

Nuclear Safety Leadership Development Program

Introduction

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What we all want

Although we are different and each of us is unique and special, we all essentially want the same things, such as....

- **To be in good health**
- **To have a good life**
- **To feel safe**
- **To be respected**
- **To receive and offer affection**
- **To be part of a family, a group, a team, a society**
- **To feel appreciated**
- **To evolve, to develop personally and professionally**
- **To have autonomy, freedom of decision and action**
- **To do something that matters, to achieve something important**
- **To see beautiful things and places**
- **To manifest our creativity**
- **To understand how the world functions**
- **To leave something good behind us, to have a positive influence on those around us**
- **To become the best versions of ourselves**

What choices we make, what decisions we take

Our choices and decisions are influenced by many factors, such as ...

- **what we want**
- **how we see ourselves and the role we think we have**
- **what we think we can achieve**
- **our values and principles**
- **the rules and norms of the society**
- **the expectations of those around us**
- **our education, knowledge and experience**
- **the information we have**
- **the expected benefits and estimated risks**

What choices we make, what decisions we take

Our past choices and decisions have led us to work in the nuclear field. This is just another thing we have in common.

The saying goes we are free when we can do what we want and we are happy when we like what we do. What do you think?

Given that we spend almost a third of our adult life working, we should like our work and it should offer us a significant part of what we want.

In general, there should be a balance between what we give and what we receive. This may be a basic assumption that some of us hold. You may have heard, sometimes, someone say “We work to live, not live to work”. What we think about our relationship with work and about its role in our lives is, again, something that has to do with our underlying assumptions.

As part of this Nuclear Safety Leadership Development (NSLD) Program, we will explore the underlying assumptions that have influenced the siting, design and operation of nuclear power plants, as well as the applicable legislation, standards and regulations.

We will also explore our own underlying assumptions and try to better understand the relationship between people, technology and organizations.

Why nuclear power is special and unique

Nuclear technology is recognized as special and unique.

Both nuclear specialists and the general public believe this, although the knowledge, understanding and perception of benefits and risks differ between the specialists and the public.

All the studies, as well as the entire operating experience, indicate nuclear power as the most reliable source of electrical energy. At the same time, the design and operation of nuclear power plants requires more complex and higher technical skills than any other energy sector (and that most other industries) to effectively control this extraordinary source of energy.

Among the special characteristics and unique hazards associated with nuclear technology, we find the exposure to ionizing radiation, the concentration of energy in the reactor core and the significant amount of decay heat.

In the framework of the NSLD program, we will discuss the most important aspects that are specific to the nuclear sector, contributing to the safe operation of nuclear installations to the development of society as a whole.

What we like about our jobs

Because nuclear power is special and unique, our jobs, just like the mission they serve, are also special and unique.

Of course, each field of activity has its own specifics and each person is entitled to consider that he or she is doing something unique and special and it is very difficult (and especially useless) for someone to try to prove otherwise.

When we consider the complex training and qualification programs in the nuclear field, the time required for people to specialize in the many different areas of expertise and activities, the rigorous requirements we must meet, the importance of our activities and the potential impact of the mistakes we could do, the responsibilities we have, we realize that there are many other simpler jobs that involve less effort and less demands.

If we didn't like the work we do, with the training we have, we could relatively easily find something else to do. But we have chosen to work in the nuclear field, and the fact that we have embarked on a leadership development program is another sign that we want to continue in this field.

What we like about our jobs

Our first assignment in the NSLD program is to become aware of and write down what we like about our jobs.

You don't have to share with others what you like about your job (but you can tell us if you want to). It is important to write this down somewhere, just for yourself, so you can see if anything changes along the way.

Why does this matter? Because one of the goals of this program is to make us like our jobs even more. And this question aims to determine the *as-found condition* 😊

What is our purpose?

What our purpose is (what we aim to achieve, what we aim for, what we want to become) depends, like our choices and decisions,

- **on our desires and aspirations**
- **on what we know**
- **on what we think it is in our power to do**
- **on how we perceive our role in a team, in an organization, in a situation.**

We all have a purpose in life and may even have multiple purposes (personal and/or professional). It is important to be aware of them, so that we can set concrete objectives and measures to achieve our goals.

Our second assignment is to write down our long-term professional purpose and goals. As we make progress in implementing the NSLD program, it will also be useful to write down a series of medium-term and short-term objectives/goals to track, review and update as necessary.

What defines us?

Have you ever wondered what defines us as humans (in relation to those around us and society in general)?

Our desires?

Our needs?

Our thoughts?

Our emotions and feelings?

Our attitude?

Our words?

Our deeds?

How do we assess whether we can trust other people, rely on other people? According to their words or according to their deeds? What are the most reliable indications we can have?

My basic assumption is that what we do defines us, not what we say. This is not necessarily a basic assumption shared by everyone. It remains to be seen whether we can validate this assumption (and whether we can adopt it as a shared assumption).

What is excellence? According to the definitions, it refers to a high degree of perfection, the quality of being excellent.

To excel means to be exceptionally good at or proficient in an activity or subject.

This means that we always refer to an average and excellence in any field can only be achieved through constant effort, only if it becomes a habit. And, as the average evolves, the standards of excellence change as well, reflecting the need for continuous improvement in any field of activity.

A constant effort requires a significant investment of energy and time, so to commit to such an endeavour we must have a strong purpose and motivation.

What motivates us?

What motivates us?

Each person has several motivations for doing something (and these can change over time):

- **Intrinsic / internal motivations** – we do something because we want to, because it reflects our values and principles, it aligns with our personal goals or is related to our passions; in this situation, the motivations we follow result in internal rewards, they make us feel that we are following our purpose in life, that we are doing something with deep meaning; from a psychological point of view, our highest internal motivations are related to the Ideal Self (Ego Ideal) in the Superego (we do things that correspond to our Ideal Self, we behave according to the standards we have set for ourselves and / or that allow us to avoid unpleasant situations involving regret, guilt, shame, cognitive dissonance).
- **Extrinsic/external motivations** – we do something because we have to align ourselves with certain objectives set by those around us and by society (organization, family, teachers, social norms, etc.), to integrate into a group, to achieve something, to obtain rewards or to avoid external sanctions.

The two categories are not totally independent. External motivations can be internalized. Internal motivations can be projected onto others, onto the organization. When we identify with the group / organization, certain motivations end up coinciding.

Internal motivations include (a few examples):

- learning, acquiring new competences (knowledge, skills, attitudes), professional and spiritual development
- interaction with people and the environment in order to bring about changes that correspond to our vision of the world ("*do you want to change the world?*")
- completing a task or implementing a project that we enjoy, that we are good at, that aligns with our passions and interests
- completing a task or project that gives us a sense of pride, that is something important to us (or to the authority figures in our lives – parents, family members or colleagues from our team or organization from whom we expect validation/positive feedback, teachers, managers, experts, etc.)
- expressing creativity – we have purpose, we have ideas, we have a vision and we want freedom and the resources to put them into practice
- material motivations, to satisfy some needs or to improve lifestyle, to increase comfort and material security.

External motivations include (a few examples):

- **solving a problem, completing a task, implementing a project in our area of responsibility, demonstrating capabilities at work**
- **fear of failure, fear of sanctions, generally fear of unpleasant consequences**
- **the need to control things, situations, even the need to control the actions of others, the processes of the organization, the way things go (why? the need for control is related to the need for safety and predictability and the aversion to risk; it can even be related to the preferred ways of achieving goals – preference for persuasion or coercion, perceived effort in each option, skills required, etc.; it may also relate to the resources and authority we need to make the changes we consider necessary)**
- **the need to integrate into a group, an organization, a society, to be accepted and appreciated by those we consider our peers (*peer pressure*) or by authority figures in the group (managers, experts etc.)**

Topics for introspection

Here are some topics for introspection – please take a few minutes, or more time, as you feel necessary, to reflect on the following:

- what do I like about my job ?**
- what determined me to choose this job?**
- what would I want to change?**
- what do I expect from others?**
- what could I do better?**
- what is my goal or what are my long-term goals?**
- what would I like to achieve in the medium term? (say in the next 3 years)**
- what short-term goals should I set?**
- what could I start doing today or tomorrow to get closer to my goals?**
- what motivates me?**

Suggestions for making the most of the NSLD program

Create a folder on your computer with the following content

- 1. The NSLD program curriculum at the last revision**
- 2. Sub- folders for all 60+ NSLD topics to save and review related materials**
- 3. A document in which to write down:**
 - ❖ your long-term goal(s).**
 - ❖ your intermediate, medium and short-term goals (objectives) .**
 - ❖ what topics you want to discuss, privately or in the group**
 - ❖ a list of questions that concern you, for which you are looking for answers / solutions**
 - ❖ what additional topics you would like to see included in the program**
 - ❖ other information relevant to personal progress through the NSLD program**
- 4. A folder with "assignments", practical exercises and case studies from the program**
- 5. A folder with any other materials you obtain that you consider relevant and useful for developing leadership qualities and from which you may wish to share ideas with other colleagues.**