

RESFIA+D

The seven competences for sustainable development

Niko Roorda, <https://niko.roorda.nu>

RESFIA+D: Professional competences for sustainable development	
Competence R: Responsibility A sustainably competent professional bears responsibility for his or her own work.	Competence E: Emotional intelligence A sustainably competent professional empathises with the values and emotions of others.
Competence S: System orientation A sustainably competent professional thinks and acts from a systemic perspective.	Competence F: Future orientation A sustainably competent professional works and thinks on the basis of a perspective of the future.
Competence I: personal Involvement A sustainably competent professional has a personal involvement in sustainable development.	Competence A: Action skills A sustainably competent professional is decisive and capable of acting.
<i>Plus: Disciplinary competences for sustainable development</i>	

Table of contents

The RESFIA+D model.....	1
Application of the competence cards	3
<i>Competence Card R: Responsibility</i>	5
<i>Competence Card E: Emotional intelligence</i>	6
<i>Competence Card S: System orientation</i>	7
<i>Competence Card F: Future orientation</i>	8
<i>Competence Card I: personal Involvement</i>	9
<i>Competence Card A: Action skills</i>	10
Glossary.....	11

The RESFIA+D model

The professional competences for sustainable development are summarized in the RESFIA+D model. Source: 'Fundamentals of Sustainable Development', chapter 8, by Niko Roorda, published by Routledge, 2nd edition, 2017 – see: <https://niko.roorda.nu/books/fundamentals-of-sustainable-development>.

The model is also available in Dutch, with the name 'VESTIA+D', which is published in the 'Basisboek Duurzame Ontwikkeling', 3rd edition (2015), published by Noordhoff, Groningen, Netherlands, – see: <https://niko.roorda.nu/books/basisboek-duurzame-ontwikkeling>.

The RESFIA+D model consists of 6 + 1 = 7 competences, shown in table 1.

The competence cards describe the six RESFIA competences on four capacity levels. The *disciplinary* competences (*D*-competences) are not described, because they are different for each education program or professional group.

The word "RESFIA" refers to the initials of the six competence groups. The addition 'D' refers to 'disciplinary competencies (see table 1, bottom row), i.e. competences that are different for each study program, discipline or professional group. They can therefore not be shown in a general schedule applicable to all discipline or profession, as the six 'RESFIA' competence groups are. This text does therefore not elaborate on the disciplinary skills.

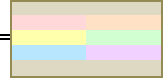
Table 1. RESFIA+D: Professional competences for sustainable development

Click – with the Control key pressed – on a competence to find the detailed description.

The section numbers refer to the sections of 'Fundamentals of Sustainable Development', 2012, in which this table is printed as table 8.4.

Competence R: Responsibility A sustainably competent professional bears responsibility for his or her own work. <i>I.e.: the sustainable professional can ...</i>		Competence E: Emotional intelligence A sustainably competent professional empathises with the values and emotions of others. <i>I.e.: the sustainable professional can ...</i>	
1. Create a stakeholder analysis on the basis of the consequence scope and the consequence period	§5.5	1. Recognise and respect his or her own values and those of other people and cultures	§4.3
2. Take personal responsibility	§8.2	2. Distinguish between facts, assumptions and opinions	§8.5
3. Be held personally accountable with respect to society (transparency)	§8.2	3. Cooperate on an interdisciplinary and transdisciplinary basis	§1.3 §4.8
Competence S: System orientation A sustainably competent professional thinks and acts from a systemic perspective. <i>I.e.: the sustainable professional can ...</i>		Competence F: Future orientation A sustainably competent professional works and thinks on the basis of a perspective of the future. <i>I.e.: the sustainable professional can ...</i>	
1. Think from systems: flexibly zoom in and out on issues, i.e. thinking analytically and holistically in turn	§3.5	1. Think on different time scales – flexibly zoom in and out on short and long term approaches	§5.5
2. Recognise flaws in the fabric and sources of vigour in systems; have the ability to use the sources of vigour	Ch. 2-4	2. Recognise and utilise non-linear processes	§7.3
3. Think integrally and chain oriented	§8.3	3. Think innovatively, creatively, out of the box	§8.4
Competence I: personal Involvement A sustainably competent professional has a personal involvement in sustainable development. <i>I.e.: the sustainable professional can ...</i>		Competence A: Action skills A sustainably competent professional is decisive and capable of acting. <i>I.e.: the sustainable professional can ...</i>	
1. Consistently involve sustainable development in the own work as a professional (sustainable attitude)	§4.7	1. Weigh up the unweighable and make decisions	§8.5
2. Passionately work towards dreams and ideals	§4.2	2. Deal with uncertainties	§6.3
3. Employ his or her conscience as the ultimate yardstick	§8.2	3. Act when the time is right, and not go against the current: 'action without action'	§4.2

Plus: Disciplinary competences for sustainable development (differing for each course, discipline or profession)



The four capacity levels

The four ascending capacity levels are *apply*, *integrate*, *improve* and *innovate*. This scheme is applied by several universities. For these competence cards they were made available by Fontys University or applied science, department of Nursing.

A general description of the four capacity levels is:

Table 2. General description of the four capacity levels

<i>Apply</i>	<i>Integrate</i>	<i>Improve</i>	<i>Innovate</i>
<ul style="list-style-type: none"> • On a practical level, you perform activities belonging to the usual demands or your (future) profession. • Your vision, your ideas and your activities are mainly limited to the area of your own discipline, your own working environment and the usual work methods. 	<ul style="list-style-type: none"> • During your professional activities you combine and integrate a complex set of subjects, work styles, people and/or cultures. You do this e.g.: <ul style="list-style-type: none"> ○ beyond the boundaries of your own discipline ○ considering other cultures, value systems, traditions ○ beyond the usual expectations and working methods of your (future) profession • in varying roles, e.g. as a manager 	<ul style="list-style-type: none"> • You oversee, both at a detail level as at a systems level, your work and the system in which you perform your activities. • You judge your own work and the work of others with whom you cooperate critically and estimate its effects in the widest sense. • Based on that, you work continuously or regularly on the improvement of the work to which you contribute, and you get proved results. 	<ul style="list-style-type: none"> • You apply innovative insights on your work, e.g. considering: <ul style="list-style-type: none"> ○ the formulated goals ○ the applied means and methods ○ the effects of the work ○ the scope of those effects in space and time ○ the underlying vision ○ the relations within and outside of the own working environment or the own discipline, e.g. with society as a whole • These innovations are expressed demonstrably in your professional activities and in their results.

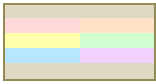
For each of the 3 x 6 competences the descriptions are specified in the form of four levels of competency. Thus a series of tables is formed, 'competence cards', forming most of this text. The various cards are easy to recognize, as a color code is used that matches the colors in table 1.

For many of the texts in the competence cards more detailed explanations are available, shown as footnotes at the bottom of the page.

After the last competence cards two more pages are added containing an alphabetical glossary with explanations of key concepts.

It is certainly *not* intended that:

1. ... all 3 x 6 competences, each with their 4 levels, are added completely and unchanged to the existing competences of a study program in higher education. Not only would this probably lead to a considerable overlap with the existing competences, also the total number of competences would become uncontrollably large.
2. ... study programs start demanding of their students that, at the moment of their graduation, they prove to have acquired the highest level for each of the 24 competences. The creation of such 'wonder people' does not, and should not, belong to the task of higher education.
3. ... students self-impose this requirement. They themselves too should not ask the impossible of themselves. It would be excellent if a professional would approach level 4 for most of the 3 x 6 competences somewhere in the course of his or her career, and certainly not in the first year of it.



Application of the competence cards

The competence cards can be applied in several ways. For each, a spreadsheet is used. It contains a number of white cells; only those can be filled or changed. If enough boxes are filled, results of calculations will automatically appear in other (non-white) boxes.

- **For students:**

Use a spreadsheet named 'RESFIA+D for students' that you can download from the 'Files' section of the 'Full Profile' of www.linkedin.com/in/nikoroorda.

Do exercise 8.22, which you can download from the same website. This means that you go through a number of steps that are explained in the exercise. Thus you create for yourself a picture of the competences for sustainable development which you currently possess, and you compare this with what you would like to set as a goal at the end of your education program. Based on that, you make a plan.

- **For refresher courses of employees of companies and other organizations:**

Use a spreadsheet named 'RESFIA+D for refresher courses' that you can download from the 'Files' section of the 'Full Profile' of www.linkedin.com/in/nikoroorda.

Do exercise 8.22, which you can download from the same website. This means that you go through a number of steps that are explained in the exercise. Thus you create for yourself a picture of the competences for sustainable development which you currently possess, and you compare this with what you would like to set as a goal at the end of your refresher course. Based on that, you make a plan.

- **For teachers and education developers:**

Use a spreadsheet named 'RESFIA+D for education developers' that you can download from the 'Files' section of the 'Full Profile' of www.linkedin.com/in/nikoroorda.

Vertaling van het Nederlands in het Engels

When you apply the model, if desired, the author of the 'Basisboek Duurzame Ontwikkeling', Niko Roorda, is available to assist. Contact information can be found in the spreadsheet.

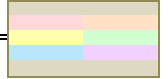
The spreadsheet contains a number of white columns in which you can fill in data:

- Ambition: what would you want to realize in the competence profile and in the curriculum?
- Reality about the competences: how close is the reality to your ambitions?
- Reality about the curriculum: the same, now with respect to the realization of the competencies in education itself
- Priority: To which items do you want to attribute a priority for improvement?
- Notes: allows you to make notes for yourself for each competency.

At the bottom of the spreadsheet you will find a larger cell entitled 'Plan', in which you can list your conclusions and a concrete plan of action.

You can use the model as an:

1. **Evaluation tool:** to investigate the current competence profile of a study program from the perspective of sustainable development: (1) Does the profile contain all necessary competences, in accordance with your ideas and desires? And (2) are these competences actually realized in the curriculum?
2. **Source of ideas and inspiration** for the improvement of the existing competences of an education program.
3. **Method for development and improvement:** if a selection of the RESFIA+D competences is added to the competence profile of an education program, you can determine for each of them the demanded minimum final level for graduates, based on the character, the level and the educational vision of the study program.
4. **Tool for individual learning routes:** if individual learning routes and goals, to be defined by students, are relevant for your education, instead of a fixed competence profile with end level demands for everyone, the students may use RESFIA+D to decide about their personal learning goals, within certain boundaries set by the educators – e.g. at least 6 of the 18 competences at level 3, etc.
5. **Tool for internships:** to create a concrete elaboration of a series of sustainability demands for internships, graduation- and other practical projects by students, as they are derived from the RESFIA+D model in 'Fundamentals of Sustainable Development' (2012):



Checklist for sustainability requirements for an internship or graduation project

This table is printed in 'Fundamentals of Sustainable Development' as table 8.5.

Explicit project prerequisites:	Report can also be retrospectively assessed on the grounds of:
R1: Creating a stakeholder analysis; determining consequence scope and consequence period for the project and its conclusions	E1: Respect shown for one's own values and those of others
R3: Taking personal responsibility for one's own work and conclusions	E2: Drawing a clear distinction between facts, assumptions and opinions
S1: Zooming in and out, adopting both an analytical and holistic perspective	E3: Proper inter- and transdisciplinary cooperation (where applicable)
S3: Thinking integrally and with a chain process in mind	F2: Non-linear processes have not been conceived of as linear
F1: Zooming in and out – focusing on both the short and the long term	I1: Sustainable attitude has been clearly rendered
F3: Thinking innovatively, creatively and outside of the box	I2: Personal involvement, or even passion, has been demonstrated
A2: Determining the degree of certainty or uncertainty in terms of the information and the conclusions	I3: One's own conscience has been used as a yardstick
	A1: Issues were weighed up in a defensible manner
	A3: Actions were undertaken at the proper time

Competence Card R: Responsibility

A sustainably competent professional bears responsibility for his or her own work.

<i>Apply</i>	<i>Integrate</i>	<i>Improve</i>	<i>Innovate</i>
R1. Create a stakeholder analysis on the basis of the consequence scope and the consequence period			
<ul style="list-style-type: none"> You name the direct stakeholders of a certain professional activity within your own discipline.¹ For these stakeholders you describe the short term consequences of your actions. For each of these stakeholders you describe their stakes.² 	<ul style="list-style-type: none"> You determine the consequence scope and the consequence period³ of a professional activity beyond the borders of your own discipline⁴. Based on this, you make a stakeholder analysis, in which you describe for the direct and the indirect stakeholders what their stake is. Doing this, you involve your own actions and decisions and those of the teams⁵ or the organisation you are a part of. 	<ul style="list-style-type: none"> You involve the conclusions of the stakeholder analysis in the design, performance and accounting of the activity. You do this in cooperation with the stakeholders or their representatives. Thus you contribute to a balanced weighing of interests according to the categories 'people', 'planet' and 'profit' or 'prosperity'. 	<ul style="list-style-type: none"> You describe possible consequences for the stakeholders, including the possible future stakeholders, on the long term. You describe them from several possible future scenarios'.⁶ You use the outcomes for the redesign of the work, its goals and its methods of yourself, your organization and your line of business.
R2. Take personal responsibility			
<ul style="list-style-type: none"> You feel and show responsibility for your professional activities and the consequences of them. 	<ul style="list-style-type: none"> You feel and show shared responsibility for the professional activities performed by the teams you belong to, and for the consequences of them. Doing this, you put the activities, as far as possible and relevant, in a societal, economic, scientific, natural or other broader context. 	<ul style="list-style-type: none"> Based on this responsibility, you work regularly on improvement of the professional activities and their goals, aiming at a positive contribution to aspects of sustainable development. Wherever several of your professional responsibilities conflict with each other, you make a careful weighing and act accordingly. 	<ul style="list-style-type: none"> You realize your professional responsibility pro-actively, by relating it to present and possible future developments and trends.
R3. Be held personally accountable with respect to society (transparency)			
<ul style="list-style-type: none"> You describe your professional activity, their goals and results, and the consequences for stakeholders openly and honestly on behalf of your direct colleagues, peers and executives.⁷ 	<ul style="list-style-type: none"> You do this also on behalf of a variety of other stakeholders⁸, in a for each of them comprehensible and attractive way. 	<ul style="list-style-type: none"> You ask and get feedback from those to whom you render account to in this way, and you use this to continuously improve your activities. 	<ul style="list-style-type: none"> You yourself organize the total of target groups to which, and the methods with which you render account.

¹ This concerns e.g. individuals, groups, organizations, countries, animals, natural habitats, etc., or their representatives.

² This includes both positive and negative interests or combinations thereof.

³ Consequence scope: total range of people, organizations, nature and the environment for which a decision, a practice or a lifestyle has consequences. Consequence period: the time it takes before the consequences of a decision have vanished. See: 'Fundamentals of Sustainable Development' (2012), §5.5.

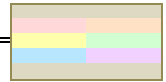
⁴ If you work on your own, this involves a multidisciplinary approach. If you work in a team in which other disciplines are represented, it is an interdisciplinary approach.

⁵ E.g. a student group, a department, a corporation, a commission.

⁶ Future scenario: a description of the events that could take place in a possible future.

⁷ This may be in the shape of formal reports, presentations, publications, books etc., and besides (but not exclusively) in a more informal way through e.g. conversations, stories, columns, websites, participation in online forums, TV programs.

⁸ Such as: interest groups, civilians, members of your family, neighbors, journalists, government employees, schools.



Competence Card E: Emotional intelligence

A sustainably competent professional empathises with the values and emotions of others.

Apply	Integrate	Improve	Innovate
E1. Recognise and respect his or her own values and those of other people and cultures			
<ul style="list-style-type: none"> You formulate the values from which you think and act as a professional.¹ 	<ul style="list-style-type: none"> You formulate the values from which others² think and act who are involved or have an interest in your professional actions. You 'listen actively'³ to others, and you communicate respectfully with these others about the differences in values. 	<ul style="list-style-type: none"> You cooperate with these others, during which you utilize both the similarities and the differences of the values as an enrichment and reinforcement of the quality of your activities. 	<ul style="list-style-type: none"> You enrich and reinforce the quality of your professional activities by actively expanding the cooperation to people or cultures with other values.
E2. Distinguish between facts, assumptions and opinions			
<ul style="list-style-type: none"> You determine about assertions⁴ whether they are about facts, hypotheses or opinions. 	<ul style="list-style-type: none"> You communicate about such a conclusion in such a way that others, including the person who made the assertion, come to a consensus about its nature. 	<ul style="list-style-type: none"> You decide on which moment during your professional activity a fact is desired or a hypothesis or an opinion. You plan your activities accordingly. 	<ul style="list-style-type: none"> If necessary, you design acceptable and realistic ways to turn a hypothesis into a fact, or to change the nature of an assertion in any other way.⁵
E3. Cooperate on an interdisciplinary and transdisciplinary basis			
<ul style="list-style-type: none"> In your professional activities, you consider aspects of other disciplines, i.e. in a multidisciplinary⁶ approach. 	<ul style="list-style-type: none"> You carry out these activities as a member of an interdisciplinary⁷ team. 	<ul style="list-style-type: none"> You involve stakeholders, including those who don't represent a specific professional discipline, actively in the activities, thus creating a transdisciplinary⁸ approach. 	<ul style="list-style-type: none"> You enlarge the target area of the activities to new kinds of stakeholders and/or cultures.

¹ Relevant concepts are e.g.: cultural values, ethical standards, beliefs, philosophy of life, traditions.

² Such as: other people, whether or not in the same culture or country as you; families, societal groups, countries, etc.

³ Active listening is not just hearing what the other says, but also trying to understand what the other says. Besides, listening skills enable you to let the other know that you listen, to let the other tell his story, and, whenever necessary, to let him clarify.

⁴ Both assertions of yourself and of others.

⁵ E.g. by: further investigation, further discussion, involving third persons, change an attempt to reach objectivity into an attempt to reach intersubjectivity, reformulating a question, research into the meaning of the words that are used.

⁶ Multidisciplinary: approach in which a project or a problem is envisioned from various disciplines, admitting different angles and methods. The experts are not intensively in contact with each other, making it unlikely that solutions based on combinations of disciplines will be developed.

⁷ Interdisciplinary: way of cooperation in a team in which experts of various disciplines cooperate intensively on a project or a problem, so that rich, creative and innovative strategies and methods can be developed and used.

⁸ Transdisciplinary: way of cooperation in an interdisciplinary team, of which also persons are members, not participating because of a certain discipline but because of their practical experience or of another kind of involvement.

Competence Card S: System orientation

A sustainably competent professional thinks and acts from a systemic perspective.

Apply	Integrate	Improve	Innovate
S1. Think from systems: flexibly zoom in and out on issues, i.e. thinking analytically and holistically in turn			
<ul style="list-style-type: none"> You plan your professional activity on the basis of a systematic analysis of the separate subsystems and aspects of the system to which your activity is related. 	<ul style="list-style-type: none"> You make a synthesis of the consequences or results of your activity, i.e. you relate the results of this activity to each other in a balanced, coherent way. 	<ul style="list-style-type: none"> You perform both the analysis and the synthesis repeatedly during the activity, causing you to act continuously and consciously at all system levels. Doing this, you also include the environment¹ of the involved system.² 	<ul style="list-style-type: none"> From a combination of analytical and holistic considerations, you make proposals for structural improvements for the system within which you work, and if necessary also in its environment.
S2. Recognise flaws in the fabric and sources of vigour in systems; have the ability to use the sources of vigour			
<ul style="list-style-type: none"> You analyze the structure of your immediate working environment. Based on this you make a SWOT analysis³. 	<ul style="list-style-type: none"> You make this SWOT analysis for the organization of which you are a member and its surroundings. You do so from a perspective of sustainable development, for example from the Triple P⁴. 	<ul style="list-style-type: none"> You make the SWOT analysis in close collaboration with representatives from all levels of your organization. Based on the SWOT analysis you formulate recommendations to use strengths and opportunities, to improve weaknesses and to anticipate on threats. 	<ul style="list-style-type: none"> You make the SWOT analysis also in close collaboration with representatives in the wide surroundings of your organization. You make recommendations to strengthen the structure of the system considerably.
S3. Think integrally and chain oriented			
<ul style="list-style-type: none"> Of the services, products or processes related to your professional activity, you make explicit in which way they are a part of a longer chain or life cycle⁵. 	<ul style="list-style-type: none"> Of these services, products or processes, you map the consequences for sustainable development⁶, and you relate them to the total of the consequences for sustainable development of the entire chain or life cycle. You cooperate on this with others who control or influence other parts of the chain. 	<ul style="list-style-type: none"> Based on the results of this analysis, you make recommendations to realize sustainable improvements in the complete chain.⁷ 	<ul style="list-style-type: none"> You design entirely new chains fulfilling the same functions and needs, and conclude whether these are better than the existing ones considering sustainable development.

¹ Environment: this may be the immediate physical or social surroundings, but also a virtual environment, for example consisting of the (perhaps widespread) business or intellectual network with which you cooperate or compete.

² Each system, possibly with the exception of the entire universe, is part of several larger systems with which it is in interaction, e.g. a country, a business sector, a natural habitat, a continent, the entire Earth, etc.

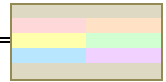
³ SWOT = Strengths, Weaknesses, Opportunities and Threats

⁴ Triple P: the triangle of people, planet, profit (or prosperity)

⁵ This may concern the life cycle of an industrial product, or a human being or an animal, a natural habitat, a company, a people or a nations, etc.

⁶ In a qualitative or a quantitative way, in words, schemes, formulas, tables, art expressions or otherwise, depending on the situation, your discipline and the nature of the activity.

⁷ A natural improvement is closing a loop or chain (if that has not been done yet), by means of reuse, high-level or low-level recycling, or energy reuse by burning.



Competence Card F: Future orientation

A sustainably competent professional works and thinks on the basis of a perspective of the future.

Apply	Integrate	Improve	Innovate
F1. Think on different time scales – flexibly zoom in and out on short and long term approaches			
<ul style="list-style-type: none"> In concrete working situations, you recognize and describe operational¹ methods for the performance and improvement of your work. You contribute to the application of these methods, and thus contribute to short term improvements. 	<ul style="list-style-type: none"> In the case of concrete work related problems, you recognize and describe the differences between short-term methods aiming at reducing the symptoms and long-term methods aiming at eliminating causes. You contribute to the application of symptom reducing methods based on the operational policy of the organization or team you belong to. 	<ul style="list-style-type: none"> In the case of work related problems, you contribute to the design of a solution strategy based on a carefully selected combination of short- and long-term methods. You contribute to the design of symptom reducing methods based on the tactical² policy of the organization or team you belong to. 	<ul style="list-style-type: none"> You contribute to the (re)definition³ and the application of the mission⁴ and of the strategic⁵ policy of the organization you belong to. You involve present and expected future trends in your working field and in society.
F2. Recognise and utilise non-linear processes			
<ul style="list-style-type: none"> You describe the possible non-linear or even unexpected developments and effects on the short term⁶ of your professional activities. 	<ul style="list-style-type: none"> You describe the possible non-linear or even unexpected developments and effects of your professional activities and those of the teams⁷ or the organisation you belong to on a middle long term. 	<ul style="list-style-type: none"> You do this also on the long term. You use these insights in a demonstrable way to design or improve the work of you and your teams. 	<ul style="list-style-type: none"> You use these insights in a demonstrable way to fundamentally (re)design the work, the goals, the methods and the working conditions of you and your team.
F3. Think innovatively, creatively, out of the box			
<ul style="list-style-type: none"> From the directly visible function of a service, product or process, you derive the underlying needs or expectations. You carry out this functional analysis in a series of layers or steps.⁸ 	<ul style="list-style-type: none"> Concerning a service, product or process, from the underlying needs or expectations you design alternative ways to meet these needs. You don't just design existing ways but also new solutions. 	<ul style="list-style-type: none"> For each of these alternatives you discover the main consequences for sustainable development. Based on an argued weighing you come to innovative and at the same time realistic recommendations or decisions.⁹ 	<ul style="list-style-type: none"> You carry out the functional analysis in complex situations in which quite a few conflicting interests exist that cannot easily be compared or weighed. Individually or together with others you implement your recommendations or decisions.

¹ Operational methods are methods that can be applied immediately or on short notice, possibly but not necessarily on the basis of tactical or strategic plans.

² Tactical policy: policy on a middle long term, aiming at the realization of concrete goals of the organization, possibly but not necessarily on the basis of tactical or strategic plans.

³ Redefining of the mission: Abandoning existing views about the mission of an organization, and redefining from the beginning why and to what purpose the organization exists.

⁴ Mission: fundamental principles and objectives of an organization, the reason why it exists. Often made explicit in a 'mission statement'

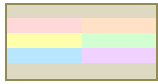
⁵ Strategic policy: policy on a long term, aiming at the realization of fundamental goals, based on the mission of the organization, or redefining these goals or the mission.

⁶ Short, middle long and long term: dependent on the context. In many situations a suitable guiding line is: Short term: about 1 or 2 years at most. Middle long term: up to about 5 or 10 years. Long term: up to about 25 or 100 years or more.

⁷ E.g. a student group, a department, a company, a commission.

⁸ In many cases this concerns needs or expectations the person involved is not aware of.

⁹ In such a weighing aspects are considered like: sustainability, finances, functional demands, realization, acceptability etc.



Competence Card I: personal Involvement

A sustainably competent professional has a personal involvement in sustainable development.

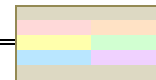
Apply	Integrate	Improve	Innovate
11. Consistently involve sustainable development in the own work as a professional (sustainable attitude)			
<ul style="list-style-type: none"> You describe the concept ‘sustainable development’, and you relate it to your own activities and your working environment. In practical situations, you name causes of unsustainability. 	<ul style="list-style-type: none"> You involve sustainability considerations consciously and demonstrably in your professional activities and decisions and in those of the teams or the organization you belong to. 	<ul style="list-style-type: none"> You use sustainability considerations consistently for the improvement of the work, the goals and the use of facilities and methods of you and of the organization you are a part of. Thus you demonstrate that you contribute to sustainable development. 	<ul style="list-style-type: none"> You are an expert in relation to sustainable development within your discipline and/or line of business, and you prove this by means of research, publications and/or public presentations. You contribute to the renewal of insights and methods within your organization, discipline and line of business, based on sustainability considerations.
12. Passionately work towards dreams and ideals			
<ul style="list-style-type: none"> You describe the wishes, dreams and ideals you have regarding the work that you do and the results and effects of it. You openly express these dreams and ideals within your direct working environment. 	<ul style="list-style-type: none"> You relate demonstrably your professional dreams and ideals to the formulation of the goals and the implementation of your work. You balance your dreams and ideals concerning your professional activities with those of your private life. 	<ul style="list-style-type: none"> With your dreams and ideals you inspire others in your working environment. In doing so, you exert a noticeably positive influence on the work and on its results and effects of you and of the teams you are a part of. 	<ul style="list-style-type: none"> Your dreams and ideals lead to original, innovative ideas and projects related to your professional activities, your working environment, your discipline or your line of business. With your passion for your dreams and ideals you express an inspiring leadership¹ to a team or organization you are a part of.
13. Employ his or her conscience as the ultimate yardstick			
<ul style="list-style-type: none"> You investigate the goals, methods, tasks and assignments of your professional activities based on your own values and ethical standards. You express the results of this investigation for yourself. 	<ul style="list-style-type: none"> You discuss the results with other stakeholders in your direct professional environment². If, based on the results, you find it necessary, you discuss with them changes in the professional activities of you and of the teams you are a part of. 	<ul style="list-style-type: none"> Goals, assignments or activities that are in conflict with your consciousness, are either not accepted or performed by you, or you adapt them, wherever possible in good consultation, until they agree with your consciousness.³ You remain firm in your decisions, and you formulate them in an assertive but not aggressive way. Although you are open to reasonable arguments of others, you are not susceptible to pressure of them. 	<ul style="list-style-type: none"> While choosing activities, education programs, jobs or career planning, you consistently and in advance take into consideration what is accessible and desirable according to your ethical standards.⁴ In the goal definition, planning, implementation and evaluation of your work you exhibit exemplary behavior and leadership thanks to your openly conscientious approach.

¹ Leadership: either formal leadership, based on an organizational position as a manager, lecturer, coach or administrator, or informal leadership.

² E.g. colleagues, manager, customers or clients, lecturer, students

³ Think e.g. of activities existing of, or causing: discrimination, exploitation, damage to nature, pollution, problem transfer, criminality, bribery, infringement of human dignity, damage to cultural heritage, violence, unsafety.

⁴ For this, you can make a pledge to yourself or to others, comparable to the Hippocratic Oath that medical graduates pledge. An example of such a pledge is shown in ‘Fundamentals of Sustainable Development’ (2012), section 8.5.



Competence Card A: Action skills

A sustainably competent professional is decisive and capable of acting.

Apply	Integrate	Improve	Innovate
A1. Weigh up the unweighable and make decisions			
<ul style="list-style-type: none"> You describe situations in your professional activities in which interests have to be weighed against each other that cannot be compared in an unambiguous way.¹ 	<ul style="list-style-type: none"> You discuss with the involved stakeholders or their representatives about decisions to make. Partly based on this you rationally weigh the pros and cons and take decisions. You explain your decisions to the stakeholders or their representatives. 	<ul style="list-style-type: none"> You investigate whether there are options to make the conflicting interests less so. You investigate whether there are ways to compensate those who suffer from the negative consequences of your decisions.² Based on that, you adapt your decisions or change the goals, the methods or the implementation of your professional activities. 	<ul style="list-style-type: none"> You replace the methods, technologies or locations of your professional work by others, making the conflicts of interest disappear entirely or largely. If existing methods, technologies or locations are not sufficient, you develop and implement totally new ones. Doing this, you keep an eye for new conflicts of interest that might arise in this way.
A2. Deal with uncertainties			
<ul style="list-style-type: none"> You make a careful estimate of the level of uncertainty of the information you use with your professional activities³. 	<ul style="list-style-type: none"> You plan your professional activities such that you take into consideration uncertainties, and if necessary you dispose of suitable actions.⁴ 	<ul style="list-style-type: none"> You apply the precautionary principle⁵: you choose your plans and methods in such a way that, wherever possible, uncertainties that are of crucial importance are minimized. 	<ul style="list-style-type: none"> You choose your <i>goals</i> and <i>strategy</i> in such a way that, wherever possible, uncertainties that are of crucial importance are minimized.
A3. Act when the time is right, and not go against the current: 'action without action'			
<ul style="list-style-type: none"> You estimate the resistances⁶ that you might raise with your professional activities (or those of your organization). You discover on which moment these resistances may be relatively low⁷, and you design the time schedule accordingly. 	<ul style="list-style-type: none"> You undertake activities⁸ to stimulate that the time is right for the implementation of your professional activities. You do this in consultation or cooperation with the stakeholders. 	<ul style="list-style-type: none"> If you discover that resistances will diminish too slow or not at all, or in order to increase support, you redesign your professional activities, aiming at a more acceptable process and result. You involve the stakeholders with this. 	<ul style="list-style-type: none"> If you discover that even the redesign of your activities do not lead to a significant reduction of resistances, you reconsider the underlying goals of these activities.

¹ E.g. starting a company that is beneficial for the local economy, but damaging to the local environment. Giving extra care to pupils or patients, at the expense of other pupils or patients or of the own health. Developing a product that causes less CO₂ emissions but takes more scarce materials. Perform activities for underprivileged youth that local inhabitants are not happy with.

² E.g. planting trees as CO₂ compensation or to compensate for lost nature. Pay financial compensation. Team expansion to be able to give sufficient attention to everybody. Build a sound-damping wall. Select alternative materials, e.g. biologically degradable ones.

³ This may be about inaccuracy of measured values, which in many cases can be determined quantitatively. Or about the level of trustworthiness of witnesses or memories; the level to which applied hypotheses and theories are accepted scientifically; or the rate to which applied models simplify reality. But also: uncertainty about delivery periods, purchase price, markets, legal regulations, own production quality.

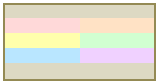
⁴ Think about the chance of setbacks or even disasters, but also of unexpected luck: in the field of finances, time, human power, deliveries, results. Suitable actions are e.g. building up stocks (of money, time, human power, etc.), taking out insurances, flexibility in the planning.

⁵ Precautionary principle: the principle that policy decisions are based (at least partially) on the prevention of certain negative consequences, even of the occurrence of these consequences without these decisions are not certain

⁶ This could be resistances of persons or groups. But also resistances caused by the timing of systems, e.g. industrial processes, delivery times, biological or meteorological systems.

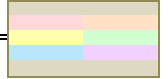
⁷ But without misusing the circumstances, like at moments when involved people are absent (e.g. on holidays) or are weakened (e.g. caused by illness, fatigue or distracted attention). Instead, for instance: wait till the support among the involved people has grown, or until they are in a suitable mood or situation to evaluate the activities in a balanced way.

⁸ E.g. render information. Eliminate sources of misunderstanding. Listen actively to objections. Search for alternatives together. Start preparatory activities ('plow the land before you sow'), in such a way that resistances are not enlarged by instead diminished.



Glossary

Active listening	Not just hearing what the other says, but also trying to understand what the other says. Besides, listening skills enable you to let the other know that you listen, to let the other tell his story, and, whenever necessary, to let him clarify.
Anticipate	Look far ahead into the future and act accordingly in order to be prepared for it
Consequence period	The time it takes before the consequences of a decision have disappeared
Consequence scope	Total size of the people, the organizations, nature and the environment that experience the consequences of a decision, a behavior or a lifestyle
Disciplinary	From or within a certain discipline
Discipline	Subject on which you work and (probably) have some expertise, e.g.: mechanical engineer, economist, teacher, nurse
Expertise	Combination of knowledge, insight, skills, attitude (together abbreviated to 'KISA'). May be based on theoretical, formal learning as well as on practical experiences
Habitat	Natural living area of a plant or an animal species or a complex combination of them
Interdisciplinary	Way of cooperation in a team in which experts of various disciplines cooperate intensively on a project or a problem, so that rich, creative and innovative strategies and methods can be developed and used
Line of business	Working sector in which you have a job, e.g.: metallurgical industry, accountancy, professional education, health
Linear	Literally: strait-lined. Linear consequences are directly proportional to their causes. (see: non-linear consequences)
Mission	Fundamental principles and objectives of an organization, the reason why it exists. Often made explicit in a 'mission statement'
Multidisciplinary	Approach in which a project or a problem is envisioned from various disciplines, admitting different angles and methods. The experts are not intensively in contact with each other, making it unlikely that solutions based on combinations of disciplines will be developed
Non-linear consequences	Consequences of which the size is not directly proportional to the causes, and that can have unexpected effects
Operational methods	Methods that can be applied immediately or on short notice, possibly but not necessarily on the basis of tactical or strategic plans
People	One of the three main aspects of sustainable development
Planet	One of the three main aspects of sustainable development: Natural environment.
Precautionary principle	Principle that policy decisions are based (at least partially) on the prevention of certain negative consequences, even of the occurrence of these consequences without these decisions are not certain
Profit	One of the three main aspects of sustainable development: Economics.
Prosperity	Alternative for the term 'profit', with a more embracing meaning, also related to the economic position of individuals.
RESFIA+D	Scheme of six general professional competences for sustainable development, each consisting of four partial competences, plus disciplinary competences that differ for each educational program or professional group
Scenario	A scenario of a play or a movie is a description of the scenes that make up the story. A future scenario is a description of the developments that might take place in a possible future



Stakeholder analysis	Investigation into all who have an interest in a certain project, process or company, both in a positive and a negative sense
Stakeholder	Person or group that has an interest in certain discussions, events, developments etc.
Strategic policy	Policy on a long term, aiming at the realization of fundamental goals, based on the mission of the organization, or redefining these goals or the mission
Sustainable development	Development that leads to a situation in which an increasing part of humanity can live an acceptable life, in a world in which this can be sustained longer and longer
Sustainable	Capable to last long
Tactical policy	Policy on a middle long term, aiming at the realization of concrete goals of the organization, possibly but not necessarily on the basis of tactical or strategic plans
Transdisciplinary	Way of cooperation in an interdisciplinary team, of which also persons are members, not participating because of a certain discipline but because of their practical experience or of another kind of involvement
Trend	Direction in which a certain development takes place over a relatively long period