

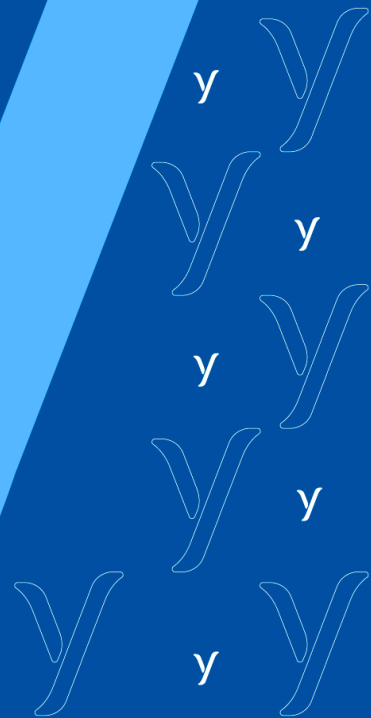
sky4.0



Soft skills in Industry 4.0

COGNITIVE FLEXIBILITY

Work & Text Book



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CONTENT

1 INTRODUCTION.....	5
COGNITIVE FLEXIBILITY	6
1. COGNITIVE FLEXIBILITY – WHAT IS IT?	6
1.1 Let’s get an insight into your thinking.....	6
1.2 Slow and fast thinking in taking decisions	7
1.2.1 The human brain is similar to a computer but it is not a computer!.....	8
1.3 Connect these dots	9
1.3.1 Some facts about the patterns of our perception	9
1.4 Dividing camels.....	10
1.5 Money is always a problem	10
1.5.1 Analysing the solution to the bonus problem.....	11
1.5.2 Did you avoid the cognitive rigidity trap?	12
1.5.3 How to avoid the cognitive rigidity trap in the “bonus case”?	12
1.5.4 Solving the “bonus case” – a wider perspective	13
2 INTRAPERSONAL SKILLS IN COGNITIVE FLEXIBILITY	14
2.1 Mindfulness – what is this concept about?	14
2.2 Neuroplasticity – rewiring brain processes	15
2.3 Two simple exercises to enhance our mindfulness skills	16
2.3.1 Being present in the moment.....	16
2.3.2 Peel the mandarin	16
2.4 Active Empathic Listening as an intrapersonal skill.....	17
2.4.1 Your AEL level	17
2.4.2 Improve your concentration during listening	19
2.4.3 Use your processing and responding abilities	20
3 IMPROVING INTERPERSONAL SKILLS.....	21
3.1.1 Enhancing interpersonal communication	21
3.1.2 The shades of words.....	22
3.1.3 Improving the message	22
3.2 Cognitive flexibility questions.....	23
3.2.1 Starting your question or sentence	24
3.2.2 Changing the way we ask.....	24
3.2.3 Avoid suggesting when asking	25
3.2.4 Avoid judgements when asking questions	25
3.2.5 Talking to a child	26

4	INTERPERSONAL SKILLS IN PRACTICE – FINAL EXERCISE	27
4.1.1	Creating a good mood for a discussion	27
4.1.2	Finding the motivation	28
4.1.3	Embedding the will to change	28
4.1.4	Freezing the motivation and making a plan of action	29
	JUST TO SUM UP	30
	APPENDICES.....	31
	APPENDIX 1: Derailing and corrective thoughts.....	31
	APPENDIX 2: Processing and responding techniques.....	31
	APPENDIX 3: Positive, neutral, and negative connotations	32
	APPENDIX 4: Message to the ego – message to the recipient.....	32
	APPENDIX 5: Changing closing questions into opening questions	33
	APPENDIX 6: Avoiding suggesting questions.....	33
	APPENDIX 7: Avoiding judging questions and sentences	33
	APPENDIX 8: “Good mood” questions	34
	APPENDIX 9: Questions to be avoided.....	34
	APPENDIX 10: Freeze the motivation and action plan	34

1 INTRODUCTION

Note from the Sky4.0 consortium

From shallow to... swallow!

It is not easy to embark on a journey of self-discovery and try to understand your strengths to value and your weaknesses to improve. There are many obstacles and biases that you have to overcome to leave the “shallow”, reach the “deep”, and stop just touching the surface. Moreover, it is even harder to accept that you have to “swallow” your pride, improve yourself, and work on getting better to achieve your goals!

This handbook is a trip towards realization and self-improvement that will empower you to develop your soft skills and thrive within the 4th Industrial revolution!

Work with your mentor and embrace this training to create principles that will power your development throughout your life and career.

In this handbook, we will speak about the Soft Skills elaborated within Sky4.0:

1. Analytical Thinking
2. Adaptability to Change
3. Cognitive Flexibility
4. Critical Thinking
5. Initiative
6. Intellectual Curiosity

COGNITIVE FLEXIBILITY

This chapter will be about the process of our thinking and the impact it has on our decisions. We will focus on a skill that we have in abundance when we are young but lose as we get older. As a child, we solve problems with a high degree of cognitive flexibility; however, as we get older we fall into the cognitive rigidity trap because we tend to act in the same way as we have done many times before. So, it is important to preserve our cognitive flexibility from childhood and combine it with wise decision taking. Is it possible? We will try to do it, but we need your help.

During our journey through this Work & Text Book, you will be asked to do some exercises. Considering the nature of the soft skills we are discussing, it is absolutely crucial to do all of the exercises included in this chapter. Thanks to this, you will get some insight into the functioning of your brain. You will be able to understand your attitude towards flexible thinking. What's more, you will improve your abilities in two areas that are of utmost importance for effective functioning in a working environment: will improve your intrapersonal and interpersonal skills.

So please remember: your activity is the key to progress!

1. COGNITIVE FLEXIBILITY – WHAT IS IT?

We have the ability and natural tendency to look at something from an infinite number of angles. For example, a group of individuals can be considered from different perspectives: physical traits (male/female, age, hair colour, etc.), emotional characteristics (calm, open, etc.), geographical (place of birth, place of residence, etc.). Such human features are at the root of the concept of cognitive flexibility, thanks to which we can look at something from an infinite number of angles and solve problems in an infinite number of ways.



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Speaking different languages is an example of our diversity. Despite the myth of The Tower of Babel, such diversity can be a great advantage because humans have the ability to solve problems in multiple ways. There are always many ways to reach the same goal, but some are more efficient than others. Nevertheless, the question is whether a person is able to act in multiple ways and be willing to be flexible in their way of solving problems or taking decisions. If we have deficiencies in this area, the question is whether we can learn how to improve our cognitive flexibility.

1.1 Let's get an insight into your thinking

Here is small set of questions for you. Fill in the blank parts of this table. Please take at least 10 minutes to come up with your answers.


QUESTION	YOUR ANSWER
What is the importance of having different solutions to the same problem?	
How can there be different solutions to the same problem?	

We hope this exercise will help you concentrate more on the diversity and nature of the problems around you. In fact, we can achieve our goals in multiple ways. Sometimes, we are successful, sometimes not. Please remember that, in the long run, reaching a goal is not as important as how you try to do it. When you get an insight into the effectiveness of your way of trying to reach goals, you prepare yourself for future challenges and your success rate increases.

Your Cognitive Flexibility is one of the elements that improves your success rate in getting satisfactory results. So, let's see how our brain reacts when faced with problems.

1.2 Slow and fast thinking in taking decisions

Here are two questions for you:

<p>1. Is it true that this man is satisfied?</p> 	<p>2. Is it true that the result of this equation is 50?</p> $2 + 2 \times 16 + 16 =$
--	---

Let's check how quickly you answered these questions. We bet that the first question did not take much time but that you had to think for a while to answer the second. Interestingly, it would be the other way round for artificial intelligence. **So, it is important to notice that the human brain does not function like a computer.**

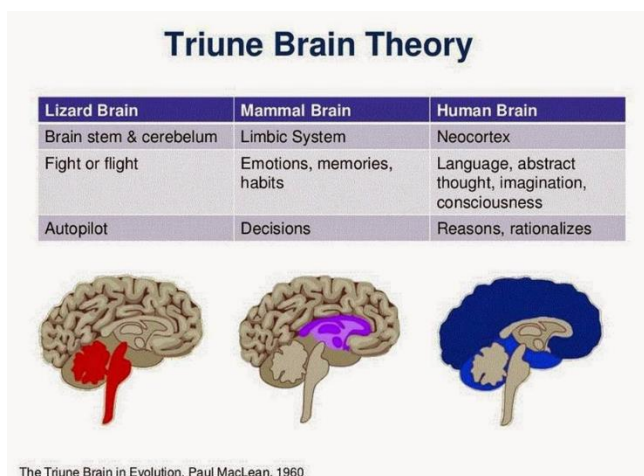
1.2.1 The human brain is similar to a computer but it is not a computer!

Our brain has a tendency to use shortcuts when making decisions. We try to solve problems using our intuition and presentiments instead of rational thinking. Thanks to this, we are able to recognize quickly whether somebody is smiling or not, but we need some time and effort to solve problems that are new for us or require cognitive effort. It is interesting that artificial intelligence reacts in the opposite way to our brains. According to the findings of Daniel Kahneman, a Nobel prize winner in 2002, we mainly take decisions quickly, but this is the basis for an erroneous, so-called heuristic system of decision-making. You can see more details about this in Daniel Kahneman's book "Thinking Fast and Slow".

Our brain's dual approach in decision-making processes has a great influence in different situations. The majority of our decisions are taken by so-called 'system 1', which is fast, unconscious, automatic, and intuitive. However, this decision-making system is also easy to fool. For example, when coming back home from work we are able to drive a car in 'stand-by' mode without thinking about our learned driving process; however, when something unexpected happens on the road, our brain suddenly switches from an unconscious to a conscious way of thinking: so-called 'system 2'. In this mode, we act rather slowly in a controlled way; we take informed decisions by analysing the broad context of the situation.

Nevertheless, this system requires more energy, which is costly for us, therefore our brain has a tendency to use the fast thinking system as often as possible instead of the slow, rational thinking system. We learn to do things habitually unless something unexpected happens. This way of decision taking is also simply explained by Paul MacLean's triune brain theory, which shows that our instincts and emotions prevail over rational thinking.

The same happens in our daily routine work. We learn to do things habitually, but this increases cognitive rigidity, a state in which we experience problems in acting and switching from one way of thinking about things to acting and thinking about them in a different way.

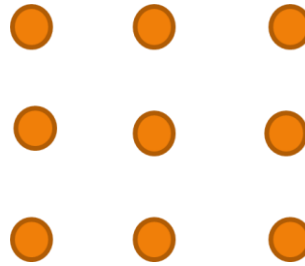


Let's check how this works in our next exercise.

1.3 Connect these dots

Connect these nine dots together by drawing not more than 4 straight lines without lifting up the pen.

Please remember, do not lift your pen while drawing!



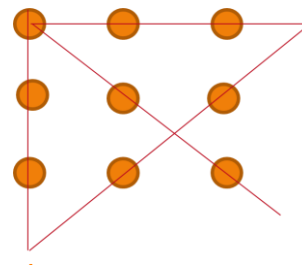
How did it go? Did you manage to do it? If not, please read the following section, which explains the boundaries of our perception.

1.3.1 Some facts about the patterns of our perception

The patterns of our perception prevent us finding solutions. We are stuck within the boundaries of our perception, as shown by the dots example. Usually, when we see dots arranged as they are in the picture, our mind automatically links the dots in the form of a square. This is the work of our habits, which are deeply rooted in our brains.

Our brain likes habits. Thanks to habits, we feel safe because we are following a neurobiological path that has already been well developed by our previous actions. The question is whether we can find enough inner strength to counteract the shortcuts in thinking that are induced by habits. All of this goes against one of the most powerful human emotions: the tendency to want to feel safe.

So, when you break free of the rigidity of your perception, you will be able to solve the dot problem in this way:



It is so simple now, isn't? To find a solution for our problem, it was enough to get rid of the thinking anchor, which in this example was the illusion that the dots form a square. An unsolvable problem proved to have a simple solution.

Great. Let's once again practise our skills to escape from an initially perceived frame.

1.4 Dividing camels

Here is a task for you:

An old man left 17 camels to his 3 sons in his will. He decided that half of the camels should go to the oldest son, a third to the second son and a ninth to the youngest. How would you solve this problem? Please take at least 10 minutes to find your solution.



Well, how did it go?

Do you remember that at the beginning of this course we stressed the need for a multifaceted approach to solving problems and the necessity to avoid initial anchors in thinking? So, maybe you noticed that this problem can be solved in different ways?

Let's look at a **“social”** solution to this task. The sons could take care of the camels together and divide the benefits according to the father's will. Of course, such a solution could provoke animosity among them because they would not benefit equally from the same amount of work.

So, we could use a simple **“economical”** approach: just sell the camels and divide the money. With this solution, we get rid of the initial anchoring perception that the herd itself should be divided, not its value.




Strangely enough, there is also a **“mathematical”** solution. If you did not have the brilliant idea to add one camel to the herd before dividing it and to subtract this “added” camel after, please consult an interesting speech by William Ury in his TED presentation (https://www.ted.com/talks/william_ury_the_walk_from_no_to_yes).

So far, we have practised our ability to avoid rigidity in decision making by solving quite general issues. It is now time to check our cognitive skills in a business-like context.

1.5 Money is always a problem

XYZ is a medium-sized company specializing in the production of spare parts for the aeronautical industry. According to company policy, some employees used to be remunerated by a system of monthly wages and a quarterly paid bonus at the discretion of the CEO. It is time now to establish the bonus amount for 3 key specialists from the Analytical, Sales and R&D Departments. Usually, the amount used to be €4,000–8,000 per person, dependent on the financial results of the firm. However, the last quarter was very unfavourable, therefore you have to cut the bonus to a total of €2,000 for all employees.

Read these brief characteristics of the staff members:

<p>Christine: Business analyst. She does a very good job, despite the fact that she has to look after a mentally disabled child, therefore her bonus is of utmost importance to her. She is very helpful for other employees. She has been with the firm for 14 years; this is partly why she is reluctant to look for another job despite her quite modest remuneration</p>	
<p>John: A nice-looking and well-educated man who is highly valued by his co-workers for his sense of humour. Lately, he has had better sales results than usual, but his after-sales service has deteriorated. Therefore, he is regarded as brilliant but not very conscientious. He needs the bonus to finance the modernization of his house. There is gossip that after 4 years of working for the firm he plans to switch to the competition.</p>	
<p>Charles: Employed 1 year ago but has already proved his impressive skills in finding innovative new products. A man with extraordinary ideas but difficult to work with. Sometimes, without notice, he doesn't come to work. Other employees in the company do not really like him, but the bosses appreciate his results and treat him as good value for money because he earns little in comparison to his sensational ideas. He is starting to be recognized within the industry, so it is possible he will soon be looking for another company to work for.</p>	

As the CEO, you have to distribute the bonus. You have 15 minutes to make the bonus division. Remember, you will have to inform your staff members about your choice. What will it be? Write it in the table below.

2000 EUR	Christine	John	Charles
BONUS ALLOCATION:			

1.5.1 Analysing the solution to the bonus problem

Once you have decided how to allocate the bonuses, we can get an insight into your thinking process which led you to this decision.

In the previous section, we stated that that from the point of view of your skills development, it is not a single result that is most important. Understanding the process by which you reached this decision will prepare you to be more effective in the future. Let's look then at your reasoning process behind the decision.

Please try to answer these 3 questions:

What is your goal from the perspective of being a CEO?	
--	--

What did you consider when making your decision?	
What will be the impact of your decision on your company?	
What will be the impact of your decision on the behaviour of your team members?	

1.5.2 Did you avoid the cognitive rigidity trap?

We know that while evaluating a problem and making a decision we have a tendency to stick to initial information. In consequence, we try to find a solution that has a close relation to the perceived information, but we forget about other possible solutions or even about the possibility of rearranging the goals of our activities.

This tendency, called the anchoring effect, is at the root of the flexible rigidity that makes it hard for the mind to shift attention in order to find creative solutions. We can observe this while solving our case. Its title is about giving a bonus, so the initial information acquired by the brain heavily influences your future judgments. Thus, giving the bonus starts to be the main concern which reduces our freedom of thinking.

1.5.3 How to avoid the cognitive rigidity trap in the “bonus case”?

In order to solve the problem of bonus allocation to the company employees, it is important to look at it from a wider perspective. Thus, it would be good to establish in advance what the present situation of the company is and why it can now give only a fraction of the bonus that was given in previous quarters.

In order to achieve this, there is a need to shift attention from the present situation (*we have to allocate the bonus*) to the real goal (*we have to find a way to assure the future of our company*). By making such a shift in thinking, we start to understand that the bonus allocation is just a tool to implement company strategy.

Usually, when solving such cases we concentrate on people problems because they are close to our emotions. However, in order to satisfy the needs of people (for example, to have a decent job and be well paid) we have to take into consideration a wider perspective: for example, what is the competitive situation of the company? Will it have enough resources to remunerate its employees?

1.5.4 Solving the “bonus case” – a wider perspective

Let's come back to the questions we posed when analysing the bonus problem. Thinking about the goal from the perspective of the CEO, we have to consider the competitive situation of the firm. To draw a conclusion from the available information, we can adopt one of these possible scenarios:

- a) The company experiences the same seasonal fluctuations in profits every year – there are always 3 quarters of good profits and 1 quarter of bad profits;
- b) New competitors have appeared on the market with highly skilled sales forces;
- c) New competitors have appeared on the market with innovative products.

When making our choice, we should take into consideration the fact that the bonus allocation will influence the behaviour of employees, which in result will have an impact on the future of the company. Thanks to our action, we will enhance the expected behaviour of our team members in order to improve the position of our company on the market. It is clear now that the bonus allocation will be favourable for Christine in scenario A, for John in scenario B, and for Charles in scenario C.

So, you have seen how cognitive flexibility works. We have solved the case thanks to a **shift** in thinking. What's more, we avoided the **anchoring effect** in our thinking process by treating the problem from a **general perspective**; subsequently, we were able to use our analytical thinking and consider specific solutions according to specific situations.

Now that we know what cognitive flexibility means, let's try to activate it within ourselves.

2 INTRAPERSONAL SKILLS IN COGNITIVE FLEXIBILITY

In the first part of this course, we looked at the nature of the decision-making process and paid special attention to cognitive rigidity problems. Now, we are aware of pitfalls such as initial anchoring in the thinking process and the tendency to make fast and simple decisions within an initially framed context.

It is now time to think about how to get rid of these tendencies. Let's look into the issue of improving our intrapersonal cognitive flexibility skills. We will study two areas that enhance cognitive flexibility skills: mindfulness and active empathic listening.

2.1 Mindfulness – what is this concept about?

Let's check your intuition. Carefully read the statements below and tick the ones that seem to be false:

	Tick the false statements		
Mindfulness means paying attention		<input type="checkbox"/>	
Practising mindfulness creates awareness		<input type="checkbox"/>	
Non-judgmental thinking is an attitude of crucial importance in mindfulness		<input type="checkbox"/>	
Mindfulness is one of many forms of meditation		<input type="checkbox"/>	
Practicing mindfulness enhances curiosity, acceptance, and openness		<input type="checkbox"/>	

Well, all of the sentences above are true. We're confident that the initial question helped you to concentrate better on each of the statements. According to the Merriam-Webster Dictionary, mindfulness is "the practice of maintaining a non-judgmental state of heightened or complete awareness of one's thoughts, emotions, or experiences on a moment-to-moment basis". In practice, mindfulness means focusing conscious attention on one thing at a time in a non-judgmental way. The results of practicing mindfulness in business activities are improved working memory capacity, decreased negative thinking behaviour, and reduced emotional reactivity.

Perhaps the most important fact about mindfulness skills is that they help us to concentrate, and you have just had a chance to see a tool that enhances concentration in action.

Have a look at this photograph.

The boys are simultaneously playing two different tunes by turning the handles of two different barrel organs. This situation made them concentrate by accident, but we actually have the ability to improve our concentration skills and use them independently of a favourable or unfavourable context. We can do this by practicing mindfulness. (*For more reading about mindfulness, see "How mindfulness can help engineers solve problems" by B. Rieken, S. Shapiro, S. Gilmartin, S.D. Sheppard, HBR Jan. 4, 2019*)



2.2 Neuroplasticity – rewiring brain processes

Please answer these questions

Can you run 20 kilometres in 2 hours?	
What would you have to do to make it possible?	
Would you observe any changes in your body?	



The answer to the last question is actually the most important. Certainly, exercising your body would bring about changes in your muscles. It is the same with the brain. This phenomenon is called neuroplasticity. The neuroplasticity of the brain is similar to the development of physical skills due to training such as running. The brain also has the ability to change in response to environmental circumstances.

As was described by psychologist Donald Hebb in his book *Organisation of Behavior*, "When an axon of cell A is near enough to excite cell B and repeatedly and persistently takes part in firing it, some growth process of metabolic changes takes place in one or both cells such that A's efficiency, as one of the cells firing B, is increased". As

he succinctly stated: cells that fire together wire together. The neuroplasticity of the brain is similar to the development of physical skills: both are the result of the human ability to learn new skills.

Let's practice this in the following section.

2.3 Two simple exercises to enhance our mindfulness skills

2.3.1 Being present in the moment

This exercise will improve your skills of observing and describing. Please sit down comfortably in a quiet place. Put one hand on a cool surface (it can be a metal chair leg or anything similar) and another hand on a warm surface (it can be your neck). Stay in this position for about two minutes and start to go mentally through the following phases one by one:

1.	Observing	"Watch" in your mind the first two thoughts that arise.
2.	Describing	Use words to explain your experience. Describe just the facts, not your opinion. Describe not only what came to your mind but also how it happened.

Repeating such an exercise from time to time will enhance your awareness of what is happening in the moment. This kind of training will significantly improve your concentration skills.

2.3.2 Peel the mandarin

Now you will be asked to analyse some information that will be transmitted through your senses.



Find a real mandarin or orange, etc., and start to peel it slowly.

Focus on the information and feelings that are passing through your senses. Consider such features as shape, colour, texture, weight, smell, taste, or any other feature you can think of. Start to describe them in your thoughts one by one.

Repeating this exercise sharpens the senses, reduces stress, and consequently improves your concentration ability.

2.4 Active Empathic Listening as an intrapersonal skill

We listen to others in order to learn something new, to look at something we already know from a different angle, or to understand somebody's feelings and expectations. Listening is indispensable to communication, but the fact is that we generally do not use our listening abilities fully.

The brain has a natural tendency to save energy, which is why we mainly use marginal listening instead of attentive or active-empathic listening. We are able to hear 450 words per minute, whereas the average speed of speaking is around 100–150 words per minute. At the same time, our brain is able to transform not more than 25% of perceived words into viable information.



These statistics can be improved by using Active Empathic Listening.

Look at the picture and imagine the following three scenarios:

1. You are sitting in a restaurant and you hear a live band playing, but you pay attention to other things.
2. You pay attention to the music, its rhythm, melody etc.
3. You not only pay attention to the music but you come closer to the players; you start dancing or singing to the tune.

In each of the scenarios above, you experienced a different level of listening. The first two stages are called marginal and active listening. The most interesting stage is the third one.

In Active Empathic Listening (AEL), which is what happened in the third stage above, we tend to feel others' feelings and concentrate on grasping the meaning and importance of the communication process. We suspend our judgment of the situation in order to understand the interlocutor without bias. We put ourselves into the shoes of the other person in order to understand their feelings, decode their interpretation of messages, and fully connect with them during dialogue.

2.4.1 Your AEL level

In order to determine your AEL level, we will use a questionnaire that is a result of a study by Drollinger, Corner and Warrington in 2006; we will compare your results to the average AEL abilities of the managers described in 2011 by G. Bodie in his article "Active-Empathic Listening as a General Social Skill".

Assess yourself on a seven-point scale, on which 1 means “never”, 7 means “always” and 4 means “sometimes”:

No	Question	Your result
1	I am sensitive to what others are not saying.	
2	I am aware of what others imply but do not say.	
3	I understand how others feel.	
4	I listen for more than just the spoken words.	
5	I assure others that I will remember what they say.	
6	I summarize points of agreement and disagreement when appropriate.	
7	I keep track of the points that others make.	
8	I assure others that I am listening by making verbal acknowledgements.	
9	I assure others that I am receptive to their ideas.	
10	I ask questions that show my understanding of others' positions.	
11	I show others that I am listening with my body language (e.g., head nods).	

Please note that questions 1 to 4 correspond to your sensing skills in listening. In this category, you are able to grasp both explicit and implicit information. You pay attention not only to what is said but also to how the interlocutor speaks. Thanks to this, you fully understand what our interlocutor meant to say.

Points 5 to 7 correspond to processing skills, which means that you are able to synthesize fragments of information and remember them.

Finally, points 8 to 11 correspond to responding skills, which tell us about non-verbal means of enhancing our interlocutor's attention while listening.

Therefore, it would be good to compare your results in each of the above fields to the average skills of managers. So, add up your responses to questions 1 to 4 and divide the total by 4. Sum questions 5, 6 and 7 and divide by 3, and sum questions 8 to 11 and divide by 4.

Compare your results to those in the table below:

Skill	Average results of managers	Your score
Sensing	3.05 - 4.91	
Processing	5.05 - 5.25	
Responding	3.31	

Please note that the results we give ourselves in questionnaires like this are usually higher than in reality. We have a tendency to over evaluate ourselves, therefore you could ask somebody

who knows you very well to assess your abilities and compare the results in order to reveal the gap between your own perception and others' perception of your abilities.

2.4.2 Improve your concentration during listening

This exercise is an example of linking mindfulness with listening skills. While listening to other people, sometimes we lose concentration. This happens when the first thought that is not related to what the speaker is saying comes to your mind.

For example, during a discussion, when you say to yourself (of course, not aloud) “he has a strange way of speaking”, usually this is the first step to start imagining subsequent thoughts, and you consequently derail yourself from the process of listening.

When such a thing happens, it is of utmost importance to do something to come back to your listening process. You can counteract your *derailing* thoughts by bringing *corrective* thoughts to your mind.

In our example above, we should concentrate on the content of the speech instead of the way of speaking. We can do this by bringing to our mind any thought that will help us to focus on the speech; for example, “What does he want to tell me?”.

Here is a set of “derailing” thoughts, a tip on what you should do, and a blank space in which you should give an appropriate example of your next thought. If you have problems finding such corrective thoughts, you can find some ideas in *Appendix 1: Derailing and corrective thoughts*.

THE FIRST “DERAILING” THOUGHT	WHAT YOU SHOULD DO	YOUR INTERNAL ANSWER (“CORRECTIVE” THOUGHT)
He has a strange way of speaking	Concentrate on the content instead of the way of speaking	What does he want to tell me?
I will interrupt his speech because I know the solution	Suspend your judgment
I have to interrupt so as not to forget my idea	Summarize, but don't interrupt
I have to concentrate	Try not to bring to your mind words that force you to do something
I am losing concentration	Concentrate on the idea of what is being said
It is too difficult	Use questions to enhance the dialogue

2.4.3 Use your processing and responding abilities

Listening is not possible without dialogue. The more you are a better listener, the less you speak. You can acquire these skills by using a set of active listening techniques like mirroring feelings, summarizing, paraphrasing, checking, and probing. Here is an explanation of these methods:

Technique	Explanation
Mirroring feelings	You ask a question or make a statement which focuses on the feelings of your interlocutor
Paraphrase	You say the same thing as your interlocutor, but you use your own words
Summarize	You summarize what was said in order to better understand the issue
Check	You want to check if your understanding of the issue is the same as your interlocutor's
Probe	You want to know more about some issues that were mentioned by your interlocutor

Now that we know the theory, let's try it in practice. Please imagine that you hear the following statement: *"This challenging project will be time consuming and will oblige us to show excellent communication skills"*.

Please find your answers by using all the techniques we have been talking about. Fill in the blank spaces in the table below (*if you need help, look at the tips in Appendix 2*)

Technique	Your Example
Mirror feelings	So, you feel that the project will be time consuming and challenging for you
Paraphrase
Summarize
Check
Probe

Well, we are now ready to take the next step. We will practise our cognitive skills in interpersonal relations.

3 IMPROVING INTERPERSONAL SKILLS

As you have probably noticed, we have been working to enhance our cognitive flexibility skills by concentrating on our inner abilities. We have done this by concentrating on our way of thinking. Once we have mastered our inner behaviour, we can look at the dynamic process of interpersonal communication. Hopefully, we are ready to help others to develop their cognitive flexibility skills.

The appropriate tools for this are the words, sentences, and questions used in dialogues between co-workers. Thanks to them, you will improve your interpersonal skills and thus be a more effective team member.

3.1.1 Enhancing interpersonal communication

The use of words, sentences and questions creates emotions in our interlocutors. Getting our interlocutor in a good mood inspires cooperation, opens the way for ingenious thinking, and is generally favourable for cognitive flexibility. We can do this by using positive words and avoiding negative words in our speech.

What's more, we can obtain this favourable effect by using sentences that are focused not on our ego but on our interlocutor; we should construct messages that express certainty and are goal-oriented; we should avoid wishful thinking.

In a dialogue, we can discern open-ended and closed-ended questions that encourage your interlocutors to either expand the discussion or close it with simple yes or no answers, respectively. However, the belief that the use of open-ended questions is sufficient to achieve fruitful communication is wrong. The real problem concerns the feelings that arise in your interlocutor as a result of particular questions or sentences. Did you use questions or sentences that enhance your interpersonal communication, or did you say something that has frozen your relations? Thus, instead of open- or closed-ended questions or sentences, we should instead think about questions or sentences that invite the possibility to continue a dialogue with another person or close this dialogue. Some call them *generous* or *expansive* questions (please consult this article: <https://psiloveyou.xyz/how-to-ask-generous-questions-that-bring-people-together-d89cb9f4cf1d>). We will call them *opening* and *closing* questions and sentences because their usage can open dialogue or close it.

To sum up, in our discourse we can discern positive or negative words, sentences that restrict somebody's autonomy in forming an opinion by denying their point of view, pressure to accept another point of view, or sentences or questions that encourage autonomous thinking. Thus, knowing what improves or worsens relations and having the ability to use questions or sentences that enhance relations is of crucial importance for creating an environment that is favourable for cognitive flexibility. Let's start with an easy aspect of this issue: the ability to understand positive and negative shades of words.

3.1.2 The shades of words

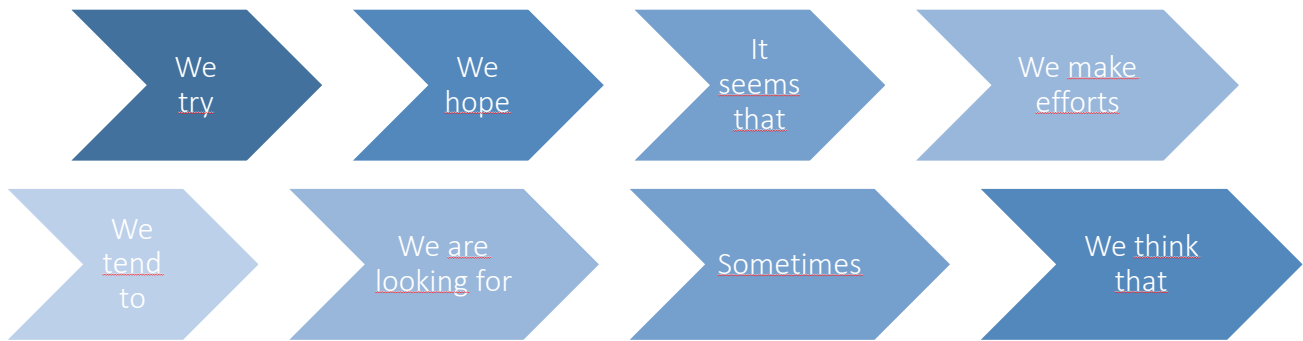
Have you ever thought about the impact of the words we use in everyday life on the mood of our interlocutors? It is quite obvious that we can say the same thing by using words with similar meanings, i.e., synonyms. It's good to have a rich vocabulary; it's great not only to have it but also to use it in a way to influence others according to our goals.

The rule is very simple: when you use positive words, you enhance positive feelings during a dialogue, but negative words restrain positive communication. Let's check ourselves in this area. Fill in the blank spaces in the table below. *(As usual, if you have any doubts, you can go to the tips in Appendix 3)*

Positive Connotation	Neutral Connotation	Negative Connotation
interested	questioning	nosy
employ	use	
	economical	stingy
steadfast	tenacious	
	full	crammed
courageous	confident	
	different	peculiar
meticulous	selective	
	old	decrepit

3.1.3 Improving the message

Once you have mastered the shades of words, we can use another technique that is helpful for effective dialogue. This time we will concentrate on sentences that will improve our message. The graphic below contains some sentences that bring feelings of uncertainty and wishful thinking into our conversation. Generally, these sentences show that the person who is using them is focused on their ego; unfortunately, the use of such words is likely to lead to a lack of results in teamwork.



What should we do to avoid these pitfalls that lead us to cognitive rigidity? We should not only avoid them but also use sentences that stress the advantages for the recipient and build the credibility of the message sender. The use of these sentences seems to mirror the message sender's focus on their ego.

Here is a tough job for you. Please change each of the sentences in the graph above so that they become a message to the sender – a message that inspires a feeling of certitude that things can be done. *(Once you've done this, you can compare your answers to some ideas in Appendix 4.)*

3.2 Cognitive flexibility questions



It is a fact that the majority of people like to be heard. They prefer talking than listening. So, if you want to have a proper dialogue in a teamwork environment, you have to master the art of posing the right questions that sustain discussion in an attempt to achieve a goal. They must be non-invasive, but they have to touch the causes of the problem. They should make us think by challenging the status quo; they should encourage investigation and discourage instant solutions. In order to activate

cognitive flexibility, they should neither judge nor suggest solutions to problems.

Questions of this type should avoid elements that hamper dialogue or restrain your interlocutor's autonomy, such as pressure and denial. These elements entail the will to counteract or provoke a mood during which somebody is feeling offended or is stopping creativity. All of these things block the ability to change the reasoning process.

We will work on these issues now by doing 3 exercises that will teach you how to form *opening* questions that avoid suggestions or judgments.

3.2.1 Starting your question or sentence

How often do you start a sentence by saying “but”, “nevertheless”, “let’s”, “why don’t we”?

Well, even if it is so easy to do this, please try not to during a discussion. Why? Because it closes the dialogue and it makes you and your thinking the central part of the discussion, even though your co-worker might also have some brilliant ideas that are worth hearing. Please refer to the table below:

Wrong starters	Right starters	Rationale
Let’s...	I wonder	Don’t pressure; instead, show your interest in another point of view.
Nevertheless	It would be so interesting to know ...	Try to probe in order to fully understand the interlocutor before you present your solution.
Why don’t we...	How did it happen that	Avoid pressuring, even if it is veiled by a false question starting with “why don’t we”.
But ...	And	Don’t put yourself in opposition with the interlocutor by using “but”; instead, use “and” or simply avoid “but”.

3.2.2 Changing the way we ask

We will work now on changing *closing* into *opening* questions. In the left column of the table below, there is a set of questions that restrain freedom of thinking. Please modify them similarly to the solution in the first row (*if you need help, you will find some helpful tips in Appendix 5*)

CLOSING QUESTIONS	OPENING QUESTIONS
Were there other ways of doing it?	What other options did you have?
Why did you stop trying?
Why didn't you try other solutions?
Could you do it in a way that you won’t regret later?
Could you do it this way?
Why don’t we try to do it like this

Such a way of modifying questioning has a positive impact on our working environment. It is based on the basic human need for exploration. A situation in which you encourage shifting the point of view helps to break free of the initial anchor. You should also try to use positive words

instead of negative ones: we can call this ‘positive reframing’. Please refer to the three techniques presented in the table below:

QUESTION/SENTENCE	TECHNIQUES	OPENING QUESTION
Could you do the analysis before you draw your conclusions?	Search for new solutions	What other ideas did you have to solve this problem?
You can't do it this way	Shift the point of view	To what extent can it be done in another way?
Did you deceive us?	Positive reframing	How could you change your behaviour to make us trust you?

Please observe that it is sometimes quite difficult to use these techniques. In our last example, we used not only positive reframing by replacing the negative word “deceive” with “trust”, which is much more positive, but we also combined the first two techniques.

The following exercises will enhance your skills in this area.

3.2.3 Avoid suggesting when asking

Once again, we will work by filling blank spaces. Try to modify the questions or statements in the left column in order to avoid suggestions (*If needed, there are some tips in Appendix 6*).

SUGGESTING QUESTION	NEUTRAL QUESTION
Before you make a decision, could you send a survey?	How can you get more information?
Can we send an email?	
I guess you could ask your boss for help, right?	
What if you started exercising regularly?	
Don't you think that talking to the team would be helpful	
Do you agree with me that you lied?	

3.2.4 Avoid judgements when asking questions

This time, we will modify the questions from the left column so as to avoid judging your interlocutor's behaviour (*you can also find some ideas in Appendix 7*)

JUDGING QUESTION/SENTENCE	NEUTRAL QUESTION
Is it good to be so aggressive with your employees?	How can you talk to employees to make you better received?

I'm afraid you can't keep your word
Doing this will probably destroy their trust in you
Well, well, such a text to the boss?
Don't you think that you have taken on too many tasks?
You were a little bit naïve, weren't you?

3.2.5 Talking to a child



with “do you” or “did you”.

In the last exercise in this section, we can use all the skills we have learned so far.

Let's imagine that the little boy in this photograph has just come home from fishing. Ask him what he was doing.

Use at least 12 opening questions. To make it easier, you can start them with words like “What”, “How”, “In what way”, “Who”, “With whom”, “When”, “To what extent”, “How much”, “How many times”. Please never start your question

4 INTERPERSONAL SKILLS IN PRACTICE – FINAL EXERCISE

Now it's time to sum up what we have learned. In our final exercise, you will be put into the shoes of a manager wants to motivate a subordinate to find different ways of implementing a project that is being undertaken by the firm. You are certain that the firm's present situation needs to change; however, the employee tells you that he is convinced that the only way of completing the project is to do it the same way as a year ago.

Please remember that any pressure you exert on the employee to accept your point of view will be harmful to the demonstration of cognitive flexibility skills. In fact, it will result in a black or white solution – a kind of zero-sum game – which means acceptance or rejection of your proposition. So, your job is to lead the discussion so as to find as many solutions to the issue as possible.

In order to do this, we will adopt a 5-step approach, as follows:

1. Create a good mood for the discussion
2. Find the motivation
3. Embed the will to change
4. Freeze the motivation (establish stability)
5. Make a plan to implement the goal

For each part of this case, you will be asked to work with *opening* questions that should activate your interlocutor's cognitive flexibility skills.

4.1.1 Creating a good mood for a discussion

All of us we know the beneficial effect of small talk to create a good mood for a discussion, but this might not be sufficient in a work environment.

So, we can combine small talk with some chat about this employee's most recent success. Please prepare yourself to start the meeting. You can discuss the results of the last project that was successfully implemented by the employee by asking some open questions. You can ask about issues such as the last successful project's overall impact on the team and its skills, or the lesson that can be learned from the last success and how this could be viable in the new project. Prepare at least 4 questions that will enhance interpersonal communication; then, compare them with those in appendix 8.

QUESTIONS TO CELEBRATE THE LAST SUCCESS

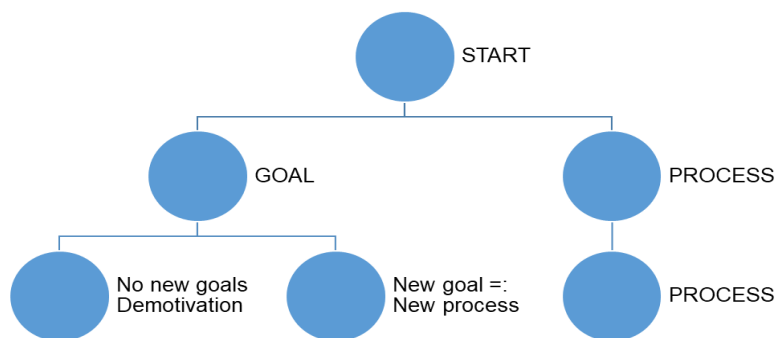
- 1.
- 2.
- 3.
- 4.

4.1.2 Finding the motivation

We have prepared our employee for a discussion about a new approach to the next project. Your role now is to discuss the beneficial effects for the employee of adopting a different approach instead of the previous one. Below, you have nine propositions. Please find three of them that you should probably avoid in fruitful dialogue because they would be detrimental to the cognitive flexibility of your employee.

1. Don't you think it would be quite easy now to try a different approach?
2. How beneficial would it be for you to find new solutions?
3. What benefits could you gain from a new approach to the project?
4. Wouldn't it be better to make small changes in the new project?
5. What could make you decide to look at the new project from a different perspective?
6. What could you do differently?
7. Why might you change your way of implementing the project this time?
8. Why not to try a different approach?
9. What could be good for your team in thinking about changes in the new project?

(if you're in any doubt, consult Appendix 9, which contains questions to avoid and the reasons why they should be avoided)



Please note that in order to be effective in our work, it is important to understand that often the real benefit of our action is to practise the process of reaching results rather than try to achieve the goal itself. It is better in such situations to concentrate on the

process instead of the goal.

4.1.3 Embedding the will to change

How to sustain positive stability once the change has been made? Let me show you an example from an interesting book on motivation by M.V. Pantalon, "Instant Influence: How to Get Anyone to Do Anything". Please use the following questions:

1. *"If you think that changing your approach would produce benefits, then say on a scale of 1 to 10 to what extent you would like make this happen?"*
2. *"Why didn't you pick a lower number?"*

Please note that it is more motivating for the employee if you ask, "Why didn't you pick a lower number?" instead of *"Why didn't you pick a higher number?"*. This is because it gives our employee an opportunity to talk about the already acquired skills that justified his choice of numbers between 2–10. While talking about it, he starts to have more confident feelings about his ability to cope with change.

If the employee's answer was 1, use the following question:

2a. *"What would it take for your 1 to become a 2?"*

4.1.4 Freezing the motivation and making a plan of action

Our job now will be to finish the exercise by letting our employee imagine why the benefits of change could be important to him and to enable him to prepare an action plan with a view to achieving the intended results. In this last exercise, you will be asked to group the questions below into a "Freezing the motivation" section and a "Plan of action" section. As usual, you will find the answer in Appendix 10, but please don't look at it before you've made your own choice. Here are the questions:

1. How will you know you have been successful?
2. Imagine you decided to do it differently; what would be good about that?
3. To what extent would the new approach be beneficial for your development?
4. What action will you take now?
5. What do you think would be valuable in approaching it like that?
6. What important thing would happen if you did it like that?
7. What will be the first step?
8. What will be the next step?
9. When will you finish?
10. Why would it be important to do the project in a new way?

JUST TO SUM UP

Well, this is the end of our journey into cognitive flexibility skills. We hope that this course has help you see the importance of this phenomena in our decision-making processes. It is a fact that as the years pass by we have a tendency to be more rigid in our thinking processes. As a result, our decisions are increasingly grounded in our previous experiences.

Once we understand that cognitive rigidity constantly increases in our minds, we can take some measures to counteract it.

We can improve our cognitive flexibility skills by using intrapersonal tools such as mindfulness or active empathic listening. We can demonstrate these skills with other people by using questions that lead to creativity and different points of view. As a result, we discover how to be more effective in our work environment by taking unexpectedly innovative decisions.

Let us wish you success in preserving and improving your cognitive flexibility skills.

APPENDICES

APPENDIX 1: Derailing and corrective thoughts

THE FIRST "DERAILING" THOUGHT	WHAT YOU SHOULD DO	YOUR INTERNAL ANSWER ("CORRECTIVE" THOUGHT)
He has a strange way of speaking	Concentrate on the content instead of the way of speaking	What does he want to tell me?
I will interrupt his speech because I know the solution	Suspend your judgment	I will wait until he finishes his speech
I have to interrupt so as not to forget my idea	Summarize, but don't interrupt	I will make notes in order to remember my idea
I have to concentrate	Try not to bring words to your mind that force you to do something	I am concentrating now
I am losing concentration	Concentrate on the idea of the speech	What is the idea of his speech?
It is too difficult	Use questions to enhance the dialogue	I will ask a question

APPENDIX 2: Processing and responding techniques

Technique	Example
Mirroring feelings	So, you feel that the project will be time consuming and challenging for you?
Paraphrase	You want to tell me that the project will take a lot of time and requires excellent communication abilities?
Summarize	As I understand, the project has two main traits: it is time consuming and it requires excellent communication skills?
Check	Do I understand properly that the project is time consuming and requires excellent communication skills?
Probe	What do you mean when you say that it is time consuming? What kind of communication skills does it require?

APPENDIX 3: Positive, neutral, and negative connotations

Positive Connotation	Neutral Connotation	Negative Connotation
interested	questioning	nosy
employ	use	exploit
thrifty	economical	stingy
steadfast	tenacious	stubborn
sated	filled	crammed
courageous	confident	conceited
unique	different	peculiar
meticulous	selective	picky
vintage	old	decrepit

The list was taken from: <https://examples.yourdictionary.com/examples-of-connotative-words.html>

APPENDIX 4: Message to the ego – message to the recipient

Message to the ego	Message to the recipient
We try	We implement
We hope	We are certain
It seems that	As a result
We make efforts	We achieve
We tend to	We obtain
We are looking for	We are able to
Sometimes	We have such standards
We think that	We know

APPENDIX 5: Changing closing questions into opening questions

CLOSING QUESTIONS	OPENING QUESTIONS
Were there other ways of doing it?	What other options did you have?
Why did you stop trying?	What else could you have done?
Why didn't you try other solutions?	What other solutions were possible?
Could you do it in a way that you won't regret later?	What could you have done to be satisfied?
Could you do it this way?	What would have to have happened for you to do it this way?
Why don't we try to do it like this ...	What would have happened if you had done that?

APPENDIX 6: Avoiding suggesting questions

SUGGESTING QUESTION	NEUTRAL QUESTION
Before you make a decision, could you send a survey?	How can you get more information?
Can we send an email?	How to reach others with this information?
I guess you could ask your boss for help, right?	Who could help you in this situation?
What if you started exercising regularly?	What could you do to improve your health?
Don't you think that talking to the team would be helpful?	Who could you talk to about this situation?
Do you agree with me that you lied?	How do you assess your behaviour in this situation?

APPENDIX 7: Avoiding judging questions and sentences

JUDGING QUESTION/SENTENCE	NEUTRAL QUESTION
Is it good to be so aggressive with your employees?	How can you talk to employees to make you better received?
I'm afraid you can't keep your word	What can you do to keep your word?
Doing this will probably destroy their trust in you	How can you maintain their trust?
Well, well, such a text to the boss?	What could you say in order to achieve a satisfactory result?
Don't you think that you have taken on too many tasks?	How could you focus on what's important to you?
You were a little bit naïve, weren't you?	How could you guard against such naivety?

APPENDIX 8: “Good mood” questions

QUESTIONS TO CELEBRATE A RECENT SUCCESS
What was the reason for the success of the last project?
Which aspects of the previous project were extremely successful?
What was the reason for this success?
How important is this success for you?
How important is this success for your team?
What was the impact of the last project on your team?
To what extent did the last project develop your team’s skills?
What elements are vital in future projects?

APPENDIX 9: Questions to be avoided

QUESTIONS TO BE AVOIDED	FLAW
Don’t you think it would be quite easy now to try a different approach?	Judgement
Wouldn’t it be better to make small changes in the new project?	Suggestion
Why not to try a different approach?	Pressure

APPENDIX 10: Freeze the motivation and action plan

FREEZING THE MOTIVATION	MAKING THE ACTION PLAN
Imagine you decided to do it differently; what would be good about that?	What action will you take now?
Why would it be important to do the project in a new way?	What will be the first step?
What important thing would happen if you did it like that?	What will be the next step?
What do you think would be valuable in approaching it like that?	How will you know you have been successful?
To what extent would the new approach be beneficial for your development?	When will you finish?