

A photograph of two workers, a man and a woman, standing in a field. Both are wearing white hard hats and high-visibility yellow safety vests over blue shirts. The man is holding a smartphone and pointing at it, while the woman is holding a laptop. They appear to be collaborating on a task. The background is a blurred field of dry grass under a bright sky.

Moving Towards Excellence in Safety Culture



DEKRA Excellence in Safety Culture

DEKRA partnered with a leading company in technological fertilizers and sustainability to drive safety culture and improve safety in production processes throughout the organization. An entity with more than 35 years of experience and 28 production plants with a manufacturing capacity of more than 2 million tons per year, this distinguished partner is present in more than 80 countries with 22 commercial subsidiaries around the world.

Prioritizing a corporate culture of excellent process safety focused on employee well-being and environmental responsibility, the company set even more ambitious goals using the latest human factors and risk management applications.

Required **Services**

Enlisting DEKRA as their expert partner, the company embarked on a cultural transformation in safety focused on two fundamental areas:

- ▶ **Safety culture** at all levels of the organization
- ▶ Improving the **safety of production processes** to reduce risk in case of deviations

Given their close relationship, both areas of work were developed in parallel, as it is essential to ensure a strong organizational safety culture in order to achieve greater excellence in process safety.

Additionally, the client requested that DEKRA's experts developed an awareness and sensitization campaign by providing technical and marketing support for the creation of physical and digital posters to be placed in each of the production centers. The campaign aimed to bring the cultural transformation closer to the entire chain of command and to incorporate new ideas for even greater performance.

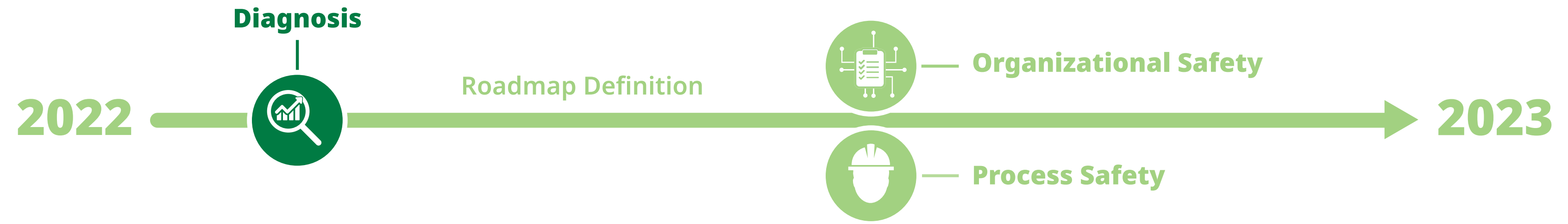
Our **Contribution**

A reliable partner with the resources necessary to ensure compliance with the latest safety standards and regulations, DEKRA led the project drawing from both its technical capabilities and extensive experience to complete the task.

DEKRA supports customers in the implementation of an effective **Process Safety Management (PSM)** program designed to aim for continuous improvement in safety management performance, reduce the likelihood of catastrophic accidents, ensure the well-being of employees, protect the environment and safeguard company assets.

In 2022, DEKRA first conducted two parallel diagnostics of the company's organizational culture and processes.

On the one hand, DEKRA used the **Organizational Process Safety (OPS)** diagnostic to assess the process safety maturity of each of the organization's work centers and identify possible interventions for improvement.



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DEKRA has created its own organizational process diagnostic tool, rearranging the twenty elements of the model developed by the Center for Chemical Process Safety (CCPS) into seven lines of workstreams:

1. Capacity
2. Incident response
3. Risk management
4. Asset integrity
5. Accountability
6. Operations
7. Organizational culture

This solution tool makes it possible to identify and define the necessary action plans associated with each of the workstreams for an optimal progress in the process safety maturity. The diagnosis is structured around the concept of continuous improvement, following the PDCA (Plan, Do, Check, Act) principles.

In this specific case, an OPS diagnosis was carried out in nine production plants in Spain and France to understand, from a technical and organizational point of view, which critical elements could fail and cause a major accident.

On the other hand, organizational culture workstream 7 was assessed independently using the Organizational Culture Diagnostic Instrument (**OCDI**).

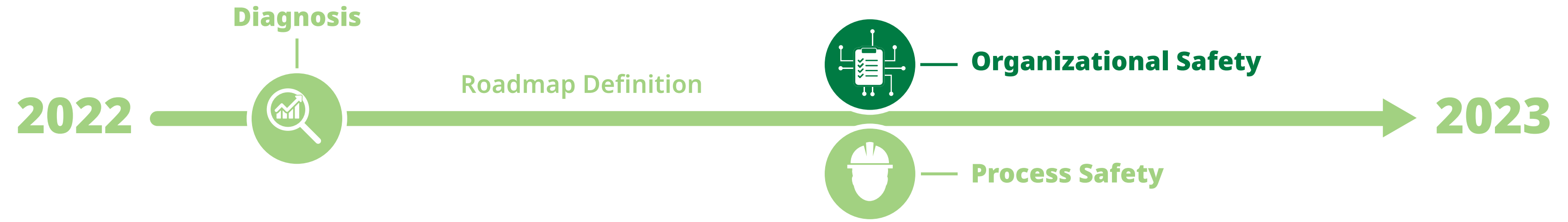
Organizational culture influences all other elements related to process and occupational safety, as well as other areas of performance, production, quality, employee involvement, etc.

The OCDI measures a specific set of factors that predict safety performance using data collected primarily through surveys, management interviews and focus groups. This methodology provides a global view and helps articulate the link between the culture and behavior of individuals and workgroups.

The OCDI assessment began with a survey in which nearly 1,200 employees participated. The DEKRA team visited the production plants under study, and additional interviews were conducted with top management, chain of command and HR representatives to clarify and confirm the survey results as well as assess strengths and weaknesses.

Both diagnoses were carried out by a multidisciplinary team consisting of experts in the field of process safety as well as specialists in organizational culture and occupational safety. Native staff from DEKRA France were also involved to eliminate cultural and language barriers during diagnostic activities at local facilities.

Based on the diagnosis, DEKRA and their client company management partners drew up an improvement plan, known as the roadmap, for both plant safety and organizational culture.



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Implementation

From the organizational safety point of view, transformation was conducted by examining:

► **Leadership for Executives**

Effective leadership is a critical factor in a company's success, influencing all aspects of operations and culture. However, unlike other elements such as processes or finance, leadership is difficult to quantify and measure reliably. To work on this point, executives attended two days of "what an effective safety leader should do" training and were evaluated as safety leaders by their peers, managers and teams. A 360° assessment provided further analysis with individual "coaching" conducted by DEKRA as part of a personalized work plan with periodic coaching follow-up.

► **Leadership for Middle Management (SafeAlign™)**

In addition to working on executive leadership, it is also important to align, engage and support operations managers (department heads, supervisors, shift managers, etc.). SafeAlign™ provides various "Visible Leadership in Operations" training modules as part of its recognized program.

For this project, these four training modules¹ were used:

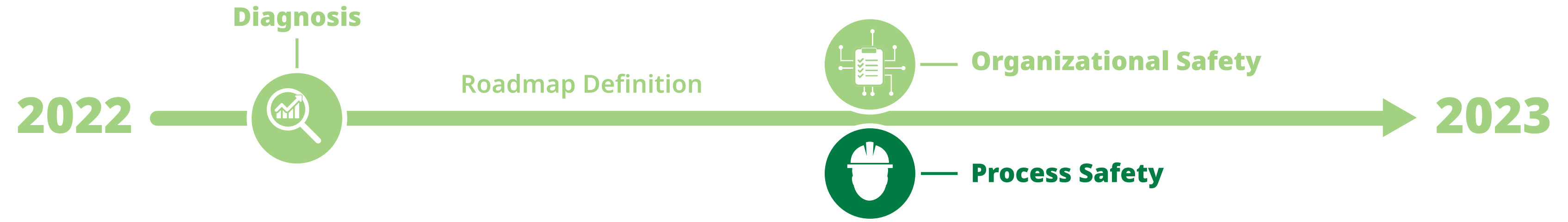
¹ The last three modules consist of a face-to-face workshop followed by individualized coaching sessions in the field.

► **1 Fundamentals of Safety Leadership**
Exploring how leaders create a culture that impacts safety, with what they say, do and choose to tolerate and value

► **2 Safety Contacts**
Focused on how to engage employees in safety conversations, encouraging speaking up, to strengthen safety culture. We helped the client develop a reporting app that would allow them to record safety contacts, to obtain a representative sample and take actions based on the data.

► **3 Risk Inspections**
Aimed at detecting equipment, installation and other risks to lead actions to improve safety culture. Using a computer tool, we helped the client register non-conformities in order to subsequently carry out actions and follow up activities.

► **4 Pre-job inspection**
Focused on job preparation and follow-up plans as a dedicated tool for operations leaders to ensure that their team identifies, discusses and understands the risks before starting a task.



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From the process safety point of view, the following lines of work were identified among the opportunities for improvement:

Process Safety Information Management

DEKRA has developed a corporate procedure for process safety information management, which serves as a guide to identify the types of documentation and information to be generated depending on the life cycle of the processes (design phase, construction, operation, decommissioning, etc.). To support this line of work, we helped our partner:

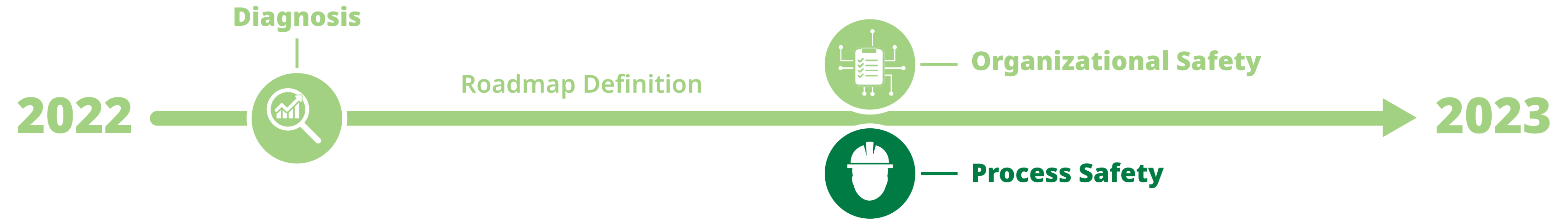
1. Follow the procedure.
2. Prepare a file of all substances likely to cause major accidents in each of the production centers evaluated.
3. Gain training, explaining the scope and content of process safety information management related to the hazard of substances, processing, equipment, the location of facilities and incident history.
4. Choose one process per plant to be documented.
5. Compile process documentation (flow charts, process description, P&ID, control...) with our external engineering and advice for final DEKRA review and recommendations based on the associated information.

The objective is that our client understands the methodology and can apply this compilation process to the rest of the production processes, prioritizing those most critical.

Competence in Process Safety

The objective was to help our client understand the hazards and risks arising from their activity and to manage limited resources effectively. This training was composed of three phases: a first e-Learning training, a two-day face-to-face workshops with theoretical and practical contents and a training exam on the acquired knowledge.





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Incident Investigation

DEKRA reviewed the internal company procedure to establish incident classification criteria, define the investigation methodology commensurate to severity and define the profile of the investigation team. Then, a procedure was prepared that allowed the client to develop an IT application to report and analyze incidents.

This stage was completed with four face-to-face workshops that taught the basics of incident investigation, data collection, interviewing, the different methodologies for identifying root and direct causes, and how to address the associated preventive and corrective actions. DEKRA expanded the client's incident investigation approach by identifying and reporting process safety incidents in addition to occupational safety incidents. We encouraged our client to consider actual as well as potential consequences and create multidisciplinary teams to lead the investigation in the area where incidents occur.

Hazard Identification and Risk Analysis

Taking the specific hazards of each plant into account, DEKRA created a corporate procedure to identify and evaluate risks in facilities, projects and potential changes. For each of the production center processes selected for documentation, a corresponding HAZOP study was performed to identify hazards and quantify risks as well as to establish an action plan, prioritizing risks according to their criticality.





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Level of **Satisfaction**

During this year, we prioritized the development of those work areas that presented the greatest opportunities for improvement, i.e., those with a lower degree of maturity. However, there is still a challenging road ahead to strengthen the workstreams we have already initiated with the client and to continue developing improvement plans in those areas in which the company has demonstrated a higher degree of maturity.

An essential element of any improvement program is the measurement of current and future performance. Therefore, in order to continuously optimize and safety culture maturity, effective predictive and retrospective metrics have been proposed for each of the initiated work streams to assess the degree of maturity progress. We recommended

to perform future OPS and OCDI diagnostics enabling the company to adapt to new situations, starting a new improvement cycle.

Although the client and their DEKRA partners may determine the length of time between assessments, a two-year term limit is advised and it is generally accepted that the time period in between should not exceed five years.

With over 130 attendees completing various workshops and training modules in both Spanish and French, we received positive feedback from this distinguished customer highlighting the practicality of our trainings and the level of DEKRA instructors.



Testimonials

“ Very good trainers, it has been a pleasant and very profitable course. With you, we learn and it is never boring. ”

“ I found it very practical as a safety leadership tool ”

“ I think, regardless of your field, it can be very useful to make safety contacts because in the long run some routines acquired by years of work and complacency could be improved and or modified. ”

“ We hope this is the beginning of the transformation in plant safety. Since we started with DEKRA, I myself have changed. ”

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DEKRA Advisory & Training Services for Process Safety

The foundation of any safe and sustainable work environment is built on prudent process safety policies and practices. Our cross-industry training and advisory services educate and advise to help you understand and reduce risk. To that end, we are leveraging digitalization to enhance process safety, including obtaining accurate advice for hazard identification and risk prediction, utilizing digital technologies for training and competence development, and replacing physical material testing with digital equivalents.

www.dekra.com

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