

Press release

Digital process hazard analysis (DPHA) from DEKRA

Safer processes with less effort

With its digital, systematic process hazard analysis, the expert organization DEKRA is improving safety in process industries while reducing resourcing requirements. Digital Process Hazard Analysis (DPHA) combines the advantages of computer technology with the DEKRA experts' specialist knowledge of reliable and safe processes, optimizing the deployment of staff and enabling faster results, while improving safety.

Process Hazard Analysis methods (HAZOP, LOPA, etc.) have barely changed over the past few decades. Now, DEKRA has introduced a new Digital PHA, which leverages the digital possibilities afforded by computer simulations and artificial intelligence (AI). Featuring process modeling to simulate scenarios and an in-house AI solution, DEKRA's experts can work together with plant operators to carry out optimized PHAs.

The time savings amount to around 70% – all while delivering results with greater precision and consistency. As a result, brainstorming sessions – the most resource-intensive phase of the PHA process – can be shortened considerably. The analysis is divided into the following steps:

- **Preparation:** DEKRA experts work with the operator to gather the necessary information and determine relevant scenarios.
- **Simulation:** Thanks to process modeling and computational support, a computer simulation by Mobatec Modeller calculates the causes, consequences, and safeguards, operating much more quickly and precisely than human brainstorming.
- **Review of results:** Once the computer generates its suggestions, humans can review the results, make recommendations, and consider additional safeguards or focus on problem solving.

These three steps are repeated for all the scenarios identified for analysis. The digital PHA concludes with a written report detailing the results. The Digital PHA solution is integrated in the ever-growing DEKRA Safety Platform.

[Digital process hazard analysis – DEKRA](#)

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About DEKRA

DEKRA has been active in the field of safety for almost 100 years. Founded in 1925 in Berlin as Deutscher Kraftfahrzeug-Überwachungs-Verein e.V., it is today one of the world's leading expert organizations. DEKRA SE is a subsidiary of DEKRA e.V. and manages the Group's operating business. In 2021, DEKRA generated sales totaling more than EUR 3.5 billion. The company currently employs almost 48,000 people in approximately 60 countries on all continents. With qualified and independent expert services, they work for safety on the road, at work and at home. These services range from vehicle inspection and expert appraisals to claims services, industrial and building inspections, safety consultancy, testing and certification of products and systems, as well as training courses and temporary work. The vision for the company's 100th birthday in 2025 is that DEKRA will be the global partner for a safe, secure and sustainable world. With a platinum rating from EcoVadis, DEKRA is now in the top one percent of sustainable businesses ranked.