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IRPA Guiding Principles for Establishing a Radiation Protection Culture

1 Introduction

At a time of significant developments in the use of ionizing radiation in the medical field as well as in the revival of nuclear industry, the radiation protection profession is facing the challenge of enhancing RP culture throughout the world.•The generation who developed safety applied today is gradually leaving now.

At the IRPA12 Congress in Buenos Aires in October 2008, the Executive Council decided to actively support an initiative for enhancing Radiation Protection (RP) culture among the RP professionals worldwide because embedding Safety at a cultural level within an organization is by far the most effective way of delivering the performance to which we all aspire. As the voice of radiation protection professionals, IRPA has initiated a process and has provided a medium for discussion on this item throughout the world. This first draft presents arguments coming from 3 IRPA workshop organized in Europe, in Asia and in USA.

This preliminary draft document has been divided into 4 parts

- Elements of traits and Elements for a definition of RP culture
- Criteria of success
- Assessment tools
- Engage stakeholders and Role of RP professionals and IRPA Associate Societies

4 Working Groups have been appointed to the drafting of this document based on the material resulting from the three IRPA Workshops

A period for consultation of the Associate Societies of IRPA and IOMP will run from November until the end of January 2012, in order to get feedback on the “preliminary draft document”. On the basis of the Associate Societies’ comments, a new version of the draft document will be produced in conjunction with each WG leader.

All societies are kindly invited to participate to the special Session on the IRPA Initiative on Radiation Protection Culture during the IRPA 13 Congress in Glasgow in May 2012. The objective of this Working Session will be to discuss on this draft and to decide about the structure and content of future IRPA Guiding Principles on RP culture to be prepared following the Glasgow Congress.

2 Elements and Traits of an Radiation Protection Culture

2.1. Introduction

Culture can be considered a system of endurance and continuation (education), transfer of knowledge and expertise to the next generation, but it's also a combination of conservation and innovation accepted by the group. Culture comes from three sources: (1) beliefs, values, and assumptions of the founders of an organization, (2) learning experiences of group members as the organization evolves, and (3) beliefs, values, and assumptions brought in by new members and leaders. Organizational culture, therefore, is the pattern of basic assumptions invented, discovered or developed by a group who have shared significant problems, solved them, and observed the effects of their solutions. If the solutions have worked well enough, they then are considered valid. Once considered valid, the assumptions are taught to new members as the correct way to perceive, think, and feel in relation to those problems. The longer we live in a given culture and the older the culture, the more it will influence our perceptions, thoughts, and feelings.

2.2 What is meant by Culture?

- The ideas, beliefs and customs that are shared and accepted by people in a society.
- That complex whole, which includes knowledge, belief, art, morals, law, customs, values, symbols, rituals and any other capabilities and habits, acquired by people as members of society that determine appropriate attitudes and behavior

2.3 Features of a Culture

- Central value
- Typical and specific structure
- Strong ethos kept in leaders
  - (ethos: *the fundamental and distinctive character of a group, social context, or period of time, typically expressed in attitudes, habits, and beliefs*)
- System of continuation (education) – transfer of knowledge and expertise
- Endurance
- Combination of innovation and conservation

2.4 Passing on Culture

- Culture is learned, passed on and changed by:
  - A pattern of basic assumptions
  - The cultural paradigm
  - Groups of people who have shared significant problems, solved them, observed the effects of their solutions, and who have taken in new members
  - Basic assumptions that serve to stabilize a group and are highly resistance to change
- Culture is a stabilizing function when taught to new members

2.5 Organizational Culture

- Organizational structure institutionalizes how people interact with each other, how communication flows and how power relationships are defined. It also reflects the value-based choices made by the company
- In a total safety culture, employees not only feel responsible for their own safety, they feel responsible for their peers' safety, and the organizational culture supports them acting on that responsibility.

2.6 Evolution of a Safety Culture

- Three main developmental systems:
  - Basic compliance system –safety training programs, work conditions, procedures and processes comply with regulations. This is passive compliance.
  - Self-directed safety compliance system –workers ensure regulatory compliance and take personal responsibility for training and other regulatory provisions. This emphasizes active compliance with the regulations.
  - Behavioral safety system –teaching individuals to scan for hazards, to focus on potential injuries and the safe behavior(s) that can prevent them, and to act safely.

2.7 Safety Culture and Radiation Protection

- Safety focuses on the system design to permit hazardous equipment to be used without harming the worker.
- Protection focuses on people and behavior (culture) to prevent harm to the worker and others when hazardous equipment is being operated.

The US Nuclear Regulatory Commission has identified 9 behavioural elements of a general Safety Culture (see Table)

Leadership Safety Values and Actions	**Problem Identification and Resolution**	**Personal Accountability**
Leaders demonstrate commitment to safety in their decisions and behaviors	Issues potentially impacting safety are promptly identified, evaluated, and addressed and corrected commensurate with their significance	All individuals take personal responsibility for safety
Work Processes	**Continuous Learning**	**Environment for Raising Concerns**
Planning and controlling work activities is implemented so safety is maintained or enhanced	Opportunities to learn safety methodologies are sought out and implemented	Personnel feel free to raise safety concerns without fear of retaliation, intimidation, harassment or discrimination
Effective Safety Communication	**Respectful Work Environment**	**Questioning Attitude**
Communications focus on safety	Trust and respect permeate the organization	Individuals continually challenge existing conditions and activities so discrepancies that might result in error or inappropriate action are identified.

2.8 Why are we interested in a specific Radiation Protection Culture?

Embedding RP at a cultural level within an organisation is by far the most effective way of delivering the performance to which we all aspire.

- To give visibility to the fundamentals of RP (science and values)
- To promote radiation risk awareness
- To promote shared responsibility among practitioners, operators, management and regulators
- To maintain the RP heritage
- To facilitate its transmission
- To improve the quality and effectiveness of RP
- To contribute to the general safety

2.9 Elements or traits about RP culture

- A pattern of knowledge (scientific, technical, ethical, historical, practical…) and behaviours (questioning attitude, personal accountability, integrity, modesty, engagement with SH, openness, adaptable, transparent, exemplar …)
- Science, values and ethics (i.e Equity), experience
- No basic differences between sectors (medical, nuclear, industry),
- A narrative in common language
  - Independent of the cultural context. The local and regional contexts are part of the narrative , not in the elements structuring RP culture (science, values, experience)
- RP Principles : Justification, Optimisation, Dose Limits
- History of RP and Feedback Experience
- Competence (by Training and education)

2.10 Position of the Radiation Protection Professional

- Approach to management is from the professionals and includes Engagement with management on developing the Culture within the facility or institution
- Need to develop:
  - Relationship with management and the workforce
  - Relationship with the regulators
  - Involvement with other relevant stakeholders

3 Criteria of success

Creation of a positive radiation safety culture encompasses the entire organization, from the top down and needs to be integrated throughout the organization.

Successful sustained positive radiation safety culture takes a comprehensive effort. These efforts will vary from discovering any problems with your radiation safety program, maintenance of rules and a regulation, testing to make sure education is retained and promoting positive reinforcement. Audits must be designed to fit the particular industry you are in.
The following listings are steps suggested to create, measure, train and sustain a radiations safety culture program.

3.1 Organizational Goals

- Executives talk the talk. Make sure safety is important, not just a word Actively participate in quality assurance programs organization-wide
  - Ex image wisely, image gently promote this participation to community
  - Participate and train for appropriateness criteria
  - Recognize good radiation practices organization wide, make safety culture a part of everyday life from the top down.
  - Celebrate positive achievements (such as)
    - Positive inspection
    - No accidents for a time period
    - Dose decrease over all employees
-
    - Allow employees to train during work hours
    - If indicated, allow employees to attend workshops, conferences
    - Purchase needed safety equipment
    - No tolerance of poor behavior
      - “back” radiation safety officials who are trying to do their job
      - Don’t let politics influence radiation safety decisions.

- Clear, concise and sound policies
- Universal compliance with all safety items
- All safety results accessible to the entire community
- Involve community in radiation safety
    - Discuss positive aspects of organization in community
    - Promote good health using correct equipment and properly trained workers
    - Emphasis organizational and worker certifications, advanced degrees and other appropriate professional stature

3.2 Assessment of safety culture

- Internal Rules and regulations, Policies are clear, concise and available
    - Training is held periodically
    - Testing is done to evaluate training efficacy
    - Training is updated periodically
- External Rules and regulations are available and accessible
    - Training is held periodically
    - Testing is done to evaluate training efficacy
    - Training is updated periodically
- Licensee safety tracking = Quality assurance
    - Internal Radiation safety audits
        - Inspections
        - Audits
        - Mandatory Periodic equipment tests
            - Held to industry standards
            - Performed by competent individuals
    - Radiation incidents (I.E. spills, wrong injections, wrong patients, dosimetry)
    - External audits (performed periodically)
        - Results accessible to all personnel
        - Deficiencies addressed quickly
        - Iv. Trend external vs. internal identification at specific intervals

❑ percentage external identification

❑ repetitive problem identification

- Identification of problems
    - Self identification
        - Must be immediate
        - Must be accurate
        - Must be in complete detail
        - All information available to affected areas
    - External identification
        - Must be immediate
        - Must be accurate
        - Must be in complete detail
        - All information available to affected areas
    - Problems prioritized by significance
        - Patient, public and personnel safety take priority
- Root cause identification for all problems
    - Feedback is sought from all parties
    - Results are given to all parties
    - Retraining speed based on severity
- Non-penalty retraining for problems
    - Lessons learned are used for future training
    - Creative allegiance For example:
        - allow person to help prepare lessons
        - have person involved in preparing training material for example like a pamphlet illustrating proper x-ray techniques

- Expect employees to take ownership of problems, help be the solution.Pride in the organization
  - Include workers in problem solving sessions
  - Ask workers for suggestions on how to solve any problems
  - Allow workers to help train, promote individual expertise
- Incentives for safe behaviors
  - Inexpensive
  - Individual or group based
  - Clear rules
  - Rewards immediately after good practice is noticed or identified
    - Example: set initial modest dose reduction goals (easy win)
    - Track radiation exposure and reward people who achieve goals
    - Group helps police the rules (not wearing = cheating, not eligible)
    - Award prize (free lunch, placque, etc.)

4 Assessment tools

This part of the document focuses on the identification of the best and optimal tools required and needed to assess the level and quality of the RP culture obtained in all the areas of activities where RP is involved. The criteria identified in the second part of this workshop (II: Criteria of success) are the elements to be assessed with proper tools in order to identify issues and problems opposing the improvement of the RP Culture or just to measure the level obtain by the RP Culture in a given situation.

There is a need to identify the best and most appropriate tools as well as to prioritize the criteria of success elements on which the assessment needs to be focused.

The assessment tools should also be a combination of quantitative and qualitative tools to be able not only to measure the identified criteria of success, but also to stimulate judgments and observations about positive or negative trends for such a given criteria of success or even to modify them.

The RP Culture can be understood as a combination of habits and knowledge of RP in all its aspects for patients, workers, population and environment, and in all exposure situations and it combines scientific and social dimensions. Despite the variety of cultures around the world, and independently from the specific context and activities considered, all the actors involved share common beliefs about the need to care for people and the natural environment. Such beliefs are essential to a sustainable future.

There are several areas in which the ionizing radiation applications can be divided:

- medical,
- industrial and research
- third-party services

There are at least three ways to impact the RP Culture in each one of these areas:

- by educating and training the people involved in RP applications;
- by creating positive and total awareness about RP at working places;
- by establishing adequate and proper communication processes among all the actors involved in RP Applications.

In general, we can assume that the usual ways to raise and to establish certain levels of culture are the continuous educational processes, the access to multimedia, and the effective communication among workers, directors with workers, and workers with patients and public, but in RP we need to be more specific in implementing all the above activities considering the following in particular:

4.1 Education and Training

- by continuing updating, with a proactive approach, not only the professionals, but also the general staff, about the evolution of scientific knowledge and related judgements of relevance in RP. Information on RP evolution by different means i.e. newsletters;
- by raising an adequate awareness among the people directly or indirectly involved in RP. Public events and meetings with capabilities to attract the public;
- by making sure that all radiological aspects are well known to workers and everybody have the correct training to take care, prevent, and evaluate RP aspects;
- by underlining that RPC is not an established area of knowledge, but one in continuous change and update, not only in its contents, but also in its approaches.

4.2 The working places

- by promoting and creating a positive work environment based on mutual respect, shared understanding and adequate communication among workers, professionals by creating the conditions for enthusiastic and effective participations to meetings open not only to the workers and professionals involved in a RP service, but also to public;
- by collecting and by taking into account requests and suggestions emerged during such meetings and by collecting and elaborating level of satisfaction forms;
- by paying particular attention to the application/compliance of Code of Ethics by the professionals.
- by encouraging RP professional, directors and workers to ask for help when confronted with new or unfamiliar RP situations.

4.3 Proper communication

- by providing a systematic feedback through a decision making review system; (provide the system)
- by setting a procedure of errors and near misses communication, by reviewing it on a regular base and by encouraging workers to examine the cases without fear of reprisal;
- by giving specific trainings to improve how, collectively and individually, the professionals improve their communication with the public or different publics, by both listening and providing information;
- by having a common/ national language used in oral and written communication;
- by developing better capabilities and methodologies to assess the Public concern and to listen to it;
- by creating the conditions for the professionals to apply the Guiding Principles for Stakeholder Engagements;
- by disseminating information on the latest development, strategies and future direction for proper RP (a role for the national RP societies ?);
- by having the various RP associations involved at different levels (medicine, industry, environment…) and with specific attention to different field, to contribute to the creation of one central national contact point (web site ?) to disseminate information at national level in mutual agreement.

While implementing or trying to implement all the above activities in the various working environments like industries, hospital, research centres on the daily life, we still remain concerned, among the other things, about:

- the level of consciousness that we are dealing or working with a physical agent that could be dangerous for oneself and the others;
- the facts and the aspects which should be inspected and considered while evaluating the RPC status in a given facility (radiotherapy, nuclear medicine, diagnostic x-rays, for instance);
- the level of information about the harms of the ionizing radiation;
- the level of knowledge of how the low doses can be harmful to the health;
- the level of knowledge of the objectives of the personnel dosimetry system;
- the presence of an effective communication between the personnel and the RSO or between the workers and the directors.

There are other concerns about RPC in any and different location and situation where RP is applied and in order to have more general and more widely applicable parameters to assess and to evaluate the level of RP Culture and its improvements in time, in Chapter 3 of this document a series of criteria has been set and defined as criteria of success in implementing and growing RP Culture. Based on above, there is, in fact a need to find and define general tools which will help to assess and evaluate the degree of success obtained in developing RPC, measured in reference to the success criteria defined in Chapter 3.

The assessment tools should be structured in such a way not only to obtain a picture of RP Culture at a given time, but also to help in finding trends and progresses or regressions in RPC.
By crossing the areas of use of RP with the ways of impacting RP Culture as described above, a list of different tools can be indentified as the correct and proper tools to measure and assess the degree of success in establishing and developing RPC.

Among the possible assessment tools, the following ones could be of particular interest:

- At national level for professionals and directly involved people
  - A program to identify number, types and activities of the different Professional Associations and to collect the specific activities done for RPC improvement;
  - The creation of a single web or multimedia point of contact in common with all the different Associations with the aim of developing RPC among professionals and the public;
  - The creation of a questionnaire to check minimum RPC requirements in order to be member of an Association;
  - Yearly survey on numbers and types of trainings organized at national level on RPC by the Associations or by professionals;
  - A specific questionnaire on knowledge and comprehension of the RP ethical code, to be distributed by the associations among their subscribers.
- At national level for the public awareness
  - A yearly survey on
    - Number and types of open to the public meetings and events on RP in the country;
    - Number and types of articles published on news papers or consumers magazines;
    - The same for TV programs and in general multimedia communications.
  - A standard method via questionnaires or self assessments to collect the feed back coming from the public during the above listed types of exposure to RPC.
- At local level in a medical RP application (for instance)
  - to assure via a formalized procedure that the workers know the principles of RP at the moment of the job contract or to have a training organized for it. This can be a measurable indicator: the number of workers of beginning course on RP;
  - to check if there is an established internal procedure for refreshing and for updating courses and trainings to workers and professionals. The number of participants among the workers to these trainings and their active participation indicated by suggestions, critics and opinion are tools to assess RPC level;
  - to formally charge the figure of the RSO in order to give it the free way to teach and refresh the theoretical and practical knowledge and abilities of tasks related to RP;
  - formalized routine questionnaires or self assessments to evaluate the workers RPC and random checks via questionnaires about RPC for the patients;
  - to act face to face interviews with RP workers and professionals as integration to the above point 3.c and as a mean to evaluate their real understandings and to collect their suggestions and opinions;
  - to formalize the way to collect (beside the training and courses cases), to analyze and if possible, to implement suggestions and ideas coming from workers (classic suggestion box);

- to check first the existence of a non-punitive method to declare and to track errors and near misses in an open and constructive way. In case of such a method does not exist, it should be implemented with the support of an external independent auditor.

- At the level of a third party "industrial" involved in RP equipments supply (for instance)
  - how to measure the level of RPC notions in the business people who has the intention to supply and install ionizing radiation facilities for nuclear medicine, radiotherapy, diagnostic imaging or industrial applications? It is important to assure that the facility was designed under the RPC conditions. This point claims the involvement of a regulatory commission;
  - to establish a procedure requiring that companies installing ionizing radiation machines or delivering some service related to radiation sources or machines (maintenance services, transportation of sources and in general three-party services) should undergo an external independent audit to establish if an adequate level of RP Culture is present and maintained at the level of the workers and the personnel directly involved in the provided activities;
  - the reviewing of the documentation can give back information about the degree of RPC. As a premise the organization must have a complete and redundant system of documentation in order to have a sufficient amount of information.
- Some of the above presented and listed assessment tools can be considered of a general use and extended to other conditions and situations where the degree of success in establish and growing the RP culture needs to be assessed, but other more specific and peculiar tools will be needed for particular conditions.

5 Engage stakeholders and Role of RP professionals and IRPA Associate Societies

5.1 Baseline of stakeholder involvement

Within the nuclear community stakeholder involvement has been a topic for a long time and still is a very present issue. There are a number of publications giving methodical guidance on stakeholder involvement and numerous examples are described in the literature. All this information is highly valid also for the purpose of a promulgation of the RP culture process. In 2008 IRPA issued Guiding Principles for Radiation Protection Professionals on Stakeholder Involvement which comprises 10 principles (see Annex). From these principles number 2-5 and 7-9 are especially relevant for the purpose of stakeholder involvement with regard to promulgating RP culture. Those who are engaged in the RP culture process should be aware of this IRPA guidance.

Representative for literature concerning stakeholder involvement the IAEA Nuclear Energy Series Nb. NG-T-1.4 "Stakeholder involvement throughout the life cycle of nuclear facilities", Vienna, 2011, can be quoted. The reader will find a concise but still comprehensive enough presentation of the subject and several quotations of additional and more exhaustive literature. Especially the hint to the Nuclear Communicators Toolbox (toolbox@iaea.org) can open up valuable guidance from practical experience. Guided by NG-T-1.4 the next steps of defining and organizing a stakeholder engagement/involvement are laid down in the following section.

5.2 Definition and identification of stakeholders

In general stakeholders can be defined as "interested parties" as it is usual the case in management systems (See e.g. IAEA GS-R-3 "The Management Systems for Facilities and Activities", Vienna, 2006). For the RP culture interested parties are normally all those which are involved in nuclear and radiation affairs, as there are

- authorities of different levels, regulatory bodies, competent authorities for special fields of application of ionizing radiation,
- local or national politicians,
- news media,
- academic/researcher,

- medical and health professionals, especially but not exclusively those which are using ionizing radiation,
- operators,
- suppliers,
- employees,
- citizens,
- special and public interest groups, consumer groups, other non-governmental groups,
- informal opinion makers.

This list is quite comprehensive and to address all of them may go beyond the capabilities of the RP community. So it is proposed to restrict ourselves as a starting point our activities to two groups: the RP professionals, organized in the IRPA AS (that means ourselves) and the news media. This selection has the following reasons: The RP professionals are the “fighters in the first line”. They have to know, what RP culture means and where the development should go to.

The second stakeholder group was chosen because of their enormous influence on the one hand and the remarkable lack of knowledge and misinformation on the other hand which was obvious in the aftermath of the FA.

There might be a necessity to involve the management of the facilities in which the RP professionals work also as a stakeholder. Safety or radiation protection culture is one of the important features of any management system within the nuclear or radiation branch. If it is felt that RP culture needs a significant improvement within the undertaking the management should also be taken into account in the process of stakeholder involvement. The decision should be taken by the IRPA AS.

5.3 Involving principles of stakeholder involvement

To be successful with the process of developing RP culture and the involvement of the stakeholders the following points must be taken into account:

- ❑ exhibit accountability,
- ❑ recognize the purpose of stakeholder involvement,
- ❑ understand stakeholder issues and concerns from the beginning,
- ❑ build trust,
- ❑ practice openness and transparency,
- ❑ recognize the evolving role of and methods for stakeholder involvement.

5.4 Development of a stakeholder involvement program

The stakeholder involvement program has to address the following items

- strategy,
- implementation plan,
- define tools and resources and process ownership,
- evaluation and adjustment of the plan.

The strategy is quite clear: to achieve a positive development of RP culture among all involved parties. However this general goal has to be underlined by more concrete objectives. Examples for these concrete objectives are

- definition of radiation protection culture in a way that all people can easily understand, taking into account that RP professionals may range from a technician who performs simple measurement tasks up to a radiation protection expert whose advice is sought for complex nuclear facilities,
- to make RP professionals familiar with the idea of promoting RP culture by organizing lectures or courses, elaboration and distribution of leaflets and other explaining material,

- foster the cooperation of the IRPA AS and exchange of experience with their national implementation of RP culture development.

This list is not complete and should be completed in the discussion process which follows.

The implementation plan corresponds basically with the road map for the IRPA Guiding Principles, but it has to be elaborated in more detail by the IRPA AS with respect to each society. The culture is always regional or national and this has to be reflected through the IRPA AS. The are many ways of bringing RP culture to the RP professionals and they will differ among the societies. Each society will find its own, best suited way, which will also depend of the resources available.

Examples for implementation are

- action plans, detailed to the level of existing working groups,
- appeal to the media for a further strengthening of contacts and consultations with regard to RP issues,
- actively posting own publications in the media via advertisements and allocate the necessary funds for it,
- the development of a network of personal contacts to media representations and providing them with profound and correct information.

This list is also not exhaustive and should be completed through the forthcoming discussion process.

5.5 The role of the RP professionals and IRPA Associated Societies

The RP professional and AS must take the opportunity to participate to provide an environment that promotes dialogue, and disseminates information among its members – companies (private and public) and society as a whole.

- - Give visibility to the IRPA initiative (meetings, media, web site,…)
  - ❑ All stakeholders including patients and the general public, Vendors and suppliers included, should be involved
- - Follow the NRC approach to develop the Policy Statement on Safety Culture
- - Take the opportunity to debate in IRPA Congresses: “How to engage Stakeholders in the IRPA initiative” directly related to the motto
  - ❑ Strong leadership
  - ❑ Motivation
  - ❑ Inclusive collaboration
  - ❑ Use of risk managers
- Develop a narrative on radiation protection in all exposure situations
- The AS must participate in all events related with the use of ionizing radiation.

Regarding the process ownership the officials of the AS should take the lead. It may be useful to dedicate the responsibility to one of the members of the committee.

Finally there must be a process of evaluation of the whole process of development RP culture and consequently an adaption/amendment of the implementation plan. This should be done at least on an annual basis. If one committee member is responsible he should report regularly to the other committee members in shorter time periods.

The implementation process will take some time. It cannot be expected that the current situation will change in a short term. Therefore sustainability is needed. Motivation of society members may be necessary through the leadership by the committee. Also the propagation of positive results in AS will become important and should be part of the IRPA congresses in the next years or even decades.

6 Conclusion

Following a process as developed in this Guidance all staff and managers can be directed towards an operational focus, and more specifically, ongoing reliability, human performance, and organizational effectiveness. This will lead to the development of a “field culture” in addition to the “science, engineering or medical culture” to anticipate problems and to obtain the commitment of all employees. Safety culture is a learned way of life. It must be an ongoing dialogue among safety professionals, organizational management and the workforce, and between the organization and all relevant stakeholders. Managers play a key role through their presence in the field to coach workers and focus all staff on the operational RP Culture.

Annex:

The IRPAGuiding Principles for Radiation Protection Professionals on Stakeholder Engagement

Radiological protection professionals should endeavour to:

1. Identify opportunities for engagement and ensure the level of engagement is proportionate to the nature of the radiation protection issues and their context.

2. Initiate the process as early as possible, and develop a sustainable implementation plan.

3. Enable an open, inclusive and transparent stakeholder engagement process.

4. Seek out and involve relevant stakeholders and experts.

5. Ensure that the roles and responsibilities of all participants, and the rules for cooperation are clearly defined

6. Collectively develop objectives for the stakeholder engagement process, based on a shared understanding of issues and boundaries.

7. Develop a culture which values a shared language and understanding, and favours collective learning.

8. Respect and value the expression of different perspectives.

9. Ensure a regular feedback mechanism is in place to inform and improve current and future stakeholder engagement processes.

10. Apply the IRPA Code of Ethics in their actions within these processes to the best of their knowledge.