

# Gain insights into the health of your transformer

With transformer monitoring solutions

[se.com/services](https://se.com/services)



Life Is On

**Schneider**  
Electric



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maintenance challenges

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# Addressing transformers' maintenance challenges

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# Addressing transformers' maintenance challenges

From electrical generation to consumption to powering industries and enterprises, transformers are at the core of the grid.

It's crucial transformers operate at their peak performance, but there are challenges:



Transformer downtime is a critical issue for your business.



Earlier replacement has a significant financial impact.



There is a shortage of skilled people to manage transformers.

## 💡 Did you know?

On average, **1** out of every **200** transformers experiences a major failure every year.

Source: CIGRE TB 642, 2015



# Introducing transformer monitoring solutions



# Introducing transformer monitoring solutions

EcoStruxure™ Transformer Expert provides unprecedented visibility into transformer health and enables fleet management.



## Predictive maintenance

Help predict potential issues before they occur.



## Reliability and safety

Help reduce the risk of downtime and detect early signs of potential issues.



## Data-driven decision making

Make data-driven maintenance and asset replacement decisions.



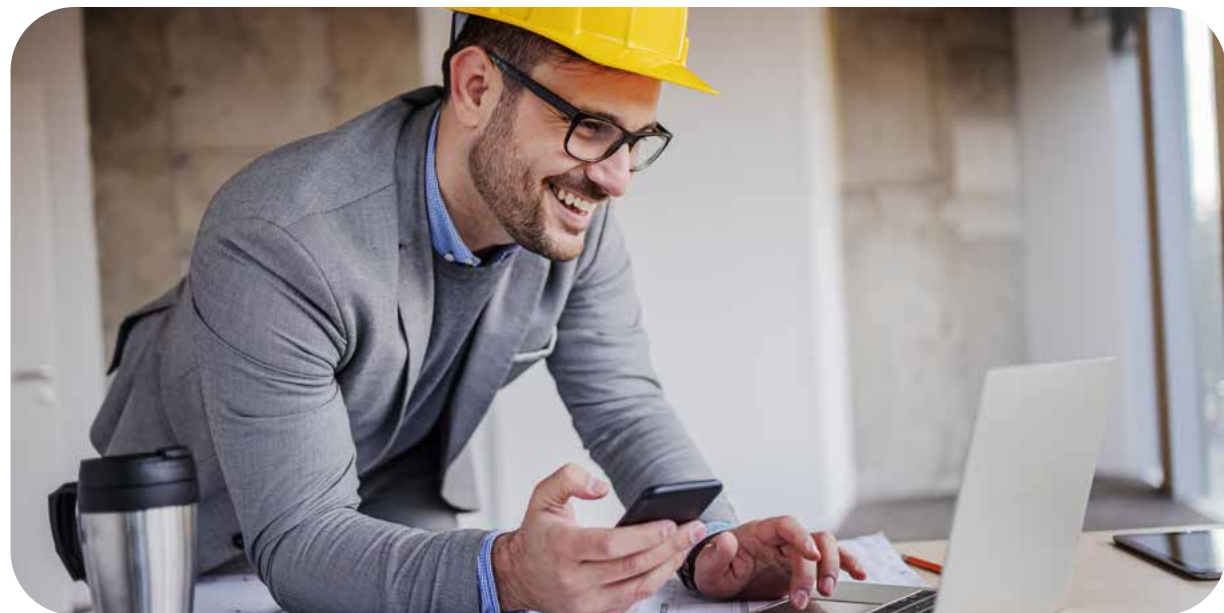
## Economic benefits

Help reduce the risk of downtime and extend asset life expectancy.



# Introducing transformer monitoring solutions (cont.)

## Start your monitoring journey



### EcoStruxure Transformer Expert Essential

Offline DGA (Dissolved Gas Analysis) historian and analytics

## Subscribe to our all-in-one monitoring solution



### EcoStruxure Transformer Expert

All-in-one disruptive IoT sensor and software analytics subscription

Also available with an add-on option for hydrogen monitoring

## Subscribe to a complete service plan



### EcoCare membership

Advanced condition-based monitoring for transformers in a digital-enabled service plan

Please verify the availability of EcoCare in your region through a local services sales representative. If EcoCare is not yet available, you can start leveraging [EcoStruxure Service Plan](#).

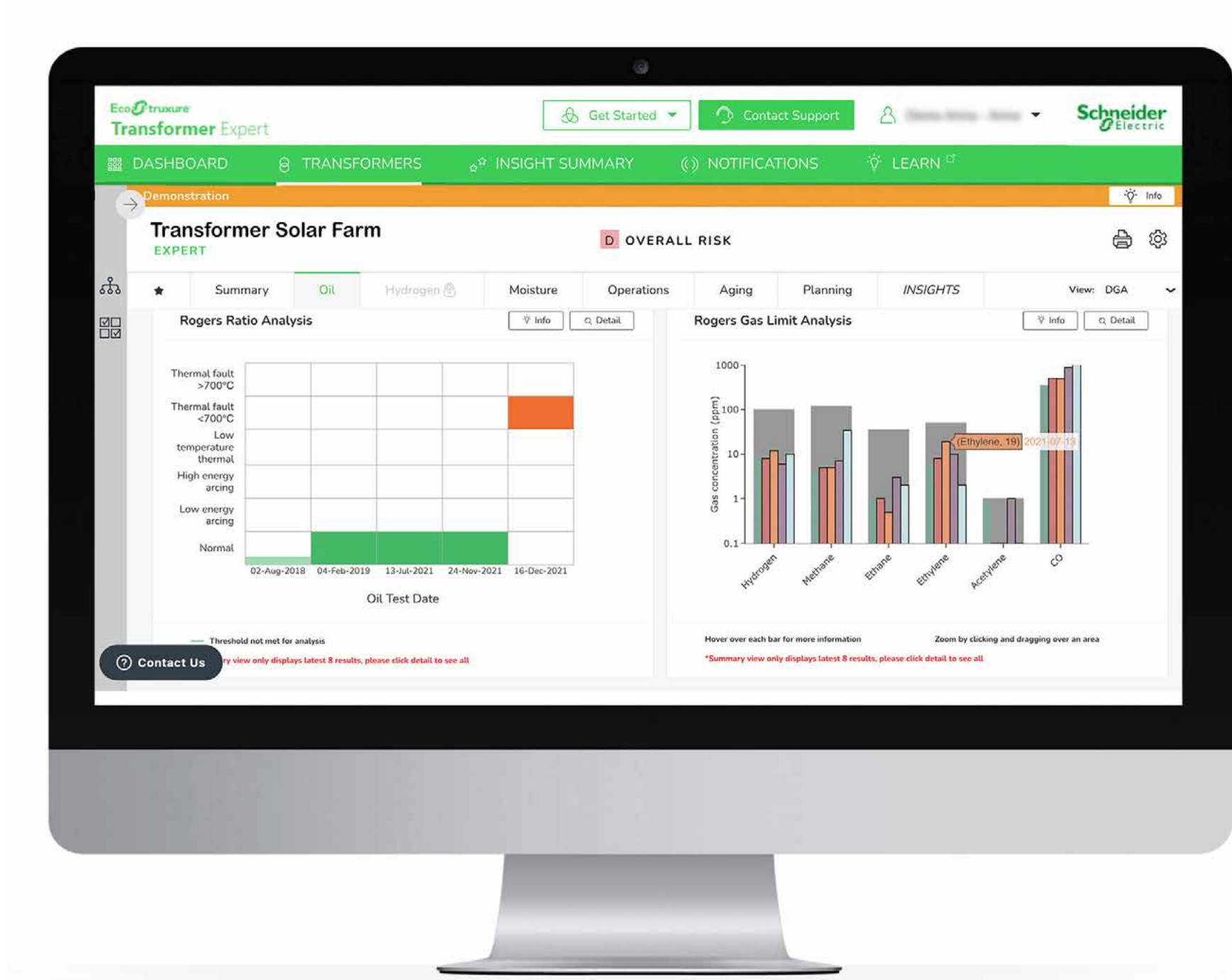


# Introducing transformer monitoring solutions (cont.)

Start your monitoring journey with offline DGA through EcoStruxure Transformer Expert Essential.

With EcoStruxure Transformer Expert Essential, you can:

- **Store dissolved gas analysis (DGA) reports** of your fleet in Data Hub
- **Get advanced analytics and automatic interpretation** based on the latest industry standards (IEEE, IEC) and guides (Rogers, Doernenburg, Duval methods)
- **Prioritize transformers** that need regular monitoring across your fleet





# Introducing transformer monitoring solutions (cont.)

## All-in-one sensors and software analytics: EcoStruxure Transformer Expert

**EcoStruxure Transformer Expert** is an advanced monitoring system, which helps detect potential issues and proactively alerts customers when further actions are necessary. This enables a transition from time-based maintenance to a more efficient condition-based approach.

Thanks to the **all-in-one, easy-to-deploy** disruptive IoT **sensors and software analytics subscription**, you can track the critical health parameters of your transformers.

Through an **innovative patented sensor for oil transformers** and advanced software analytics, EcoStruxure Transformer Expert measures the health of critical transformers in 3 parameters:



Moisture



Overheating

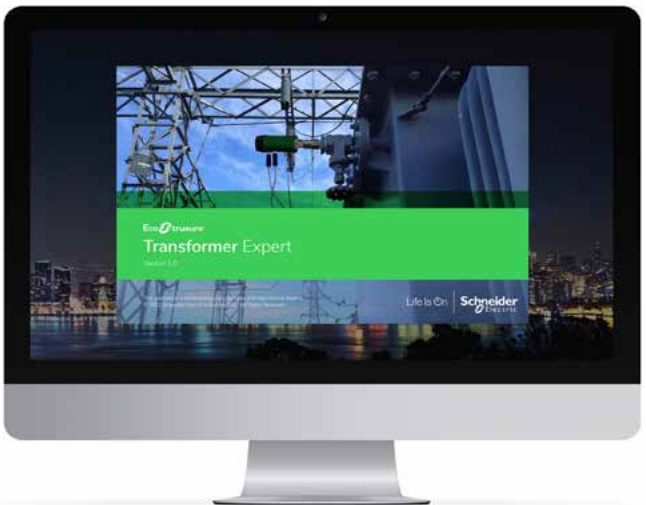


Discharge

Through **powerful system insights and advanced cloud-based analytics**, you get operating and aging insights along with risk assessment to monitor your transformers' health, thanks to:

- Fleet-wide view of transformer health
- Efficient and insightful dashboards for each transformer
- Historical DGA oil test repository

EcoStruxure Transformer Expert comes with EcoStruxure Transformer Expert Essential included. **Hydrogen monitoring** is available as an add-on. By leveraging the **Dual H2 sensor** certified by FM Global, you are able to track hydrogen, a key early warning sign for transformer issues.



**EcoStruxure Transformer Expert**



**EcoStruxure Transformer Expert Dual H2**



# Introducing transformer monitoring solutions (cont.)

## Advanced condition-based monitoring delivered through the EcoCare services membership

With EcoCare membership, a next-generation service plan, we take care of your electrical distribution equipment through exclusive support and innovative digital services. You get exclusive access to our remote experts and unlock the full potential of your equipment.

We will monitor the health of your oil transformers, so that you can act in anticipation. Enabled by advanced condition-based monitoring, this is an optional feature inside your **EcoCare for Electrical Distribution Equipment membership**.

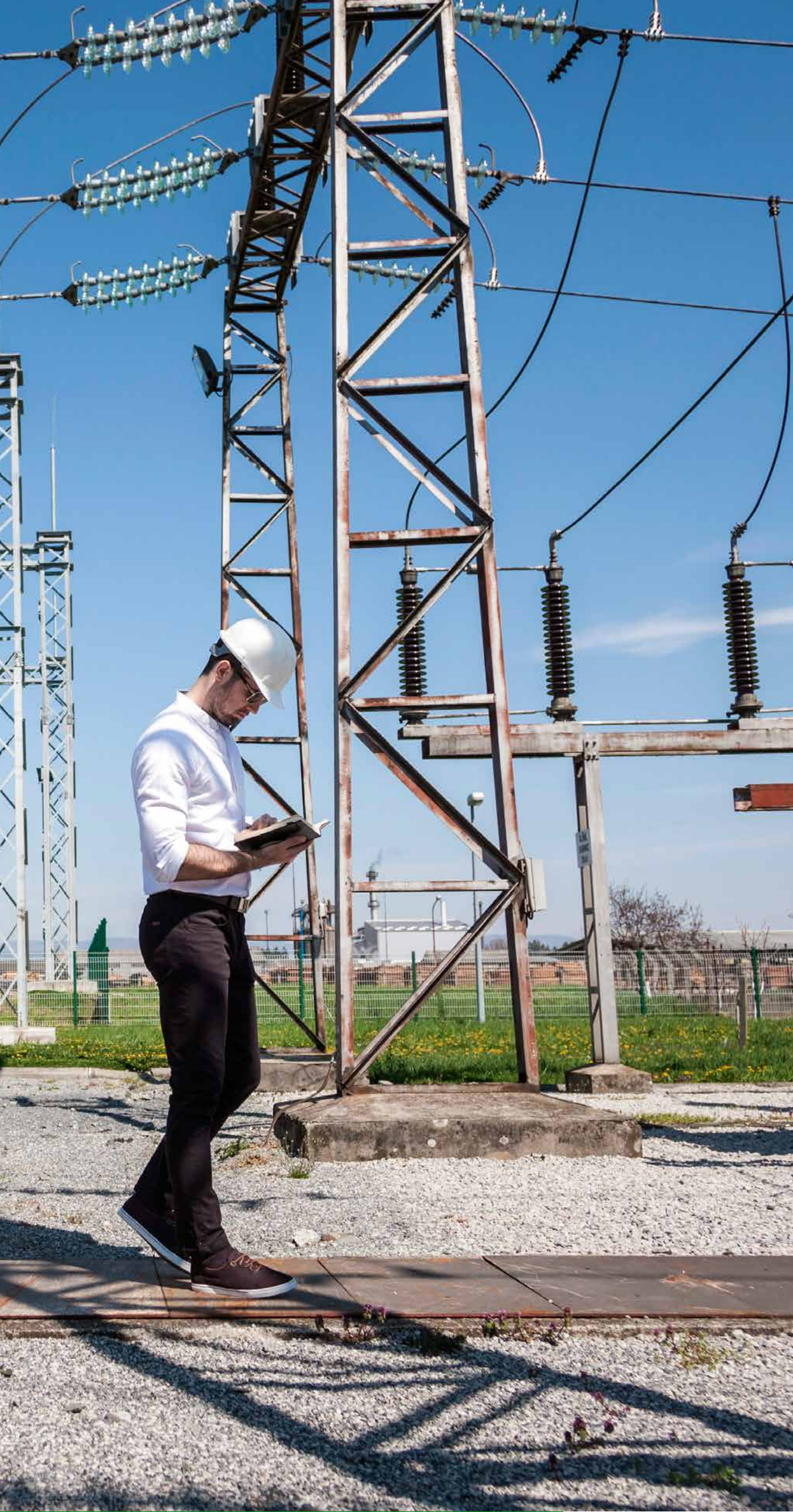
24/7 remote monitoring and advanced analytics focus on four different indicators:

- Operating risk
- Solid insulation risk
- Dielectric risk
- Aging risk

If risk increases, our experts from the Connected Services Hub will take the necessary action and provide insights, analysis, and recommendations to help you improve your business continuity and optimize your transformers' life.

Learn more

Please verify the availability of EcoCare in your region through a local services sales representative. If EcoCare is not yet available, you can start leveraging [EcoStruxure Service Plan](#).





# Analytics and insights

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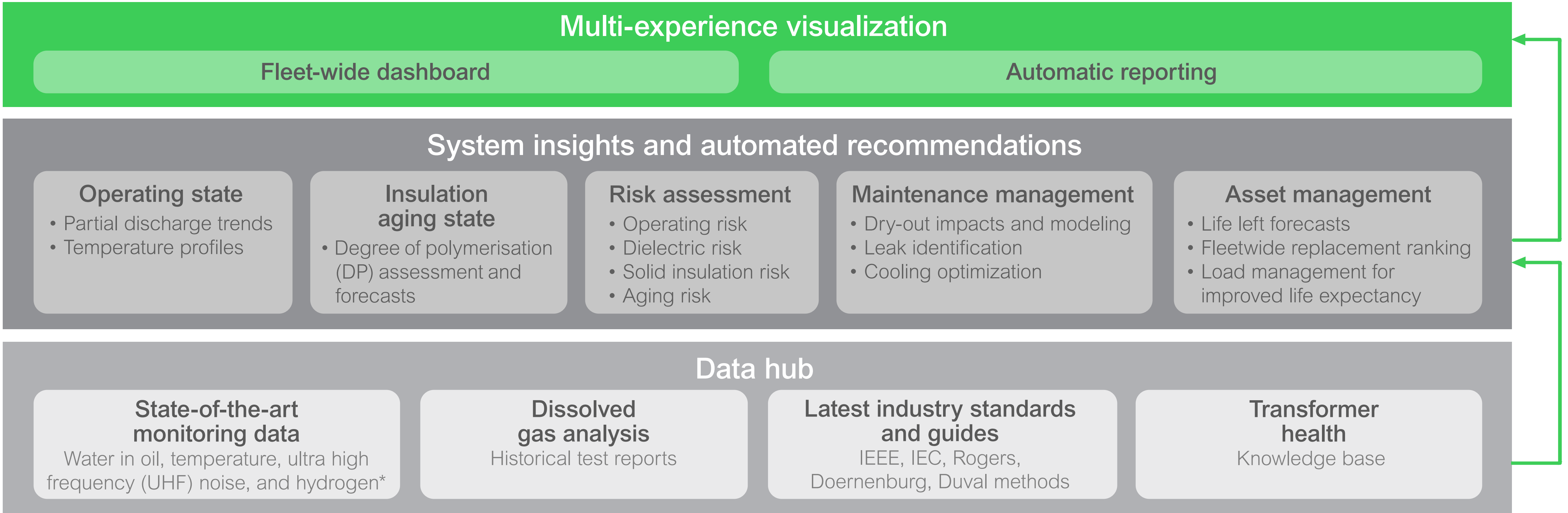
Locating additional  
resources





# Analytics and insights

Data, insights, and visualization to proactively manage oil transformers

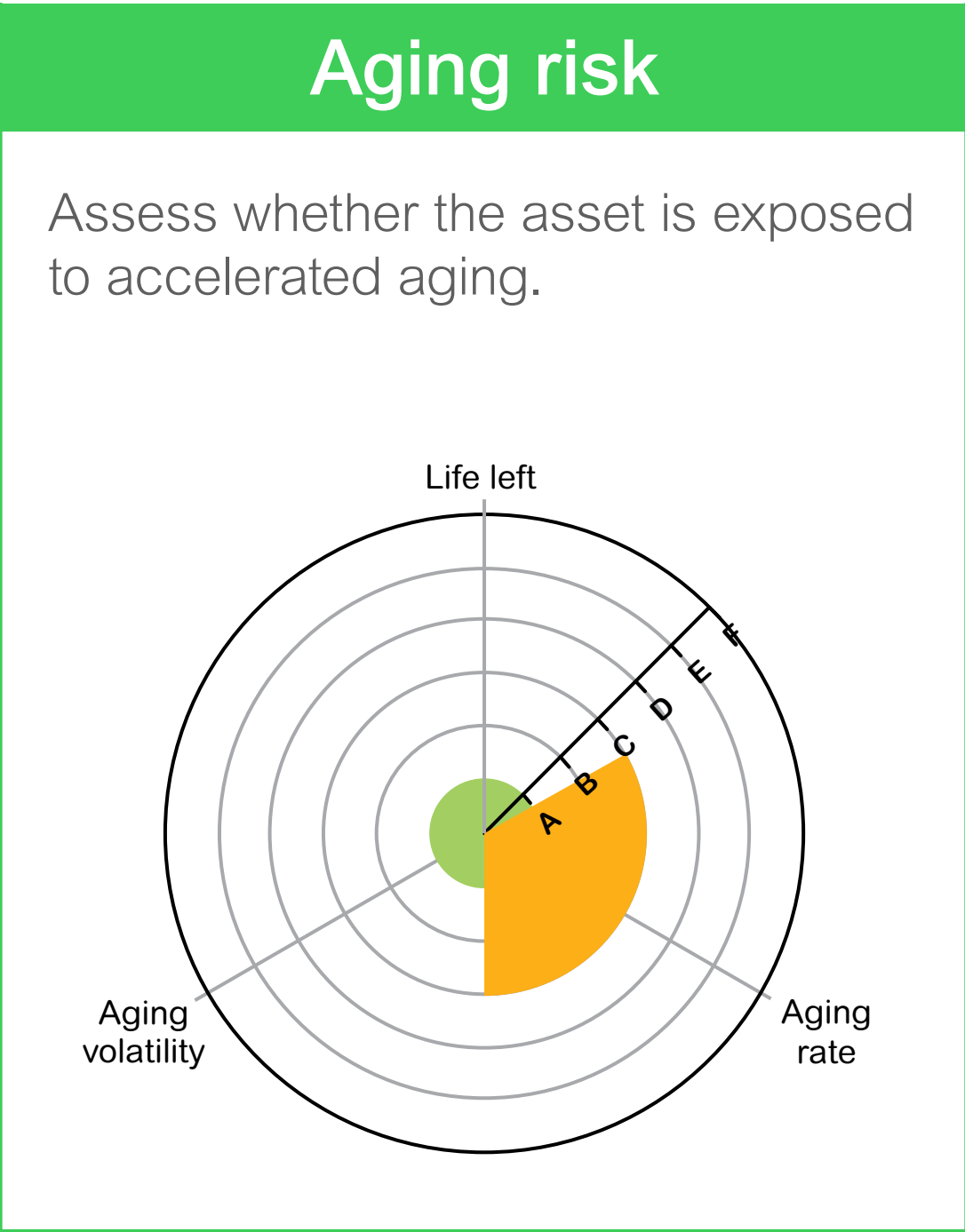
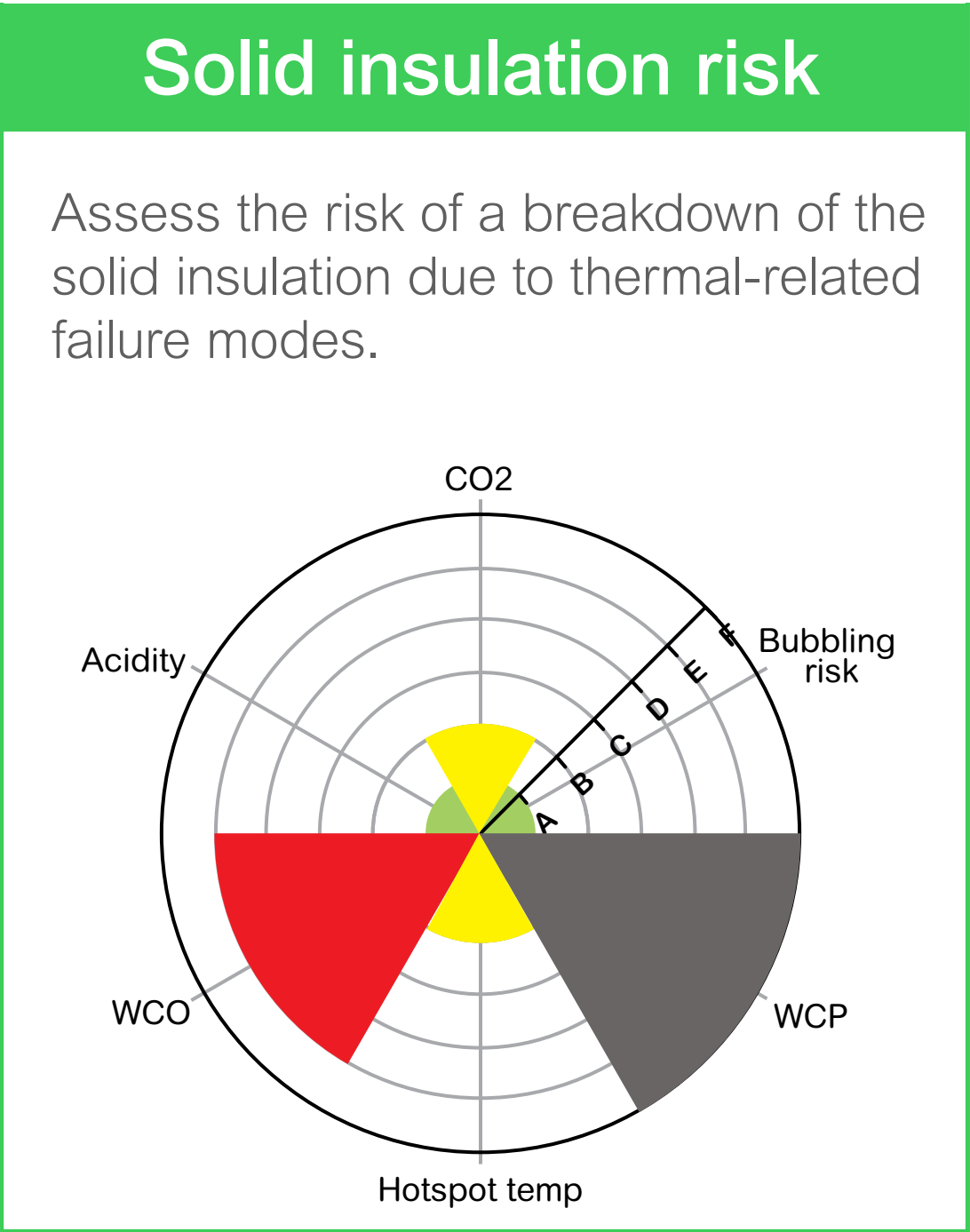
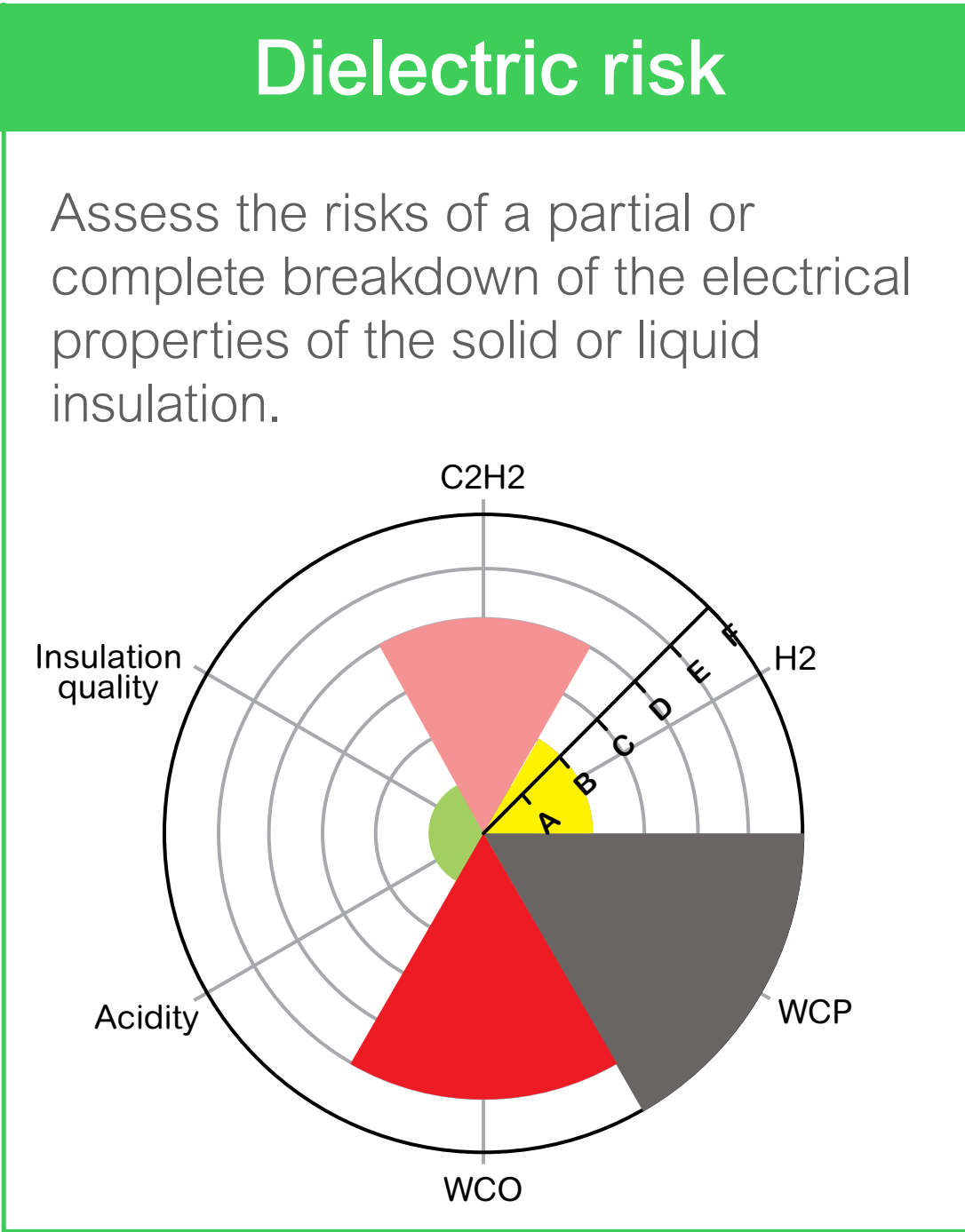
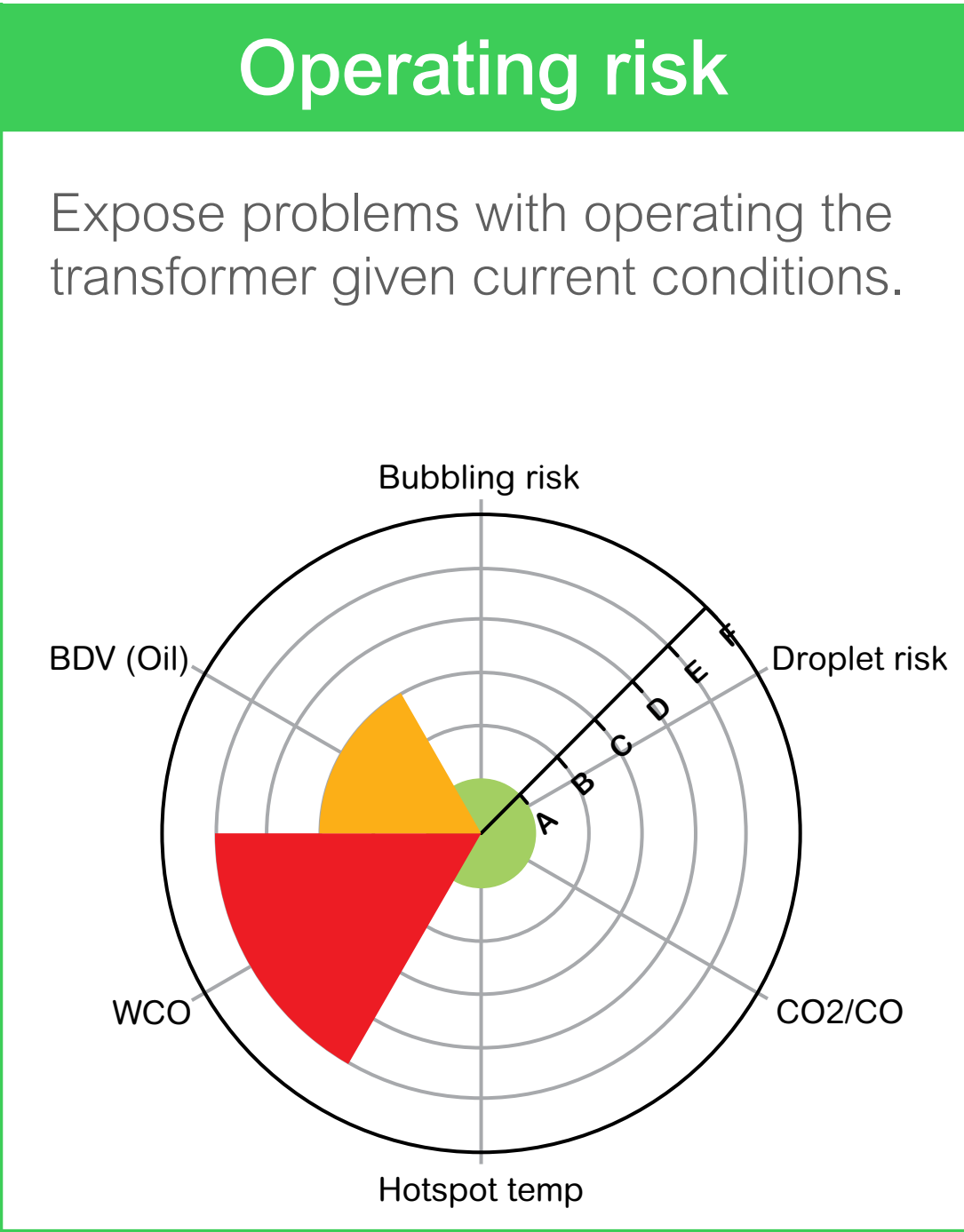


\* Optional



# Analytics and insights (cont.)

Powerful system insights with advanced analytics enable continuous risk assessments



These analytics and insights are available with EcoStruxure Transformer Expert subscription (including add-on hydrogen monitoring) and EcoCare membership.

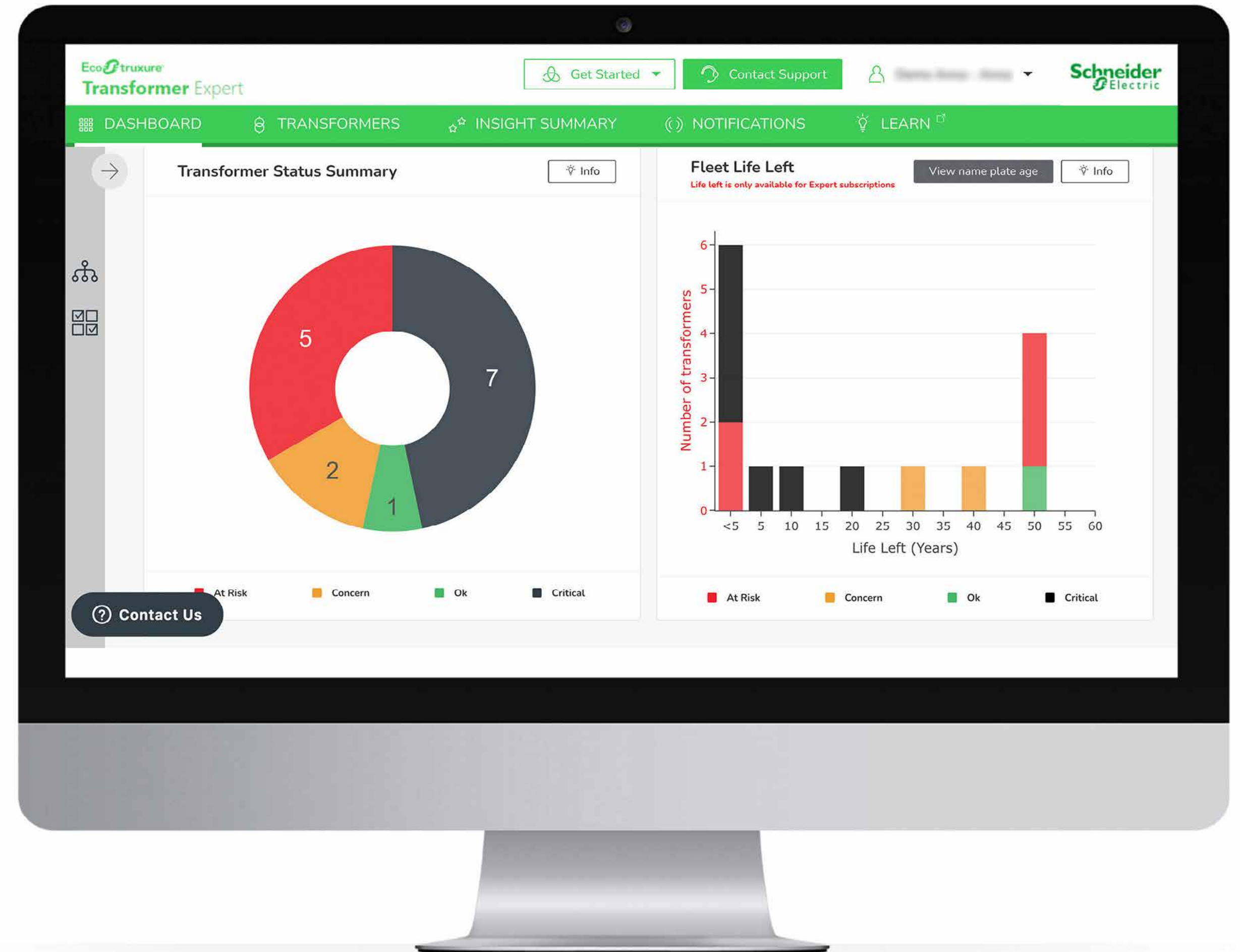


# Analytics and insights (cont.)

Fleet view of transformers and their health allows you to:

- **Gain visibility** into the health and operating status of your oil transformers
- **Prioritize transformers that most need care** across your fleet
- **Make data-driven decisions** for maintenance and asset replacement

These analytics and insights are available with EcoStruxure Transformer Expert Essential and EcoStruxure Transformer Expert subscription (including add-on hydrogen monitoring).





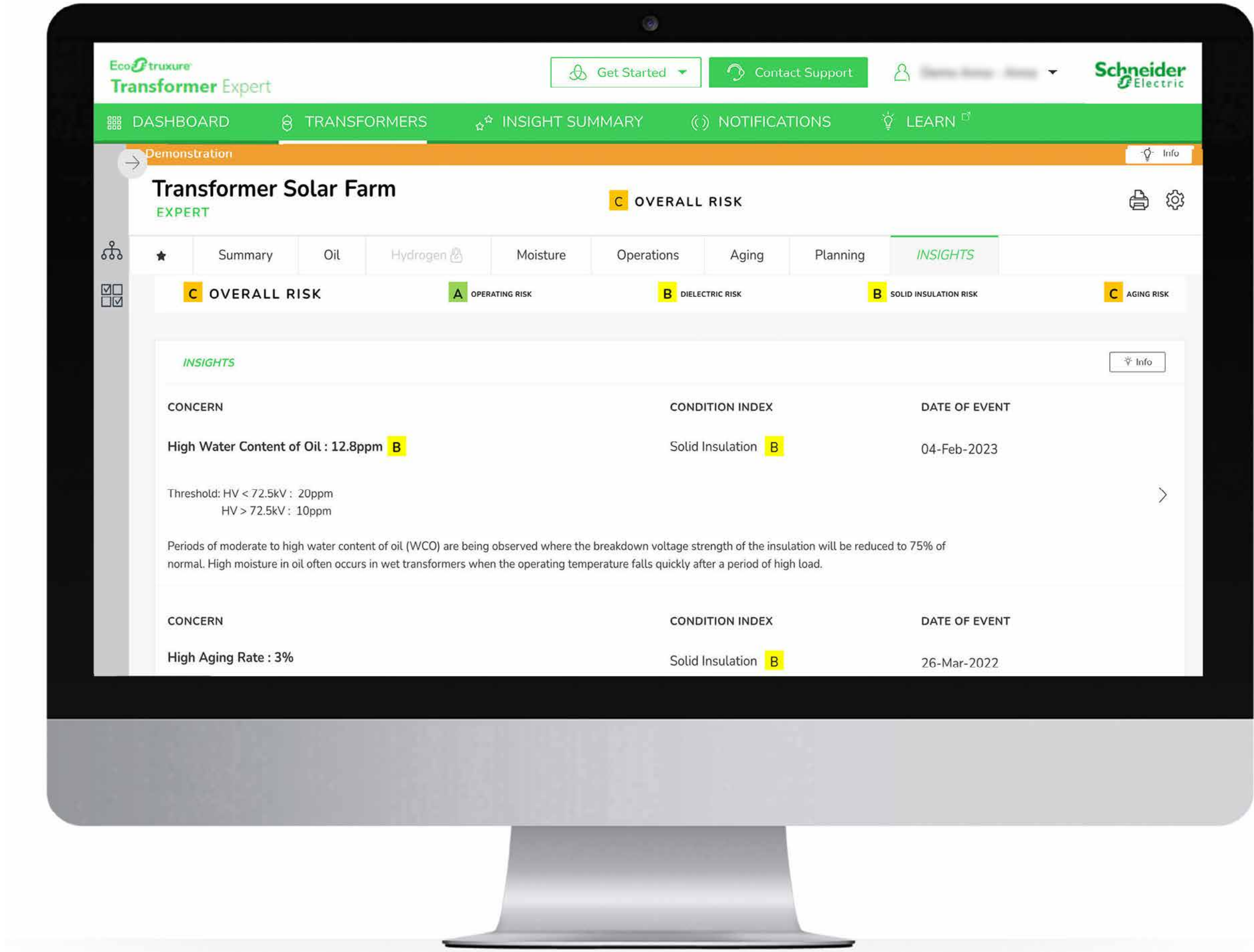
# Analytics and insights (cont.)

## Efficient and insightful dashboards for each transformer

**Predictive maintenance** improves workforce and OpEx decisions, and **life extension** reduces CapEx. We can help you achieve this thanks to:

- Recommendations and insights
- Regularly updated health charts
- Transformer Health Index
- Scientific references to go further

These analytics and insights are available with EcoStruxure Transformer Expert subscription (including add-on hydrogen monitoring).





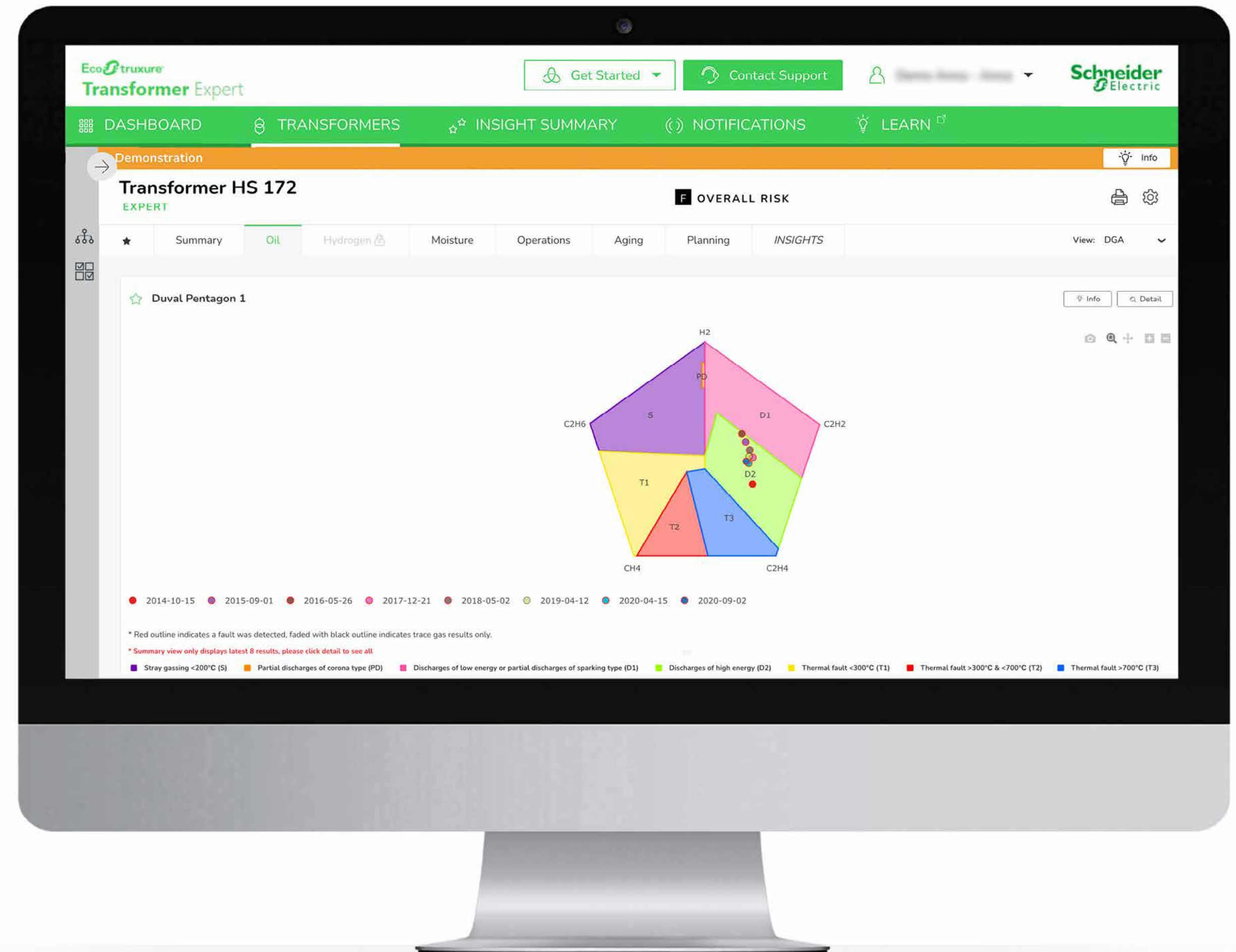
# Analytics and insights (cont.)

Historical dissolved gas oil test reports in the Data Hub are:

- Archived in the platform
- Automatically analyzed to international standards

Try our advanced analytics and insights capability by simply uploading your existing oil test reports.

These analytics and insights are available with EcoStruxure Transformer Expert Essential and EcoStruxure Transformer Expert subscription (including add-on hydrogen monitoring).





# Analytics and insights (cont.)

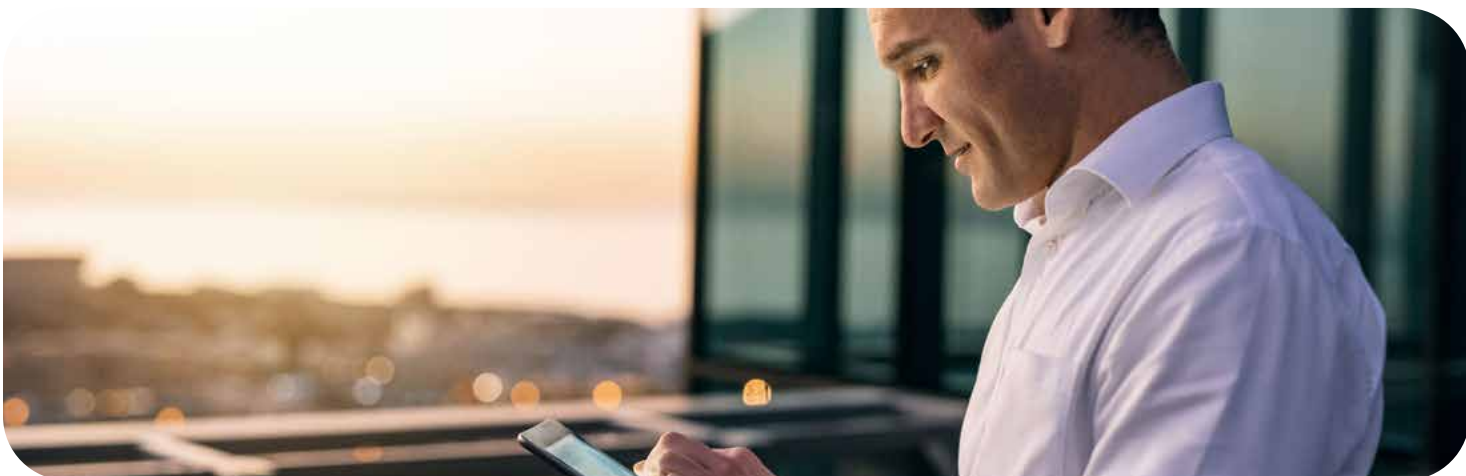
## Connected Services Hub as your 24/7 remote experts team

A dedicated and highly skilled team of **125+ experts** worldwide is available remotely **24/7** to proactively **monitor and analyze** your critical electrical assets leveraging our EcoStruxure digital platform.



**We continuously monitor and support your assets and systems 24/7.**

- Remote experts monitor and diagnose
- Alarm notification



**You have visibility and get recommendations from our experts.**

- Live data available through mobile app
- Quarterly customized reports based on advanced analytics with recommendations
- Annual summary report and consultation meeting on how to improve your assets' performance

[Learn more](#)

Connected Services Hub is available only with EcoCare membership

Please verify the availability of EcoCare in your region through a local services sales representative. If EcoCare is not yet available, you can start leveraging [EcoStruxure Service Plan](#).

## 💡 Did you know?

Schneider experts from the Connected Services Hub:

- Support over **140 countries**
- Deliver **1200+** expertise reports per year
- Treat **500+** incidents per year
- Provide, on average, **actionable recommendations on 50% of their monitored electrical assets.** Experts deliver just the relevant information at the right time.



# Learning from our customers

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# Learning from our customers

## CERN, Geneva, Switzerland

CERN (the European Organization for Nuclear Research) is one of the world's largest and most respected centers for scientific research.

To deliver their mission – understanding what the universe is made of and how it works – they provide scientists with a unique complex to push the frontiers of science and technology for the benefit of all.

In this research environment, the availability of facilities remains crucial.

“The relationship with the Schneider Electric Services team has been great. You have listened and responded to my suggestions. I feel we are on a journey together to solve problems, and I've really appreciated the fast response from the team.”

– Giuseppe Cappai, High Voltage Maintenance Manager for CERN

### Goal

Make the best decision to refurbish or replace critical transformers, which were over 30 years old, to keep facilities available.

### Solution

Monitor the behavior, analyze risk, and recommend best practice in the asset management of 8 transformers using EcoStruxure Transformer Expert.

### Story

Following the outcomes of the online analysis, maintenance actions were implemented and replacement plans made to minimize the risk of these critical assets impacting operations.

### Results

Innovative, affordable, and easy-to-use technology that helps inform maintenance decisions and critical asset management to keep assets continuously online.

Discover more



# Locating additional resources



# Locating additional resources

Learn more about how you can optimize your transformer's health with our Transformers Monitoring Solutions:



## Web

[EcoStruxure Transformer Expert](#)

[EcoCare for Electrical Distribution Equipment](#)



## Blog posts

[5 ways that transformer monitoring helps avoid failures, extend asset lifespan, and reduce OpEx](#)

[Why assessing transformer health is critical for utilities, businesses, and consumers](#)

[How CERN research lab uses innovative oil-filled transformer monitoring to reduce operational risks](#)



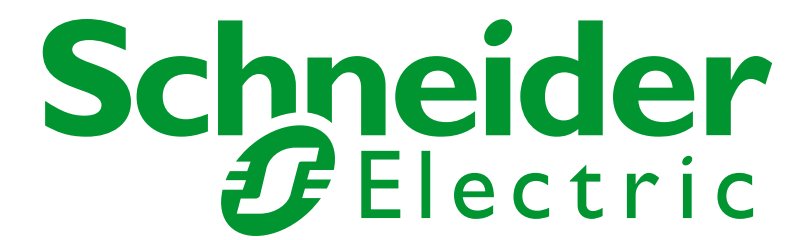
## White papers

[Benefits of shifting from traditional to condition-based maintenance in electrical distribution equipment](#)

[Strategies of maintaining electrical distribution equipment](#)



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To learn more  
about our services visit

[se.com/services](https://se.com/services)



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