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Oversight Culture

ENSI Report on Oversight Practice

Oversight Culture 2015

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Preface

Safety culture has for many years been a primary concern of the Swiss supervisory authority ENSI. The accident in Fukushima in 2011 put this cultural aspect sharply in the sights of supervisory safety authorities worldwide. Even the initial analyses of the events revealed that in Japan there were not only large deficits with regard to the operator company but also considerable room for improvement by the supervisory authorities. Their complicated structure, with a lack of lines of responsibility and unclear authorisations to give instructions, was one of the main reasons why safety gaps that had long been identified were not remedied in a timely manner.

In view of the findings from Fukushima, the Swiss supervisory authority began a critical self-examination early in the summer of 2011: Are we doing the right thing the right way? Do we have an oversight culture that not only focuses on operators but also looks critically at our own role? As regulator, are we fostering an adequate culture with a critical attitude in order to meet our responsibility to the public that has to be protected?

This internal discussion led to a decision by the ENSI management bodies to launch a broad-based process designed to constantly scrutinise and improve ENSI's oversight culture.

The large-scale project, called «Oversight Culture», involved all of the authority's employees, and it was successfully completed three years later in 2014. The findings obtained were converted into measures, some of which have already been realised and others scheduled for implementation in the coming years. Even though the project as such is over, the identified processes remain alive and will continue to influence ENSI's work in the future.

On the international level, the Swiss project on oversight culture has met with great interest, particularly by other nuclear supervisory authorities. We have therefore decided to share our considerations and experiences with all interested parties and to report not just on the results but also, in particular, on the project's methodology and approach. In this way, we hope that the findings and experiences from Switzerland may be useful to other supervisory authorities in designing and carrying out similar projects.

Anne Eckhardt, Chair of the ENSI Board

Hans Wanner, Director General ENSI

Summary: Most important findings and results

In the aftermath of the Fukushima accident in 2011, the Swiss supervisory authority ENSI launched a project whose subject was reflection about its own safety culture – its «oversight culture» – and whose aim was to start an ongoing reflection process within ENSI. This report presents the conceptual understanding on which ENSI based the project and describes the approach, methods, and results of the project. For such a project, there is no single correct approach and method. Rather, each organisation that intends to pursue a similar project needs to define an approach that best suits it, one that corresponds to the specific desired objective, the prevailing basic conditions, and the organisation's current culture.

But regardless of the specific conditions, the following aspects appear to us to be generally valid:

- The project should be carried out in a way that is unconnected to day-to-day operations in order to enable reflection at a meta-level.
- The supervisory authority should consider systematic, organisation-wide self-reflection to be an integral component of its regular mission (day-to-day operations) and not a one-time, extraordinary activity. Nevertheless, it is useful to initialise the self-reflection process as part of a formal project so that attention and resources are explicitly dedicated to the self-reflection process being developed and established.
- The analysis of the organisation's oversight culture should ideally be carried out by the supervisory authority's own employees, since this kind of analysis creates a learning effect in the organisation and has an impact on the oversight culture. It is itself a part of the self-reflection process being established.
- It is highly advisable to have competent outside parties provide support for the analysis. Such outside parties help to support self-reflection by scrutinising and mirroring the values and world views that are deeply rooted in the organisation and consciously and often unconsciously determine the daily routine and behaviour of employees.
- In order for the project to have a broad, long-lasting effect on the organisation's capacity and desire for self-reflection, it is essential that ideally the entire staff be involved over the course of the project.
- Thus, a project like this is accompanied by a relatively large effort on the part of the organisation. It is therefore necessary to embed the project in the organisation's overall planning and strategy.
- Commitment by the organisation's management is of primary importance to the success of a culture project.
- Decisive is that after the project formally concludes, self-reflection is not considered to be finished but rather becomes an established part of daily oversight routine and thus integrated into the oversight culture on a long-term basis.
- Culture changes require time and cannot be controlled at will. The initial project can only be the starting point for follow-up projects and measures, which enable constant self-reflection to become a self-evident element of the supervisory authority's culture.

Methods and approach of the Swiss supervisory authority

ENSI's project was headed by a multidisciplinary project team that spanned hierarchical levels. It received support from an outside organisational consultant on technical and methodological issues, as well as from a so-called «Sounding Board», which helped the project team in reflecting about the project.

The project was designed on the basis of a participative approach. All ENSI employees were actively involved in all three project phases on a repeated basis.

Although the project was initiated and implemented in-house, various stimuli were provided from outside: In addition to the outside consultant and the regular reflection with the Sounding Board, a workshop was conducted with representatives from the supervised parties.

The project was designed and implemented in three phases over three years: analysis, assessment, and implementation.

The goal of *Phase 1 (analysis)* was to describe the «actual condition», i.e. ENSI's current oversight culture (at the time of the analysis).

As a basis, the project team first sought to characterise ENSI's oversight culture on the basis of three specific examples from ENSI's oversight practice. For each chosen example, members of the project team conducted interviews with the ENSI employees involved in the relevant example and carried out surveys of how the oversight culture was perceived by the organisational units not involved in the examples. Based on the analysis of these surveys, the project team elaborated 33 hypotheses about the oversight culture.

In the course of six all-day, department-specific workshops, employees in all ENSI departments reflected on the oversight culture in their section, in their department, and at ENSI as a whole. To this, the individual sections in each department elaborated «metaphors» – i.e. figurative representations – of the section-specific oversight culture perceived by them. Moreover, the hypotheses were presented to them in the form of a questionnaire for verification or falsification.

Finally, a workshop was organised with representatives from the supervised parties in order to elicit their perception with respect to the impact of the oversight culture on their safety culture and compare it with ENSI's self-image.

Three key aspects that characterised ENSI's oversight culture emerged from the Phase 1 activities:

- Oversight philosophy and practice: What is «good oversight»?
- Collaboration and communication within ENSI: How do we work together (in and between sections, departments, hierarchical levels)?
- Oversight role vs. public role: How do oversight and public relations depend on and influence each other?

Phase 2 (assessment) followed from and built on Phase 1 (analysis) in 2012. It was designed to elaborate a normative determination and description of the oversight culture sought by ENSI and to clarify the existing need for action.

The project team elaborated a proposal for a description of the desired oversight culture, which was presented to the entire ENSI staff in connection with several all-day, cross-departmental workshops that built upon one another for the purposes of discussion and further development.

Parallel to the «Oversight Culture» project, a separate project team elaborated a new Mission Statement for ENSI following the completion of Phase 2. The «Oversight Culture» project team identified from the totality of all «target» records concerning the oversight culture those of fundamental, superordinate character that were to be explicitly adopted into ENSI's Mission Statement and integrated them into the existing draft of the new Mission Statement. In this way, the main results from the «Oversight Culture» project found expression in the new Mission Statement. ENSI placed the Mission Statement under the motto «We strengthen safety» and formulated its self-conception of its own role with, inter alia, the following sentence: «Through our supervision, we strengthen the safety culture of the supervised parties, and we encourage them to take responsibility for their own actions».

Phase 3 (implementation), which was carried out in 2014, served to elaborate a package of measures for implementing the «target» elaborated in Phase 2 and the identified need for action.

Using the results from Phases 1 and 2, the project team elaborated a proposal for a package of measures for implementing the target regarding the oversight culture and the new ENSI Mission Statement. This was submitted to the ENSI Executive Board and ENSI employees in several iterations, revised, and then approved by the Executive Board in the fall of 2014.

All measures followed the principle:

«Good oversight» is based on a high degree of competence and professionalism on the part of ENSI employees, on overarching collaboration, and on a well-founded framework for oversight,

with «good oversight» being geared toward the motto of strengthening safety as defined in the ENSI Mission Statement.

The package of measures consists of a total of 15 measures. On the one hand, they relate to the three main fields of action: «Competence and professionalism of ENSI employees», «Overarching collaboration», and «Framework for oversight». On the other, it provides measures to promote self-reflection and improve oversight, as well as a measure to monitor implementation of the package of measures.

Once the implementation plan elaborated by the project team was submitted to the Executive Board, the «Oversight Culture» project formally concluded. However, in order to achieve a permanent change, the process has to be continuously carried on. The desired values, attitudes, and practices do not constitute a condition that can be achieved with a single project «once and for all». Reflection about ENSI's oversight culture and the effect this has on the safety culture of the supervised parties must take place on a regular basis and become an integral component of ENSI's work and culture. The change of culture sought in this way is a long-term process and requires continual efforts. This constant process needs a stable anchoring in ENSI's structures and procedures. Transitioning from «project mode» to «day-to-day operations mode» and maintaining the priority and motivation of all responsible parties and employees is one of the main challenges for oversight culture and its further development in ENSI.

1 Introduction

In the wake of the nuclear accident in Chernobyl, there arose broad agreement in the 1990s in the nuclear industry and other sectors that organisations with the ability to cause great harm to humans or the environment through their activities must be characterised by a good safety culture¹. In this regard, the focus of discussions hitherto was mainly on companies that pose a direct threat to humans and the environment, e.g. operators of large facilities (nuclear installations, chemical plants, etc.), transport companies (aviation, railways, etc.), and hospitals. However, the scientific discourse in safety research as well as considerations by users of scientific concepts in various industries have in recent years developed further in the direction of a *systemic way of thinking*.

In the area of nuclear installations, the accident in Fukushima² in particular led to an expansion of the way of thinking in that in addition to operators of installations and processes, the superordinate system of actors and environmental factors that influence safety and the safety culture of operator organisations are also being included in the considerations. All actors in the superordinate system mutually influence one another. At the same time, their own (safety) culture is both a result of such interactions and a factor that influences the culture of other actors³.

One of the system's key actors that materially influences the safety of nuclear installations and the safety culture of operators is the supervisory authority. The analyses of the events in Fukushima made that abundantly clear. The operator of the Daiichi nuclear power plant in Fukushima, Tokyo Electric Power Company (TEPCO), was not the only party responsible for the failures in the run-up to the earthquake and tsunami. The supervisory authorities also share the responsibility⁴.

After Fukushima, supervisory authorities throughout the world are called upon to scrutinise themselves as to how they exercise their oversight duty and their own responsibility with respect to protecting humans and the environment against the dangers of nuclear power. Accordingly, supervisory authorities must deal with the issue of safety culture in a number of respects:

- *Safety culture as a subject of oversight*: Supervisory authorities have to elaborate approaches and instruments for monitoring the safety culture of the organisations they supervise. These are the subject of the report «Oversight of Safety Culture in Nuclear Installations», published by ENSI in 2014. They will not be addressed in this report.
- *Safety culture as a subject of self-reflection*: Supervisory authorities have to give attention to their own safety culture and the way in which it influences the safety culture of the supervised parties. This report addresses these issues.

In the years since the accident in Fukushima, the issue of the «safety culture of supervisory authorities» was taken up by supervisory authorities throughout the world and by international organisations (specifically, the International Atomic Energy Agency [IAEA] and the Nuclear Energy Agency [NEA] of the OECD). This was triggered by the realisation of the key role that was played by the Japanese supervisory authorities in the occurrence and the overcoming of the

¹ The concept and term «safety culture» are not discussed in detail in this report. On this, see the following ENSI report: Swiss Federal Nuclear Safety Inspectorate (2014). Oversight of Safety Culture in Nuclear Installations, ENSI Report on Oversight Practice, ENSI-AN-8980. ENSI (http://www.ensi.ch/en/wp-content/uploads/sites/5/2014/12/oversight_of_safety_culture_in_nuclear_installations_ensi.pdf).

² Cf. the 2011 ENSI analysis of the accident in Fukushima under special consideration of the human and organisational factors (http://static.ensi.ch/1344405634/ensi_analyse_eng_020712_web.pdf), as well as the in-depth 2015 report on the events in Fukushima and the organisations involved in dealing with them (<http://www.ensi.ch/de/2015/12/17/ensi-vertieft-analyse-der-menschlichen-und-organisatorischen-faktoren-beim-unfall-in-fukushima/>). (An English translation of the latter report will soon be available)

³ Cf. ENSI report, supra note 1, at Chapter 1.

⁴ Cf., e.g., ENSI analysis, supra note 2, as well as the official IAEA report on the accident in Fukushima (<http://www-pub.iaea.org/books/IAEABooks/10962/The-Fukushima-Daiichi-Accident>).

nuclear accident. Numerous authorities have since initialised their own projects, and the international organisations have called upon the member states to begin an international exchange of information and experiences on the issue and take part in elaborating various reports and recommendations. In connection with the Integrated Regulatory Review Service (IRRS), the IAEA recommended to ENSI in 2011, inter alia, that it embed safety culture in its management system in order to achieve a common understanding within its organisation about the key elements of safety culture.

Unrelated to this, ENSI launched a project in 2011, a few months after the accident in Fukushima, whose subject was reflection about its own safety culture. The ENSI project met with great international interest, for which reason the Swiss supervisory authority decided to make the findings and results of the project accessible to all interested parties.

This report presents the conceptual understanding on which ENSI based the project and describes the approach and methods that were used in the project. The results of the project will be treated only by way of example and in a summary manner, since they are specific to ENSI and are not necessarily applicable to other supervisory authorities.

The report is directed at a conceptually and methodologically interested national and international public, particularly at authorities that regulate the nuclear industry, but also in other industries that are interested in the topic or are thinking about carrying out a similar project. It should be understood as a contribution to the (international) discourse about the role of supervisory authorities in the superordinate overall system of various actors and their influence on the safety culture of nuclear installations or other complex socio-technical systems.

2 Oversight culture: Term and concept

2.1 The term «oversight culture»

Instead of the term «safety culture of the supervisory authority», ENSI uses «oversight culture». The term «oversight culture» describes those aspects of the organisational culture of the supervisory authority that relate to the exercise of its core mission, i.e., in the case of ENSI, the oversight of Swiss nuclear installations. In this regard, the focus is on the safety of nuclear installations in the sense of protecting humans and the environment against the risks of the peaceful use of nuclear energy (Article 1 of the Swiss Nuclear Energy Act). That is the superordinate objective of ENSI's work, even the primary reason for its legitimacy and existence. In this sense, the term «oversight culture» is equivalent to «safety culture of the supervisory authority».

In reliance on the definition formulated by ENSI in its report on supervision of the safety culture in nuclear installations⁵, the term «oversight culture» is defined as follows:

Oversight culture comprises values, world views, verbal and non-verbal behaviours as well as specific products and work bases (e.g. the regulatory framework, demands, and formal orders) which are shared by the members of the supervisory authority. Oversight culture includes those values, world views, behaviours, products and work bases that determine or demonstrate how the members of the authority approach and deal with nuclear safety in their oversight work.

Accordingly, analogous to the safety culture of the supervised parties⁶, oversight culture covers in addition to visible and perceivable elements (behaviour, products, work bases) also values and world views of the employees of the supervisory authority that are not directly perceivable.

⁵ ENSI report, supra note 1, at Chapter 2.1

⁶ Id. at Chapter 2.2

The holders of these values and world views are in some cases aware of them. But in others, they are not, although these values and world views are nevertheless highly defining for their holders' behaviour and their interpretation of that which is occurring in their environment. In other words, they determine how employees of the supervisory authority (e.g. inspectors, decision-makers) perceive and evaluate behaviour and occurrences at the operators of nuclear installations, but also in public and society, which measures they derive from this, and how they act and react vis-à-vis the supervised parties or other actors.

It thus becomes clear that the fundamental conceptual considerations underlying the term «safety culture» in the traditional understanding related to operators of nuclear installations are also applicable to supervisory authorities. In every organisation that directly or indirectly deals with large risks, a good safety culture is essential. This applies to the operators of nuclear installations but also notably to supervisory authorities (cf. Chapter 2.2). With regard to contents as well, the concept of safety culture is fundamentally applicable to supervisory authorities. The key underlying values and features of a good safety culture that are commonly mentioned in the literature and in practice can be readily applied to supervisory authorities. In the ENSI report on the supervision of the safety culture in nuclear installations⁷, the following features of a good safety culture were for example described:

- Safety is a clearly recognised value
- The management unambiguously backs safety
- Everyone is aware of his responsibility for safety
- All activities are essentially safety-oriented
- Safety is developed through ongoing learning.

However, there are differences in how these values are expressed, in the specific behaviour of employees, and in the products and bases of their work and the effects of these.

However, the possibilities, limits, and potential gaps associated with the application of the concept of safety culture to the supervisory authority have so far not been sufficiently studied by science and proven in practice. Thus, a broadly supported, recognised model of a «good safety culture» is so far not available. Various international organisations (specifically, the IAEA and the OECD NEA) and research institutions have started to elaborate conceptual and methodological bases. This report, too, seeks to make a contribution to this discourse.

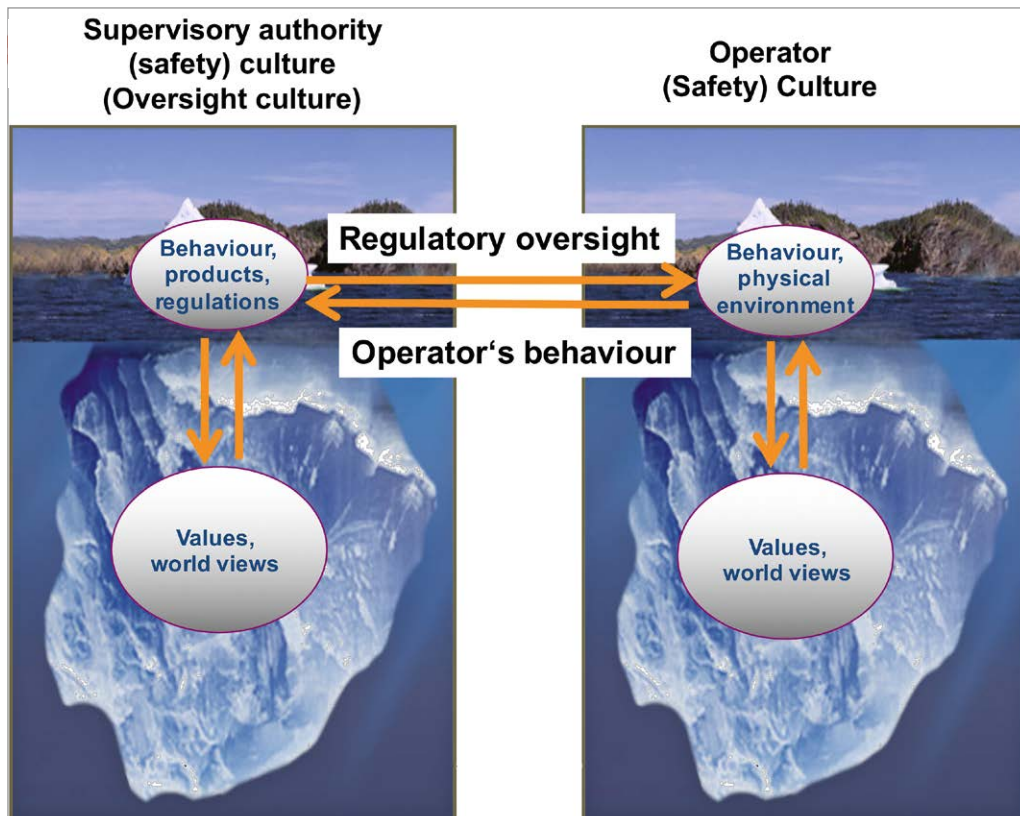
⁷ Id. at Chapter 3. For a description of the mentioned features of a good safety culture, we make reference to this report.

2.2 Why does the supervisory authority need to consider its oversight culture?

As mentioned above, the supervisory authority, together with the supervised parties and numerous other organisations, bodies, and entities (e.g. manufacturers and suppliers, research institutions, international organisations, non-governmental organisations, political institutions, the media, and the public), is part of a superordinate system of actors that mutually influence one another, and these actors are in turn informed by prevailing social values and norms and conversely contribute to the further development of the latter. Therefore, the supervisory authority must constantly keep in mind the responsibility it bears and the role it plays in the overall structure of actors, the way in which its oversight culture and work is shaped by external influences, and how it influences the other actors and thus the overall system. The purpose of this reflection by the supervisory authority is to ensure that the safety of nuclear installations and the protection of humans and the environment is at the forefront at all times and that its work is always directed towards this objective.

A key element of this reflection by the supervisory authority is naturally how it deals with the supervised parties. The supervisory authority materially influences the safety and the safety culture of the supervised parties. It does so permanently, whether intentionally or unintentionally, on the basis of what it does or does not do, even on the basis of its mere existence. The way in which it interprets the statutory bases and its statutory mandate and implements them in its oversight work, its fundamental oversight approach, and the kind of relationship that it has with the supervised parties but also with the other actors in the superordinate system generate certain types of behaviour and attitudes on the part of the supervised parties that can be beneficial for the safety of their nuclear installations or, in the worst case, even detrimental to them. Conversely, the behaviour of the supervised parties (e.g. how they deal with safety generally or with the requirements of the supervisory authority specifically) likewise influences the behaviour and attitudes of the members of the supervisory authority (cf. Figure 1).

Figure 1:
The reciprocal influence of the supervisory authority and the supervised parties on each other



By actively reflecting on these mechanisms and integrating them into daily oversight routine, a supervisory authority does not leave to chance the nature of its effect on the safety culture of the organisations it supervises and thus on the safety of the nuclear installations but rather can knowingly shape it in a targeted manner. This reflection process thus also covers the specification and practical implementation by the supervisory authority of its statutory mandate to oversee and enforce compliance with statutory requirements by the supervised parties⁸ and the fundamental principle that the operators of nuclear installations are at all times themselves responsible – in connection with statutory requirements – for the safety of their installations⁹. In connection with its project on oversight culture, ENSI discussed its understanding of this statutory mandate and its implementation in oversight, and it defined what effect it wants to achieve with its work in its new Mission Statement¹⁰. It placed the Mission Statement under the motto «We strengthen safety» and formulated its self-conception of its own role with, inter alia, the following sentence: «Through our supervision, we strengthen the safety culture of the supervised parties, and we encourage them to take responsibility for their own actions». Accordingly, ENSI bases the implementation of its statutory mandate on a view under which it understands oversight as being more than the pure supervision of compliance with the body of rules (laws, ordinances, guidelines) but rather also considers a proactive component to be part of its mandate, in the sense of improving safety and bolstering the perception of responsibility on the part of the supervised parties¹¹.

3 Analysing and influencing the oversight culture

If one follows the current reasoning, the active concern by the supervisory authority with its own oversight culture must be viewed as a necessary component of its mission – just as it is expected that the supervised parties are concerned with their own safety culture. In this regard, the aim is, on the one hand, to understand the nature of its own oversight culture and the (potential) effects of this on the safety and safety culture of the supervised parties and, on the other, to change the oversight culture where needed and to (continually) improve oversight. Therefore, the following will address how the oversight culture can be understood and analysed (cf. Chapter 3.1) and, conversely, how it can be influenced and changed (Chapter 3.2) and where attention has to be paid. These considerations are illustrated in Chapter 4 on the basis of ENSI's «Oversight Culture» project.

⁸ Art. 72 of the Swiss Nuclear Energy Act defines the duties and powers of the supervisory authorities (i.e. ENSI) as follows:

1 The supervisory authorities shall examine submitted projects and ensure that licence holders and owners of nuclear goods meet their obligations in accordance with the provisions of this Act.

2 They shall order all necessary and reasonable measures aimed at preserving nuclear safety and security.

3 In the event of an immediate threat, they may impose immediate measures that deviate from the issued licence or ruling. (...)

⁹ Art. 22 of the Nuclear Energy Act: «The licence holder is responsible for the safety of the installation and its operation»; Art. 9 of the Convention on Nuclear Safety of 17 June 1994 (<https://www.iaea.org/publications/documents/infcircs/convention-nuclear-safety>): «Each Contracting Party shall ensure that prime responsibility for the safety of a nuclear installation rests with the holder of the relevant licence»; IAEA Safety Standards, Fundamental Safety Principles, Safety Fundamentals No. SF-1 (http://www-pub.iaea.org/MTCD/publications/PDF/Pub1273_web.pdf), Principle 1: Responsibility for safety: «The prime responsibility for safety must rest with the person or organization responsible for facilities and activities that give rise to radiation risks».

¹⁰ http://static.ens.ch/1404379147/ensi_leitbild_charte_de_lifsn.pdf

¹¹ In 1999 this self-understanding of oversight was also described by the Nuclear Energy Agency (NEA) of the OECD: «In addition to enforcing safety regulations, the regulator should make sure he/she has a positive effect on the operator's safety culture» (NEA, 1999, *The Role of the Nuclear Regulator in Promoting and Evaluating Safety Culture*, Paris, OECD, p. 12). And: «... role of the regulatory body in ... promoting safety culture, through its own example and through encouragement given to operators» (id., p. 9).

3.1 Analysing the oversight culture

The supervisory authority's study of its own oversight culture makes it possible for it to sharpen its understanding and awareness with respect to the cultural elements of its own organisation (shared values and world views of the employees, as well as their expressions in daily oversight and in the elaborated products and work bases; cf. Chapter 2.1) and their effects on the safety (culture) of the supervised parties. The aim is to reflect on the extent to which oversight, in addition to fulfilment of its statutory mandate in the narrow sense, also serves to strengthen safety and the safety culture of the supervised parties, as well as their taking responsibility for their own actions, and to avoid negative influence (cf. Chapter 2.2).

For that purpose, it is necessary for the supervisory authority to proceed to a meta-level that is unconnected to day-to-day operations and to observe its own organisation and how it functions from a «bird's-eye perspective», i.e. to look itself in the «mirror» and reflect on itself. In this regard, there is no one right approach and method. Rather, depending on the desired goal, the prevailing basic conditions, and the current culture, the aim is to determine the approach that best suits the supervisory authority. In so doing, the methodological requirements and limitations have to be taken into account that inevitably result in connection with efforts to understand and evaluate a culture¹². Specifically, it must be taken into consideration that a culture is not easily captured and cannot be quantitatively measured and objectively assessed.

Based on the experience of ENSI, the following will discuss several points that should be borne in mind when determining the approach.

3.1.1 Project versus integration of self-reflection in daily routine

As mentioned above, self-reflection about its oversight culture should be viewed by the supervisory authority as an integral component of its mission and in fact constitute a substantial element of such oversight culture. This means that specific activities concerning self-reflection should take place continuously in the «normal» daily routine and not be understood as one-time activities. Nevertheless, it appears sensible to initialise the self-reflection process in connection with a formal project. The advantage of this is that attention and resources are explicitly dedicated to the process being developed and established in the organisation and work is made toward achieving a concrete «result». But what is decisive is that after the project formally concludes, self-reflection regularly becomes a part of the daily oversight routine and is thus integrated into the oversight culture on a long-term basis. To this end, specific measures must be defined in connection with the project in order to continue to track their actual and long-term implementation after the project ends.

3.1.2 Self-analysis versus outside analysis

Analogous to other types of analyses and reviews, the question also arises with regard to the analysis of the oversight culture whether this should be performed in-house as a self-assessment or commissioned to an outside body, which subsequently communicates the results and proposes corresponding follow-up measures. Whereas commissioning an outside body can by all means make substantive and economic sense for many types of analyses (e.g. analyses of formal organisational procedures or economic indicators), it appears to make less sense to (completely) turn over to an outside body the analysis of the organisation's own culture, particularly where the intention is to have the reflection about the oversight culture be more than a one-time event and it is a declared aim to establish it and continue to perform it even after the project ends. An analysis performed in-house creates a learning effect in the organisation and has an impact

¹² Cf., e.g., ENSI report, supra note 1; Wäfler, T., Künzler, C., Schmid, J., Gärtner, K. & Bezzola, J. (2010), Klärung des Standes von Wissenschaft und Praxis im Bereich der Erfassung von Sicherheitskultur, Fachhochschule Nordwestschweiz.

on the oversight culture. It itself is part of the self-reflection process being established. However, the feasibility of performing the project in-house depends on a number of conditions, several of which should be mentioned here:

1. a project team with the most representative composition, in which ideally all organisational units and hierarchical levels are represented,
2. involvement of ideally the entire staff over the course of the project,
3. openness of results and willingness to implement the results of the common discourse in the organisation,
4. a certain degree of an already extant «advance of trust» among the employees of all hierarchical levels,
5. confidentiality in handling data, statements, and (interim) results,
6. technical expertise existing in the organisation that can be called upon for planning and carrying out a project on cultural and organisational development.

The first two points are crucial in order to have ideally all aspects, skills, and experiences existing in the organisation be included in the analysis. Moreover, they help to broadly support the project and create acceptance and motivation within the organisation. However, wide participation by all employees also entails the possibility of a large diversity in results and can create multi-layered – potentially also conflicting – expectations among the various groups of employees. This implies that the existing basic conditions (e.g. resources, legal bases, etc.) should generally permit an openness of results and that in the entire organisation, particularly with company management, there must be a willingness and desire to take up potentially difficult topics and conflicts and to permit and bear desired or necessary changes (third point). Extant, unchangeable basic conditions must be identified before starting and clearly communicated. The fourth point is likewise key, since without a minimum of mutual «advance of trust», employees will not have the willingness or the courage to speak with one another about their work and their values and attitudes and to scrutinise these self-critically. At the same time, it is necessary that employees be guaranteed that (certain) data, statements, and results of analyses are treated confidentially so as to be able also to take into account such information that the employees are unwilling to provide openly or lack the courage to do so (fifth point). This confidentiality relates both to the treatment of information within the organisation itself and to the public communication of project content and results outside of the organisation. It constitutes a key condition for the project's success. Moreover, it shapes the general basic trust in the organisation and accordingly is also vital for future projects and for the dealings among employees on all hierarchical levels in the organisation. Finally, the sixth and last point refers to the fact that for the planning, management, and implementation of a «culture project», it is necessary to have not only the requisite project management expertise but also skills in the area of organisational and safety culture.

3.1.3 Outside support

Although the aim should be to carry out the project in-house, it is highly advisable to obtain support for this from competent outside parties. Reflecting about one's own culture is of course a difficult endeavour, since one often has only a very limited awareness, if any, about the elements of the culture that are most deeply embedded (world views and values), such that self-reflection is possible only with difficulty, if at all (cf. Chapter 2.1). Such outside parties help to support self-reflection by scrutinising and mirroring the values and world views that are deeply rooted in the organisation and consciously and often unconsciously determine the daily routine and behaviour of employees. The outside party must be able to assume a position that is independent of all employees and hierarchical levels in the organisation in order to be able to gain the trust of all employees and exercise a moderating effect in the event of any existing or emerging conflicts.

3.1.4 Scope of the project and time of its execution

Conducting the project in-house with the comprehensive involvement of the staff on all hierarchical levels and all organisational departments is, as described above, advantageous in a number of respects (acceptance and motivation, broad support, representativeness). However, it is also associated with a relatively large effort on the part of the organisation. An inherent paradox can make the project difficult: Because of the large expenditure of resources that is required, it appears to make more sense to try to conduct the project during «quiet periods» so as to avoid as far as possible the emergence of conflicts about resources and priorities, which can lower the motivation for necessary project activities, such as workshops, surveys, etc. However, experience has shown that during such quiet periods, the «emotional pressure» to scrutinise and change the organisation's culture tends to be low, which can mean that the motivation in the organisation to initialise, carry out, and follow through with a culture project is sacrificed in favour of pressing day-to-day operations. It is therefore necessary to embed the project in the organisation's overall planning and strategy. In that way, both day-to-day operations (oversight) and the culture project can be assigned the necessary priority and emerging conflicts can be spotted early on and defused.

3.1.5 Support by management

Commitment by the organisation's management is of primary importance to the success of a culture project. Company management must initialise the project, provide the necessary resources and expertise, and embed and prioritise the project in the strategic and operational framework. But even more decisive is leadership by management on all levels with respect to the aim and the issue. The (explicit and implicit) attitude that management signals to the staff with respect to the project and its openness and exemplary function are crucial for the motivation and willingness of the entire staff to participate actively and openly and thus for the chances to be able to achieve the goals sought with the culture project in the short, medium, and long term.

3.2 Changing the oversight culture

A culture, including oversight culture, cannot be «shaped» and changed at will. The culture develops in an organisation over a long period of time on the basis of its past experiences and is relatively stable. Changes to the culture require time and can be controlled only in part¹³. Accordingly, if the analysis of the current oversight culture indicates a need for a change of the oversight culture, this limited controllability of the culture has to be taken into consideration. On the one hand, this means that suitable measures have to be defined that create and support the desired change in attitudes and behaviour and generate suitable experiences on the part of the employees. On the other, precautions also have to be taken so that the planned and achieved changes in attitudes and behaviours can be established and maintained in the long term.

4 ENSI's «Oversight Culture» project

The following presents the procedure and methodological approach of ENSI's «Oversight Culture» project, as well as its main results. This project can serve as an example for a possible approach by a supervisory authority for actively examining its oversight culture. However, the methodological approach and the procedure must be established depending on the basic formal and cultural conditions specific to a supervisory authority in the given case.

¹³ ENSI report, supra note 1, at Chapter 4.1.

4.1 Project structure

4.1.1 Project organisation

The project was run by a multi-disciplinary project team that spanned hierarchical levels, and consisted of employees from all departments¹⁴, the project head, an intern to support project management (temporary), an outside consultant (organisational psychologist), and the «Delegate of the Executive Board» (DEB)¹⁵ (ENSI Director General) (cf. Figure 2). The «Oversight Culture» project team was commissioned by the ENSI Executive Board and reported to it regularly, either via the DEB or directly, on the procedure, progress, and results of the project.

In addition, a so-called «Sounding Board» was created, which was composed of representatives from the ENSI Board, ENSI's Staff Council and the Human Resources team, and an outside expert (organisational psychologist)¹⁶. This body regularly supported the project team in reflecting about the project, and it provided it with technical and methodological advice.

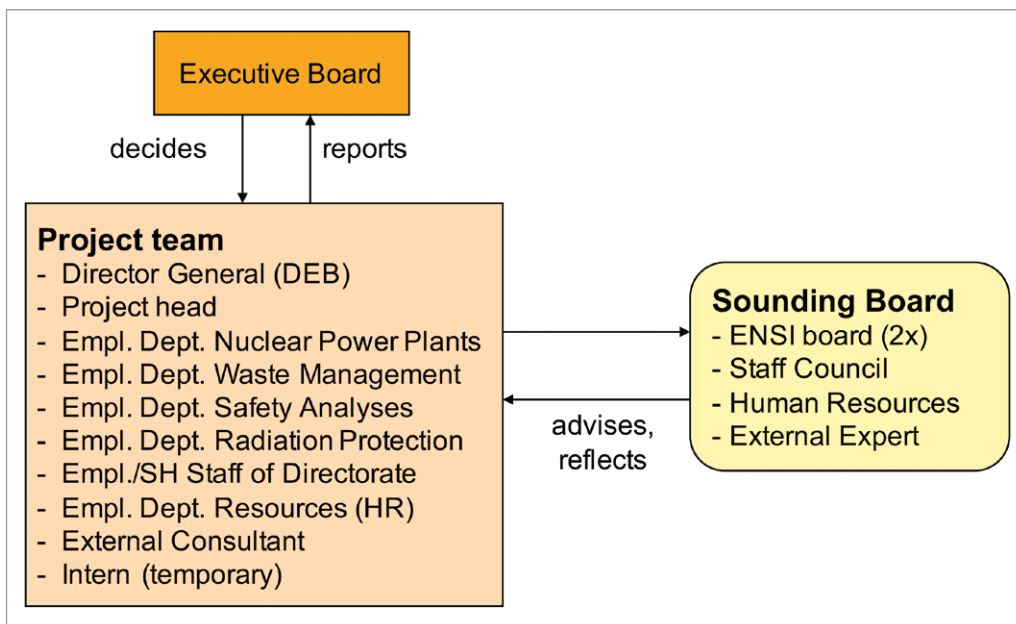


Figure 2:
Project organisation for ENSI's «Oversight Culture» project (Legend: DEB = Delegate of Executive Board; Empl. = Employee; Dept. = Department; SH = Section Head; HR = Human Resources)

The project team was intentionally composed in a multi-disciplinary manner that spanned hierarchical levels in order to take into account the greatest possible diversity of technical, function-related, and experiential backgrounds and to ensure the broadest possible support for the project in the organisation. For the project head, the assistant to the project management (intern), and the outside consultant, importance was placed on expertise in the area of organisational and safety culture.

As an outside observer, the outside organisational consultant was tasked with supporting ENSI in the sense of a «mirror» with regard to reflection and with supporting the project from a methodological and technical standpoint.

¹⁴ These are the oversight departments Nuclear Power Plants and Waste Management, the technical departments Safety Analyses and Radiation Protection, the Staff of the Directorate, and, at time, the services department Resources.

¹⁵ In ENSI the Delegate of the Executive Board has, inter alia, ultimate supervision of the project and represents the project on the Executive Board.

¹⁶ This is not the same person who worked as the outside consultant on the project team.

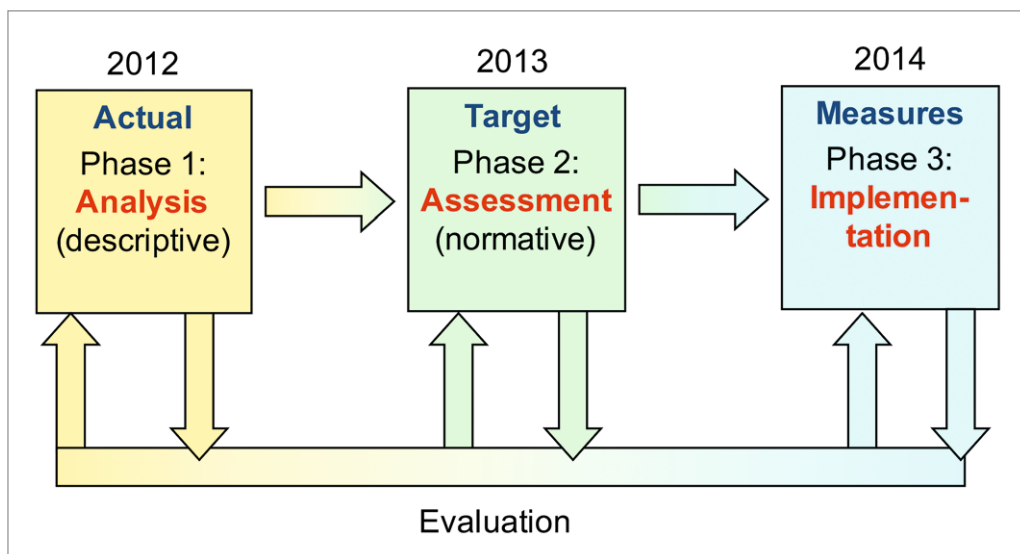
4.1.2 Project phases

The project was designed and implemented in three phases over three years (cf. Figure 3). The goal of *Phase 1*, which was implemented in 2012 and at the start of 2013, was to describe the «actual condition» (analysis phase). It was a descriptive analysis of ENSI's current oversight culture (at the time of the analysis), i.e. the elaboration of a subjective account of its oversight culture, and thus the elaboration of a kind of «self-portrait» by ENSI itself.

Phase 2 (2013) followed from and built on Phase 1 (analysis) in 2013. It was designed to elaborate the «target», i.e. a normative determination and description of the oversight culture sought by ENSI and the eliciting of the existing need for action (assessment phase).

Phase 3, which was implemented in 2014, served to elaborate a package of measures for implementing the «target» elaborated in Phase 2 and the identified need for action (implementation).

Figure 3:
Structure of the «Oversight Culture» project
in three phases



The project and its progress were evaluated continuously over the entire course of the project. This was primarily accomplished through regular meetings with the Sounding Board, with the DEB, with the entire Executive Board, and with the ENSI Board, as well as through bilateral meetings with representatives of the ENSI Board. At the conclusion of the project, an evaluation meeting was held with the project team, in connection with which the experiences with the project were reflected on and learning was derived for future projects. This report can likewise be considered part of the evaluation.

4.2 Methodological approach

4.2.1 Explorative approach

An *explorative approach* was chosen for the project on the oversight culture in ENSI. This means that the project was not based from the outset on a specification as to the desired nature of the oversight culture, i.e. a theory of «good oversight culture» (cf. Chapter 2.1). Rather, a model of the oversight culture was elaborated in an explorative manner, where the elements and features of ENSI's oversight culture were identified by surveying ENSI employees (cf. Chapter 4.3.1). The elements of the oversight culture identified in this way could subsequently be assigned to a model known from the literature (cf. Chapter 4.3.1), which served the further discussion and structuring of project activities and results.

4.2.2 Participative approach

In addition, the project was designed on the basis of a participative approach. Under the direction and coordination of the project team, ENSI employees were actively included in all three project phases on a repeated basis (by means of oral and written surveys, workshops, consultations, feedback and discussion of results, etc.). The analysis of the actual situation (Phase 1), the elaboration of the oversight culture aspired to (Phase 2), and the development of proposed solutions and measures (Phase 3) thus took place with the active collaboration of the entire ENSI staff. The project was initiated and carried out in-house.

Since reflecting about one's culture naturally cannot take place exclusively «from inside out» (cf. Chapter 3.1.3), various stimuli were provided from outside and integrated in the structure and execution of the project: in addition to continual outside support of the project by a consultant and the regular reflection with the Sounding Board (cf. Chapter 4.1.1), a workshop was conducted at the end of Phase 1 with representatives of the supervised parties. The aim of this workshop was to compare the self-image of ENSI's oversight culture that it elaborated in-house with the external image of the oversight culture by the supervised parties and to validate it (cf. Chapter 4.3.1).

4.2.3 Confidentiality

As described above (cf. Chapter 3.1.2), the safeguarding of confidentiality vis-à-vis the employees who take part in project activities is crucial to creating and maintaining a critical and open attitude in the project. It ultimately forms the prerequisite for the needed continuation of the process. For this reason, the employees were guaranteed that confidentiality would be safeguarded at all times in the treatment of personal statements and products from project activities (workshops, surveys, etc.). Accordingly, the corresponding data and documents were viewed and evaluated only by the project team or, in some cases, only by a part of the project team. In addition, all those kinds of data and documents for which the employees were assured of confidentiality were destroyed after assessment and further processing in the project.

4.3 Project execution

The following explains the project activities for each phase and summarises or presents by way of example the results of each phase. A detailed tabular overview of the project activities and steps can be found in the Annex, Chapter 7.1.

4.3.1 Phase 1: Analysis of the «actual situation»

Elaboration of hypotheses about the oversight culture

In the first phase, ENSI's oversight culture was characterised using three specific examples from oversight practice¹⁷. The examples were determined by the project team with involvement of the Executive Board and the section heads.

For each of the three examples, members of the project team interviewed ENSI employees involved in the respective example¹⁸. A total of 34 interviews took place. In addition, separate surveys about the perceived oversight culture were carried out with those sections and departments that were not directly involved in the examples. The surveys were carried out under safeguarding

¹⁷ 1) ENSI's dealing with the accident in Fukushima, 2) a team inspection conducted by ENSI after the accident in Fukushima, 3) a long-term project to elaborate bases for oversight.

¹⁸ Each interview was conducted by two members of the project team using a semi-structured questionnaire specific to each example. The questions concerned, for example, such issues as the specific execution of the supervisory activity, collaboration among the involved parties, and decision-making in connection with the oversight activity, as well as the general perception of ENSI's regulatory culture. The aim of this interview technique was, to give the interview partners the opportunity to reflect openly about ENSI's regulatory culture as they perceive it on the basis of the specific application example and to identify issues of the regulatory culture in an explorative manner.

of confidentiality, and the results were accessible only to the project team and were anonymised and evaluated by it. In addition, raw data and documents containing such raw data were destroyed after evaluation.

Based on the analysis of the results of these surveys, the project team elaborated 33 hypotheses about the oversight culture¹⁹.

Department-specific workshops

In connection with six all-day, department-specific workshops, employees in all ENSI departments reflected on the oversight culture in their section, in their department, and at ENSI as a whole. In addition, the individual sections in each department elaborated «metaphors» – i.e. figurative representations – of the section-specific oversight culture perceived by them (cf. Figure 4). These were then presented to the employees in the other sections of the department, and similarities and differences were identified that are characteristic of the oversight culture of the entire department.

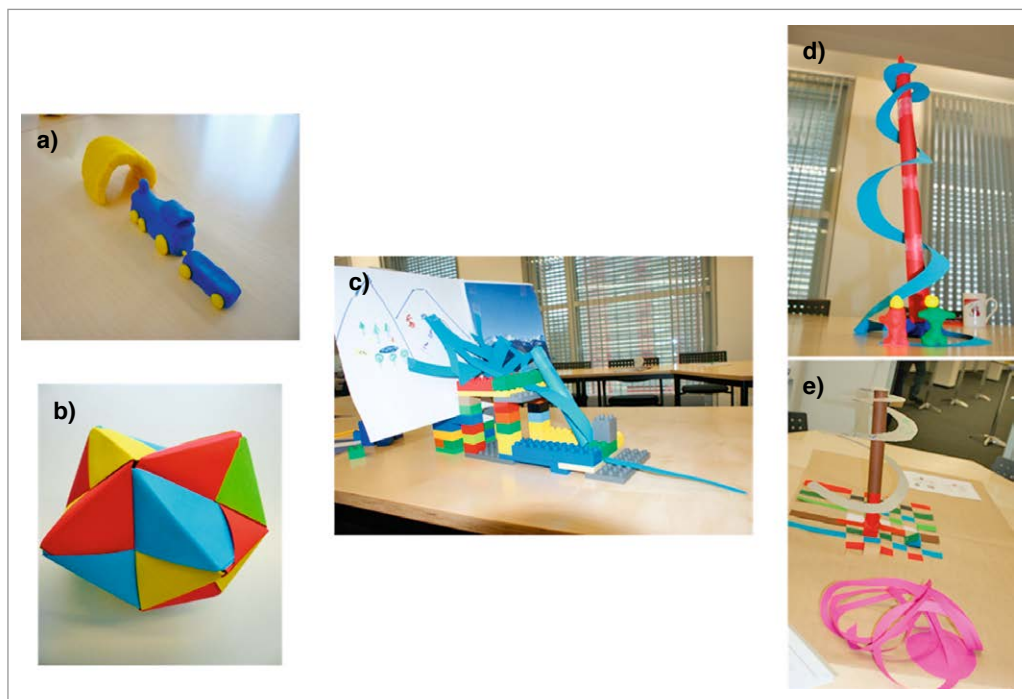


Figure 4

A selection of metaphors elaborated by the sections for their oversight culture

- a) Section in development (locomotive with the first car), which is heading toward a tunnel (future is still uncertain).*
- b) The end product consists of various parts, which have to fit together. In this regard, all parts are important. If one part is missing, everything crumbles.*
- c) A comprehensible decision has to be derived from various kinds of information.*
- d) The path continues constantly. One never reaches the end.*
- e) Laws (pillar); interconnection with other employees (braided base); dynamism through impetus from outside (spiral)*

¹⁹ The interviews were evaluated with a content-analytical procedure. In the process, the individual statements made by the interview partners were constantly abstracted and condensed by the project team in connection with several workshops using an iterative procedure, resulting in the formulation of the 33 hypotheses about ENSI's regulatory culture (cf. the figure in Appendix 7.2).

In addition, in connection with these six, department-specific workshops, the 33 hypotheses elaborated by the project team were presented to all ENSI employees in the form of a questionnaire. The aim of this survey was to verify the hypotheses, i.e. their (partial or complete) confirmation or rejection for the sections or ENSI as a whole. In the process, commonalities and differences between the oversight cultures of the sections and departments, as well as between the hierarchical levels, were to be identified²⁰. Finally, fields of action were elicited in small groups with regard to the oversight culture.

The results of the written survey on the 33 hypotheses about the oversight culture that was conducted during the workshops were then evaluated and processed by a sub-group of the project team and reported back specifically and in a confidential setting to each department and put up for discussion in connection with a meeting lasting several hours.

Workshop with the supervised parties

ENSI's self-reflection about its own oversight culture does not constitute an end in itself but rather should, as explained above, serve the continual improvement of oversight in the service of the safety of the supervised nuclear installations. In their daily routine, the supervised parties are constantly confronted with ENSI's oversight culture, since the latter substantially influences the basic conditions under which they have to go about their daily business, their specific activities, their deployment of resources, and ultimately their safety culture and the safety of their installations. For this reason, in connection with a project by the supervisory authority on its oversight culture, it is indispensable to take into account the perception of the supervised parties with respect to the effect on this very oversight culture.

Accordingly, at the end of Phase 1, an all-day workshop was conducted with representatives from the supervised parties²¹. The aim of this workshop was a juxtaposition of the self-image elaborated by ENSI about its own oversight culture with the external image of the supervised parties. The following issues were discussed:

- How do the supervised parties experience ENSI's oversight culture?
- What effect does ENSI's oversight have on the safety (culture) of the supervised parties?

²⁰ The written survey was carried out confidentially. Since a detailed section- and hierarchical-level-specific evaluation was to be made, complete anonymity was not possible. For this reason, a code system was developed for allocating the questionnaires completed by the employees by organisational unit and hierarchical level. Moreover, the questionnaires were administered and evaluated solely by the intern in collaboration with the project head and the outside consultant. The results were aggregated and processed in such a way that no inferences could be drawn from statements to individuals. After evaluation, the questionnaires were destroyed.

²¹ In addition, in connection with the specialist discussions on safety culture, which were organised by the Human and Organisational Factors section in the nuclear power plants in 2012 (cf. ENSI report, supra note 1, at Chapter 4.3.3), feedback was obtained from the supervised parties with respect to the impact of ENSI's response to the event in Fukushima. This feedback was fed into the «Oversight Culture» project.

Results of Phase 1

Three key aspects that characterised ENSI's oversight culture emerged from the (explorative) Phase 1 activities:

- *Oversight philosophy and practice*: This aspect relates to the basic question of what «good oversight» is. It covered, for example, issues in connection with ENSI's responsibility and remit, with its oversight strategy, and with its relationship to the supervised parties.
- *Collaboration and communication within ENSI*: This aspect dealt with the issue of how collaboration takes place within ENSI in and between sections, departments, and hierarchical levels. In this regard, the results indicate marked heterogeneity of sub-cultures within ENSI and a need to bolster collaboration within ENSI between the sections and departments.
- *Oversight role vs. public role*: This aspect dealt with the issue of the extent to which and the way in which the oversight role and the public role depend on and influence each other. The results indicate a potential area of conflict between these two roles.

For the purposes of structuring and depicting the three identified key aspects, the model that was developed by the Finnish supervisory authority STUK in connection with a similar project was used in simplified form. That model describes the three fundamental roles of a supervisory authority and their potential areas of conflict: the authority role, the expert role, and the public role (cf. the following digression).

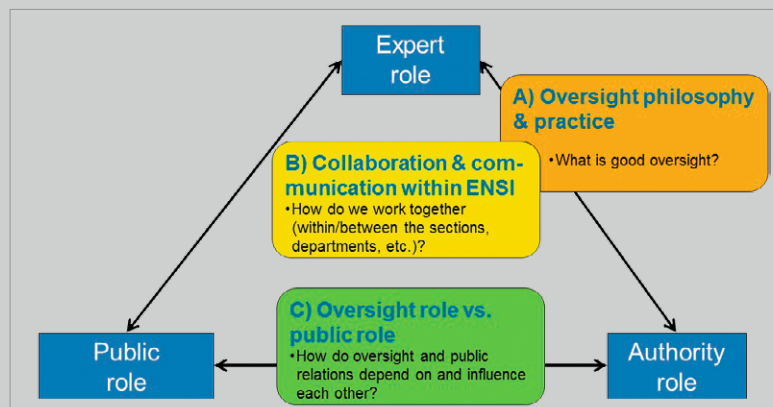


Figure 5:
Key aspects of
oversight culture
identified in
Phase 1

Digression: The role of supervisory authorities

Although, as explained in Chapter 2.1, a generally recognised theoretical model of a «good oversight culture» does not yet exist, a model of the roles of the supervisory authority, which was developed by the Finnish research institute VTT on the basis of a case study by the Finnish supervisory authority STUK, proved to be useful for structuring the further considerations in connection with the «Oversight Culture» project²². ENSI believes that this model constitutes an appropriate foundation for the supervisory authority's reflection process about its own self-conception and its culture and thus might also be helpful for other supervisory authorities.

In fulfilling its mission, the supervisory authority holds three different roles, which interact and sometimes also conflict with one another: the authority role, the expert role, and the public role. Each individual inspector embodies these three roles personally and simultaneously, although, depending on the function, the specific situation, and the specific task, possibly with a different manifestation.

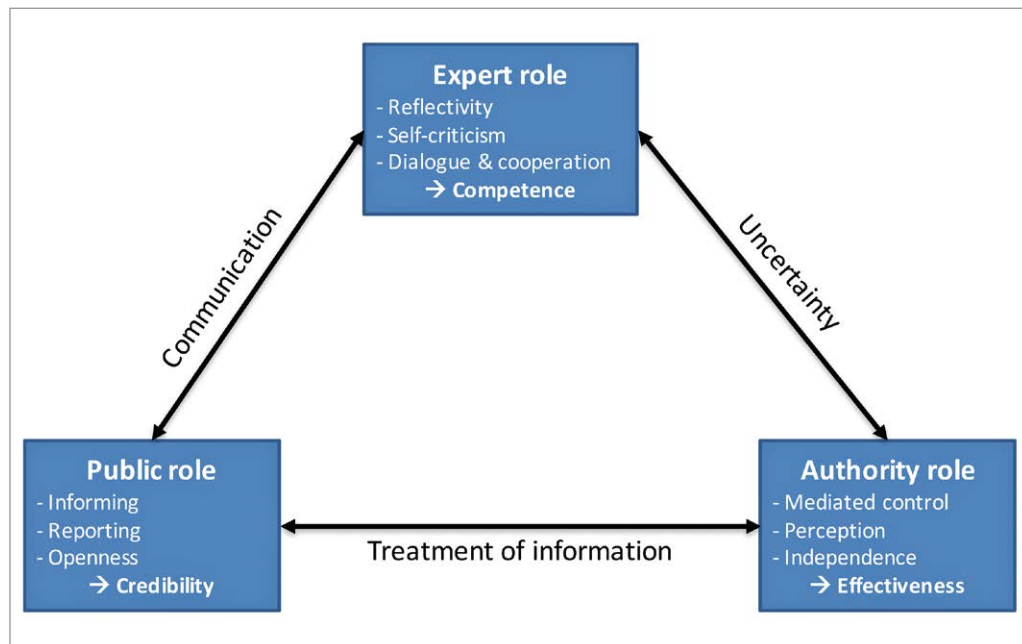
- *Authority role*: In the authority role²³, inspectors specify the requirements of the regulatory framework and evaluate their fulfilment. In this role, it is of central importance that inspectors master the use of rules and procedures as a means of control. But since the latter never depict the situation being evaluated 1:1, and therefore the fulfilment of the requirements cannot be directly evaluated, they must be used by inspectors as an indirect means of control in order to discern the meaningfulness of the situation. In addition, inspectors must perceive and evaluate circumstances outside of the regulatory framework. They must develop tools, such as indicators, inspection plans, etc., for the purpose of monitoring the operation of the nuclear installation indirectly and based on sample observations. Finally, the principle of independence requires that inspectors be able to distinguish between the factual content of an expressed opinion and the person expressing the opinion. Actions by inspectors must be founded on factual arguments. According to the authors of the study, the fulfilment of the requirements of this role is related to the *effectiveness* of oversight.
- *Expert role*: The expertise that inspectors develop and apply in the expert role is essential, since the regulatory framework can never be comprehensive and cover all matters. Inspectors therefore need to have extensive technical and methodological knowledge in their technical and supervisory field. In addition, work in the expert role places high demands on the professional ability of inspectors to judge. They must be capable of reflecting in a systematic, deep manner about the subject of oversight, but also of self-critically scrutinising their own thinking and their perception. They must have or develop the ability to perceive safety-relevant signals, even where these are not yet clearly (e.g. on the basis of the regulatory framework) identifiable, in order ideally to still be able to intervene during the «incubation period». In addition, the capacity for dialogue and collaboration both within the supervisory authority and with the supervised parties is indispensable in the expert role. The expertise establishes the *competence* of the supervisory authority.

²² Reiman, T. & Norros L. (2002a), Regulatory Culture – A Case Study in Finland. IEEE 7th Human Factors Meeting, Scottsdale Arizona (pp. 5-15 et seq.); Reiman, T. & Norros, L. (2002b), Regulatory Culture: Balancing the Different Demands of Regulatory Practice in the Nuclear Industry, in: B. Kirwan, A. Hale & A. Hopkins (eds.), Changing Regulation – Controlling Risks in Society. Amsterdam et al.: Pergamon (pp. 188-89).

²³ The term «authority» refers here to the formal authority of an authority's members with which they are endowed by virtue of their office and not to the personal authority that a person projects.

- *Public role*: The public role stems from the supervisory authority's informational mandate vis-à-vis the public. Communication constitutes the key task in this role. In practice, it is essential that inspectors have the ability to evaluate which information they are obligated to communicate in connection with reporting and where this obligation is limited for reasons of confidentiality. This requires that inspectors make an independent evaluation of the situation. In so doing, the sense of proportionality must be preserved. The fulfilment of the requirements of open communication emanating from the public role promotes the *credibility* of the supervisory authority vis-à-vis various stakeholders.

Figure 6:
The roles of the supervisory authority and potential areas of conflicts between them
(based on Reiman & Norros, 2002a, 2002b²²)



In the opinion of the authors of the study, a «good oversight culture» exists when all three roles are in balance. However, the various roles may at times conflict with one another. The following illustrates several potential areas of conflict between the roles:

- *Expert role vs. authority role*: An area of conflict between these two roles exists with respect to the extent of possible or tolerable uncertainty. A certain degree of uncertainty (e.g. in dealing with new problems for which consolidated knowledge does not yet exist) is conceivable or inherent in the expert role. However, uncertainty in the authority role is problematic (since here, for example, a subject of oversight must be unambiguously assessed by means of a clear regulatory basis).
- *Expert role vs. public role*: Communication in the expert role differs from that in the public role. Whereas, e.g. communication in the expert role strives for technical completeness and terminological precision and pursues a broader time frame, communication in the public role requires a language easily understood by a lay audience and a simplification of complex circumstances, which in some cases cannot completely meet the demands of technical specialists.
- *Authority role vs. public role*: With respect to the treatment of information from oversight, there is a potential area of conflict between the demand for the greatest possible openness and transparency vis-à-vis the public and the demand that a reporting culture be promoted at the supervised parties that is as open and transparent as possible. On the one hand, transparency vis-à-vis the public corresponds to the statutory mandate. It constitutes an

integral principle of official action and is a basic prerequisite for creating and maintaining the public's trust in the work of the supervisory authority. This stands in contrast to the demand on the part of the supervised parties and to the requirements of supervisory work for a certain degree of confidentiality, namely in those areas where an excessive focus on transparency and openness can interfere with the reporting culture of the supervised parties vis-à-vis the supervisory authority. The latter would impede the ability of the supervisory authority to obtain deep insight into the organisation of the supervised parties and to have an open, constructive dialogue with them in the interest of safety, which could ultimately have a negative impact on the safety of the nuclear installations.

The areas of conflict cannot be fully resolved. However, they need to be recognised by the supervisory authority and mitigated as far as possible. For this reason, it is important for the supervisory authority, in connection with a self-reflection process and a continual dialogue within the organisation and with external stakeholders, to become aware of the areas of conflict and, where necessary, to respond to them with suitable measures.

4.3.2 Phase 2: Elaboration of the «target»

On the basis of the results of Phase 1 (analysis of the actual culture), the project team elaborated a proposal for a description of the desired oversight culture. This proposal was structured in tabular form and consisted of a series of topics about the oversight culture (according to the three identified key issues), associated leading records describing the «target», substantive explanations about these «target» records, and background information from Phase 1, as well as initial ideas about the existing need for action and possible measures. The latter were formulated, for example, using existing inputs from the interviews in Phase 1. This table was discussed and revised by the project team (in connection with two workshops). The resulting document then served as the basis for the discourse in ENSI about the desired oversight culture and the existing need for action.

Cross-departmental workshops

The elaborated proposal concerning the «target» was presented to the entire ENSI staff in connection with several all-day, cross-departmental workshops for the purposes of discussion and further development. All ENSI employees were asked to register for one of five possible dates for the workshop. In contrast to the department- and section-specific workshops in Phase 1, this resulted in mixed groups in which the employees of the sections, departments, and hierarchical levels worked together randomly.

The goals of these workshops were

- to encourage a broad discussion in ENSI about the desired oversight culture,
- to consolidate the proposed «target»,
- to collect ideas for measures for implementing the «target»,
- to practice self-reflection about the oversight culture, and
- to promote and practice cross-sectional and hierarchy-spanning collaboration in ENSI.

A modified form of the «World Café»²⁴ methodology was used for the discussions in the workshops. In this regard, text extracts on a number of issues of the overall proposal were discussed by the participants in rotating groups with alternating composition, so that by the end of the workshop, each participant had discussed a number of issues about oversight culture with various colleagues and further developed the text.

The five workshops built on one another, i.e. the results from one workshop served as input for the next workshop. After each workshop, the results were incorporated into the document so that the

²⁴ Cf., e.g., [https://en.wikipedia.org/wiki/World_Caf%C3%A9_\(conversational_process\)](https://en.wikipedia.org/wiki/World_Caf%C3%A9_(conversational_process))

participants in the next workshop were able to take into consideration in their discussion the suggestions and modifications made by the previous group(s). In this way, the text originally elaborated by the project team was gradually developed further and consolidated by the ENSI staff. In connection with two subsequent workshops of the project team, the document was finalised to an extent that it could be used for the further work.

ENSI Mission Statement

Parallel to the «Oversight Culture» project, a separate «Mission Statement» project team elaborated a new Mission Statement for ENSI^{25,26}. The «Oversight Culture» project team identified from the totality of all «target records» concerning the oversight culture those of fundamental, superordinate character that were to be explicitly adopted into ENSI's Mission Statement and integrated them into the existing draft of the new Mission Statement. In this way, the main results from the «Oversight Culture» project found expression in the new Mission Statement and thus received an explicit commitment conveyed internally and externally.

However, this approach had a disadvantage, because in order to avoid confusion with respect to the «target» records that were «officially» declared valid, the «target» records that had been elaborated were no longer communicated and pursued further to the full extent later in the project. Thus, part of the elaborated vision of the desired oversight culture served at most in implicit form as the basis for further reflection. Although some of the results that did not make their way into the Mission Statement were taken up in the package of measures elaborated in Phase 3, an effort still has to be made to find opportunities to include the target records not explicitly taken into account thus far in future self-reflection in ENSI.

²⁵ Whereby two members of the «Oversight Culture» project team simultaneously worked on the «Mission Statement» project team and were thus able to ensure a direct connection between the two projects. The heads of the two projects also directly exchanged information and experiences on a regular basis.

²⁶ The approach and results of that project are not the subject of this report. ENSI's Mission Statement can be viewed at http://static.ensi.ch/1404379147/ensi_leitbild_charte_de_lifsn.pdf.

Results of Phase 2

The work in Phase 2 resulted in a series of «target» records on the oversight culture sought by ENSI. These «target» records flesh out the three key issues identified in Phase 1 (cf. Figure 7).

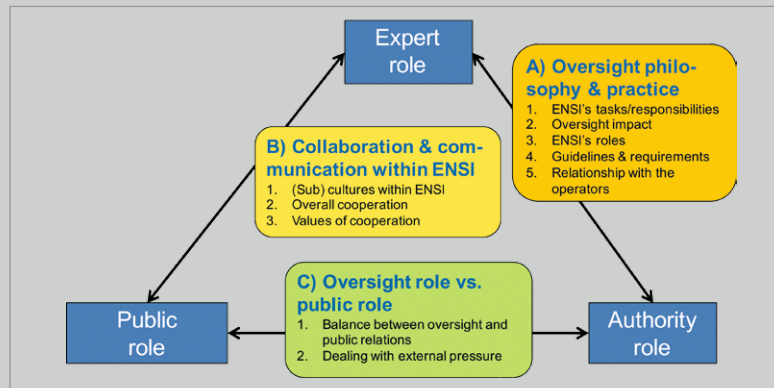


Figure 7:
Issues associated with the desired oversight culture

The following provides a summary overview of the content of the formulated «target» records:

A) Oversight philosophy and practice

ENSI's self-conception with respect to its remit, impact, and role is addressed under the heading «Oversight philosophy and practice». For example, it is emphasised that ENSI performs its supervisory work independently and that its oversight should be comprehensible, balanced, and effective. It is also noted that ENSI advocates a holistic approach. This means that it takes into account in its oversight the influences of humans, technology, and organisation as well as their interaction, and that it views a nuclear installation as an «HTO system». The operator of a nuclear installation is responsible for the nuclear safety of its installation, and ENSI must not through its oversight lessen or impede the assumption of responsibility by the operator. ENSI's objective then is also to positively influence the safety of the installations and bolster the safety culture of the supervised parties and to strengthen them in taking responsibility for their own actions through the choice of its supervisory principles and methods and their implementation. ENSI's requirements should also be worded in such a way that they contribute to improving safety and strengthen the self-initiative of the supervised parties in proactively improving safety. ENSI cultivates its dealings with the supervised parties in a way that is based on professionalism and constructive dialogue. The technical interaction between ENSI employees and those of the supervised parties takes place reliably and «at eye level» from expert to expert. ENSI cultivates a questioning attitude vis-à-vis the supervised parties.

B) Collaboration and communication within ENSI

It is emphasised that ENSI bases its work on a common understanding of its role, remit, and effect and that it presents a consistent outward behaviour. The safety of nuclear installation is the shared objective of ENSI employees. They work together toward this objective. Through overarching collaboration among ENSI employees, it is assured that all aspects of nuclear safety are taken into consideration. Employees cultivate a manner of dealing with one another that is open, fair, and collegial; they provide support to one another and respect the opinions of others. They cultivate an intensive exchange of information and internally coordinate in advance those decisions with broad external effect. They make decisions in a way that is well-founded, objective, and comprehensible.

C) Oversight role vs. public role

This topic area emphasises the need for suitable balance between informing the public and guaranteeing the safety of nuclear installations. ENSI views itself as a competence centre for nuclear safety in Switzerland. In dealing with pressure from outside, it always acts prudently and without haste. It includes the concerns of stakeholders in its decisions.

4.3.3 Phase 3: Elaboration of measures for implementing the «target»

Elaboration of a package of measures

In the third phase of the project, using the results from Phases 1 and 2, the project team elaborated in connection with several workshops a proposal for a package of measures for implementing the «target» regarding the oversight culture and the new ENSI Mission Statement.

For the purpose of structuring the package of measures being elaborated and its clear alignment on the defined «target» (ENSI Mission Statement and «target» oversight culture), the project team elaborated from the given fields of action and measures proposals the following fundamental principles that were to be supported by the package of measures:

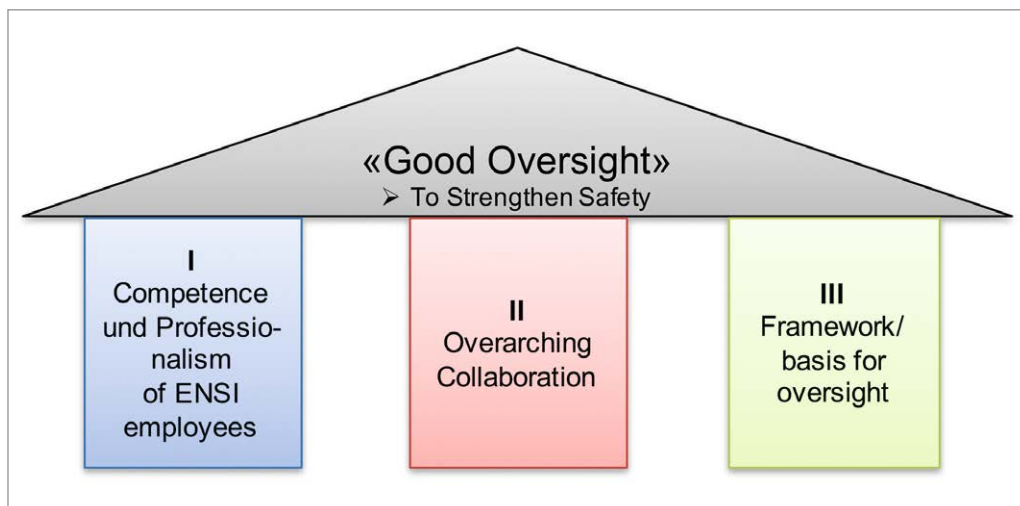
«Good oversight» is based on a high degree of competence and professionalism on the part of ENSI employees, on overarching collaboration, and on a well-founded framework for oversight,

with «good oversight» being geared toward the motto of strengthening nuclear safety as defined in the ENSI Mission Statement.

In accordance with this, the three following key fields of action constitute the «pillars» of good oversight (cf. Figure 8):

- I. Competence and professionalism of ENSI employees
- II. Overarching collaboration
- III. Framework for oversight

Figure 8:
The central pillars in the package of measures



The project team revised and grouped the need for action identified in the «Oversight Culture» project and the corresponding measures proposals and allocated them to the three pillars, which ultimately resulted in a collection of 22 measures.

For each of these measures, the project team described the need for action, the significance of the measure for the day-to-day operations of ENSI employees, and the potential risks of the measure. In addition, it was highlighted how the respective measure is connected with other measures in the total package, how its effectiveness could be evaluated, and who needed to be involved in its detailed elaboration and implementation.

Following an initial rough review by the ENSI Executive Board, the package of measures was then presented to ENSI employees and distributed for consultation²⁷.

²⁷ The hearing was directed at all ENSI employees, as well as ENSI's Staff Council.

On the basis of the results of the internal consultation, the project team revised and condensed the measures and once more presented the new package to the Executive Board. The Executive Board discussed and commented on the new package of measures and gave the project team its feedback. Following another round of revisions by the project team, the resulting package, which contained 15 measures, was approved by the Executive Board in the fall of 2014.

Results of Phase 3

The total package consisted of 15 measures. They related to the areas depicted in the figure.

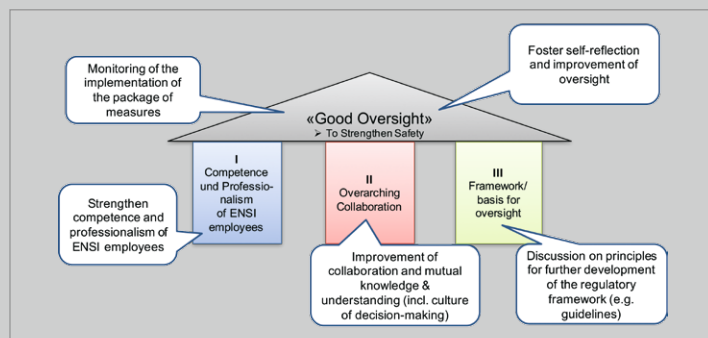


Figure 9:
Overview of the issues for which measures were formulated

The following presents several measures by way of example:

- Basic and continuing training of ENSI employees: Based on the findings from the «Over-sight Culture» project, special importance is to be attached in ENSI's basic and continuing training concept, which is currently being expanded, to promoting social skills, which in addition to technical competence, are also indispensable for professional oversight.
- Training course on feedback techniques: For the purpose of strengthening skills in giving and receiving feedback, a training course is held for all ENSI employees and permanently embedded and further developed in the company through corresponding long-term measures. The aim is to impart methods that ensure at all times a professional and constructive dialogue with supervised parties, external experts and colleagues within ENSI.
- «One hour for safety»: For the purpose of promoting reciprocal knowledge and overarching collaboration within ENSI, a monthly lecture series aimed at all ENSI employees was institutionalised. In this regard, two half-hour lectures are normally given, in connection with which (1) an ENSI section introduces itself and explains its tasks, and (2) an ENSI employee reports on a technical issue from his or her work. Alternatively, the hour can be used as a vessel for mutual reflection and discussion about oversight issues.
- Decision-making culture as regards decisions with possible wide-ranging effect: With regard to oversight-related decisions with possible large significance, the exchange of information, the comprehensibility, and the coordination of the decision in ENSI should be improved. The Director General convenes an internal technical meeting with the broad participation of the sections for the purpose of preparing the decision.
- Self-reflection on Mission Statement: For the purpose of embedding the new ENSI Mission Statement, various activities are envisioned that animate ENSI employees in various constellations (individually, in the sections, in the departments) to concern themselves with the contents of the Mission Statement and their consequences for their work.
- Feedback from supervised parties about ENSI's oversight culture: In connection with special technical meetings, the impact of ENSI's oversight culture on the safety culture of the supervised parties is regularly reflected on with the supervised parties. In addition, the existing formal channels through which the supervised parties give ENSI their feedback should be examined for their suitability and modified accordingly.

Implementation plan

When it approved the package of measures in the fall of 2014, the Executive Board also decided that the package of measures should be implemented in full as soon as possible, and at the same time, it gave the project team the task of elaborating an implementation plan for the package of measures.

Accordingly, the project team elaborated for the attention of the Executive Board an extensive implementation plan, which situated each measure's main activities along a time axis and designated the responsible persons or bodies. In addition, it also took into consideration the interfaces and interconnections with other measures or activities in ENSI. This plan was created as the basis for the subsequent detailed planning of the implementation of the individual measures that was to take place after the end of the project. It was explicated and submitted to the Executive Board at the end of 2014.

4.3.4 Further action: Implementation and integration of the measures

Once the implementation plan was submitted to the Executive Board, the «Oversight Culture» project was formally concluded. However, the internalisation and implementation of the values, attitudes, and practices elaborated in the «Oversight Culture» project and formulated in the ENSI Mission Statement, as well as the implementation of the defined measures, have not yet been achieved with the conclusion of the project (cf. Chapter 5.1). The desired values, attitudes, and practices should become self-evident elements of ENSI's (oversight) culture and in some cases they require an enduring change of behaviour and established, long-standing practices. The desired cultural change is a long-term process and requires continual efforts and a stable anchoring in ENSI's structures and processes.

Two «tracks» are crucial for this:

– *Responsibility of leadership:*

The embedding of the values of the «target» concerning the oversight culture and ENSI's Mission Statement, as well as the implementation of the defined measures in the daily routine of all ENSI employees, must take place via leadership instruments and leaders in ENSI. This means that managers (starting with the Executive Board) have to bear, convey, claim, and set a personal example of the values to be embedded. In particular, managers should convey and foster a climate in which greater cross-sectional and hierarchy-spanning collaboration takes place and in which problems and conflicts can be discussed in an open, direct (i.e. across the management line and in the personal relationship), and constructive manner.

– *Integration into existing structures and processes:*

Measures must be integrated into ENSI's «normal» daily routine and be implemented with the aid of the customary procedures, structures, and instruments (processes within the management system, ENSI's regular organisational structures). On the other hand, progress in the implementation of the measures must be regularly controlled and the change of ENSI's (oversight) culture monitored. In ENSI's organisational structure, this controlling and monitoring should be situated in the Staff of the Directorate, which is responsible for ensuring the deployment of the leadership processes and instruments. The Director of the Staff of the Directorate was therefore charged with initiating, coordinating, and controlling the implementation of the measures. He reports regularly (at least once a year) to the Executive Board about the status of the implementation of the measures. If applicable, the Executive Board then decides about necessary changes to the package of measures or (additional) measures to bolster the oversight culture. In addition, the Executive Board reports to the ENSI Board each year about the status of the implementation of the measures.

5 Challenges for the future and experiences from the «Oversight Culture» project

5.1 Challenges for the future

An oversight culture that strengthens safety and safety culture and encourages the supervised parties to take responsibility for their own actions is not a condition that can be achieved «once and for all» but is rather a process that must be continuously carried on and cultivated. Reflection about oversight and the effect this has on the safety culture of the supervised parties must take place on a regular basis and be an integral component of the supervisory authority's work and culture. Measures aimed at continuously and critically scrutinising and improving oversight must be cultivated and maintained. Although ENSI's «Oversight Culture» project has formally ended, the measures derived from it must continue to be implemented and monitored. They were integrated into ENSI's structures and processes. This was intended to ensure that they do not fizzle out and lose priority in favour of (pressing) day-to-day operations. Transitioning from «project mode» to «day-to-day operations mode» and maintaining the priority and motivation of all responsible parties and employees is one of the main challenges for the oversight culture and its further development in ENSI.

In this regard, the commitment by ENSI's management to continuing the efforts to scrutinise and improve the oversight culture, as well as its active promotion of the measures and its function as a role model in the daily routine, continues to be just as crucial as it was when the project was ongoing. Equally important is the further active inclusion of all ENSI employees, in order to maintain their awareness and commitment with respect to reflecting about and improving the oversight culture.

5.2 Experiences from the project

The following will touch upon several experiences from the project that constituted special challenges in the course of the project or are deemed to be especially important for any analogous project in the future.

5.2.1 Active involvement of the staff

The experiences from the project confirmed the assumption underlying the project definition (cf. Chapters 3.1.2 and 4.2.2) that the active involvement of the entire staff constitutes a crucial element for the success of a project concerning oversight culture. Although the participative approach in the project was associated with a great expenditure of resources and time²⁸, this was the only way in which it could be ensured that a self-reflection process was initiated in the individual project phases, which in some cases already caused changes with respect to the desired oversight culture. Active involvement of the staff has many advantages:

- Broad support, identification with project and results, motivation
- Various viewpoints are discussed and considered
- The employees are informed about the project, transparency
- Awareness for the oversight culture, the employees talk about the oversight culture
- Overarching collaboration is promoted through the project activities.

However, it needs to be taken into consideration that involvement of the staff is also associated with the emergence of an expectation on the part of employees. If the emerged expectations with respect to the further development of the oversight culture are not met, there is a risk that the project may even have a counterproductive effect on the motivation and commitment of the employees.

²⁸ Beginning with project planning, ENSI (which has a staff of ca. 150 people) invested ca. 8,000 person-hours for activities in connection with the project.

In carrying out the project, a challenge with respect to the involvement of the employees was in addition their conviction and motivation concerning active participation in project activities, in some cases with the deployment of already scarce work resources. This requires an optimal balance between «too little» and «too much»: In order to arouse and maintain the interest and commitment of the employees, they have to be involved time and again (in different ways) over the course of a long project. However, the number and duration of such activities must not be so great as to unreasonably disturb the performance of the «core mission» (oversight of nuclear installations) and provoke opposition on the part of the employees. It is also necessary to be responsive to emerging needs in the project in a manner that is as flexible as possible, without in so doing losing sight of the goals of the overall project. In addition to good, ideally long-term planning and announcement and an attractive design of the participation measures, the support and commitment of the management is also needed, which can significantly influence participation by the staff through explicit prioritising of the project, through calls to take part, and by taking part themselves.

Also posing a challenge was the project's long duration and linear execution. On the whole, both the project team and the ENSI employees showed signs of fatigue and a levelling off of motivation, particularly toward the end of the project. The members of the project team did not experience the project activities as equally interesting and motivating in all phases of the project. Many felt that the specific measures were being elaborated and implemented too slowly. Similarly, with regard to the derivation of measures from the initial workshops, the «common thread» was no longer easily apparent to all employees, despite regular information provided to the entire staff: On the one hand, one to two years had lapsed between the workshops and the announcement of the measures. On the other, not all of the interim steps taken by the project team in the intervening period were known to the other employees.

5.2.2 Confidentiality in handling data and results

The careful handling of data and results, as well as clear communication with respect to the use of information and statements provided by and products elaborated by the employees (cf. Chapters 3.1.2 and 4.2.3) proved to be crucial. They decisively influenced the trust and willingness of the employees to be involved in the project.

It is thus essential for a similarly structured project that adequate confidentiality be assured so that employees can speak openly and personally about experiences and problems. This means that statements by employees must be used in the project or disclosed to (internal) offices only in depersonalised form. In addition, it must be able to be ensured that the project's raw data and interim results are not communicated outside of the organisation either in the course of or after the end of the project. In order to be able to safeguard and guarantee the pledged confidentiality at all times, it is advisable that the corresponding data and documentation be destroyed after they have been evaluated and processed further in the project.

5.2.3 Experiences with respect to project organisation

The project organisation established for the project proved effective over all. For a project covering the entire organisation, it is of crucial importance that the project team be composed as representatively as possible with respect to the organisational structure. But in order to be able to work as efficiently as possible, it should also not exceed a certain size.

All ENSI departments in charge of oversight were represented on the project team by at least one member²⁹. Because the project was focused on oversight, however, the Resources department,

²⁹ Because of a change in ENSI's organisation that occurred during the project (closure of an oversight department), some of the departments were thereafter represented with several members on the project team.

which is responsible for ENSI's administrative and support activities, was not represented on the team from the outset³⁰ but rather starting in Phase 3. However, all employees, including those in the Resources department, were involved in the various activities of the project (workshops, hearings). Seen in retrospect, however, it appears sensible to integrate all of the organisation's departments in the project team from the outset.

Guaranteeing hierarchical representativeness in the project proved to be a challenge. ENSI's organisation has the following hierarchical levels: employees without a managerial function, section heads and their deputies, department heads and their deputies, and the Director General. The management was represented on the project team by a section head or, in the course of Phase 3, by his deputy as project employees, as well as by the Director General³¹ as Delegate of the Executive Board (DEB). Thus, the representativeness of the hierarchical levels could not be comprehensively guaranteed in the composition of the project team.

The ENSI Board, which is ENSI's strategic and internal supervisory body, was represented by two people on the Sounding Board. Thus, while the ENSI Board did not participate operationally on the project team, it was nevertheless well able to follow the status and progress of the work through its involvement on the Sounding Board, through bilateral meetings with the project head, and through regular information provided to the entire ENSI Board³².

Overall, the composition of the project team remained largely constant over the entire project duration. In Phase 3, the project team was, as mentioned above, expanded by a member of the Resources department, and the section head was replaced by his deputy. The steady composition facilitated continuity in collaboration over the entire project duration. On the other hand, the integration of new project team members also enabled the inclusion of new viewpoints and inputs in the project.

Occasionally posing a challenge was the availability of sufficient resources with regard to the employees on the project team. Since even during the project they had to primarily fulfil their core tasks, there were repeated bottlenecks of resources and unequal allocation of project work within the project team.

5.2.4 Experiences with respect to project management

Management of the «Oversight Culture» project constituted a challenging task from both an organisational as well as a technical standpoint.

For more than three years, project management tied up a significant amount of the resources of the project head, despite the support of an intern³³. Accordingly, the corresponding resources were available to the technical section to only a considerably reduced extent. The willingness of the section head, the entire section, and ENSI's other hierarchy to make available the required resources for the «Oversight Culture» project to the project head and to redefine the priorities of day-to-day operations for this time were a key prerequisite to the success of the project.

Also from a technical standpoint, the project placed a high demand on project management. This had to do with a new type of project for which no established ENSI specific procedures and methods could be resorted to. Concepts and methods were specially elaborated and implemented for the project with the support of an outside expert and the project team. The scope and duration of the project also posed challenges for project management.

³⁰ However, the Resources department was represented on the Sounding Board from the outset.

³¹ The department heads and the Director General jointly constitute the Executive Board.

³² The ENSI Board conducted its own project on regulatory culture independently of ENSI. In this way, it satisfied the fact that it likewise influences ENSI's regulatory culture and the safety culture of the supervised parties through its own attitudes and actions.

³³ Who later became a regular ENSI employee.

Since the project dealt thematically with cultural and organisational issues, technical expertise in the area of human and organisational factors, and corporate and safety culture were indispensable for project management. Accordingly, the role of the project head was not limited to classic project management but instead also covered to a great extent specialised conceptual and operational work. The latter also posed a challenge in the project: On account of the project's specialist background and the associated strong presence of the Human and Organisational Factors section by the project head and its support, it was – despite the interdisciplinary and cross-sectional and cross-departmental composition of the project team – important to constantly emphasise the ENSI-wide importance of the project and to point out that the project was formally allocated not to a section but rather to ENSI as a whole and to the ENSI Executive Board. This was particularly important in order to maintain the identification of the entire organisation with the project and the topic of oversight culture. Therefore, this also required that in addition to the frequent appearances of the project head in connection with the operational execution of the project, the ENSI Director General regularly demonstrated his «ownership» of the project by bringing up the project at various events and encouraging employees to participate in project work. However, evaluation of the experiences also revealed that the project team itself could have been made more visible through better allocation of «representation duties». In this way, the general, ENSI-wide importance of the project could have been better demonstrated.

In connection with the «Oversight Culture» project, which dealt with the issues of culture and collaboration within ENSI, project management was, in addition to the classic project-management and technical tasks, of course also faced with challenges in the area of interpersonal and intra-organisational collaboration. When planning the work, it is accordingly advisable, particularly for projects that are intended to explicitly address these kinds of issues, to expressly include the possibility of interpersonal and intra-organisational conflicts and emotional issues and to prepare ways of dealing with them from the outset.

6 Conclusion

At the conclusion of a project, in particular, a broadly based project in which the organisation as a whole was involved and for which a great number of resources were invested, the question arises as to whether the project was «worth it» and whether one would recommend the project in an analogous form to other organisations.

As things stand today, the first of the two questions cannot yet be definitively answered. On the one hand, it can be answered in the affirmative, since the project itself was a part of the desired process of reflection: The entire staff of ENSI repeatedly engaged themselves in one form or another over three years with issues of oversight culture and the impact on their own work. This bolstered the employees' awareness of these issues. Today, the employees are using the term «oversight culture» in their daily routine, from which it can be concluded that there is greater reflection with respect to supervisory work. Moreover, certain practices changed over the course of the project or, at the latest, in connection with implementation of the measures at the end of the project. For example, during the project, there was an improvement in communication and in the coordination of supervisory decisions with potentially great importance. The measures resulting from the project are in the process of implementation, or implementation is being planned.

On the other hand, it will be evident only over the long term whether the desired change of culture sets in and whether it is enduring. It remains to be seen to what extent the systematic and continual self-critical scrutiny, which was practiced in connection with the project on the basis of the findings from the accident in Fukushima, will continue to be practiced systematically and to what

extent overarching collaboration within ENSI was able to be permanently improved and bolstered. In order to be able to determine this, it will be necessary at periodic intervals to evaluate the effectiveness of the measures and comprehensively reflect within ENSI about the oversight culture and how it changes over time.

An initial indirect answer to the question of whether the project was «worth it» can also be derived from the international attention now being paid to the issue of oversight culture, which has grown significantly in the interim, including through the essential involvement of ENSI. The international community has recognised that the role of the supervisory authority and its influence on the safety of nuclear installations and the safety culture of their operators are of great importance and that the issue of oversight culture should not be ignored. What is required is a systemic perspective that focuses not just on the operators of nuclear installations but also includes all actors in the overall system, specifically also the supervisory authorities. In particular, the relevant international organisations (i.e. IAEA and OECD NEA) are making efforts to specify the concept of the oversight culture or safety culture of supervisory authorities and to elaborate methods for developing and implementing it in practice.

The second question – whether an analogous project is also advisable for other supervisory authorities – is in ENSI's view to be answered unambiguously in the affirmative. On the one hand, for the above-described reasons, it is important that all authorities responsible for the oversight of nuclear installations critically scrutinise their oversight culture and its influence on the safety of the installations and the safety culture of the supervised organisations. This is all the more the case in that a nuclear accident can have negative effects (on health, the environment, society, politics, the economy, etc.) not just in the country where the installation is located but also globally.

These considerations are, with certain variations, also applicable to companies in other industries³⁴ in which safety and the handling of risks are very important. Therefore, in ENSI's view, an analogous project may also make sense for sectors outside the nuclear industry. However, since there are differences in the constellations of actors in the superordinate overall system of operators, suppliers, authorities, legislative bodies, etc., in the way in which oversight is organised, in the basic social conditions (e.g. different acceptance of risks in society), and not least in technology itself, concepts and approaches are likely not applicable in full but instead must be modified to meet the situational circumstances and the special aspects of the relevant industry.

Apart from conceptual and methodological considerations, it is ultimately crucial that each supervisory authority always adopts a critically scrutinising attitude vis-à-vis itself and its own supervisory work and promote a culture and provide basic organisational conditions that enable such an attitude for all employees on all hierarchical levels and demand it of them. ENSI is aware that promoting such a culture beyond the «Oversight Culture» project remains an essential task of management and employees. With the project and the implementation of the defined measures, a good basis was able to be created for further consolidating this culture and for relentlessly developing supervisory work further in the future.

³⁴ Such as in health care, the financial sector, or other services areas.

7 Appendix

7.1 Detailed chronological sequence of the «Oversight Culture» project:

Phase	When	What	Who	Why/subject
-	Summer 2011 – early 2012	Initialisation of the project	ENSI Board, EB	Appointment of project head (PH); start of meetings between PH, EB, and ENSI Board; commissioning of outside expert; appointment of PT; concept development and set-up of the project
1	February 2012	Management workshop	DEB, PH, consultant, ENSI management	Presentation of the project, discussion of oversight culture
1	February 2012	Kick-off workshop for the project	PT	Official project start, presentation of the project to the PT, determination of the examples to be analysed
1	Spring 2012	Interviews and written survey	PT, interview partners, surveyed section/ departments	Interviews about three specific examples from oversight and written survey of the sections and departments not involved in the examples
1	Spring 2012	Evaluation of the interviews	Intern, PH	Content analysis of the interviews/ surveys
1	May – August 2012	4 workshops	PT	Elaboration of hypotheses about oversight culture
1	October – November 2012	6 departmental workshops (all-day)	PT, all ENSI employees	Elaboration of metaphors of oversight culture in each section, discussion of oversight culture in the specific department, validation of the hypotheses about ENSI's oversight culture using questionnaires, group discussion about issues of oversight culture
1	November 2012 – February 2013	Evaluation of the results of the departmental workshops	Intern, PH, consultant	Identification of commonalities and differences within ENSI's culture (sub-cultures) and verification of the hypotheses about oversight culture; evaluation of the metaphors elaborated by the sections
1	March 2013	Feedback on results per department	PH, intern	Feedback and discussion of the results of the evaluation of the written survey, including overview of results of the verification of the hypotheses
1	April 2013	Workshop with the supervised parties	PH and PH assistant, PT members, consultant	Perception of ENSI's oversight culture by the supervised parties; effect of oversight on the safety (culture) of the supervised parties
2	April 2013	2 workshops	PT	Discussion and approval of the proposal on the «target» for oversight culture
2	June – July 2013	5 cross-departmental workshops	PT, all ENSI employees	Discussion and enhancement of the proposal on the «target» for oversight culture; identification of need for action and formulation of initial measures proposals
2	Fall 2013	2 workshops	PT	Completion of «target»
2	2013	Several project meetings and work on the «Mission Statement» project	PT, 2 members of the «Oversight Culture» PT, PH	Elaboration of input for the new ENSI Mission Statement; integration of results from the «Oversight Culture» project into ENSI's Mission Statement

Phase	When	What	Who	Why/subject
3	Start of 2014	Several workshops/ meetings	PT	Elaboration of proposal for package of measures; description of each measure
3	May 2014	Initial (rough) review by EB	PH, EB	Presentation of proposal for package of measures to EB; rough review of the proposal and approval by EB for presentation to ENSI employees
3	June 2014	ENSI hearing	PH, PT, all ENSI employees	Presentation of package of measures to ENSI employees and carrying out of the hearing (1 month)
3	July-August 2014	Revision of package of measures	PH, PT	Integration of comments from ENSI employees and Staff Council; preparation of report to the attention of EB
3	September 2015	Comments by EB	EB, PH	Discussion of measures by EB; feedback of EB to PT (PH)
3	September – October 2014	Revision of package of measures	PH, PT	Integration of EB comments; revision of report
3	October 2014	Approval of package of measures	EB	Discussion and approval of the package of measures by EB; order to implement as soon as possible and elaboration of an implementation plan
3	Fall 2014	Elaboration of implementation plan	PH, PT	Elaboration of a detailed implementation plan for the package of measures
3	December 2014	Presentation of implementation plan	PH	Presentation of implementation plan to EB

Legend:

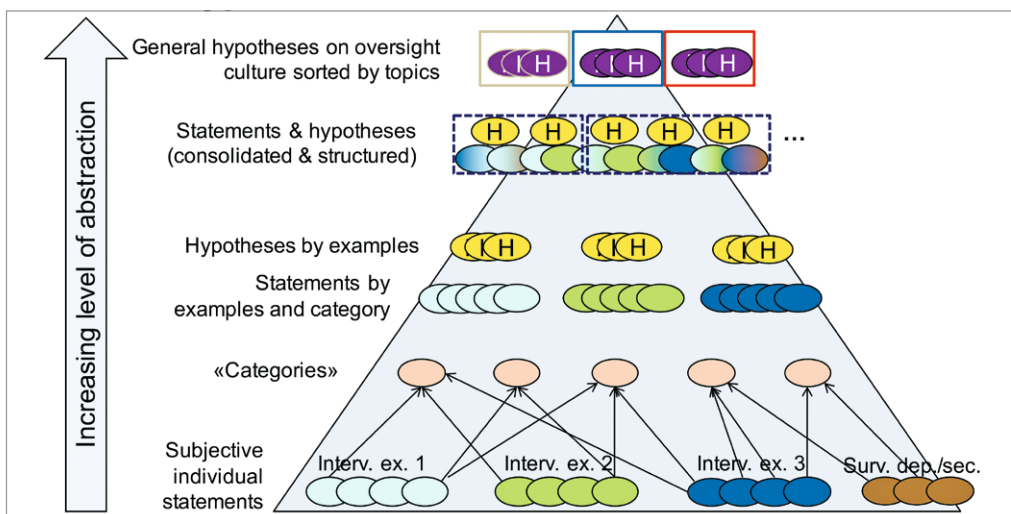
DEB = Delegate of the Executive Board

EB = Executive Board

PH = Project head

PT = Project team

7.2 Procedure for evaluating the surveys and elaborating the hypotheses about oversight culture



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