.fi