White Paper on Repsol Safety Culture

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1 Introduction

This document aims to describe, in a simple and precise manner, **what a Safety Culture represents for Repsol** and how we can face the challenge of **continuously improving it, involving everyone** who works at our facilities and on our activities.

Repsol's priority is to avoid accidents and people getting hurt, as well as to facilities and its surroundings. Fortunately, we are in a **society that requires safety standards** and a growing concern for sustainability, safety and the environment.

As a leading company in the Oil & Gas sector with an **international presence**, we are required to coexist with the **diversity of environments, businesses, countries and laws** on the one hand, and to advance in the **generation of a common culture**, on the other. We must find a way of moving beyond all these differences and position Repsol as a leading company based on excellence wherever we operate.

At Repsol, we understand that **our Safety Culture is an inseparable part of our Organizational Culture** which is based on the same values, and is evident in shared behaviors and attitudes.

Safety Culture demands action, not only talk

2 The origins of Safety Culture

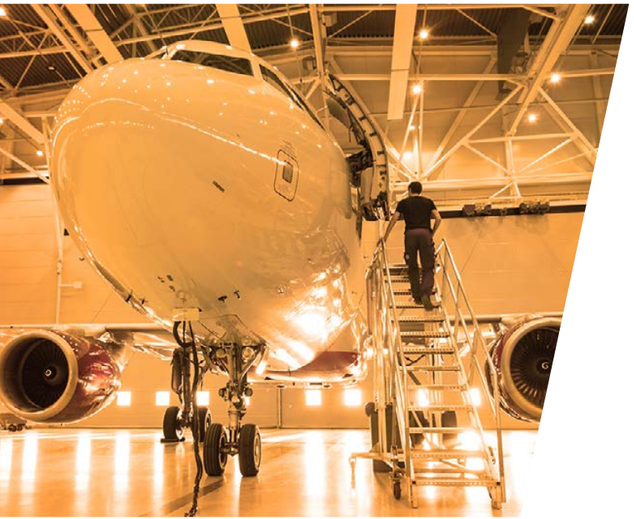
The introduction of the Safety Culture concept is **the result of serious past accidents**, both in other sectors and in our own, which unfortunately led to fatalities and irreversible damage. The same main causes were identified: deficiencies in people's attitudes and behaviors as a result of other organizational weaknesses.

Although the concept of **Safety Culture** was born in the 50s and 60s, the term was not officially used until **the end of the 80s**, after the investigation of the **Chernobyl disaster**. Its inclusion occurred when the International Committee concluded in its report that the main factors were design errors and deficiencies in Safety Culture at all levels of the organization:

- Prioritizing production over Safety.
- Institutional deviation in compliance with procedures.
- A lack of supervision and communication.
- Poor work environment.

The Chernobyl disaster marked the beginning of the concept of Safety Culture

In 1997, **James Reason** [Manchester University] in his book "Managing the risks of organizational accidents" **studies several serious incidents** in our history, such as the collision between two planes in Los Rodeos [Tenerife, 1977], the accident at the Three Mile Island nuclear power plant [Pennsylvania, USA, 1979], the pesticide plant disaster in Bhopal [India, 1984], the loss of the Challenger space shuttle [USA, 1986] and especially the Chernobyl nuclear power plant disaster [Ukraine, 1986], and he concludes that **human error is a relevant factor in many of them**, which makes its specific study necessary.



Human error is never a cause, but a consequence of something deeper

Until now, the sectors in which **most progress has been made** in terms of Safety Culture are **Nuclear Energy** and **Aeronautics**, which have generated specific regulation requirements due to the high consequences and media impact of their accidents.

The aviation sector, the International Civil Aviation Organization [ICAO], and the nuclear energy sector, the International Atomic Energy Agency [IAEA], require the development of systematic programs in Human Factors and Safety Culture.

Unfortunately, **there have also been accidents in the Oil & Gas sector** that show the consequences of a poor Safety Culture: the destruction of the Piper Alpha oil platform [North Sea, 1988] leaving a total of 167 fatalities or the explosion at the Texas City refinery [USA, 2005] with 15 fatalities.

However, **2010 was a turning point**, due to the Deepwater oil platform accident in the Gulf of Mexico, and the concept of Safety Culture began to develop more widely in the Oil & Gas sector.

3 Why work on Safety culture?

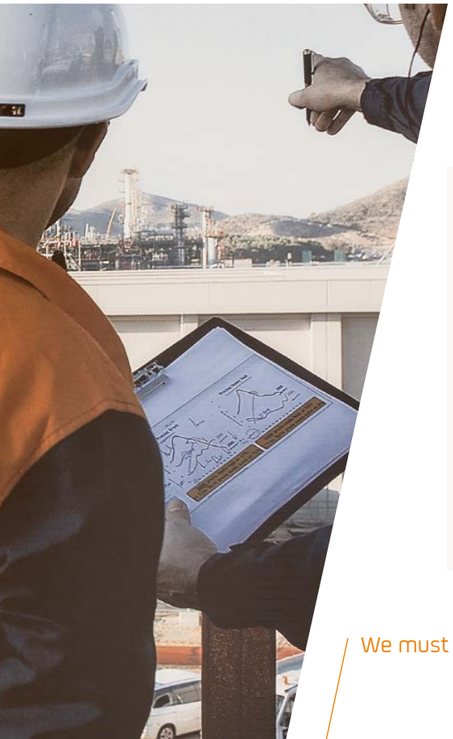
At Repsol our greatest commitment is to ensure the integrity of people as well as the protection of the environment and so we work every day to improve safety in our operations wherever we are.

For a long time, the industry focused its efforts on improving the safety of facilities, equipping them with **better technology,** and implementing and maintaining an integrated **Management System** (regulations, training, procedures, etc.).

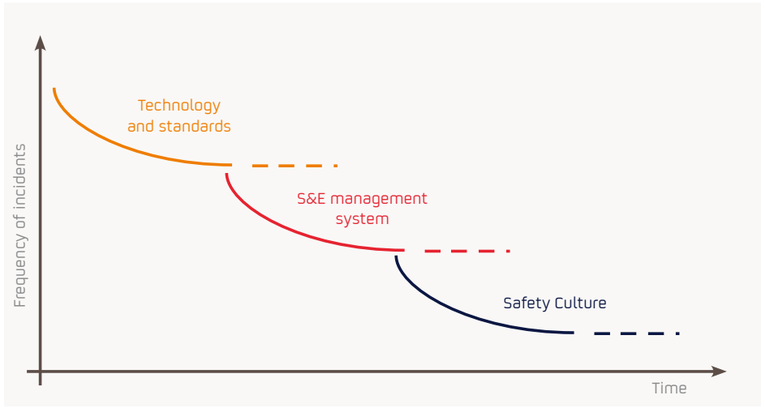
However, although these two lines of work are **necessary**, It has been observed that there is a point, no matter how significant the investment is, where the substantial improvement is not achieved and therefore the company target of "**0 accidents**" isn't either.

Despite the improvement of these aspects, we must remember that people are behind it all, and are the only ones capable of **making decisions that adjust to the circumstances** of each situation and who are **deeply influenced by the Organizational Culture**.

A robust Safety Culture is an essential element to achieve our goal of "0 accidents"



The **Safety Culture** is what determines how we **act** when **nobody is supervising us, and it makes us feel responsible** for prioritizing Safety in our actions instinctively. It is what makes the difference between a safe working environment and one that is not, as we have been able to observe through the worst accidents.



We must share the same values in order to face common challenges

The **effective implementation** of a solid Safety Culture generates **competitive advantages** for the organization:

- Improvement in safety **performance** which is directly reflected in its accident rates.
- It increases the reliability of our facilities and the **continuity of operations**, allowing us to reach our production objectives and business results.
- Positive effects on the **work environment and the employees' sense of belonging**, result in a lower staff turnover and the reduction in absenteeism rates, consequently improving productivity.
- Insurers, auditors, and stakeholders in general, have a **better perception** of companies with a good Safety Culture.

A weak Safety Culture can lead to accidents with irreversible consequences

4 Definitions

Various definitions of what is understood to be Safety Culture have been proposed and these are some examples **of how leading organizations define it**:

- **ICSI** (Institut pour une Culture de Sécurité Industrielle): “Safety Culture is a set of practices (ways of doing) and a mindset (ways of thinking) shared by the stakeholders of an organization, on the control of the most significant risks related to their activities.”
- **IOGP** simplifies the definition referencing Deal and Kennedy (1982) that defines it as “The way we do things around here,” giving value to the real way in which the employees do things regarding Safety.
- **CCPS** (Center for Chemical Process Safety): “The combination of group values and behaviors that determine the manner in which Process Safety is managed,” or “How we behave when no one is watching.”

At Repsol we understand Safety Culture as:
A group of behaviors, beliefs, and values shared by all the employees of the Organization to control risk in our activities

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Our Safety Culture journey

Since **leadership is the engine to transform culture**, and culture, in turn, is capable of changing people's behavior, Repsol has taken this aspect as a **starting point** for working on Safety Culture, since leaders' behavior should be the **example to follow throughout the Organization**.

In **2010**, a benchmark analysis of Safety Leadership was carried out regarding our **positioning** with respect to other companies. A **questionnaire of team leaders**: "DuPont Perception of Safety Leadership" was conducted. Thanks to this work, we were able to identify where we were at and the path to follow to improve.

In **2011**, eight **Safety behaviors** that all leaders must put into practice were defined:

The leader

1. Assume individual responsibility for Safety and Environment.

2. Set a visible example of commitment to Safety and Environment.

3. Act with the firm conviction that all incidents are preventable.

Co-workers

4. Develop people so that they act as leaders in Safety and Environment.

5. Provide and demand individual responsibility in Safety and Environment from all co–workers, systematizing positive and negative recognition.

Systems

6. Consider Safety and Environment as the main criterion in the decision–making process.

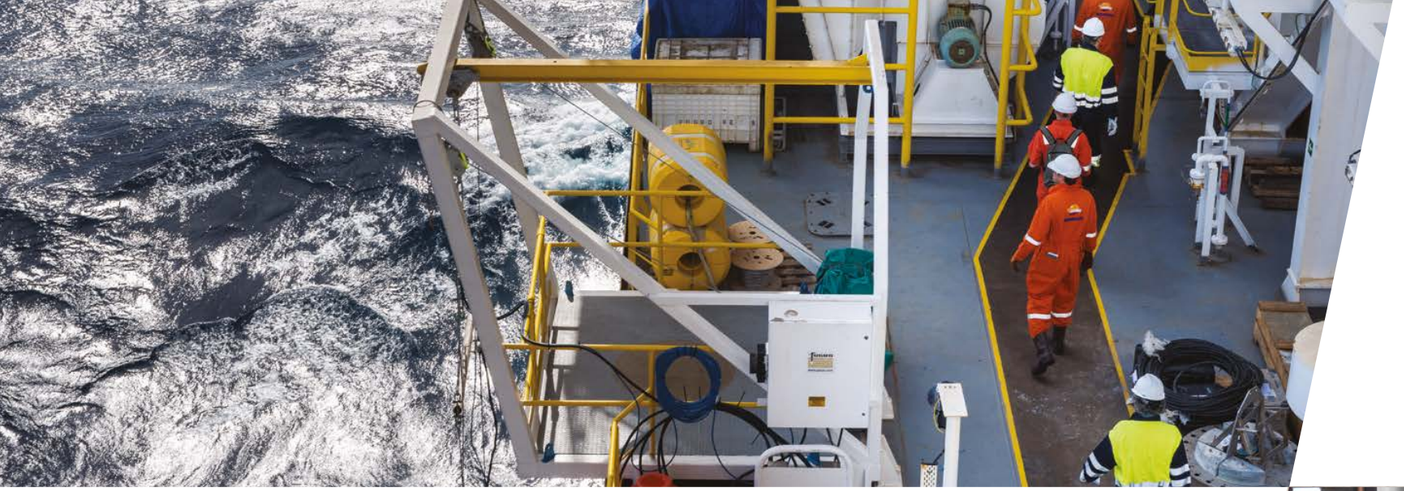
7. Be proactive in systematically identifying all Safety and Environment risks, shortcomings and opportunities for improvement.

8. Immediately correct the Safety and Environment shortcomings identified.

A good safety culture requires everyone´s commitment, at all levels

In **2012**, to implement these eight behaviors in the organization, a **Safety Leadership Plan** was designed, consisting of various actions:

- An **awareness program** in Safety Leadership for all **team leaders** called **PRISMA** (Safety and Environment First), which was a benchmark of success due to its innovative format and wide-range, with **more than 3,000 participants** around the world.
- This deployment was extended to the **rest of the personnel through the EOS program in Exploration and Production and through tailored editions of PRISMA** to the reality of each Business.
- **S&E Objectives** and evaluation criteria were introduced in the **performance** tools, so that the commitment to Safety would be consolidated as a key factor to be considered in the development of our professionals.
- An extensive **communication campaign** was carried out at work centers under the slogan **“More committed, 0 accidents”**.



For this reason, in addition to continuing to work on local and Business initiatives, we have decided to support a **more global and structured approach** to improving our Safety Culture, which is based on the following elements:

- The definition of our **own culture model**, described below, in which the desired attributes and associated work practices are explicitly stated. This model was developed in collaboration with the ICSI (Institut pour une Culture de Securité Industrielle) and is the result of an analysis of the best industry and risk sector practices, benchmarking organizations and consolidated models such as J. Reason's.
- **Deployment and communication** of the aforementioned model to all levels of the organization, to accelerate its implementation.
- **Evaluation and measurement** mechanisms in all of our assets and activities, with a local focus, involving all the groups that participate in our operations.

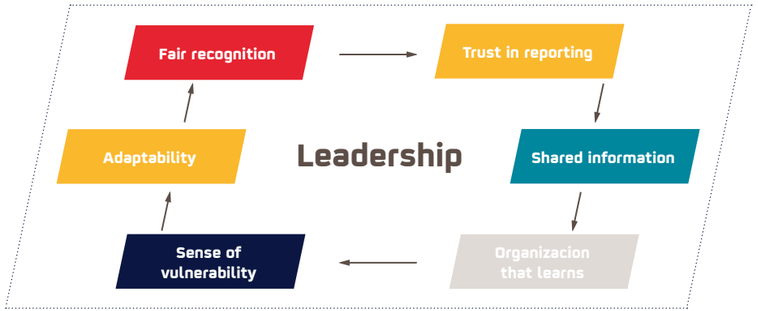
After the efforts made, In **2014** the DuPont questionnaire was returned to team leaders and **significant improvements** were noted. In particular, what stood out was the inclusion of Safety and Environment **criteria** in **decision-making** at all levels, and the increased conviction that **all accidents are avoidable**. This reduction of the fatalistic view of Safety is essential so that the goal of zero accidents, although ambitious, is seen as achievable.

However, despite these improvements, we are still below the leading companies or Safety benchmarks and there are still significant differences between the many areas and businesses of the Company.

6 Our principles

As established in our **Health, Safety, and Environmental Policy**, in order to progressively advance towards excellence, Repsol is committed to promoting all aspects that contribute to strengthening the Safety Culture.

So, in **2014** the **Safety Culture Model** was developed, based on **7 fundamental attributes** related to each other:



6.1. Leadership

Leadership is the engine in the **cultural** transformation process and is, therefore, the first attribute to discuss. However, in this case we will not only deal with the leadership of hierarchical leaders, but also the **commitment of each and every person** who works for the Company.

Everyone who works at Repsol must be a Safety leader. Safety leadership transcends hierarchy. This means that **everyone** will be responsible **for knowing the risks** of their activity, **participating in training** on safety issues, maintaining a **proactive attitude** when identifying and correcting deficiencies, **prioritizing** Safety and **acting** accordingly.

The **hierarchical leaders** have the added responsibility of **leading by example**, showing behaviors and attitudes consistent with our principles at all times. To do so, they must be present in the field **listening and communicating** effectively with their teams, **encouraging their collaborators** to do the same, **and supporting** employee Safety initiatives.

Leadership moves culture and culture changes people's behavior

6.2. Fair recognition

A robust Safety Culture must be based on **trust** that all members of the organization **identify and report unsafe conditions or situations** without fear of reprisal.

To create this environment, it's necessary to have **clear criteria**, that is known and shared, that allows us to **recognize** appropriate behaviors and **discourage** inappropriate ones; and **processes to apply them** in a homogeneous, coherent and transparent manner.

With these criteria in place it´s possible to clearly **distinguish between error and negligence and avoid the fear of being sanctioned** which generates a lack of transparency in aspects of safety.

Establishing clear and known rules encourages transparency and trust within the Organization

6.3. Trust in reporting

Having **confidence in the action criteria** related to Safety encourages **everyone to report** the relevant information, not only on incidents with actual consequences or damage, but those that only had potential consequences, as well as any anomaly or risky situation.

Likewise, in order to obtain a **quality report**, capable of generating knowledge in the Company, it is necessary to **implement communication channels and tools** that help manage the information.

Finally, this information should serve to **analyze the root causes of the incidents** in an objective way by multidisciplinary teams, **propose corrective measures, implement them** in reasonable terms **and communicate them** to the entire Organization, mainly the person who brought it to our attention.

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What is not known cannot be measured and therefore cannot be managed or improved

6.4. Shared information

As a result of the report and the conclusions obtained in the investigations and through other sources, we have valuable **information that is necessary to share** with all the members of the Company. In this way the **communication of good practices** is encouraged, and it helps to make more better decisions in the future.

The information must **flow in all directions** through established **channels**:

- **Top-Down:** sets objectives, guidelines, plans, projects, indicators, report incidents that have occurred and the corrective measures that have been implemented, etc.
- **Bottom-Up:** communicates possible deficiencies or unsafe situations that are seen or detected in work environments, as well as suggestions for improvement.
- **Horizontal:** shares operational experiences and improve collective learning.

Sharing information and experiences is key to making the best decisions and move forward

6.5. An organization that learns

The direct consequence of sharing the information of what happened should be **to learn** from our surroundings **and avoid making the same mistakes again**. Therefore, the Organization should promote learning through::

- **Anticipative learning**: through **continuous training** program that provides a broad knowledge of the risks associated with our activity. We must also **avoid the loss of knowledge** as a result of organizational changes.
- **Reactive learning**: arising from **lessons learned** after an incident.

The only way to avoid repeating the same mistakes is learning from them

To ensure that everything learned is incorporated into the usual practices in a sustainable manner, it must be supported by processes, procedures and work instructions.

6.6. Sense of vulnerability

The fact of thoroughly **knowing** our **activity** shouldn't let us **underestimate operation risks**. We must **maintain** a **critical and alert attitude** even in familiar surroundings so that we can respond to unusual situations.

In addition, we must maintain a desire for **continuous improvement and correctly use** the **operational** (facility safety systems), **administrative** (standards, procedures, etc.) or **personal** (PPE) safety systems that are available.

Too much reliance on how well things are done can be negative, if it leads to complacency or indifference

6.7. Adaptability

Everyone must have the **ability to anticipate and diagnose possible failures** to avoid incidents, **as well as the initiative to propose improvements** in this regard; and the Organization must provide the means to implement them.

In addition, to control or minimize the risks we need to be **flexible** and adapt to the different potential **situations** that may arise due to **organizational or operational changes.**

Approximately 80% of the most serious incidents occur in changing environments

7 Safety Culture Evolution Plan

Given that the processes of cultural change require an effort that takes several years, it is important to ensure the coherence and consistency of the initiatives and messages so they become sustainable.

To achieve a level of excellence in Safety Culture, **Repsol is committed to work** during the following years on these issues:

- **Local diagnostics**: performed on the Company's assets in order to assess their degree of maturity with respect to the Safety Culture model and to establish development plans adapted to each one, as they are influenced by various factors (the country's political situation, legislation, local culture, typical installation and operational risks, etc.). These diagnoses are made using many tools:

  / **Questionnaires:** provide insight on the existing perception of asset safety and on the organization's beliefs and values. All personnel and large number of contractors are invited to take part.

  / **Focus groups and interviews**: explain the reasons of the aforementioned views and offer a greater degree of detail about the effectiveness of the work processes by those who are involved.

  / **Document analysis** provides information on the systematization of the actions.

  / **Task Observation** allows direct observation of the main work processes.

- **Dissemination measures:** workshops, communications, etc., that make it possible to spread the word about the Safety Culture Model and the aspects of the areas that should be addressed, as well as making people more aware of the issue.
- **Transformation projects**: are wide-ranging initiatives whose objectives are to create new processes, transform existing ones to strengthen the focus on the human factor, deploy global training programs or take actions at company level on issues that have been considered systemic weaknesses in previous diagnoses.
- Strengthening and alignment of the **Safety aspects in the company leadership model** and in the people evaluation and development processes.
- **Identification and availability of a best practices catalog for the Organization** and initiatives that help improve the attributes of culture and accelerate its implementation.

Only with the commitment and involvement of everyone who works at our facilities will it be possible to achieve an excellent sustained level of safety performance


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