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PROJECT RESULT NO. 2

PART 3/5



# Training materials for participants

TRAINING COURSE ENTITLED

Key competences for people 50+  
**Entrepreneurship**

2021-1-PL01-KA220-ADU-000035200

**PREPARED BY THE  
PROJECT CONSORTIUM**

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## Project result no. 2

Training course entitled:

# Key competences for people 50+:

## Entrepreneurship

### Part 3/5 - Training materials for participants

Version: English



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## INTRODUCTION

### 'Find Someone Who...' Game Sheet

<b>Find someone who...</b>	<b>NAME</b>
<b>... has a cat.</b>	
<b>... likes to get up very early.</b>	
<b>... doesn't like tomatoes.</b>	
<b>... can ride a bike.</b>	
<b>... has a unique hobby.</b>	
<b>... watched all the Rambo movies.</b>	
<b>... likes the yellow colour.</b>	



## MODULE 1

### WORKSHEET 1 .1

#### Exercise No. 1

#### "Check your self-awareness"

1. What is most important to you in life?
2. What are your values?
3. What gives you energy?
4. What makes you lack energy?
5. My most pleasant memory from last year is .....
6. What trait do you like most about yourself?
7. Who is most important to you in life?
8. Who is your greatest support?
9. How do you take care of yourself?
10. What makes you happy?
11. What makes you sad?
12. What makes you angry?
13. How do you make your decisions?
14. How often do you enjoy the little things?
15. When do you feel grateful?
16. What calms you down?
17. What relationships are supportive for you?
18. What do you like to do in your free time?
19. What do you value most about your job?
20. What is your strength?
21. What is your weakness?
22. What motivates you to develop?
23. Finish this sentence: I can't imagine my life without .....





## Exercise No. 2



**Exercise No. 3**

Limiting belief	Good conviction



### Exercise No. 4

Bad habits that hinder effective actions	Good habits



## WORKSHEET 1.2

### Exercise No. 5

### THE 'BIG FIVE' PERSONALITY

Assign 5 adjectives describing character traits to each of the factors.

AMICABILITY	OPENNESS	SCRUPULOUSNESS	EXTRAVERTISM	NEUROTISM



### PERSONALITY TEST

No.	FEATURE NAME	FEATURE NAME	FEATURE NAME	FEATURE NAME
1	garish	overbearing	shy	thoughtless
2	undisciplined	not compassionate	vindictive	apathetic
3	repeats him/herself	refractory	offensive	not engaging
4	forgetful	offhand	whimsical	apprehensive
5	interjects	impatient	uncertain	undecided
6	unpredictable	insensitive	unpopular	isolating him/herself
7	chaotic	unyielding	fussy	reluctant
8	too permissive	coxcomb	pessimist	colourless
9	villain	debater	alienated	aimless
10	naive	annoying	negative	nonchalant
11	demanding recognition	workaholic	withdrawing	concerned
12	talker	tactless	touchy	shy
13	unorganized	dominant	depressed	full of doubts
14	erratic	intolerant	introvert	inert
15	muddler	manipulator	moody	mumbling
16	showing off	stubborn	sceptic	slow
17	loud	haughty	solitary	lazy
18	distracted	fiery	suspicious	sluggish



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19	restless	willing	vindictive	distancing
20	changeable	cunning	critic	conciliator
<b>SUM</b>				



No.	FEATURE NAME	FEATURE NAME	FEATURE NAME	FEATURE NAME
1	alive	enterprising	analytical	flexible
2	cheerful	convincing	constant	calm
3	sociable	of strong will	prone to sacrifice	conciliatory
4	inspiring confidence	competing	prudent	possessed
5	refreshing	resourceful	showing respect	restrained
6	full of trust	independent	sensitive	undemanding
7	animator	set for success	planning	patient
8	spontaneous	sure	organized	humble
9	optimist	honest	orderly	obliging
10	fun-loving	authoritative	loyal	friendly
11	charming	bold	minute	diplomatic
12	sunny	confident	perfect	consistent
13	inspirer	independent	idealist	considerate
14	exuberant	decided	deep	cutting/hard on sb
15	easy to deal with	activist	musical	mediator
16	talkative	persistent	thinker	tolerant
17	energetic	leader	loyal	listener
18	nice	boss	programming	happy
19	popular	productive	perfectionist	indulgent



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20	dynamic	brave	decent	balanced
SUM				

	SANGUINE	CHOLERIC	MELANCHOLIC	PHLEGMATIC
SUM "X"				





Exercise No. 6

# SWOT ANALYSIS

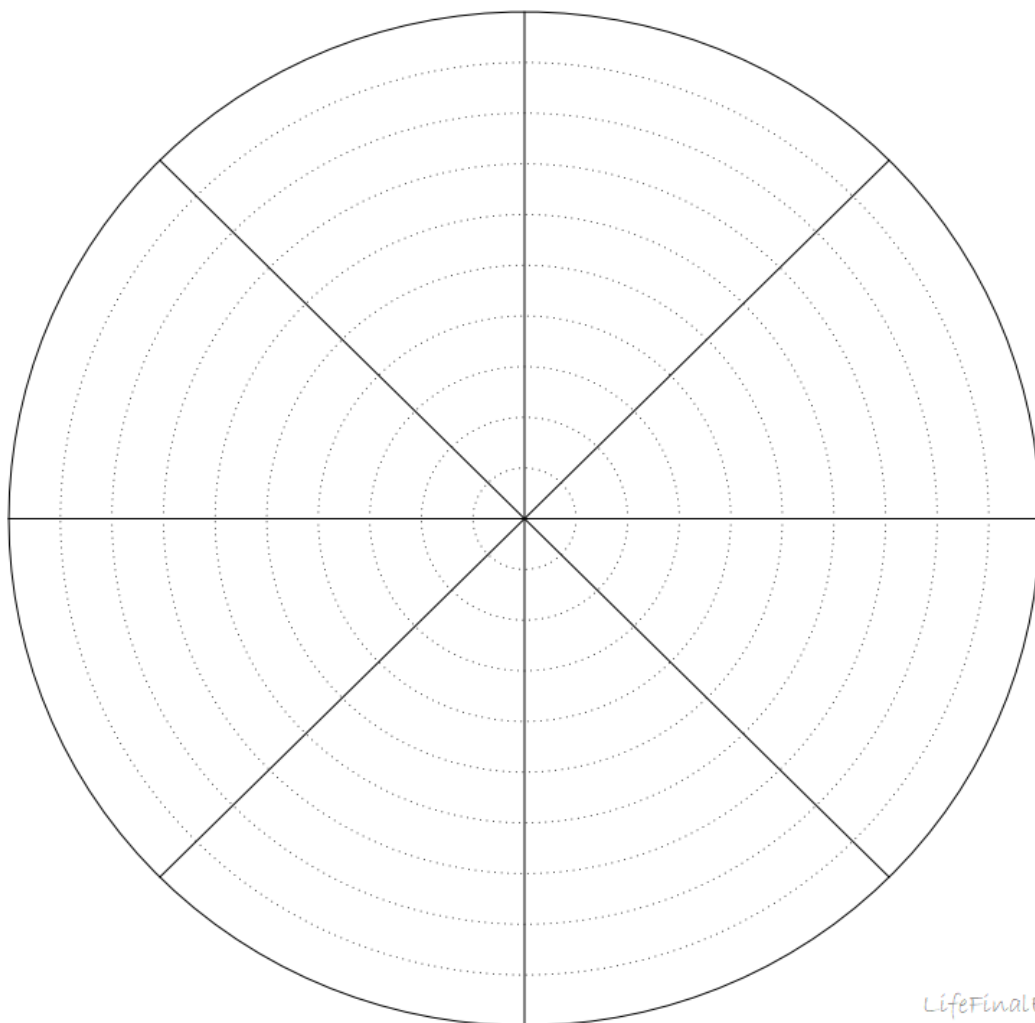
<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<b>CHANCES</b>	<b>THREATS</b>



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## Exercise No. 7

# WHEEL OF LIFE



LifeFinalEdited.pl

Source of the graphic: <https://lifinaledited.pl/kolo-zycia/>



## WORKSHEET 1.3

### Exercise No. 8

### CREATIVE THINKING

a) associations

SUN	CHILDHOOD
SONG	HORROR
SCHOOL	ROUGH SEA
BOTTLE	GRIN
WOMAN	WARM MORNINGS

b) what if

..... animals spoke with a human voice?
..... only women lived in the world?
..... there was no night?
..... there was no money?
..... everyone could fly?

### Exercise No. 9

### Game - "Defining objects"



**Write a new definition/new use for the subject of your choice.**

.....

.....

.....

.....

.....

.....

.....

.....

**Exercise No. 10**

**DRAWING**

**Sketch a minimum of 5 circles and try to draw everything you can think of using these circles.**



**"TURN A DISADVANTAGE INTO AN ADVANTAGE"**

CRITICAL OPINION	POSITIVE ASPECT



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## **SELF-AWARENESS AND CREATIVITY IN MY LIFE - script for Participants**

### **1.1 Self-awareness - the art of self-insight**

*“Self-awareness is the development of a personality that is made beautiful by happiness and love.”*

August Wittl.

**Self-awareness** - Monitoring our inner and outer world.

**Inner self-awareness** – The ability to observe one's own emotions, reactions, values, ambitions, expectations, desires, aspirations; recognizing your strengths and weaknesses. In addition, it is an understanding of the impact we have on others.

**External self-awareness** - It indicates the extent to which we are aware of how we are perceived by the environment according to the above-mentioned categories.

### **Emotional intelligence**

“The capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships.” (Daniel Goleman).

### **The 5 Components of Emotional Intelligence:**

**Self-regulation** (control over your emotions, self-control, conscientiousness, innovation)

**Empathy** (recognition of others' emotions)

**Social skills** (control over the relationship with another person)

**Motivation** (self-motivating, commitment, initiative, optimism)

**Self-awareness** (knowing your own emotions, correct self-esteem, self-confidence)

In taking care of our self-awareness, **REGENERATION OF OUR BODY is a very important factor**. When working on self-awareness, we must be **RELAXED, because with intensive self-analysis, OUR ENERGY DEPOSIT** is quickly depleted.

**Let's not give in to defense mechanisms that distort the perception of reality and truth. When we do not want to see something, when we often have to pretend to ourselves that we do not care about something at all because of emotions, feelings that can be uncomfortable, painful, with which something needs to be done.**

### **The benefits of self-awareness**



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- ✓ Understanding your own thoughts and feelings
- ✓ Strengthening self-discipline
- ✓ Increased self-esteem
- ✓ Changing habits
- ✓ Establishing good relationships
- ✓ Strengthening self-discipline
- ✓ Greater agency in decision-making
- ✓ The ability to listen
- ✓ More effective learning

### 8 pillars of inner self-confidence

**Pillar 1 Self-awareness** - deepen your self-awareness

**Pillar 2 Self-acceptance** - look at yourself with your heart

**Pillar 3 Self-satisfaction** - appreciate your actions

**Pillar 4 Self-confidence** - do not doubt yourself, even when you have difficult moments, look for solutions

**Pillar 5 Value** - put yourself first

**Pillar 6 Confidence in yourself** - make decisions and act with confidence in yourself

**Pillar 7 Responsibility for your own life** - live in a way of not doing anything against yourself, with dignity, bear the consequences for bad decisions and accept what serves and what does not serve as a lesson.

**Pillar 8 Positive attitude** - try not to take everything "too seriously", distance yourself, look for advantages in every situation.

### Ways to increase self-awareness

#### 4P method

**STOP** (Polish: *Przestań*) making the distinction between good and bad emotions

**FEEL** (Polish: *Poczuj*) your emotions in your body

**KNOW** (Polish: *Poznaj*) who or what is your "trigger"

**KEEP** (Polish: *Prowadź*) an emotional diary

### Beliefs that facilitate and limit effective action

**Beliefs**, otherwise views, ways of acting, attitudes towards something, when we believe that something is right or true, have been with us from an early age. Later, they are shaped at different stages of our lives. Most of the time, we cling to them and it's hard for us to change our approach. However, it often happens that our beliefs become a reflection of our reality. They can help us or hurt us.

**Limiting beliefs:** "I'm too old for this", "I'm not good for this", "I don't deserve this", "I can't afford this", "I'm not lucky", etc.



**Positive/supporting beliefs:** "I believe that I will get this job", "When, if not now", "I can do it", "I deserve all the good that I get", "everything I need is already inside me", etc.

## 7 Habits of Effectiveness

- **Habit 1** - be proactive (healthy eating, physical activity, attention to sleep/rest, preventive healthcare, attention to development in various areas of your life)
- **Habit 2** - start with a vision of the end (a person who cares about a valuable life, bringing good to the lives of others until the very end)
- **Habit 3** - do what is most important first (set priorities in life and make sure you take care of them in the right order)
- **Habit 4** - think in terms of win-win (enter into win-win arrangements in life, e.g. the son needs his father's car to get to training, the father agrees on the condition that he refuels the car, and the son makes sure that the car is always clear. Both sides are winning.)
- **Habit 5** - first try to understand, then be understood (Such situations can be gained through cooperation, thinking about others and their needs)
- **Habit 6** - synergy (a group participating in a brainstorming is able to do more than each individual)
- **Habit 7** - sharpening the saw (when we cut a tree and at some point we can't go on, we have to sharpen the saw, just like in life sometimes we have to let go and take care of ourselves, read, take a bath, meditate, take a walk, take care of each of our spheres).

## METHODS FOR BUILDING AND PRESERVING HABITS THAT FACILITATE EFFICIENT ACTION

- **SPECIFIC START DATE** (do not say that you start, for example, to take care of physical activity from the new year or after Christmas. We set a specific date, preferably from tomorrow).
- **A COMPANION ON THE WAY** (it is important to have a supportive environment or someone who will accompany us on this road in the process of creating good habits), especially when we work together with a group whose individuals support and motivate each other.
- **REWARD** (there is a reward in the wheel of habit, but it's not about something we can buy, it's not about material goods. It's about the very fact that I do something for myself and the end result it brings. For example, regular exercise and weight loss with good nutrition relieve my spine and I gain health, and when I am healthier, I set an example for my loved ones and maybe I will inspire someone with it).

### 1.2 Advantages of knowing your strengths and weaknesses





## Basic personality traits

**Personality** is a characteristic, relatively constant way of how an individual reacts to the social and natural environment, as well as the way of interacting with it. Several factors influence the formation of our personality:

**Temperament** - (inherited) a set of characteristic features that is not dependent on the acquisition of knowledge, value system or behaviour. This is our disposition/nature, which we can easily control.

**Upbringing** - the process of teaching children, transferring values and principles by parents, teachers' input, as well as observing siblings, peers, the functioning of their families, the environment (so-called modelling).

**Environment** - everything around us.

## The big five

**Agreeableness** - People characterized by this trait are positive about the world. As a rule, these individuals are very trusting, sincere, acting for the benefit of others. These people do not like conflicts.

**Openness** - Open people can infect others with their warmth, they have no problem talking about feelings, they are aware of their own emotions. They are mostly creative people, hungry for experiences: those concerning their inner and outer world, they like novelties, new ideas.

**Conscientiousness** - People who are very organized, dutiful, disciplined, have clearly defined goals they strive for. They are characterized by commitment and responsibility.

**Extroversion** - Lively, sociable people, often talkative. They like to be among people and are often perceived as dominant, in the centre. Extroverts are full of energy, action-oriented, they feel bad in solitude, they can win people over.

**Neuroticism** - Neurotic people are more likely to feel emotions such as anxiety, anger, fear, anger, sadness, guilt. They are sensitive and experience everyday stress more acutely and do not always cope well with it. They are quite shy people.

## Personality profile and its benefits

### Benefits:

- We recognize our strengths and weaknesses
- We become more aware of our behaviour and reactions, so we can prevent stress situations
- Understanding our versatility, expectations of others become more matching with what they have, what they can offer/ provide us
- Communication with others is significantly improved

## INDIVIDUAL LIFE VALUES AND GOALS

Our values, i.e. what we profess/believe in, what we follow, are essential in life. They form the basis of our relationships with family, friends and co-workers. They determine the choices we make in life, they shape us, motivate us and help us achieve our goals and successes.



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### **Authenticity**

Truthfulness, sincerity in relationships, compliance with reality. People for whom authenticity is important do not need to wear masks of characters they are not, they like themselves and are proud of who they are; are rather consistent in their actions, faithful to what they profess, regardless of the pressure felt from the outside.

### **Balance**

Balance makes people feel an important balance between professional and life responsibilities. Maintaining this state is quite difficult due to unplanned events that bring confusion and internal imbalance.

### **Identity**

The need to be part of society makes people feel obligated as citizens. This attracts them to engage in certain activities related to the functioning of people in the country, their social rights. They take part in protests, they persuade others to join the fight for certain ideas, they fulfil themselves in this way.

### **Community**

It is basically the environment that surrounds us, the people who live in the closest environment: family, co-workers, friends, neighbours. If a community is motivating for people, it means that a sense of belonging is a huge life fulfilment for them.

### **Friendships**

For many people, friendship takes the top place in the hierarchy of their values, because thanks to true friends, their lives have a completely different quality. It makes them able to do a lot for those they care about and is a huge support, they have a big impact on the lives of others, but they can also learn a lot about themselves from them.

### **Kindness**

In relation to maintaining relationships, this is a very important value. It causes that we have a good influence on others, sometimes it is a disinterested smile, a small gesture, e.g. passing someone in a queue, showing gratitude.

### **Science and knowledge**

These are values that play a huge role in people's lives. They affect our lives and strengthen our inner strength, independence, less susceptibility to manipulation, our self-awareness, improving character.

### **Leadership**

It can be motivating and inspiring, releasing energy in people. It is certainly a value that is important for people in managerial positions or with dominant features, who are not afraid and like to make changes in life.

### **Loyalty**

It is characterized by commitment to the other person. People who are professionally loyal to their employers and the people they work with maintain strong and honest relationships.

### **Respect**

It refers to ourselves, all people around us, nature, places. It is a kind approach, reacting to evil, accepting others as they are, their beliefs, motivations, even if they are far from ours.

### **Spirituality**

For many people, it is of great importance in life. Spiritual people are often characterized by the need to do good, whether in the religion they profess, the job they are currently in, the family they have. Nurturing spirituality is the overarching goal and makes them feel fulfilled in life.



### **Material values**

There are those for whom material sources are one of the most important life values. Such people often work very hard in order to get promoted, because it makes them feel satisfied in life.

### **Recognition**

It is very valuable for personalities who like to be appreciated for what they do. Such people fulfil themselves in positions where they can be leaders.

## **SWOT ANALYSIS**

The SWOT method can also be used to determine your personal positive or negative sides. A personal SWOT analysis is a mini-tool that will fully help you reach your goal and not lose potential opportunities. It is important that we focus on what we can develop and what we can change.

**S** – Strengths;

**W** – Weaknesses;

**O** – Opportunities, i.e. potential chances and opportunities;

**T** – Threats, i.e. potential threats.

## **WHEEL OF LIFE**

Who is the creator of the technique?

The original concept of the Wheel of Life was created by Paul J. Meyer, founder of the Success Motivation Institute in 1960. Paul J. Meyer was a leader and pioneer in the coaching industry. He has built many programs to help people achieve their goals, manage their time, and be a better leader. Today, there are many versions of this technique and it is used for many purposes.

The wheel of life - in other words, the wheel of balance, the coaching wheel of values. It is a method for anyone who wants to look at their quality of life, check in which areas they are fulfilled and which are those requiring certain actions. It may turn out that there will be something that will surprise us, which we did not realize before, and during the exercise it will reveal itself. Then, for example, it will turn out that a change in a given area can be very constructive in relation to changes in other areas of life.

The “wheel of life” method is worth using when:

- We feel the contradiction of values
- We are facing an important decision
- We feel problems in relations
- Personal development is important to us
- We experience repetitive patterns, etc.



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### Advantages of this tool:

- It's not complicated
- It helps define a value system
- It helps to determine the level of satisfaction in a given area of life
- It makes you aware of the causes of certain contradictions
- It motivates you to make some changes
- It helps in making decisions
- It is conducive to the introduction of life balance
- It helps you prepare for a job interview

We can prepare the wheel of life ourselves, it depends on us what areas of life we choose.



### 1.3 The magic of creativity

#### PRINCIPLES OF CREATIVE THINKING

##### CREATIVE THINKING

This is a completely different way of thinking, acting, creating than the one most often used by us. It is believed that creative thinking is innate and weakens with age. The process of creative thinking is very much related to creativity.

##### **FACTORS AFFECTING THE PROCESS OF CREATIVE THINKING ARE:**

Experience, Intelligence, Emotions, Training.

##### THE ESSENCE OF CREATIVE THINKING:

1. DEVELOPMENT OF GOAL-SETTING SKILLS
2. COGNITIVE DEVELOPMENT
3. BUILDING MOTIVATION IN THE CREATION PROCESS
4. STRENGTHENING TRUST AND OWN POSSIBILITIES
5. RISK-TAKING
6. GIVING UP YOUR OWN LIMITATIONS
7. COMBAT DEFECTIVE BELIEFS
8. MAKING CONSCIOUS DECISIONS, MAKING CHOICES THAT SERVE US

##### SCHEME OF THE CREATIVE THINKING PROCESS:

###### 1. PREPARATION:

This stage is about identifying the problem, collecting all the information needed to solve the problem. It will be useful to set goals, create mind maps, conduct brainstorming.

###### 2. ASK YOURSELF :

It is best to ask yourself open-ended questions, because thanks to them we are willing to give a new answer. Questions are very useful in following a creative life.

###### 3. SEARCH/CONSCIOUS:

Avoid rational thinking, assumptions. It is worth considering and analyzing all factors.

###### 4. INCUBATION:

This is the beginning of developing a solution to the problem.

###### 5. EUREKA MOMENT:

Moment of enlightenment, I have the answer, the so-called "ah, we got it!".

###### 6. ASSESSMENT:

Evaluation of the solution to a given problem that appeared in the mind. It won't hurt to consult your opinion to possibly make some changes to finally confirm this solution.

###### 7. IMPLEMENTATION:

Implementation of ideas. Keep making changes until you are completely satisfied.



## LIMITATIONS OF THE CREATIVE PROCESSES:

**One-sidedness** – seeing only one direction, one most dominant feature of a given object. It doesn't allow you to identify more strengths.

**Excessive knowledge** – leads you to search for ready answers, acquired during education in a given field. It inhibits the willingness to investigate and search for new solutions.

**Diagrams** – allow you to move in a very limited area, limit the self-assessment of various aspects, objects.

**Impatience** – discourages activity in the process of creative thinking because of "i want it now".

## PRINCIPLES OF CREATIVE THINKING

### 1. THE PRINCIPLE OF DIVERSITY

The principle is simple. We work with as many **different** ideas as possible, because the more there are, the more likely we are to catch something really interesting.

### 2. DEFERRED VALUATION PRINCIPLE

It consists in rejecting the evaluation and criticism of ideas given by the group or individual ones during e.g. brainstorming.

### 3. THE PRINCIPLE OF RATIONAL IRRATIONALITY

Using intuition and emotions in the phase of finding a solution. To help this process, sometimes you need to get away from the problem and do something completely different. Go shopping, cycling, etc. It often happens that the solution comes by itself, then there is a moment of enlightenment. It happens that solutions are detached from patterns and schemes, unlike the ones we initially considered.

### 4. PRINCIPLE OF PEOPLE

A very important factor when working on finding creative solutions is having fun. It leads to getting rid of internal limitations. A positive atmosphere has a better effect on intellectual performance.

### 5. NEWS PRINCIPLE

Everything that happens and that we focus on is "here and now". We do not pay attention to external stimuli that can confuse us in the process of creating creative solutions.

## METHODS OF ENCOURAGING YOUR OWN CREATIVITY:

### 1. UNDERSTAND THE STEPS OF CREATIVE THINKING

There are 4 stages: preparation, "hatching," understanding, verification.



Preparation is the stage where we define the problem and delve into the topic. During hatching, we collect information and conduct analysis. During verification, we evaluate ideas that have arisen over time and submit them to our own assessment. All these steps will make the mind start to function much more naturally in a creative way.

## ***2. WALKING AND WALKING OUTSIDE***

This is the best method in situations when we feel internally blocked, irritable, lost. We are unable to make any decision. Oxygenation, above all, has a very good effect on the work of the brain. A lot of research shows that going out in the fresh air activates the production of hormones that enhance creativity.

## ***3. FREQUENT BREAKS AT WORK STIMULATE CREATIVE THINKING***

There are studies showing the impact of frequent breaks in the workplace on the final performance of employees. When we perform certain activities without interruption, a turning point is a common occurrence. The brain begins to be overloaded and mechanically pushes creative thinking to the background. Taking a break doesn't just "reset the head", it strengthens our physical health. The mind regenerates, and after more frequent breaks it works smoothly and effectively.

## ***4. DIVERSIFICATION OF KNOWLEDGE***

It is worth going beyond the areas to which we are accustomed. The very fact that we are firmly established in some areas of our choice is positive, but it limits our perspectives and makes our thinking more clichéd. The diversification of knowledge allows us to go beyond known solutions and look for completely non-standard, new ones.

## ***5. READING FREQUENTLY***

Reading books has a very beneficial effect on our development, regardless of our age. It is worth finding time to read at least a few pages or one chapter every day. Reading enriches our imagination, develops our vocabulary and the level of reasoning.

## ***6. WRITING ALL DOWN MANUALLY***

Writing down (preferably every morning) primarily helps us put some order in our thoughts. Writing by hand is very helpful in the ability to assimilate information, concentrate and remember. A good way is also to always have your notebook, diary or even a piece of paper with you, on which we can quickly write down what just came to our mind and we feel that it is worth writing down, so that we do not miss it, we quickly note it down.

## ***7. CREATE WHILE SLEEPING***

This method is not easy and not for everyone, but it is worth trying, because amazing things can happen. You can visualize e.g. a solution to a given problem just before going to sleep and write down in your notebook what happened during your sleep right after waking up in the morning; perhaps the solution had presented itself in a dream and had been slightly modified. You can also set an alarm, e.g. when going to sleep, we set the alarm clock to sound up to an hour after falling asleep. When we wake up, we



write down what happened during the dream. Sometimes we say that we are not dreaming, or we are so tired that nothing can wake us up, so it is good to try this method until it succeeds.

## TOOLS FOR CREATIVE WORK

- **BRAINSTORMING**

The best way to create a good idea is to generate many ideas. In order for the brainstorming process to be done well, you need to stick to the basic rules:

1. **EVERYONE HAS THE RIGHT TO HAVE A DIFFERENT OPINION.**
2. **ALL IDEAS ARE EQUALLY APPRECIATED.**
3. **CRITICISM OF OTHER PEOPLE'S IDEAS IS NOT TOLERATED.**

- **METHOD 635 (Brainwriting)**

The technique of finding and saving ideas and solutions. The author of this technique from 1968 is Bernd Rohrbach. The number 635 corresponds to the specific factors that are taken into account when performing the task. 6 means the number of people participating in the exercise, as a whole - as all listeners, or 6 participants in one group. Each person has to create 3 solutions in no more than 5 minutes. All ideas must be written down on cards. The cards are circulated so that everyone can see the written concepts. Each person should fill out 6 sheets with their 3 answers. In the end, it gives us 6 people x 6 cards x 3 solutions, which gives a total of 108 ideas.

- **MIND MAP**

This technique engages two hemispheres of the brain: the left - responsible for logical thinking, analysis, numbers and the right - imagination, colours, perception of the depth of space. When creating a mind map, two hemispheres of the brain are involved, co-creating an infinite number of solutions/ideas. The mind map method focuses on associations, starting from the main phrases, through the general ones, to the most detailed ones. The role of the mind map is to increase productivity, assimilate knowledge and train memory.

- **ISHIKAWA DIAGRAM 1962 (fish diagram)**

The purpose of this method is to find the causes of specific effects and analyze the problem. The problem/consequence is placed on the right side (fish head), and on the left side all the going lines (up, down) at an angle to the straight line (fish spine). The first task is to determine the effect. Then find all the possible causes that gave birth to it.

## Turning criticism into effective evaluation

### How to accept criticism and get the best out of it?

- Think about what phrases touched you the most and what emotions accompanied you?
- Write down which words from the critique you find useful.
- Remember that mistakes are a natural factor in human development.
- If your idea is immediately denied, remember that this is the beginning of the road, the initial stage to the next one.
- Remember that criticism can be constructive as well as a good introduction to start a discussion and exchange experiences with another person.





- You can always thank for criticism using phrases such as:

"Thank you for expressing your opinion, I have not considered this approach before, I will think about it."

"Thank you for bringing this to my attention, I'll be more careful."

"Thank you for your valuable comments."

### **Tools supporting the process of generating ideas**

When discussing individual tools, you can use a flipchart and draw graphs, drawings to better outline the correct use of a given method to the participants. This will also stimulate the group's visual thinking.

- **DESIGN THINKING** - (design thinking in approaching a problem)

This is a very versatile method.

The purpose of this method is to solve problems, to create new innovative solutions. We look at the problem from the perspective of another person, employee, recipient, client, through conversation and observing their behaviour.

#### **STEP 1 - EMPATHY**

This is the moment of "awakening". We all have limitations as to our ideas, approach to perceiving the world, views. It is not easy for us to understand how another person perceives a given problem. To understand the essence of the problem and find effective solutions, we need to go outside.

#### **STEP 2 – DEFINING THE PROBLEM**

The stage defining the problem we will face and setting the direction for further actions.

#### **STEP 3 – LOOKING FOR SOLUTIONS**

The stage in which we develop strategies and create various solutions. It is very important not to deviate from the previously chosen direction so that the actions make sense.

#### **STEP 4 - PROTOTYPING**

Creating prototypes, the initial version of our solution.

#### **STEP 5 - TESTING**

In the last stage, we check how our concept works in practice, how what we have been working on works.

- **SCAMPER**

Read to the participants what each letter of the abbreviation "SCAMPER" stands for and explain what the technique is about.

The pioneer of the method is Bob Eberle (1970s). He created a scheme in the form of the abbreviation SCAMPER. Each element of the shortcut has helping questions with relation to the problem:



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**S - SUBSTITUTE:** "What can we replace this with?" "What happens if we change our course of action?"; "What happens when we change certain people in a given project?"; "What will happen if we change the materials we've used so far?" etc.

**C - COMBINE:** "What can we combine?"; "How do you put it together?" etc.

**A - ADJUST:** "What idea could I borrow?"; "What other inspirations can be used in this?" etc.

**M - MODIFY/MAGNIFY/MINIFY:** "What can I add?"; "What needs to be doubled, strengthened, supplemented?" etc.

**P - PUT TO OTHER USES:** "What other functions does this solution have?"; "What use can adults get from it?" etc.

**E - ELIMINATE:** "What factors can I give up?"; "Is everything necessary?"; "Can I miss something?" etc.

**R - REVERSE/REARRANGE:** "What happens when I change the order?"; "Should I rearrange something?"; "Maybe change the sequences?" etc.

- **LOTUS FLOWER**

The creator of this method is Yasuo Matsumura. It consists in placing a circle in the centre of a sheet of paper, with the main problem in it. Then, draw more circles and enter possible solutions into them. You should add more circles to these drawn circles, enter the next suggestions/ideas, which in the end are the result of the previous ones. As a result, the so-called "grid" of numerous and different approaches to solving the main problem.

## **Creative problem-solving**

### **3 DISNEY CHAIRS**

Walt Disney, genius, founder of the world's largest business giant, author of the "3 chairs" concept. When looking for a strategy, solutions for a specific problem, he divided the process into three stages. There were 3 rooms with 3 chairs:

#### **THE DREAMER'S CHAIR**

Sitting on this chair, we play the role of a dreamer, not caring about any limitations. We have the right to fantasize with "head in the clouds", abandoning all everyday life and even the laws of physics.

Positive (dreamer) attitude, when a problem becomes an opportunity for us and we focus on positively considering the options for solving it. We choose the solution that seems the most pleasant to us and associated with positive emotions, driven by commitment to its implementation.

#### **REALIST'S CHAIR**

From this point, you should move on to realistic thinking (realist) to indicate what are the real chances of success of such a solution. In this attitude, you should ask questions about how to implement it and consider whether such a solution solves a specific problem.

#### **CRITIC'S CHAIR**

At the end, there is a pessimistic attitude (critic) who will answer the questions about the disadvantages of a given solution. By design, it gives "worst-case" scenarios for solving a given problem.



In conclusion: The dreamer looks at the problem in terms of opportunity and its solution as engaging work. The realist realizes what the problem is, and their solutions are analyzed in terms of sober thinking. The critic sees the problem as a very big obstacle and all its solutions have their downsides that must be taken into account.

It is important to remember that for the Walt Disney method to be effective, participants must identify with their roles as much as possible, otherwise we call this anchoring.

### **THE "5 WHY?" METHOD**

This is one of the methods that allows us to find the source of the problem step by step.

EXAMPLE:

#### **I overslept to work**

**1.** Why did you oversleep to work?

Because I didn't set an alarm clock yesterday as I usually do.

**2.** Why didn't you set an alarm clock yesterday?

Because I stayed up late until I finally fell asleep.

**3.** Why did you stay up late?

Because I had to prepare an initial outline for the work.

**4.** Why so late?

Because I'm overloaded with responsibilities.

**5.** Why are you overloaded with responsibilities?

Because I took on too many projects at work.



## MODULE 2

### WORKSHEET 2

#### Exercise 2.1 - Ecological self-assessment:

		<b>That's what I always do</b>	<b>That's what I sometimes do</b>	<b>I haven't done that yet, but I can try</b>	<b>It's not for me</b>	<b>Not applicable</b>
1	I return expired or unused medicines to the pharmacy					
2	I try to buy locally-produced goods					
3	I avoid disposable products					
4	I try to buy fruits and vegetables in bulk (unpackaged)					
5	I take my own reusable packing bags when shopping					
6	I pack vegetables and fruits in my own bags for weighing					
7	I drink tap water					
8	I try to refuse the plastic bags offered by sellers					



		<b>That's what I always do</b>	<b>That's what I sometimes do</b>	<b>I haven't done that yet, but I can try</b>	<b>It's not for me</b>	<b>Not applicable</b>
9	I try to buy as many products as possible in bulk (without packaging)					
10	I buy bread in bulk (without packaging)					
11	I consciously choose products marked with eco-labels					
12	I go shopping with a list					
13	I avoid unplanned purchases					
14	I try not to succumb to promotions					
15	Whenever possible, I choose products made of recyclable materials (recycled).					
16	I collect rainwater					
17	I take a shower instead of a bath					
18	I unplug appliances that I'm not using					
		<b>That's what I</b>	<b>That's what I</b>	<b>I haven't done</b>	<b>It's not</b>	<b>Not applicable</b>



		<b>always do</b>	<b>sometimes do</b>	<b>that yet, but I can try</b>	<b>for me</b>	
19	When buying household appliances, I pay attention to their energy efficiency					
20	Before I buy a new electronics/household appliance, I try to repair the old one					
21	I take care of the tightness of windows and doors in my flat/house					
22	I take care of the thermal insulation of my flat/house					
23	I use renewable energy sources					
24	I check whether my energy supplier uses renewable energy sources					
25	When choosing a car, I take into account its emission level					
26	When carrying out even short local trips, I plan the fastest route					
		<b>That's what I always do</b>	<b>That's what I sometimes do</b>	<b>I haven't done that yet, but I can try</b>	<b>It's not for me</b>	<b>Not applicable</b>



27	Where possible, instead of a face-to-face meeting that requires travel, I organize an online meeting					
28	If possible, I choose the train instead of the plane					
29	I choose local products that did not have to be transported far					
30	I really segregate all garbage thoroughly					
31	I avoid plastic					
32	Instead of throwing away, I try to fix things and pass them on					
33	I choose glass containers instead of plastic ones					
34	When possible, I use public e-services instead of going to the office/clinic, etc.					
35	I'm saving paper					
		<b>That's what I always do</b>	<b>That's what I sometimes do</b>	<b>I haven't done that yet, but I can try</b>	<b>It's not for me</b>	<b>Not applicable</b>



36	I limit my meat consumption					
37	I care about nature					
38	I choose organic products					
39	I use a cup to brush my teeth (I don't brush my teeth under running water)					
40	I use aerators in the faucets and a rain showerhead in the shower					
41	I don't run the washing machine/dishwasher until it's full					
42	I use the ECO mode in the washing machine/dishwasher					
43	I don't waste food (I buy as much as I really need and eat it or give it to others)					
44	When boiling water in the kettle, I pour only as much as I really need					
		<b>That's what I always do</b>	<b>That's what I sometimes do</b>	<b>I haven't done that yet, but I can try</b>	<b>It's not for me</b>	<b>Not applicable</b>





45	I use the water from washing vegetables and fruits to water the flowers					
46	When I can, I choose public transport or a bicycle					
47	Waste that cannot be sorted at home (e.g. batteries, fluorescent lamps and electro-waste), I throw/hand over to the appropriate containers/places outside the house					

## Exercise 2.2 - Segregating waste

### Option 1:

1. Cut out the following types of waste, put them in a common container (can be an envelope, a jar) and mix.
2. We mark places that are waste containers:
  - Metal/plastics,
  - Glass,
  - Paper,
  - Bio ,
  - Mixed waste,
  - Other (Points of Selective Collection of Municipal Waste)

Depending on the room and its equipment, it can be 6 tables (we put the name of the "waste container" on each one) or 6 containers of any type (e.g. jars, large envelopes). The purpose of the exercise is also physical activity, therefore the containers should be placed in different parts of the room.

If the location of the room and the season allows, the exercise can be carried out outside, e.g. on the lawn in front of the room.

If there is no wind, cards depicting garbage can be scattered on the lawn (10 per person).

3. The participants draw from the envelope/any container min. 10 garbage items (cards with the names of different waste).
4. Each of the participants throws the garbage they have drawn into the container they consider to be the right one (we ask the group not to consult, the exercise is anonymous).



- Once all the "garbage" has gone into the "containers", the trainer takes each of the bins one by one, pulls out the garbage and reads the names. The group jointly assesses whether a given piece of garbage should actually go to a given container.

Option 2:

It is possible to use a more ecological form of this exercise, i.e. the trainer reads (in a random order) the name of the garbage, and the participants together decide which section it should go to. The garbage items on the cards are partly arranged by types of containers, so you should avoid reading "in sequence".

Plastic cap	Plastic bottle with contents
Plastic drink bottle	A plastic toy
Empty medication blister pack	Used disposable gloves
Milk carton	Medication packaging
Juice carton	Motor oil packaging
Toothpaste packaging	Auto parts



Shampoo plastic packaging	Used batteries
Shower gel plastic packaging	Paint can
A can of green peas	Car paint container
Carrier bag	Expired drugs
Plastic bag	Used syringes
Foil	Used medical needles
A can of tomatoes	Worn-out dishwasher
Canned food can	Worn-out laptop



Aluminum foil	worn-out TV
Jar cap	Worn-out mobile phone
Bottle cap	Worn-out radio
Used spray deodorant	Unused spray deodorant
Used spray hairspray	Unused spray hairspray
Pure Styrofoam (from an appliance box)	Waste toner from the printer
Paper packaging	Used paper towel
Cardboard	Varnished paper



Envelope	Foil-coated paper
Corrugated cardboard	Greasy paper
Paper catalogs	Dirty sandwich paper
Leaflets	Paper fertilizer bag
Damaged book	Paper cement bag
Magazine	Wallpaper
Newspaper	Disposable diaper
School and office paper	Greasy disposable paper packaging



Notebook	Greasy disposable packaging
Printed sheets	Clothes
Books	Yogurt packaging
Wrapping paper	Paper in which the ham bought "by weight" was wrapped
Paper bags	Paper in which cheese bought "by weight" was wrapped
Paper bags	Fence mesh
Car window	Mirror
Glass bottle of olive oil	Ceramics



Glass packaging of face cream	Ceramic pot
A jar of cucumbers	Porcelain
Glass bottles of eye cream	Crystal glass
Beer bottle	Windowpane
Jam jar	Spectacle glass
Juice glass bottle	Heat-resistant glass
Green glass bottle	A candle with wax content
White glass bottle	Bulb



A small jar of tomato paste	Fluorescent lamp
Wine bottle	Car headlight
Vegetable waste	Animal bones
Fruit waste	A used toothbrush
Branches of trees and bushes	Edible oil
Mown grass	Animal excrement
Sawdust and tree bark	Hard coal ash
Untreated wood	Stones





Food leftovers	Impregnated wood
Potato peelings	MDF chipboard
Cucumber peel	Soil
Apple peel	Fibreboard
Plum pits	Leftover meat after dinner with bones
Dry leaves	Surgical face mask
Dry flowers	Disposable razor
Tea bag	Contact lenses



Baby pacifier	Dish-washing sponge
Syrup glass bottle	Syrup plastic bottle
Pen	Felt-tip pen
A small plastic toy (e.g. a block)	Chips packaging
Used pot	Broken garlic press
Broken safety pin	Broken pin
Broken scissors	Plastic CD/ DVD case
Squeezed ointment tube	Glass perfume bottle



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A roll of toilet paper	A roll of paper towel
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### Exercise 2.3 - Ecology and household budget

In the table below, mark (e.g. with an "X") in what way a given environmental action/behaviour affects the household budget.

		<b>It causes <u>savings</u> in the household budget</b>	<b>Neutral for the household budget</b>	<b>Increases <u>costs</u> in the household budget</b>
1	Buying products "by weight" instead of already packed (e.g. cheese, meats, vegetables)			
2	Buying seasonal products (e.g. vegetables and fruits)			
3	Buying local products			
4	Bringing your own reusable bag for shopping			
5	Drinking tap water			
6	Going shopping with a list			
7	Taking a shower instead of a bath			
		<b>It causes <u>savings</u> in the</b>	<b>Neutral for the</b>	<b>Increases <u>costs</u> in the</b>



		household budget	household budget	household budget
8	Refusing plastic bags offered by sellers			
9	Buying bread in bulk (without packaging)			
10	Unplug appliances that are not in use			
11	Segregation of waste			
12	Buying energy-saving electronics/household appliances			
13	Collecting rainwater			
14	Repairing electronics / household appliances instead of buying a new one			
15	Taking care of the tightness of windows and entrance doors in winter			
16	Thermal insulation of a residential building			
		<b>It causes <u>savings</u> in the household budget</b>	<b>Neutral for the household budget</b>	<b>Increases <u>costs</u> in the</b>



				household budget
17	Using renewable energy sources (e.g. electricity from photovoltaic panels)			
18	Using renewable energy to heat water (photovoltaic panels)			
19	Choosing the shortest car route			
20	Travel by train instead of by plane			
21	Sale of used and unnecessary things			
22	Using public e-services instead of going to the office			
23	Limiting meat consumption			
24	Brushing your teeth with a cup (instead of running water)			
25	Using aerators in faucets and a rain showerhead in the shower			
26	Turn on the washing machine/dishwasher when it is full			

### Exercise 2.4 – Shopping

Read the product descriptions and make the BEST choice according to you.



	I choose (mark with an X)
Washing machine No. 1 Price: X Energy saving: A Warranty: 2 years	
Washing machine No. 2 Price: X - PLN 200 Energy saving: B Warranty: 3 years	

	I choose (mark with an X)
Butter No. 1 Price: X Weight: 200 grams	
Butter No. 2 Price: X + PLN 1 Weight: 300 grams	

	I choose (mark with an X)



Used car (3 years old) No. 1 Price: X Warranty: none Fuel consumption: 8.9 l Fuel type: PB (unleaded petrol)	
Used car (3 years old) No. 2 Price: X - 10% Warranty: 1 year Fuel consumption: 12.9 l Fuel type: ON (diesel)	

	I choose (mark with an X)
Sunflower Oil No. 1 Price: X Weight: 1 litre Shelf life: 3 months	
Sunflower Oil No. 2 Price: 4 x X Weight: 5 litres Shelf life: 3 months	





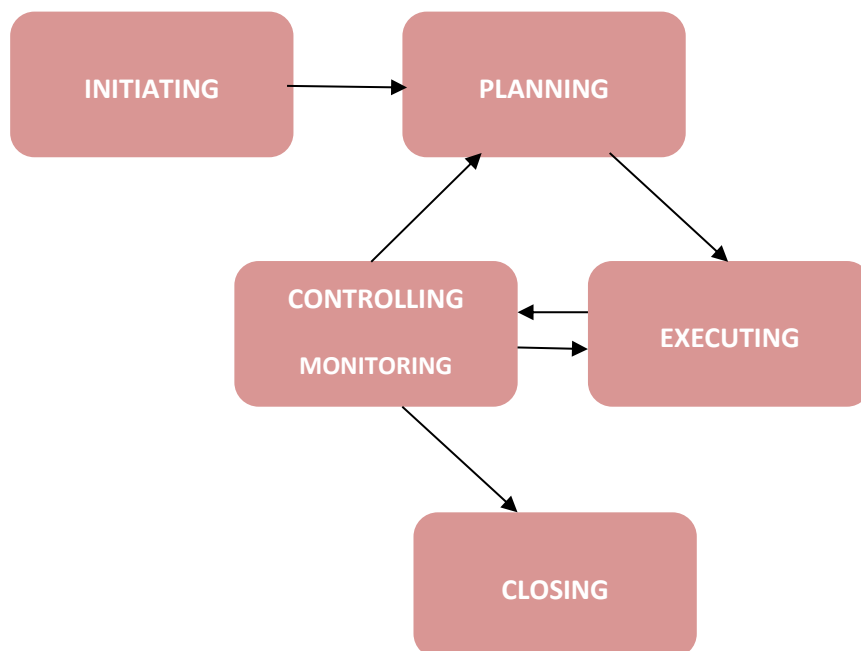
	I choose (mark with an X)
<p>Strawberry jam No. 1</p> <p>Price: X</p> <p>Weight: 195 grams</p> <p>Ingredients: strawberries (40%), sugar, water, gelling agent - pectins, thickening agent - guar gum, acidity regulator - citric acid</p>	
<p>Strawberry jam No. 2</p> <p>Price: X</p> <p>Weight: 195 grams</p> <p>Ingredients: strawberries (100 g of strawberries per 100 g of the product), fruit sugars, concentrated lemon juice to correct the sour taste, gelling agent - pectins</p>	



## MODULE 3

### WORKSHEET 3.1

Stages of project management and dependencies between them



Adapted from: A Guide to the Project Management Body of Knowledge (PMBOK® Guide) 2000 Edition, p. 31  
<https://www.cs.bilkent.edu.tr/~cagatay/cs413/PMBOK.pdf> (accessed November 10, 2022)



## Roles in the project

Exercise - match the role in the project to its description:

1. Sponsor	A. The person who will use what will be created as a result of the project activities.
2. Project manager	B. There are one-person projects, but usually several people work on them. Group members who pursue the goal of the project.
C. The project team	C. Takes the initiative to start work. He/she owns the project, provides resources for its implementation and makes sure that it gets the right support.
D. Functional managers	D. The person responsible for implementing the idea. The biggest challenge is high responsibility with little impact on the environment.
E. Client	E. In large companies, it is department managers who assign project team members.
F. User	F. Someone for whom the project is carried out. He/she defines key requirements.



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1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

Based on: M. Kapusta, *Zarządzanie projektami krok po kroku*. Warszawa: Edgard, 2013, ed. I, pp. 28-29.



**Ways to create a project card in a team (by Mariusz Kapusta)**

No.	Question	Project card element	Tools used
1.	Why was the project established?	<b>Business background</b> - explains the reasons for establishing the project and its business goals.	<ul style="list-style-type: none"> <li>➤ discussion - describing the current situation</li> <li>➤ brainstorming - if business goals and success criteria are not clearly presented</li> </ul>
2.	What is the goal of the project?	<b>Project goal</b> - business goals may go beyond the scope of the project; in this case, describe what is expected to be the end result of the project.	<ul style="list-style-type: none"> <li>➤ discussion – describing currently known goals</li> <li>➤ brainstorming – identifying potential goals that may not have been articulated</li> </ul>
3.	Who to involve in the project?	<b>Key stakeholders</b> – proper management of relations with people involved in the project is one of the key success factors.	<ul style="list-style-type: none"> <li>➤ brainstorming - identifying key stakeholders</li> <li>➤ discussion - building a matrix of stakeholders (...)</li> </ul>
4.	How will you know that the goal has been achieved?	<b>Criteria for Success</b> - To be able to determine whether success has been achieved, you must be able to measure it.	<ul style="list-style-type: none"> <li>➤ brainstorming - defining measures of success</li> <li>➤ discussion – defining the ranges that the measures should meet</li> </ul>
5.	What to do during the project?	<b>Scope of the project</b> - in order to implement the project, a number of elements must be created, which, when put together, give the final effect.	<ul style="list-style-type: none"> <li>➤ discussion - creating a complete list of key elements of the project</li> </ul>
6.	How many milestones do you have to go through to complete the project?	<b>Milestones</b> - The progress of the project is determined by the completion of these major milestones.	<ul style="list-style-type: none"> <li>➤ discussion - creating a preliminary schedule of successive stages that will lead to a happy ending (usually several, several dozen)</li> </ul>



7.	How much will the project cost?	<b>Project cost</b> – at the start of the project, these are often only generally estimated costs, or simply only the available budget is given here.	➤ discussion - creating an estimated range of costs "from-to"
8.	What can prevent the implementation of the project?	<b>Threats</b> - knowing the key threats, you can plan an appropriate response in advance, and thus avoid unpleasant surprises.	➤ brainstorming - creating a list of the most important threats to the project (5-10)
9.	What can significantly help in the implementation of the project?	<b>Opportunities</b> - knowing the most important opportunities, you can get help from your superiors in their use, and thanks to this, the implementation of the entire project will be easier.	➤ brainstorming - creating a list of the most important opportunities for the project (5-10)
10.	What limits the freedom of project implementation?	<b>Limitations</b> – everything that limits the room for manoeuvre in planning and implementation, e.g. a budget or a really tight deadline.	➤ brainstorming - creating a list of key constraints
11.	What conditions must be met to be able to implement the project?	<b>Assumptions</b> – for planning purposes, it is assumed that certain conditions will be met, e.g. access to needed resources will be obtained; hidden assumptions often cause planning errors.	➤ brainstorming – creating a list of all the conditions that must be met to be able to implement the project

Source: M. Kapusta, *Zarządzanie projektami krok po kroku*. Warszawa: Edgard, 2013, ed. I, pp. 62-63.



**PROJECT CARD TEMPLATE - SMALL PROJECT (by Mariusz Kapusta)**

**PROJECT NAME:**

**PROJECT MANAGER:**

**BUSINESS BACKGROUND:**

Optionally, a few sentences about the reasons for implementing the project in the organization. What was the impetus to start it?

**OBJECTIVE:**

What do you want to achieve?

How will you know that the goal has been achieved?

**PROJECT BUDGET AND OTHER LIMITATIONS:**

What financial resources do you have at your disposal?

By what date must the project be completed?

Who do you have at your disposal?

What other projects do you depend on?

**THREATS:**

What can go wrong?	What can be done to prevent or mitigate negative events?
	<ul style="list-style-type: none"> <li>➤ to avoid</li> <li>➤ mitigate the impact, the likelihood, or both</li> <li>➤ accept passively - if it happens, it's hard</li> <li>➤ actively accept - if it happens, that's the plan</li> <li>➤ transfer (insurance, outsourcing)</li> </ul>

**SCOPE, TIME, RESPONSIBILITIES:**

What is to be done?	By when is this supposed to be done?	Who will do it?
These can be stages, e.g. analysis, design, implementation, or specific products, e.g. foundations, walls, roof.	It is worth remembering about the interval (e.g. January-April, if you are just starting the project), these dates in the plan may still change.	Optionally, if you don't have cost targets for specific milestones or products, stay with the overall project cost and remove this column.

**OTHER INFORMATION:** Sometimes something is important to the project and goes beyond these guidelines. This is the right place to enter this information.

Source: M. Kapusta, *Zarządzanie projektami krok po kroku*. Warszawa: Edgard, 2013, ed. I, p. 64.



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## Problem and solution tree



Write down the main problem in the centre of a piece of paper or a large sheet of paper (the trunk of the problem tree).

Add reasons below the main problem.

The causes form the roots of the tree and can grow deep and interconnect depending on the problem. Use arrows to show the relationship between the root causes and the problem.

Draw arrows leading upwards from the main problem and add different consequences of this problem. They are tree branches. For each of these consequences, you can "branch" to any further consequences.

Keep adding causes and consequences with arrows showing how they contribute to each set of roots and branches until you can't think of any more. You can also look at the soil the tree is growing in - are the roots nourished or is it fertile soil for the problem?

It may be useful to summarize your findings about the problem and its consequences, and present them with suggestions for solutions.

It is important to think about solutions to the problem at hand:

- What would be the solution to the root causes of the problem?
- What should be changed?
- Who can help make the change?
- What attitudes and behaviours need to change?

Based on:

[https://en.duf.dk/fileadmin/user\\_upload/Editor/5\\_The\\_problem\\_tree\\_and\\_development\\_of\\_solutions.pdf](https://en.duf.dk/fileadmin/user_upload/Editor/5_The_problem_tree_and_development_of_solutions.pdf)  
<https://pixabay.com/pl/vectors/tree-d%C4%85b-wind-goes-roots-307951/>

## An example of a problem/solution tree





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<b>PROBLEM</b>	<b>OBJECTIVE</b>
<b>Low level of digital skills among people 50+</b>	<b>Increase in the level of digital skills among people 50+</b>
<b>There are no initiatives related to the activation of seniors</b>	<b>Organization of free activities for seniors</b>



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Analysis of goals in the project using the SMART method

<p><b>Specific</b></p> <p><b>Measurable</b></p> <p><b>Achievable</b></p> <p><b>Relevant</b></p> <p><b>Time-bound</b></p>
--

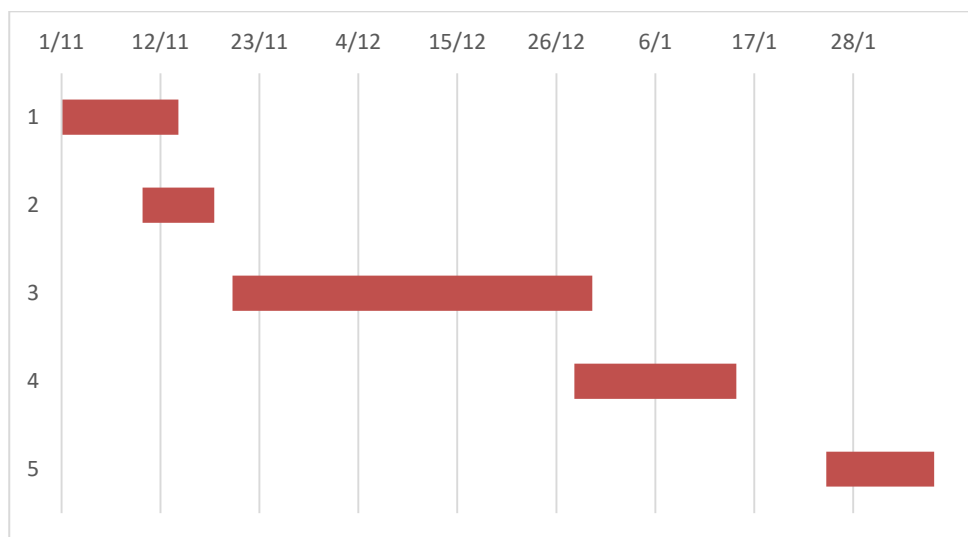
OBJECTIVE	
<b>S</b> →	.....
<b>M</b> →	.....
<b>A</b> →	.....
<b>R</b> →	.....
<b>T</b> →	.....

SMART GOAL: Competence increase in the use of new technologies in 10 people 50+ by 40% in the next three months



### Project schedule: Gantt chart

#### Sample chart:





## Project risk management

PMBok – *A Guide to Project Management Body of Knowledge*, <http://www.pmi.org>, a guide to the world of project management created by the Project Management Institute, states that risk is one of the areas of project management that consists of six processes:

- 1. Planning risk management**, i.e. defining methods, techniques, ways and tools to manage risk;
- 2. Identifying risks**, i.e. defining those risks that may affect our project;
- 3. and 4. Conducting a risk analysis: qualitative**, i.e. identifying which risks to address, which to focus on/prioritisation; **quantitative**, i.e. a numerical analysis of the risks identified through the qualitative analysis;
- 5. Planning the response to risk**, i.e. planning the actions/appointing people in relation to possible intervention when risks occur in the project;
- 6. Risk monitoring and control**, i.e. putting the previously planned actions into practice, monitoring the execution of these actions and controlling the status of risks in the project.

### Possible responses to risks (but also opportunities) in the project are the following:

- Risk/threat avoidance - e.g. a decision to abandon the project altogether.
- Risk/threat reduction - actions to reduce the impact of an event or reduce the likelihood of it occurring.
- Risk transfer - e.g. involvement of a third party, subcontractor etc.
- Risk acceptance - involves observing the status of the risk, it does not involve taking action.
- Seizing an opportunity - in other words, taking advantage of an event that may unexpectedly benefit the project.
- Opportunity amplification - taking advantage of an opportunity, but only partially.
- Rejecting an opportunity involves consciously ignoring/not taking advantage of it.

Based on: [http://edunice.pl/wp-content/uploads/2012/09/zarz%C4%85dzanie-ryzykiem\\_web.gov\\_pl.pdf](http://edunice.pl/wp-content/uploads/2012/09/zarz%C4%85dzanie-ryzykiem_web.gov_pl.pdf),  
M. Prywata, *Zarządzanie ryzykiem w małych projektach*, Warszawa: PARP, 2010.



### Sample risk register

No.	Project risk/threat (situation/event)	Probability of occurrence	Possible reaction/corrective action
1.	Delays in project work	High	Planning of a detailed timetable, taking into account public holidays, non-working days, etc.  Involving additional people if problems arise.
2.	Flight cancellation (e.g. in a project where a meeting with a foreign partner in another country is organised)	Likely	Planning other forms of meeting, e.g. online meeting, webinar, remote participation of the selected people who did not make it to the meeting.
3.	...	Moderate	...
4.	...	Low	...



## WORKSHEET 3.2

### My personal project - analysis of goals using the SMART method

<p><b>Specific</b></p> <p><b>Measurable</b></p> <p><b>Achievable</b></p> <p><b>Relevant</b></p> <p><b>Time-bound</b></p>
--

OBJECTIVE	
<b>S</b>	→
.....	
<b>M</b>	→
.....	
<b>A</b>	→
.....	
<b>R</b>	→
.....	
<b>T</b>	→
.....	



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## PRESENTATIONS – MODULES: 1, 2, 3

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Key competences for people aged 50+

**Course: Entrepreneurship**

**Self-awareness - the art of self-insight**

**Module 1**

KK50+



**"Self-awareness is  
the development of  
a personality that  
is made beautiful  
by happiness and  
love."**

**- August Witt**



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## SELF-AWARENESS as an element of EMOTIONAL INTELLIGENCE



## SELF-AWARENESS - MONITORING OUR INTERNAL AND OUTSIDE WORLD.



### INTERNAL SELF-AWARENESS:

Observation of own emotions, reactions, values, ambitions, expectations, desires, aspirations. Being aware of one's own strengths and weaknesses. Moreover, it is understanding what influence we have on others.

### EXTERNAL SELF-AWARENESS:

Indicates to what extent we realize how we are perceived by others according to the above-mentioned categories.







## 5 COMPONENTS OF EMOTIONAL INTELLIGENCE - (Daniel Goleman)

### DANIEL GOLEMAN

- AMERICAN PSYCHOLOGIST
- SCIENCE JOURNALIST
- AUTHOR OF THE BESTSELLER "EMOTIONAL INTELLIGENCE"
- In his book, he pointed out 5 elements of emotional intelligence.



### ■ EMOTIONAL INTELLIGENCE –

“The capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships.” (Daniel Goleman)



### The 5 Components of Emotional Intelligence:

- **Self-regulation** (control over your emotions, self-control, conscientiousness, innovation)
- **Empathy** (recognition of others' emotions)
- **Social skills** (control over the relationship with another person)
- **Motivation** (self-motivating, commitment, initiative, optimism)
- **Self-awareness** (knowing your own emotions, correct self-esteem, self-confidence)

### BENEFITS OF SELF-AWARENESS (EXERCISE - BRAINSTORMING)





- Understanding your own thoughts and feelings
- Strengthening self-discipline
- Increased self-esteem
- Changing habits
- Establishing good relationships
- Strengthening self-discipline
- Greater agency in decision-making
- The ability to listen
- More effective learning



## 8 PILLARS OF INTERNAL CONFIDENCE

- Pillar 1 **Self-awareness**
- Pillar 2 **Self-acceptance**
- Pillar 3 **Self-satisfaction**
- Pillar 4 **Self-confidence**
- Pillar 5 **Value**
- Pillar 6 **Confidence in yourself**
- Pillar 7 **Responsibility for your own life**
- Pillar 8 **Positive attitude**





## HOW TO TAKE CARE OF OUR SELF-AWARENESS?

**REGENERATION OF OUR BODY** IS A VERY IMPORTANT FACTOR. WHEN WORKING ON SELF-CONSCIOUSNESS, WE NEED TO BE **RESTED** BECAUSE WITH INTENSIVE SELF-ANALYSIS, **OUR ENERGY DEPOSIT QUICKLY VANISHES.**



**DON'T GIVE UP TO DEFENSE MECHANISMS DISTURBING THE RECEPTION OF REALITY,**

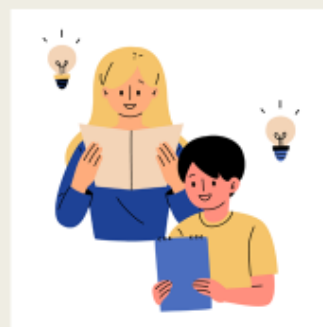
**TRUTH**

**WHEN WE DON'T WANT TO SEE SOMETHING, WE OFTEN HAVE TO PRETEND THAT WE DON'T CARE ABOUT SOMETHING, BECAUSE OF EMOTIONS, FEELINGS THAT MAY BE UNCOMFORTABLE, PAINFUL, WITH WHICH SOMETHING NEEDS TO BE DONE.**

**(EXERCISE)**

## WAYS TO INCREASE YOUR SELF-AWARENESS

- **STOP** making the distinction between good and bad emotions
- **FEEL** your emotions in your body
- **KNOW** who or what is your “trigger”
- **KEEP** an emotional diary





## WAYS TO INCREASE SELF-AWARENESS

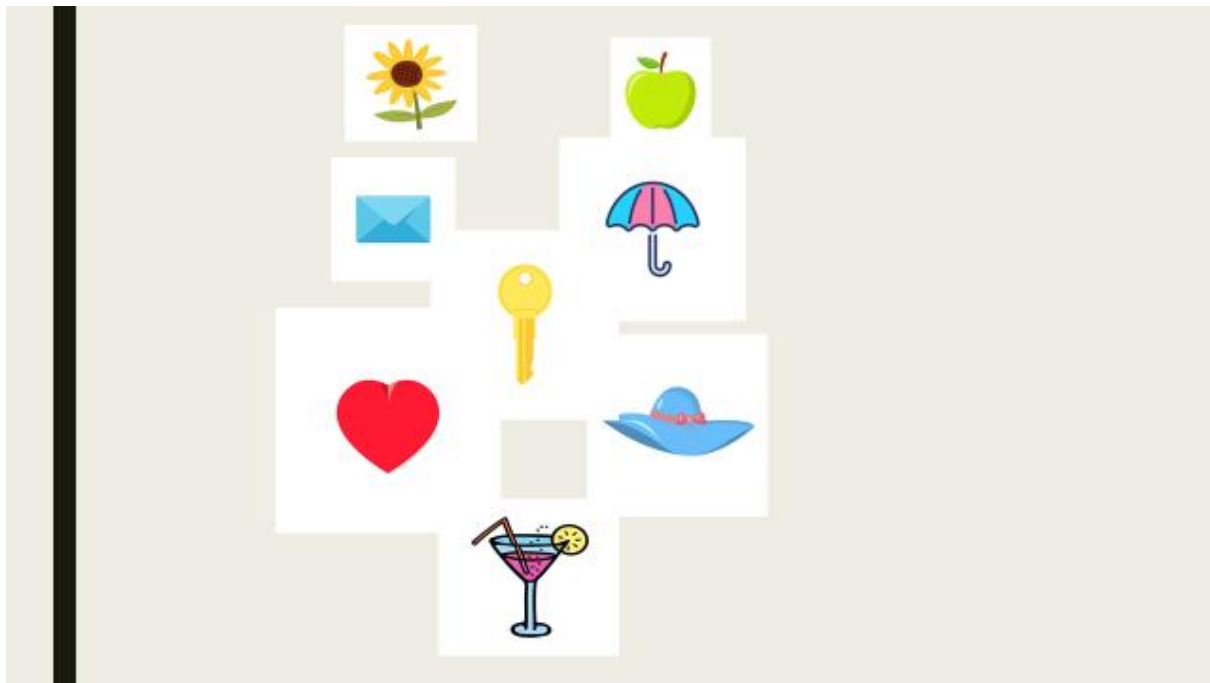
- LOOKING FOR NEW EXPERIENCES
- RECOGNIZING COGNITIVE DISTORTIONS
- ANALYSIS OF VALUES
- SEEKING OPINIONS FROM YOUR LOVED ONES ABOUT YOUR ATTITUDES, CHARACTERISTICS OR BEHAVIOURS



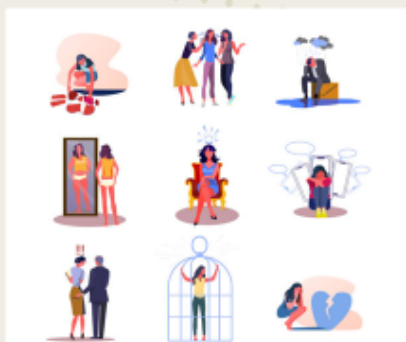
## COGNITIVE PROCESSES ARE THE BASIS IN BUILDING SELF-AWARENESS.

COGNITIVE PROCESSES INCLUDE, AMONG OTHERS, THINKING, MEMORY, ATTENTION, PERCEPTION, INDEPENDENT PROBLEM-SOLVING, CONCEPT CREATION, INDEPENDENT PLANNING.





## BELIEFS THAT FACILITATE AND LIMIT EFFECTIVE ACTION



- **LIMITING BELIEFS** - HARMFUL BELIEFS THAT DO NOT SERVE US, HINDER OUR EMPOWERMENT, E.G.:  
"I AM TOO OLD FOR THIS" ,  
"I'M NOT SUITABLE FOR THIS"  
"I DON'T DESERVE THIS"  
"I CAN NOT AFFORD IT",  
"I HAVE NO LUCK"  
ETC.



### FACILITATIVE BELIEFS - POSITIVE, SUPPORTING, e.g.:

- "I BELIEVE, I WILL GET THIS JOB",
- "WHEN, IF NOT NOW",
- "I CAN HANDLE IT",
- "I DESERVE ALL THE GOODNESS I GET"
- "EVERYTHING I NEED I ALREADY HAVE IN ME" ETC.



### UNMASKING THE HABITS THAT HINDER EFFECTIVE ACTION



### HABITS





**WHAT CAN I DO TO MAKE MY ACTIONS EFFECTIVE?**

STEPHEN COVEY DESCRIBED 7 HABITS THAT LEAD TO CONSTANT AND INTEGRATED GROWTH OF PERSONAL EFFICIENCY.

- **N1** - BE PROACTIVE
- **N2** - START WITH A VISION OF THE END
- **N3** - DO THE MOST IMPORTANT THING FIRST
- **N4** - THINK IN WIN-WIN CATEGORIES
- **N5** - FIRST UNDERSTAND, THEN BE UNDERSTOOD
- **N6** - SYNERGY
- **N7** - SHARPENING THE SAW

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Key competences for people aged 50+

**Course: Entrepreneurship**  
**Advantages of knowing one's strengths  
and weaknesses**  
**Module 1**



## HUMAN PERSONALITY

A characteristic, relatively constant way of how an individual reacts to the social and natural environment, as well as the way of interacting with it.



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## FACTORS AFFECTING PERSONALITY

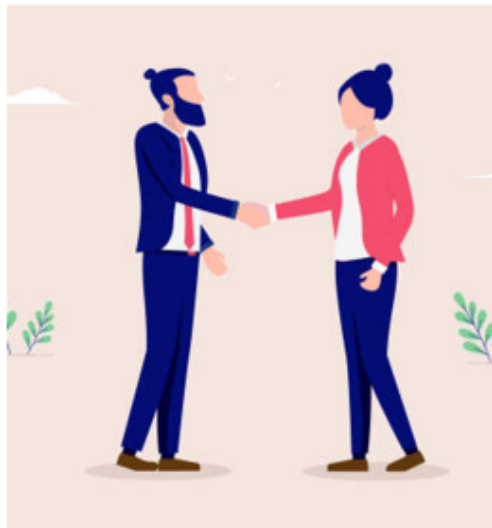
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- TEMPERAMENT
- EDUCATION
- ENVIRONMENT

## BIG FIVE –

## THE BIG 5 PERSONALITY TRAITS



## 1. AGREEABLENESS

People characterized by this trait are positive about the world. As a rule, these individuals are very trusting, sincere, acting for the benefit of others. These people do not like conflicts.

## 2. OPENNESS TO EXPERIENCE

Open people can infect others with their warmth, they have no problem talking about feelings, they are aware of their own emotions. They are mostly creative people, hungry for experiences: those concerning their inner and outer world, they like novelties, new ideas.





### 3. CONSCIENTIOUSNESS

People who are very organized, dutiful, disciplined, have clearly defined goals they strive for. They are characterized by commitment and responsibility.



### 4. EXTRAVERTISM

Lively, sociable people, often talkative. They like to be among people and are often perceived as dominant, in the centre. Extroverts are full of energy, action-oriented, they feel bad in solitude, they can win people over.



## 5. NEUROTISM

Neurotic people are more likely to feel emotions such as anxiety, anger, fear, sadness, guilt. They are sensitive and experience everyday stress more acutely and do not always cope well with it. They are quite shy people.



## PERSONALITY PROFILE





## BENEFITS

- Recognizing our strengths and weaknesses
- Becoming more aware of our behaviour and reactions, so we can prevent stress situations
- Understanding our versatility, expectations of others become more matching with what they have, what they can offer/ provide us
- Communication with others is significantly improved



## INDIVIDUAL LIFE VALUES AND GOALS

- AUTHENTICITY
- BALANCE
- IDENTITY
- COMMUNITY
- FRIENDSHIP
- KINDNESS
- SCIENCE AND KNOWLEDGE
- LEADERSHIP
- LOYALTY
- RESPECT
- SPIRITUALITY
- MATERIAL VALUES
- RECOGNITION





## WHAT IS A SWOT ANALYSIS?

SWOT ANALYSIS – IS ONE OF THE MOST POPULAR TOOLS / METHODS FOR ORGANIZATION ANALYSIS. IT IS USED TO IDENTIFY ALL STRENGTHS AND WEAKNESSES, OPPORTUNITIES AND THREATS IN ORDER TO DEVELOP A COMPANY STRATEGY.



## PERSONAL SWOT ANALYSIS

However, the SWOT method can also be used to determine your personal positive or negative sides.

A personal SWOT analysis is a mini-tool that will fully help you reach your goal and not lose potential opportunities.



- S** (STRENGTHS)
- W** (WEAKNESSES)
- O** (OPPORTUNITIES)
- T** (THREATS)  
POTENTIAL HAZARDS



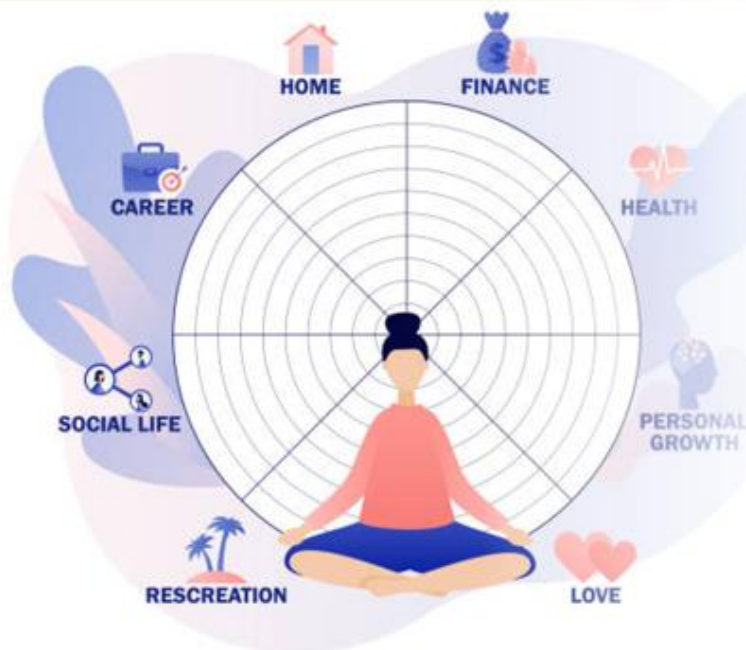




## WHEEL OF LIFE

**Paul J. Meyer**, founder of the Success Motivation Institute in 1960.

Paul J. Meyer was a leader and pioneer in the coaching industry. He has built many programs to help people achieve their goals, manage their time, and be a better leader. Today, there are many versions of this technique and it is used for many purposes.



### WHEEL OF LIFE –

in other words, the wheel of balance, the coaching wheel of values. It is a method for anyone who wants to look at their quality of life, check in which areas they are fulfilled and which are those requiring certain actions.



### THIS METHOD IS WORTH USING WHEN:

- WE FEEL A CONTRADICTION OF VALUES
- WE ARE FACING AN IMPORTANT DECISION
- WE FEEL PROBLEMS IN RELATIONSHIPS
- PERSONAL DEVELOPMENT IS IMPORTANT FOR US
- WE EXPERIENCE REPETITIVE PATTERNS, ETC.



## BENEFITS

- It's not complicated
- It helps define a value system
- It helps to determine the level of satisfaction in a given area of life
- It makes you aware of the causes of certain contradictions
- It motivates you to make some changes
- It helps in making decisions
- It is conducive to the introduction of life balance
- It helps you prepare for a job interview



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Key competences for people aged 50+

## Course: Entrepreneurship Module 1





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**PATTERNS IN THE PROCESS OF  
CREATIVE THINKING**



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### **CREATIVE THINKING**

IT IS A COMPLETELY DIFFERENT WAY OF THINKING, ACTING, CREATING THAN THE WAY WE MOST OFTEN USE.

IT IS RECOGNIZED THAT CREATIVE THINKING IS INHERENT AND DECLINES WITH AGE.

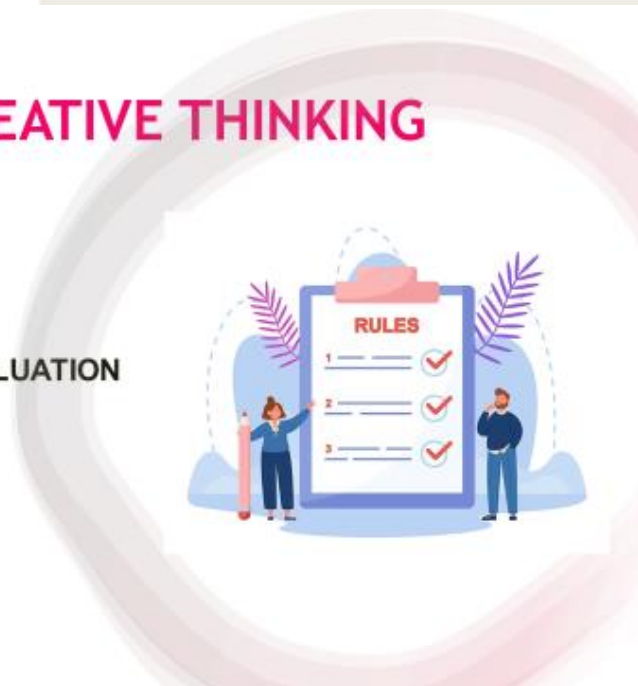
THE PROCESS OF CREATIVE THINKING IS LINKED WITH CREATIVITY.

**FACTORS AFFECTING THE PROCESS OF CREATIVE THINKING ARE:**

- **EXPERIENCE**
- **INTELLIGENCE**
- **EMOTIONS**
- **TRAINING**

## **PRINCIPLES OF CREATIVE THINKING**

- 1. PRINCIPLE OF DIVERSITY**
- 2. PRINCIPLE OF DEFERRED VALUATION**
- 3. THE PEOPLE PRINCIPLE**
- 4. PRINCIPLE OF TIMELINESS**





## THE ESSENCE OF CREATIVE THINKING



1. DEVELOPMENT OF GOAL-SETTING SKILLS
2. COGNITIVE DEVELOPMENT
3. BUILDING MOTIVATION IN THE CREATION PROCESS
4. REINFORCING TRUST AND ONE'S OWN POSSIBILITIES
5. RISK-TAKING
6. GIVING UP YOUR OWN LIMITATIONS
7. FIGHTING DESTRUCTIVE BELIEFS
8. MAKING CONSCIOUS DECISIONS, MAKING CHOICES THAT SERVE US

## SCHEME OF THE CREATIVE THINKING PROCESS

1. PREPARATION
2. ASK YOURSELF
3. SEARCH/REFLECT
4. INCUBATION
5. EUREKA MOMENT
6. EVALUATION
7. IMPLEMENTATION





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## LIMITATIONS OF THE CREATIVE PROCESSES

- **ONE-SIDEDNESS**
- **EXCESSIVE KNOWLEDGE**
- **PATTERNS**
- **IMPATIENCE**





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## TOOLS OF CREATIVE WORK

# BRAINSTORM



## METHOD 635

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## MIND MAP

## ISHIKAWA DIAGRAM





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## METHODS OF STIMULATING YOUR OWN CREATIVITY



### 1. UNDERSTAND THE STEPS OF CREATIVE THINKING



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## 2. WALKING AND WALKING OUTSIDE



## 3. FREQUENT BREAKS AT WORK STIMULATE CREATIVE THINKING



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## 5. READING FREQUENTLY





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## 6. WRITING EVERYTHING DOWN MANUALLY



## 7. CREATE WHILE SLEEPING



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## TOOLS SUPPORTING THE PROCESS OF GENERATING IDEAS



### DESIGN THINKING - step by step

- STEP 1 - EMPATHY
- STEP 2 - DEFINING THE PROBLEM
- STEP 3 - LOOKING FOR SOLUTIONS
- STEP 4 - PROTOTYPING
- STEP 5 - TESTING



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- S** (SUBSTITUTE)
- C** (COMBINE)
- A** (ADAPT)
- M** (MODIFY / MAGNIFY / MINIFY)
- P** (PUT TO OTHER USES)
- E** (ELIMINATE)
- R** (REVERSE / REARRANGE)



# LOTUS FLOWER



## METHODS OF CREATIVE PROBLEM SOLVING

- Workshop work on specific problems
- Analysis of cases and business trends
- Individual exercises
- Work in teams
- Discussions, inspiration (theory) supported by numerous real-life examples
- Drawing and graphic illustration of thoughts



## 3 DISNEY CHAIRS

THE DREAMER'S  
CHAIR



THE REALIST'S  
CHAIR



THE CRITIC'S  
CHAIR







## 5xWHY ?

- 1. Why did you oversleep to work?**
  - Because I didn't set an alarm clock yesterday as I usually do.
- 2. Why didn't you set an alarm clock yesterday?**
  - Because I stayed up late until I finally fell asleep.
- 3. Why did you stay up late?**
  - Because I had to prepare an initial outline for the work.
- 4. Why so late?**
  - Because I'm overloaded with responsibilities.
- 5. Why are you overloaded with responsibilities?**
  - Because I took on too many projects at work.





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Key competences for people 50+

## Course: Entrepreneurship, Module 2 "Ecology in my life"





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# CLIMATE CHANGE - GLOBAL WARMING

"Climate change" means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the **global atmosphere** and which is in addition to natural climate variability observed over comparable time periods.

(UNITED NATIONS FRAMEWORK CONVENTION  
ON CLIMATE CHANGE - Article 1(2))



## Effects of global warming:

Solar energy is accumulated in in the troposphere, and above all in the waters of the oceans, contributing to the increase in the average temperature around the globe.



## Increased energy in the troposphere is:

- increase in average temperature,
- reduction of snow cover,
- change of directions of air masses movement,



- increase in wind strength,
- changing the direction of ocean currents,
- reducing the average amount of precipitation,
- increase in torrential rainfall.

<https://klimada2.ios.gov.pl/files/2021/Adaptacja%20do%20zmian%20klimatu%20na%20gruncie%20UNFCCC.pdf>

- The unprecedented intensity and speed of changes taking place in the natural environment is the result of the rapidly increasing temperature of the troposphere.
- The speed of environmental change is a phenomenon to which the long-term process of natural evolution may not find an answer.
- The adaptive potential of natural and anthropogenic systems to the effects of climate change is directly proportional to their adaptive capacity over time.

<https://klimada2.ios.gov.pl/files/2021/Adaptacja%20do%20zmian%20klimatu%20na%20gruncie%20UNFCCC.pdf>



## Biodiversity is:

variety of ecosystems (natural capital), species and genes in the world or in a particular habitat.

- It is **essential** to human wellbeing, as it delivers services that sustain our economies and societies.
- Biodiversity is also **crucial** to ecosystem services – the services that nature supplies – such as pollination, climate regulation, flood protection, soil fertility and the production of food, fuel, fibre and medicines.

<https://www.eea.europa.eu/themes/biodiversity/intro>

## Why is biodiversity important?

- Healthy ecosystems provide us with **everything we take for granted**. **Plants** convert solar energy, making it available to other life forms. **Bacteria** and other living organisms break down organic matter into nutrients, providing plants with a healthy soil to grow in. **Pollinators** are essential for plant reproduction, guaranteeing food production. **Plants** and **oceans** absorb carbon dioxide. The water cycle is largely based on **living organisms**.
- In short, biodiversity gives us **clean** air and water, good quality soil and pollination for crops, helps us fight and adapt to climate change, and **reduces the impact** of natural disasters.

<https://www.europarl.europa.eu/news/en/headlines/society/202001095T069929/loss-biodiversity-meaning-and-cause>



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Up to 200 species go extinct every day!



Human activities causing pollution, changes in habitats and climate change put pressure on species and ecosystems. According to scientists, **1 million species of plants, insects, birds and mammals around the world are currently threatened with extinction.**

<https://www.consilium.europa.eu/pl/policies/biodiversity/>



Acid rain damages the leaves and roots of plants (AR - precipitation with a pH lower than 5.6; it is formed as a result of the reaction of water vapor contained in the air with oxides (sulphur, carbon, nitrogen)).

Research conducted by *the International Union for Conservation of Nature (IUCN)* showed that between 1500 and 2009, 875 species **disappeared permanently** from the Earth. However, this value seems to be very underestimated, especially in relation to modern times, i.e. from the mid-15th to the beginning of the 20th century. The state of knowledge at that time did not allow to recognize and describe **a large number of species**.





The number of **species** that exist on our planet today and those that **are dying** out can only be approximated. Optimistic reports say that between 500 and 5,000 of them die annually. Others, created by estimating the number of extinct species based on the area of destroyed natural habitats, set the rate of extinction at 50, 100, 150 and even 350 species per day, which gives a number of 20,000-50,000, or even 120,000, per year.

A drastic increase in the rate of extinction of species has been observed since the beginning of the 20th century, and this process is **constantly intensifying**. For this reason, it is sometimes said that we are witnessing **the sixth mass extinction**, also known as the Holocene.

<https://mpc.gov.pl/a/zagrozenia-birozmnodnosci/019ngvFoa>



## Main causes of biodiversity loss:

- Change of land use (e.g. deforestation, intensive monoculture, urbanisation)
- Direct exploitation such as hunting and overfishing
- Climate change
- Environment pollution
- Invasive alien species

[https://www.europarl.europa.eu/pdfs/news/expert/2020/1/story/202001095T069929/202001095T069929\\_en.pdf](https://www.europarl.europa.eu/pdfs/news/expert/2020/1/story/202001095T069929/202001095T069929_en.pdf)

As a result of the **growth** of human populations and the growing **demand** for **meat and hides**:

- Hunting for selected species has often been so intense that it has led to their **extinction**.
- In the 17th century, the **auroch** (*Bos primigenius*) was extirpated in Europe, the dromedary **dodo bird** (*Raphus cucullatus*) was extirpated on the island of Mauritius, and the last **sea cow** (*Hydrodamalis gigas*) was hunted near Bering Island in the 18th century. In the 20th century, the North American migratory **pigeon** (*Ectopistes migratorius*) was extirpated.

<https://zpe.gov.pl/a/zaagroczenia-bioroznorodnosc/0190gvFoa>



- Food was also obtained through agriculture. Huge areas were devoted to plant cultivation and animal grazing. Natural resources were exploited more and more intensively, which also had a negative impact on the environment.
- Fishing has also become a threat to biodiversity: today, nearly 30% of the world's fisheries are constantly **overfished**, and another 50% are **exploited** so intensively that they will soon be **unable to regenerate**.
- Subsequent negative changes in the natural environment, especially its pollution and degradation, have been and still are taking place under the influence of the development of industry, transport, construction, municipal economy, and now also tourism.

<https://zpe.gov.pl/a/zagrozenia-bioroznorodnosci/D19oqFoa>

The most important cause of the decline in biodiversity is the constant reduction of the area of natural ecosystems. Deforestation is the biggest problem, because **forests** are the most valuable ecosystems on Earth from the point of view of biodiversity.

They are a refuge for about 75% of land species living on our planet.

They are the second global supplier of oxygen after the **oceans** and a specific reservoir of drinking water.

They also act as a natural air filter.

In addition, they prevent soil erosion and stabilize the climate.

And their maintenance is important for stopping global warming because they absorb huge amounts of CO<sub>2</sub>.

<https://zpe.gov.pl/a/zagrozenia-bioroznorodnosci/D19oqFoa>



- Each tree is a habitat for numerous **organisms** creating a specific biocenosis. **Deforestation** means the loss of all these functions, and thus the disappearance of a huge number of species and the relationships with which they are linked.
- An important reason for the threat to biodiversity is also the disappearance of **swamp, marsh and peatbog ecosystems**. These areas are **drained** and used in agriculture for growing crops. Drainage measures, which lower the water level, contribute to the **loss** of habitats by numerous water and wetland **birds**, and also lead to the extinction of **amphibians** that breed in these areas.

<https://zpe.gov.pl/a/zagrozenia-bioroznorodnosci/D19ogvFoa#:~:text=Istotnym%20powodem%20zagro%C5%BCenia,nak%20tych%20obszarach>

- Another reason for the **decline** in global biodiversity is the introduction of alien, **invasive** species into natural ecosystems.
- Globally, this has led to the **loss** of about half of native species. Many alien species are introduced by man consciously, considering them useful in **agriculture, forestry, horticulture**, others accidentally. This is especially favoured by the development of international and intercontinental transport and tourism.
- **Invasive** species are defined as alien species in a given ecosystem, usually originating from other climatic zones, which have found very favourable development opportunities in new conditions. Because of this, they began to reproduce **en masse** and **dominate** the ecosystems. They also usually have the ability to spread very quickly.

[https://view.genial.ly/5e9765cf682dd50db837a5f/presentation-human-influence-on-biological-diversity\\_](https://view.genial.ly/5e9765cf682dd50db837a5f/presentation-human-influence-on-biological-diversity_)

<https://zpe.gov.pl/a/zaagrozenia-bioroznorodnosci/D19ogvFoa>



- In Poland, invasive species include, for example, the **American mink** (*Neovison vison*) and the **raccoon** (*Procyon lotor*) - animals that escaped from **fur farms** or were released from them and created numerous populations. They **easily adapt** to new conditions, are very **prolific**, **threaten birds** nesting on the ground and many **mammals**. They also inhabit national parks and other protected areas, where attempts are made to eliminate them.
- **The Sosnowsky's hogweed** (*Heracleum sosnowskyi*) is also an invasive species, which was supposed to be cultivated for its medicinal values and used as fodder, but has proved harmful to humans and cattle through its scorching properties. In turn, its dynamic spread has become a **serious threat** to the native flora.

<https://zpe.gov.pl/a/zaгроzenia-bioroznorodnosci/D19oqvFoa>

**The increase in global temperature** is also causing another serious problem that has been observed since the 1970s, i.e. the progressive **melting of the polar ice caps**. The ice-bound shores of Alaska, which are a breeding and rearing place for walrus, are gradually melting, which means that **pregnant females** are forced to look for new, unaltered areas. As a result, they crowd on small beaches still covered with ice, forming herds of several tens of thousands of individuals.

**The disappearance of the ice cover** also affects the populations of the **Adélie penguin** (*Pygoscelis adeliae*). These birds prey on krill by diving from the ice floe, usually close to the breeding colony. Due to the fact that coastal ice floes are melting faster and faster, and krill exist only under the ice, birds have to feed further and further from the shore. For this reason, **they leave their chicks** for a long time, which is the reason for their increased mortality.

[https://sp16.polskowi.pl/content/artykuly/files/Biologia%20%20a\\_c\\_0520%20201-04.06.2020.docx](https://sp16.polskowi.pl/content/artykuly/files/Biologia%20%20a_c_0520%20201-04.06.2020.docx) - <https://zpe.gov.pl/a/zaгроzenia-biodiversity/D19spFoa>



## Do you know that...?

- About 80% of the world's biodiversity is associated with forests.
- Ca. 1.6 billion people depend directly on forests for food, shelter, energy, medicine and income.
- Every year, 10 million hectares of forest are lost worldwide - roughly the size of Iceland - which is responsible for 12 to 20 percent of the increase in global greenhouse gas emissions that contribute to climate change.
- Land degradation affects nearly 2 billion hectares - an area larger than South America.

<https://klimada2.ios.gov.pl/chronmy-lasy/>

## Sustainable development





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**We did not inherit **the Earth**  
from our ancestors.  
We only  
borrowed it from our  
children.**

Source: no clear author, the saying appears among Indian and Chinese proverbs,  
it was also used by Antoine Marie Roger de Saint-Exupéry and Lester Brown

## Sustainable development

*Sustainable development **is intergenerational solidarity** consisting in finding such solutions that guarantee **further growth**, which allow for active inclusion in development processes of **all social groups**, while giving them the opportunity to benefit from economic growth.*

<https://www.gov.pl/web/rozwoj-technologie/zrownowazony-rozwoj>



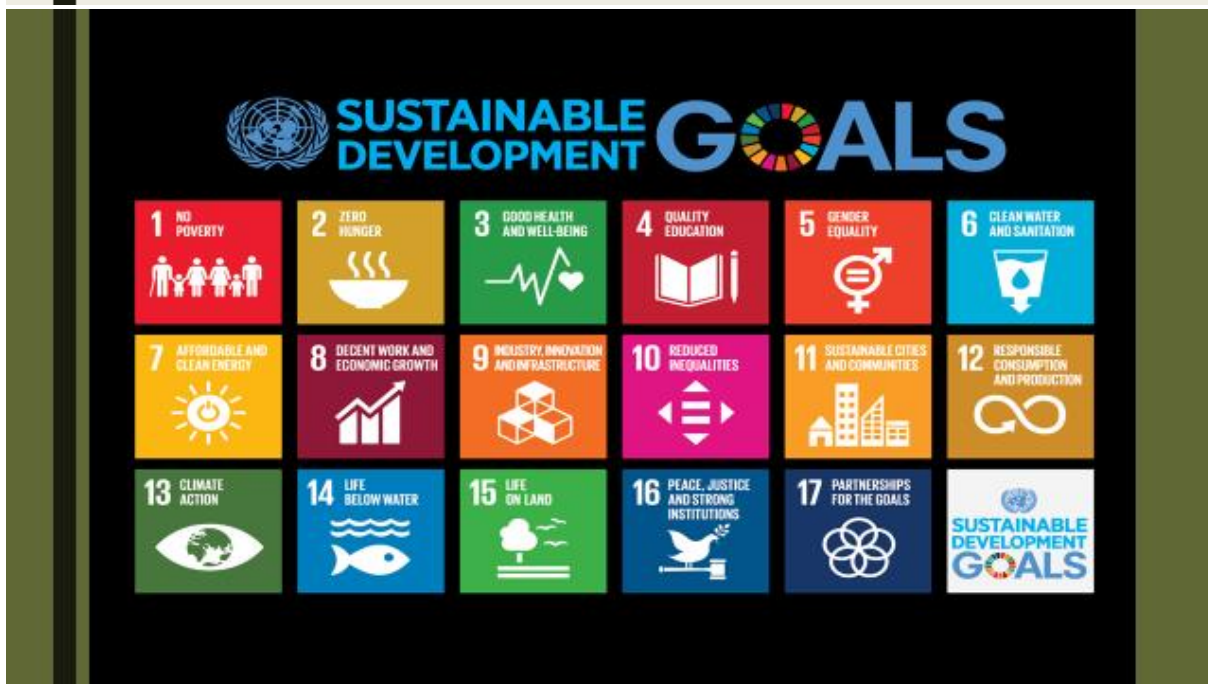
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Initially, discussions on sustainable development were limited to the need to reduce the negative impact of economies on the natural environment.

Over the years, the concept has gained a fuller understanding, aligning the essence of the three factors of development: respect for the environment, social progress and economic growth.

Currently, the concept of sustainable development is increasingly entering the mainstream of discussions on socio-economic development, becoming a horizontal principle, reflected in all development policies.

<https://www.gov.pl/web/rozwoj-technologie/zrownowazony-rozwoj>







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### Sources:

- <https://www.gov.pl/photo/68534860-e12a-49ef-91d9-9313cd3e36d5>
- <https://www.un.org/sustainabledevelopment/news/communications-material/>
- <http://www.un.org.pl/>
- <https://www.un.org/sustainabledevelopment/>
- <https://www.un.org/development/desa/dspd/2030agenda-sdgs.html>

## 6 CLEAN WATER AND SANITATION





- Today, more than 2 billion people live in areas where there is a risk of **limited access** to drinking **water**.
- It is estimated that by 2050, at least one in four people in the world will live in a country with a chronic or periodic **shortage of drinking water**.
- Drought affects some of the poorest regions of the world, which only intensifies the occurrence of **hunger and malnutrition**.

<https://www.un.org/pl/cel6>

## Facts

- Every fourth health care facility lacks basic water services.
- 3 out of 10 people do not have access to safe drinking water and 6 out of 10 people do not have access to safe sanitation.
- At least 892 million people still practise open defecation.
- Between 1990 and 2015, the number of people using improved drinking water sources increased from 76% to 91%.
- More than 40% of the world's population still suffers from water scarcity and this proportion is expected to continue to increase. More than 1.7 billion people live in river basins that use more water than they add.

<https://www.un.org/pl/cel6>



- 2.4 billion people **lack access** to basic sanitation facilities such as toilets and latrines.
- More than 80% of **untreated wastewater** generated by human activities discharges into rivers or the sea.
- In 80% of households without access to water, women and girls are responsible for fetching water from the local area.
- Every day, an average of 1,000 **children die** from diarrhea and its complications, which are preventable waterborne or sanitation related diseases.
- About 70% of the water used for irrigation comes from rivers, lakes and underground water sources.
- Floods and other water-related disasters account for 70% of all **fatalities caused by natural disasters**.

## 7 AFFORDABLE AND CLEAN ENERGY





## Facts

- 13% of the world's population still has no access to modern electricity.
- 3 billion people depend on coal, wood and charcoal, and animal waste for cooking and heating.
- Energy is the main cause of climate change, accounting for around 60% of global greenhouse gas emissions.
- In 2012, pollution from burning fuel fuel caused 4.3 million deaths, 60% of which were women and girls.
- In 2015, the share of renewable energy in total energy consumption reached 17.5%.

<https://www.un.org/pl/cel7>

## 11 SUSTAINABLE CITIES AND COMMUNITIES





## Facts:

- Today, 3.5 billion people - half of the human population - live in **cities**, and by 2030, it is projected that 5 billion people will live in cities.
  - In the coming decades, developing countries will account for 95% of urban expansion.
  - Today, 883 million people **live in slums**, mainly in East and Southeast Asia.
- 
- Cities in the world occupy only about 3% of the Earth's area, while they consume 60-80% of energy and produce 75% of **carbon dioxide emissions**.
  - **Rapid urbanization** has an impact on freshwater resources, wastewater, the environment and public health.
  - In 2016, 90% of city dwellers breathed **polluted air**. 4.2 million people died as a result of air pollution. More than half of the world's urban population was exposed to levels of air pollution at least 2.5 times higher than the legal limit.

<https://www.un.org/pl/cel11>



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# 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



## Facts:

- If, according to estimates, the world's population will increase to 9.6 billion by 2050, then we will need natural resources in quantities corresponding to three times the resources of our planet in order to maintain our current lifestyle.
- With the increased use of non-metallic minerals in infrastructure and construction, there has been a significant improvement in the standard of living. The material footprint per capita in developing countries increased from 5 metric tons in 2000 to 9 metric tons in 2017.
- 93% of the world's top 250 companies report on their sustainability activities.

<https://www.un.org/pl/cel12>



## Energy

- If people around the world used **energy-saving light bulbs**, \$120 billion would be saved annually.
- Despite the development of technologies promoting the efficient use of energy, its consumption in OECD countries will increase by 35% by 2020. Energy used for commercial and residential purposes is the second largest area of its global consumption after transport.
- In 2002, the car market in OECD countries consisted of 550 million vehicles, of which 75% were private cars. By 2020, the number of private cars is expected to increase by 32%. At the same time, the mileage rate will increase by 40% and the number of flights will triple.
- Households consume 29% of global energy and contribute 21% of carbon dioxide emissions
- In 2015, the share of renewable energy in total energy consumption was 17.5%.

<https://www.un.org/pl/cel12>

## Food

- Not only food production has a large environmental impact (agriculture, food processing). Also, households, through the choice of food products, diet and habits, influence their environment, the amount of energy consumed and food wasted.
- Each year, about a third of all food produced - 1.3 billion tons of food, worth about \$1 trillion - **is wasted in homes or stores**, or due to poor transportation and harvesting practices.
- 2 billion people worldwide are overweight or obese.
- Land degradation and **declining soil fertility**, unsustainable use of water, overfishing and degradation of the marine environment all reduce the environment's ability to provide us with food.
- Globally, the food sector consumes **30%** of the energy consumed and is responsible for 22% of total greenhouse gas emissions.

<https://www.un.org/pl/cel12>



# 13 CLIMATE ACTION



## Facts:

- Between 1880 and 2012, the global **average temperature increased** by 0.85°Celsius. To illustrate, a 1° Celsius increase in temperature results in a 5% **reduction in grain yield**. In the years 1981-2002, due to **climate warming**, there was a significant **reduction in the level of harvest of corn, wheat** and other significant crops in the amount of 40 megatons per year.
- Ocean temperatures have risen, snowfall has decreased, ice cover has decreased, and sea levels have risen. Between 1901 and 2010, the world's average sea level rose by 19 cm as the oceans expanded due to **global warming** and **melting of glaciers**. Since 1979, the amount of ice in the Arctic Sea has been steadily decreasing. Every decade, 1.07 million km<sup>2</sup> of the ice cover melts.





- Assuming that the current level of concentration and the volume of greenhouse gas emissions are maintained, at the end of this century the **temperature on Earth will increase** by more than 1.5° Celsius compared to the years 1850-1900. At the same time, the temperature of the ocean waters will increase and the ice cover will continue to melt. It is estimated that by 2065 the average sea level will **reflects of climate change** rise by 24-30 cm, and by 2100 by 40-63 cm. Most of the will **persist** for centuries to come, even if we manage to curb greenhouse gas emissions.
- Global **carbon dioxide emissions** have increased by almost 50% since 1990.

- Between 2000 and 2010, global carbon dioxide (CO<sub>2</sub>) emissions grew faster than in any of the previous three decades.
- It is **still possible**, using a wide range of technological measures and changing behavioural patterns, **to reduce the rate** of increase in the Earth's average temperature by 2° Celsius compared to pre-industrial levels.
- Institutional and technological **changes** give a greater than zero chance that the global warming rate will not exceed this threshold.

<https://www.un.org/pl/cel13>



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# 14 LIFE BELOW WATER



## Facts:

- The oceans cover three-quarters of the Earth's surface, contain 97% of the world's water, and make up 99% of the Earth's habitable space.
- Over three billion people rely on marine and coastal biodiversity to stay alive.
- On a global scale, the annual market value of marine and coastal resources and industrial production is estimated at USD 3 trillion or about 5% of global GDP.
- There are nearly 200,000 identified species in the oceans, but the actual number may be in the millions.



- The oceans **absorb** around 30% of the carbon dioxide produced by human activities and thus mitigate the effects of global warming.
- The oceans are the world's **largest source of protein**; for more than 3 billion people, they are the main source of protein.
- Fishing directly and indirectly **provides jobs** for over 200 million people.

- Fisheries subsidies are **rapidly depleting** many fish species and **hampering efforts** to preserve and restore the world's fisheries and related jobs. Due to subsidies, ocean fishing generates \$50 billion less annual profit than is potentially possible.
- **The acidity** of the oceans **has increased** by 26% since the start of the industrial revolution.
- Coastal waters are **polluted** and **eutrophicated**. Unless action is taken, eutrophication is estimated **to increase** in 20% of large marine ecosystems by 2050.

<https://www.un.org/pl/celt4>



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# 15 LIFE ON LAND



## Forests

- Forests cover 30.7% of the Earth's surface. They not only provide food security and shelter for various forms of life, but also play a key role in combating climate change, protecting biodiversity, as well as being a place of residence for indigenous peoples.
- **Protecting forests** will improve natural resource management processes and **increase** land productivity.
- We **lose** 13 million hectares of forest every year, and the ongoing degradation of drylands has led to the **desertification** of 3.6 billion hectares. Even though almost 15% of the area is currently protected, biodiversity is still under threat.



- Forests are the main source of livelihood for about 1.6 billion people, including about 70 million indigenous peoples.
- Forests are inhabited by over 80% of all species of animals, plants and insects that live on land.
- Between 2010 and 2015, the world's forest area decreased by 3.3 million hectares. This has a special impact on the lives of poor people living in the countryside, who make their living mainly from forest raw materials, flora and fauna.

## Desertification

- 2.6 billion people live **directly** from agriculture, with 52% of farmland affected to a greater or lesser extent by soil degradation.
- It is estimated that the level of arable land loss is **30-35 times greater** than at any time in history.
- As a result of **drought and desertification**, we lose 12 million hectares (23 hectares per minute) every year, on which 20 million tons of grain could be grown.
- 74% of the world's poor are directly affected by land degradation.



## Biodiversity

- Of the approximately 8,300 known species of animals, 8% are already extinct, while 22% are **threatened with extinction**.
  - Of the more than 80,000 tree species, only less than 1% have been studied for their potential utility.
  - Fish provides 20% of animal protein to 3 billion people. Only ten species of fish account for 30% of marine catches and only ten species of fish account for 50% of aquaculture production.
  - More than 80% of the human diet is based on plants. Only three main types of cereals - rice, corn and wheat - meet 60% of energy needs.
- 
- At least 80% of people living in rural areas in developing countries rely on traditional **herbal medicine** as their primary form of health care.
  - **Microorganisms and invertebrates** are crucial to ecosystems, but we still do not fully understand their role in the functioning of ecosystems and still underestimate them.
  - Illegal poaching and wildlife trade are activities that are at odds with **protecting the environment**. Almost 7,000 species of animals and plants in 120 countries are illegally sold.

<https://www.un.org/pl/cell15>



# SMOG

## Smog

- [eng. 'smoke', 'fog'],
- fog containing atmospheric air pollution;
- smog is created by **primary pollutants** (dusts, gases and vapors emitted by **industrial plants, power plants, internal combustion engines of motor vehicles, etc.**) and products of their photochemical and chemical transformations occurring in conditions of temperature inversion during windless weather; the formation of smog is favored by the location of areas at risk of smog in depressions.



Photochemical smog, also known as oxidative smog, is formed during strong sunlight as a result of photochemical transformations occurring in high concentrations of nitrogen oxides, hydrocarbons, especially unsaturated ones (alkenes) and other exhaust gas components (mainly automotive); these compounds create very **reactive radicals**, which in turn undergo chemical changes to form **toxic substances**, mainly peroxides, e.g. peroxyacetyl *nitrate* (PAN); The components of this type of smog are also: ozone, carbon monoxide, nitrogen oxides, aldehydes, aromatic hydrocarbons.

Acid smog, also called industrial fog, is formed in humid air heavily polluted with so-called acid gases, mainly sulphur dioxide (SO<sub>2</sub>) and carbon dioxide (CO<sub>2</sub>), and coal dust; it occurs mainly in regions where houses are heated by burning coal and other solid fuels.

<https://encyklopedia.pwn.pl/haslo/smog:3976775.html>





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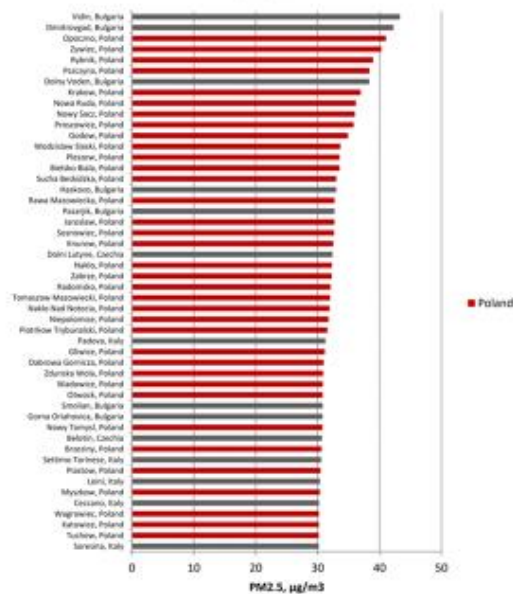
In the general statistics of the European Union, **Bulgaria** wins by exceeding the air pollution standards set for 2020 in 83% of cities.

**Poland** is in the second place with a score of 72%.



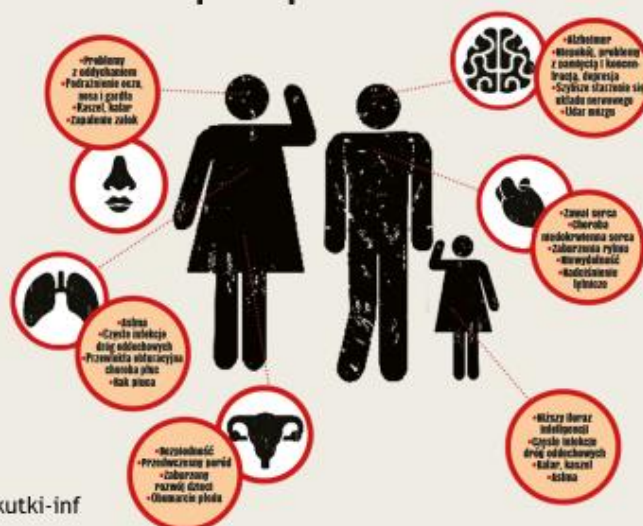
<https://www.focus.pl/artykul/ranking-smog-on-50-most-polluted-cities-eu-az-36-is-in-polsce-180509043616>

50 most polluted cities in the European Union





## Smog - effects on people



<https://smog.edu.pl/sutki-inf>

- Short-term effects, which are temporary, include **illnesses** such as **pneumonia** or **bronchitis**. They also include discomfort such as irritation to the nose, throat, eyes, or skin. Air pollution can also cause headaches, dizziness, and nausea. **Bad smells** made by factories, garbage, or sewer systems are considered air pollution, too. These odors are less serious but still unpleasant.

<https://education.nationalgeographic.org/resource/air-pollution>



- Long-term effects of air pollution can last for years or for an entire lifetime. They can even lead to a person's **death**. Long-term **health effects** from air pollution include heart disease, lung cancer, and respiratory diseases such as emphysema. Air pollution can also cause **long-term damage** to people's nerves, brain, kidneys, liver, and other organs. Some scientists suspect air pollutants cause **birth defects**. Nearly 2.5 million people die worldwide each year from the effects of outdoor or indoor air pollution.

<https://education.nationalgeographic.org/resource/air-pollution>

- People react differently to different types of air pollution. Young children and older adults, whose immune systems tend to be weaker, are often more sensitive to pollution. Conditions such as asthma, heart disease, and lung disease can be made worse by exposure to air pollution. The length of exposure and amount and type of pollutants are also factors.

<https://education.nationalgeographic.org/resource/air-pollution>



- The [World Health Organization](#) (WHO) provides evidence of links between exposure to air pollution and type 2 diabetes, obesity, systemic inflammation, Alzheimer's disease and dementia. The [International Agency for Research on Cancer](#) has classified air pollution, in particular PM<sub>2.5</sub>, as a leading cause of cancer. A recent [global review](#) found that **chronic exposure can affect every organ in the body**, complicating and exacerbating existing health conditions.

<https://www.eea.europa.eu/themes/air/health-impacts-of-air-pollution>

- The [EEA estimates that](#), in 2019, approximately 307,000 premature deaths were attributable to PM<sub>2.5</sub> in the 27 EU Member States. Nitrogen dioxide (NO<sub>2</sub>) was linked to 40,400 premature deaths, and ground-level ozone was linked to 16,800 premature deaths.

View the map

<https://eea.maps.arcgis.com/apps/InteractiveLegend/index.html?appid=f008e0dc0ce24edfae5463748de10f27>



## Effects On The Environment:

Like people, animals, and plants, entire ecosystems can suffer effects from **air pollution**. Haze, like smog, is a visible type of air pollution that obscures shapes and colors. Hazy air pollution can even muffle sounds.

Air pollution particles eventually fall back to Earth. Air pollution can directly **contaminate** the surface of bodies of water and soil. This can **kill crops** or **reduce** their yield. It can kill young trees and other plants.

<https://education.nationalgeographic.org/resource/air-pollution>

- Sulfur dioxide and nitrogen oxide particles in the air, can create **acid rain** when they mix with water and oxygen in the atmosphere. These air pollutants come mostly from **coal-fired power plants** and **motor vehicles**. When acid rain falls to Earth, it damages plants by changing soil composition; **degrades water quality** in rivers, lakes and streams; damages crops; and can cause buildings and monuments to decay.
- Like humans, animals can suffer **health effects** from exposure to air pollution. Birth defects, diseases, and lower reproductive rates have all been attributed to **air pollution**.

<https://education.nationalgeographic.org/resource/air-pollution>



If you suffer from cardiovascular diseases, contact your doctor



Do not go out for a walk and do not take your child for a walk



Do not air the apartment



Do not play sports outside



Wear a dust mask



Turn on the dust collector

<https://smog.edu.pl/skutki-inf>

## Water resources

- **The Earth**, observed from space, has a **blue** color, because as much as **71%** of its surface is covered with **water**, which reflects the blue part of the sunlight spectrum.
- The vast amount of water on Earth is salty and therefore undrinkable. The average salinity of sea water depends on the type of reservoir: the open waters of the ocean contain about 33 g of salt per liter, the waters of the Mediterranean Sea - about 40 g/l, and the waters of the Persian Gulf as much as 48 g/l.
- Less than 3% of the world's water is **drinkable**, of which 2.5% is frozen water in the Antarctic, Arctic and glaciers.



- Only 0.5% of drinking water is used for human and ecosystem needs.
- Most of the fresh water, about 70%, is stored in glaciers and snow mainly in Antarctica.

<https://zpe.gov.pl/a/wody-i-ich-ochrona/D7spMF3Lo>

## Water

- Water gets contaminated and is self-cleansing
- Man pollutes **water** faster than **nature** can clean it by recycling, in rivers and lakes.
- Over 1 billion people in the world still do not have access to drinking water.
- Excessive use of water contributes to global water stress.
- Natural water is free, but the infrastructure needed to deliver it is expensive.

<https://www.un.org/pl/cell7>



## Water

- Water is a precious resource: [Less than 3% of the world's water is fresh \(drinkable\)](#), of which 2.5% is frozen in the Antarctica, Arctic and glaciers. And [humans are misusing and polluting water faster](#) than nature can recycle and purify water in rivers and lakes.
- Using water smartly can help us ensure a steady flow of clean, safe water.
- You can save water by taking shorter showers, turning off the tap when brushing your teeth, installing a low-flow toilet, and many other ways.
- With one shower of about 10 minutes a day, an average person consumes the equivalent of over [100,000 glasses of drinking water](#) every year.
- [Severe water scarcity affects about 4 billion people](#), or nearly two thirds of the world population, at least one month each year.
- [Agriculture is by far the largest water consumer](#), accounting for 72% of annual water withdrawals globally. Shifting towards a plant-based diet is one of the most impactful actions one can take to save water.

<https://www.un.org/en/actnow/facts-and-figures>

<https://www.un.org/sustainabledevelopment/climate-action-superheroes-info/>

Water footprint, i.e. what **You** can **do!** We use huge amounts of water every day. Directly - by washing hands, cleaning, cooking or drinking - and indirectly through the **purchase** of various products such as food, clothes, paper, electronics or furniture.

Did you know that large amounts of water are needed to produce each of these things?





ŚLAD WODNY DLA WYBRANYCH PRODUKTÓW

**SKÓRA** (wydeca)  
17 000 litrów wody na kg



**KAWA**  
900 litrów wody na dzianek (700 ml)



**BIODIESEL** (z soi)  
11 207 litrów wody na litr biodiesla



**JĘCZMIEN**  
450 litrów wody na 500 g



**WOŁOWINA**  
4020 litrów wody na porcję wołowiny (200 g)



**PSZENICA**  
450 litrów wody na 500 g



**BURGER**  
2200 litrów wody na porcję burgera (150 g mięsiny)



**CHLEB TOSTOWY**  
400 litrów wody na 500 g



**SER ŻÓŁTY**  
2200 litrów wody na porcję sera żółtego (100 g)



**HERBATA**  
50 litrów wody na dzianek (200 ml)



**BAWEŁNA**  
2495 litrów wody na jedną koszulkę (250 g)



**PROSO**  
2200 litrów wody na 500 g



Jedna kropka to ekwiwalent 50 litrów słodkiej wody zużywanej podczas wytwarzania danego produktu. Przedstawione wyliczenia są przykładowe i mogą się różnić w zależności od pochodzenia i procesu produkcji.

Źródło: <https://www.nature.com/scientificreports/>

[https://konsument.pl/materialy/pd4\\_713\\_prawa\\_wyzytku\\_woda.pdf](https://konsument.pl/materialy/pd4_713_prawa_wyzytku_woda.pdf)

	Average amount of water used [l]
Home water consumption	
Shower	30 (5 minutes)
Bathing in a bathtub	60
Machine wash	95
Brushing teeth with the faucet open	6
Brushing teeth with the faucet closed	1
Brushing your teeth with a cup of water	0.2
Leaking tap (1 drop/s)	12 thousand annually



## Bathroom:

1. While waiting for the shower water to heat up, you can place a bucket or bowl under it to collect cold water that would otherwise flow down the drain. Later, you can use it, for example, for watering plants.
2. Control your water consumption when washing your hands and teeth. You can use a cup to brush your teeth.
3. Check that all faucets are tight and that water does not escape through broken seals.
4. Invest in a gray-water toilet. This solution is becoming more and more popular on the market.
5. Install aerators in the faucets and a rain shower in the shower. It is also a good way to increase your savings.
6. Do not run the washing machine until it is full. Try to turn on the ECO mode, which has an increased soaking time, thanks to which it uses less energy.
7. Pay attention to the length of the bath - you don't need a lot of time to wash yourself.

[https://ekonsument.pl/materialy/publ\\_711\\_przedo\\_wszystkim\\_woda.pdf](https://ekonsument.pl/materialy/publ_711_przedo_wszystkim_woda.pdf)

## Kitchen:

- Don't waste food that uses a lot of water to produce.
- Do not run the dishwasher until it is full. When deciding to buy a dishwasher, choose one that has a built-in **water-saving system**.
- When boiling water in the kettle, **pour in as much water as you need**. If you have excess, you can pour it into a thermos that will maintain the temperature, so you won't have to heat the water again.
- Use the water from washing vegetables and fruits to water the plants.

[https://ekonsument.pl/materialy/publ\\_711\\_przedo\\_wszystkim\\_woda.pdf](https://ekonsument.pl/materialy/publ_711_przedo_wszystkim_woda.pdf)



## Balcony/garden:

- **Water plants in the morning or evening.** As a result, less water evaporates from the plants.
- From the accumulated surplus water, **you can prepare a drinking bowl** for pollinators, but remember that it should be safe for them. To do this, throw pebbles and/or sticks inside so that the insects can sit on something.
- **Install the tank under the gutter.** Collecting rainwater is a great way to water plants in the city as well. It's easier than you think!
- If possible, **set up a rain garden** (bioretention facility).

## 6R Principle





## 6R Principle

- **Rethink** - think about whether you really need the item.
- **Refuse** - i.e. do not buy what contributes to increasing the amount of waste in your home, e.g. vegetables or fruits packed in plastic or cheap t-shirts. In this way, as consumers, we give a signal to producers what we really care about.
- **Reduce** - limit the amount of things you use, think about whether you really need each of them. Try to introduce the spirit of minimalism and buy only what you really need.
- **Reuse** - exchange and donate unnecessary things to someone who may need them, **consider** whether they can not have a different function. When looking for something new, **consider** whether it is not better to opt for a second-hand item.
- **Repair** - do not immediately throw away a slightly damaged item, perhaps it will be **repaired** and will serve you for years to come.
- **Recycle/rot** - **segregate waste** and contribute to the processing of secondary raw materials, e.g. glass bottles/compost.

<https://niechzyjeplaneta-edition2021-2022.onet.pl/odpady/segreguj-smieci/zasada-6r-pomaga-ratowac-srodowisko/1ft1py2> Article prepared by UNEP-GRID-Warszawa.



[https://www.ekonsument.pl/a67196\\_zasada\\_6r\\_w\\_praktyki\\_Czy\\_prakyczny\\_pora\\_dnik\\_jak\\_konsumowac\\_odpowiedzialnie\\_.html](https://www.ekonsument.pl/a67196_zasada_6r_w_praktyki_Czy_prakyczny_pora_dnik_jak_konsumowac_odpowiedzialnie_.html)

## Rethink, i.e. think if you really need a given thing.

- We often make **purchases on impulse**, without thinking about whether we really need a given thing. This principle prompts us to **think critically**. Have you ever wondered why household appliances break down most often when the warranty expires? Why the day after the premiere of a new smartphone, another one is already appearing? Why does the repair cost often oscillate around the purchase of new equipment? This is done through marketing, which drives the sales spiral. The UN reports that for several years the world has been producing **over 20 million tons of electronic waste annually**.



## Rethink in practice:

- Don't be manipulated by ads. **Be a critical consumer!**
- Decide how, what and when you buy. Explore your real needs.
- Pay attention to the details of the product, the country of origin, in short: **read the labels**, and if in doubt, **ask the seller**.
- Appreciate and buy Polish products, it contributes to reducing the carbon footprint.
- Buy certified products (GOTS, Fairtrade, FairWear, OEKO-TEX).

## Refuse

- Refuse and **don't let yourself be led into compulsive consumption**. This principle encourages minimalism and pays more attention to intangible issues such as **harmony, peace, balance and nature**. Refusing contributes to supporting slow movements (slow life, slow food, etc.) More and more people are starting to care about work-life balance. Recently, the attitude of deconsumption, i.e. consciously limiting one's purchases, has become popular. As it turns out, continuous economic growth is not a guarantee of happiness, more and more often it is said that happiness is caused by non-material factors, such as: communing with nature, lasting friendships, culture, strong local communities, etc.



## Refuse in practice:

- Limit going to the store, it will **save you time** and teach you better organization and planning.
- Do not treat fashion as therapy for bad days, try to approach the **purchase** of clothes in **moderation**.
- Remember, you don't always have to be online. It's good to switch off from time to time and see what you can do with your free time.
- Think of what you see as a **sense of happiness**: Is it buying new clothes or maybe meeting friends?

## Reduce

- **Reduce, buy less.** Limit yourself to the absolute minimum. As you know, how much we buy affects how much of raw materials, energy and water is used. **It is worth** bearing in mind the condition of our planet.
- Do you know what **a carbon footprint is?** It is the amount of all greenhouse gases (carbon dioxide, methane and several other gases) emitted due to human activities. For an average Pole, the carbon footprint is 8,000 kg of CO<sub>2</sub>. Meanwhile, the global target is only 2,000 kg of CO<sub>2</sub> per person. There are even special websites where you can roughly calculate your carbon footprint (<https://waznamisjздrowaemisja.pl/kalkulator-sladu-weglowego>). Calculate and think about what you can do to reduce it. Below are some tips.



## Reduce in practice:

- Don't throw away food. Buy only as much as you can consume.
- Give up reusable, double packaging. Try to buy products with minimal packaging.
- Carry your own shopping bag with you.
- If you can choose a bike instead of a car or public transport, do not hesitate to do it!
- Turn off devices that are not working, **do not keep** chargers in sockets unnecessarily, print on both sides (if necessary). These are small things, but during the day there can be quite a large list of actions that can be taken to make it function more efficiently and optimally.

## Reuse

- Use products repeatedly, in line with **upcycling**, i.e. a method of reusing and **giving a new life** to a product. Instead of **throwing away**, think about how you can reuse an item. Upcycling is a great exercise in creativity! An old t-shirt can be used as a kitchen cloth, an ice cream box is perfect for freezing parsley, eggshells work as fertilizer for plants, coffee grounds are an excellent scrub. These are just a few tips on how to give a second life to a product. There are certainly many more, the only thing that can be a limitation is our imagination.





## Reuse in practice:

- Paper scraps can be used for making notes, drafts.
- Share clothes, books, toys that you no longer use.
- Participate in cashless clothes swaps (so-called swap parties).
- Use jars for homemade preserves (don't buy new ones !).
- Exchange movies, books, CDs, etc. with your friends. This will avoid buying the same things by many people and will certainly contribute to tightening and strengthening the relationship.

## Recovery

- Before you decide to replace the equipment, try to **repair it** or hire someone who repairs equipment. Just a few decades ago, repairing home appliances, shoes or clothes was the norm. People used equipment that **worked flawlessly for many years**, and if it broke down, it was repaired. Today we live in times when repair is **not "included"**. Note that manufacturers often intentionally **"age"** a product so that the consumer can quickly replace it with a newer model. This is often more cost-effective than repair.



## Recovery in practice:

- Get to know the local services such as a **shoemaker, tailor, leather worker, bookbinder**, etc.
- Use electronic repair points.
- Support and engage in social campaigns fighting against **consumerism** and unfair practices of producers. Remember - your voice and your actions matter.
- If you can, use a desktop computer (it is much easier to make improvements and replace components in it than in a laptop).

## Recycle

- **Recovering and reusing** the waste and raw materials from which the product was made. It is important to segregate waste properly to facilitate its further **recycling**. Especially important for us should be containers for electro-waste, batteries and fluorescent lamps. It is important that the harmful waste they emit does not get into the groundwater and soil.



## Recycle in practice:

- Sort your waste properly.
- Throw e-waste into regular bins (take them to places specially designed for this purpose).
- Return expired medications to the pharmacy.
- Compost your organic waste.

## Exercise - segregating waste



## Where to dispose of waste after renovation?

- In everyone's life, there are also non-standard or rare situations in which a particular type of waste occasionally occurs. A renovation, for example, can be such an event. There is a lot of commotion involved. Furniture is often delivered in packaging, paint containers, tape, polystyrene and many other products are left behind. What containers should I put them in? Here is a quick reference guide that everyone will find useful.

<https://www.leroymerlin.pl/kuchnia/segregacja-smieci-w-pigulce-zasady-i-dobre-praktyki,e16818,d722.html>



packaging polystyrene  
adhesive tapes

paint containers

cardboard with tape

brush

rubble

furniture

refrigerator

wallpaper

nitrile or rubber gloves

potting soil

metals and plastics

mixed waste

Point of Selective Collection  
of Municipal Waste

paper

mixed waste

Point of Selective Collection  
of Municipal Waste

bulky-waste container

electrical and electronic  
equipment collection point

mixed waste

mixed waste

mixed waste

## METALS AND PLASTICS

### We should dispose of:

- unscrewed and crushed plastic drinks bottles
- bottle tops, unless they are collected separately as part of a charity event
- plastic food packaging
- multi-material packaging (e.g. milk and juice cartons)
- packaging for cleaning products (e.g. washing powder), cosmetics (e.g. shampoo, toothpaste), etc.
- plastic bags, sacks, carrier bags, other plastic sheeting/foils
- aluminium beverage and juice cans
- tin cans
- aluminium foil
- non-ferrous metals
- bottle tops, caps from jars



### Do not dispose of:

- bottles and containers with contents
- plastic toys
- Medication packaging and used medical supplies
- motor oil packaging
- car parts
- used batteries and accumulators
- cans and containers of paint and varnish
- waste electronic equipment and household appliances



## PAPER

### We should dispose of:

- paper packaging, cardboard (including corrugated cardboard)
- catalogues, flyers, brochures
- newspapers and magazines
- school and office paper, printed pages
- notebooks and books
- wrapping paper
- paper bags and sacks



### Do not dispose of:

- paper towels and used tissues
- varnished and foil-covered paper
- greasy or heavily soiled paper
- milk and drink cartons
- paper sacks of fertilizer, cement and other building materials
- wallpaper
- disposable nappies and other hygiene products
- greasy disposable paper packaging and disposable tableware/crockery
- clothing

## GLASS

### We should dispose of:

- beverage and food bottles and jars (including alcohol and vegetable oil bottles)
- glass packaging for cosmetics (unless it is made of several raw materials joined together permanently)



### Do not dispose of:

- ceramics, flowerpots, porcelain, faience, crystal
- eyewear/spectacle glass
- heat-resistant glass
- grave candles with a wax content
- light bulbs and fluorescent tubes
- headlights
- packaging for medicines, solvents, engine oils
- mirrors
- window panes and wired (reinforced) glass
- TV monitors and lamps
- thermometers and syringes



## BIODEGRADABLE WASTE

### We should dispose of:

- vegetable and fruit waste (including peelings, etc.)
- tree and shrub branches
- grass cuttings, leaves, flowers
- sawdust and tree bark
- untreated wood
- food leftovers



### Do not dispose of:

- animal bones
- edible oil
- animal faeces
- coal ash
- medicines
- impregnated wood
- chipboard and MDF
- soil and stones
- other municipal waste (including hazardous waste)

## MIXED WASTE

- Anything that cannot be recovered through the recycling process, excluding hazardous waste, should be put in the mixed waste container.





## Glass

### Input:

- beverage and food bottles
- jars without metal caps
- glass packaging for cosmetics

### Output:

- building materials in the form of glass fibers
- tiles
- glass packaging



## Paper

### Inputs

- paper and cardboard packagings
- newspapers magazines flyers
- notebooks
- office paper
- cardboard, paper bags

### Outputs

- coffee filters
- egg cartons
- lighting shades
- toilet paper
- packagings e.g pizza packagings







## METALS AND PLASTICS

### Inputs

- ✓ plastic bottles
- ✓ tetrapak milk cartons and packaging
- ✓ plastic packaging bags
- ✓ cans
- ✓ aluminium foil
- ✓ packaging for cleaning products and cosmetics

### Outputs

- fleece sweatshirts
- garden furniture
- metal packaging



## bio

### Inputs

- ✓ leftover vegetables and fruits
- ✓ branches of trees and bushes
- ✓ mowed grass leaves and flowers
- ✓ sawdust and tree bark

### Outputs

- fertilizer
- biogas





## Greenwashing

also called "green sheen", is a form of advertising or [marketing spin](#) in which [green PR](#) and [green marketing](#) are deceptively used to persuade the public that an organization's products, aims and policies are [environmentally friendly](#). Companies that intentionally take up greenwashing communication strategies often do so in order to distance themselves from the environmental lapses of themselves or their suppliers.

<https://en.wikipedia.org/wiki/Greenwashing>

Greenwashing is marketing communication by a company based on false or misleading claims about the environmental compliance of a product or its components.

<http://sinsofgreenwashing.org>



## Examples of greenwashing:

- The company uses **hidden opportunity costs** - misrepresents the environmental impact of a product (e.g. energy-efficient electronic devices are actually made of environmentally hazardous materials).
- The company highlights as environmentally-friendly facts with **no connection to reality** - refers to something that is wrong (e.g. a claim in the US market that something "does not contain HCFCs" - i.e. hydrochlorofluorocarbons, the use of which was banned in the US in 2010, or emphasising that a cosmetic does not contain CFCs, when their use has been banned since the 1990s).
- The company **reduces its costs under the guise of environmental care** (e.g. sending invoices by e-mail or asking to use towels less often).

## We call it *greenwashing* when:

- The company **does not provide evidence** - there is no information available on the environmental performance of the product nor any reliable certification.
- The company is **deliberately vague** - the product descriptions are vague or **unspecific** and may be misunderstood by the consumer; an example is the term "**all natural**" (arsenic(III) oxide or mercury are found in nature but are highly **poisonous** - "natural" does not necessarily mean "green").
- The company emphasizes the '**lesser evil**' of using its products - for example, 'green' **cigarettes** or environmentally-friendly **pesticides**.

<https://pl.wikipedia.org/wiki/Greenwashing>



## We call it *greenwashing* when:

- The company uses **white lies** - it **illegally** and **unjustifiably** uses eco-labels and certificates and uses overly exaggerated, suggestive images, fictitious data to prove the environmental performance of the product - in other words, the content and form of the **false labelling** is intended to **mislead** the customer.
- The company **distorts** the **real impact** of the product on the environment - it highlights the ecological aspect (e.g. that the packaging is made of biodegradable material), but does not mention how large the ecological footprint of the production of the product itself or even of the packaging is.
- The company **omits certain information**, the disclosure of which could compromise the "environmental" character of the product (e.g. a dry cleaner is called an eco-laundry).

<https://pl.wikipedia.org/wiki/Greenwashing>

- <https://pixabay.com/pl/photos/zmiana-klimatu-termometr-po%5%bcar-lasu-3836835/>
- <https://pixabay.com/pl/photos/tygrys-ogr%3%b3d-zoologiczny-biopark-2182843/>
- <https://pixabay.com/pl/illustrations/wzrost-rozw%3%b3j-natura-%c5%9brodowisko-6756491/>
- <https://pixabay.com/pl/vectors/wykrzyknik-wykrzyknika-krzyk-znak-350199/>
- <https://www.nowy-sacz.info/50-most-polluted-cities-in-the-european-union/>
- <https://naszesmieci.mos.gov.pl/jak-segregowac>
- <https://agencja-informacyjna.com/greenwashing-w-przemysle-odziezowym/>
- <https://pl.wikipedia.org/wiki/Greenwashing><https://pl.wikipedia.org/wiki/Greenwashing>



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Key competences for people 50+

**Course: Entrepreneurship, Module 2  
"Ecology in my life"**





## European Green Deal

The main objective:  
Transformation of the EU  
economy towards climate  
neutrality by 2050

Based on: <https://klimada2.ios.gov.pl/europejski-zielony-lad/>

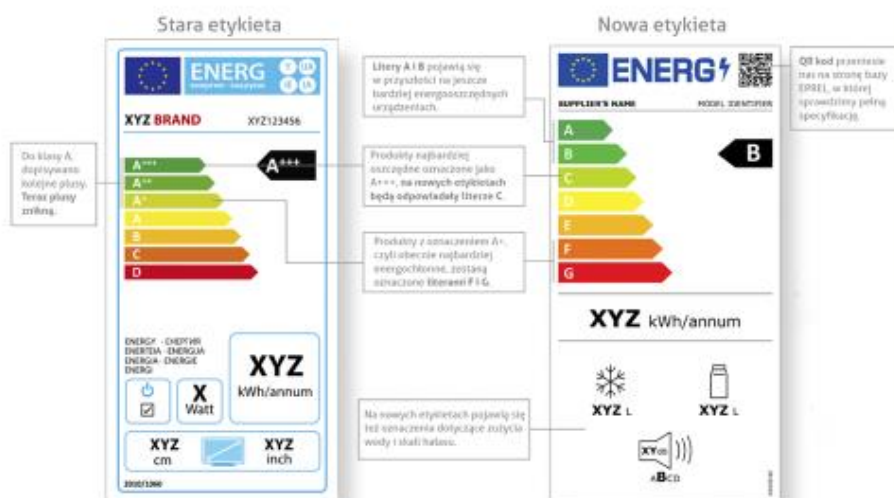
### 1. Improvement of energy efficiency

could help reduce energy consumption in the EU by **a half** compared to 2005, it applies to the energy efficiency of both equipment and buildings. New buildings are built in accordance with the relevant standards, old buildings will be adapted thanks to EU financial assistance.



### What can you do?

- Use devices **wisely**. Remember to turn them **off** when you're not using them. Remember that devices in standby mode and chargers left in contact also consume energy.
- Choose energy-saving household appliances and electronics. From March 2021, energy efficiency standards have changed - the most energy-efficient devices, which until now were marked as A+++, will now be marked as class C.
- Ensure that your flat/house is thermally upgraded to reduce heat loss in winter and coolness in summer - think about airtight windows, doors, roof and wall insulation.



Picture describing the difference of Energy class plates on household appliances.  
(more Energy class markings, water usage and noise level indicators and QR code implementation)



## 2. Implementation of renewable energy sources

which will reduce CO<sub>2</sub> emissions and meet the growing needs. The plan assumes that by 2050 over 80% of electricity will come from RES and will account for a half of the final energy demand in the EU.

### What can you do?

- Change the way you heat your home - choose low- and zero-emission devices, e.g. solar panels or a heat pump.
- Obtain green energy to power electrical equipment, e.g. from photovoltaic panels.
- Check whether your energy supplier uses renewable energy sources (RES).

## 3. Clean, safe and connected mobility

Currently, transport is responsible for a quarter of EU greenhouse gas emissions. The modernization of all types of transport will contribute to the reduction of emissions into the atmosphere, and thus provide us with better air quality, lower noise levels and accident-free traffic.

Particular emphasis will be placed on the development of safe paths for residents on bicycles and on foot. Facilitations will be related to the expansion of car and bicycle rental services. Public transport will be exclusively zero-emission. Large investments will allow the development of rail connections, so that train travel can partly replace carbon-intensive air travel.





## What can you do?

- When buying a car, pay attention to its emissivity.
- Take passengers and use eco-driving rules to reduce harmful exhaust emissions.
- Plan your journey by choosing routes that will get you to your destination as soon as possible.
- Limit business trips - where possible, organize online meetings.
- Buy local products that have not had to be transported long distances.
- Limit flights by plane - if possible, consider travelling by train.

## 4. Competitive and circular industry

- Maintaining the competitiveness of the EU industry - currently one of the most efficient in the world - has been linked to the efficient use of resources and the development of a circular economy. As recycling becomes more popular, the production of many industrial goods, such as steel, glass and plastics, will become more resource-efficient and less carbon-intensive.



## What can you do?

- Segregate your waste. Remember that garbage is a source of raw materials.
- Avoid plastic wherever possible.
- Do not buy products unnecessarily wrapped in plastic. Choose those in recyclable packaging, e.g. glass.
- Repair and pass on - instead of throwing away.

## 5. Infrastructure and connections

The completion of trans-European transport and energy networks will enable the economy to function more efficiently and exchange materials, products or information more quickly.

### What can you do?

- Use e-services and help develop them.
- Buy local products that did not have to be transported far away - this way you will contribute to reducing your carbon footprint.



## 6. Bioeconomy and natural carbon sinks

It was assumed that a more efficient use of biomass would be needed in a zero emission economy. Its increased production must come from sustainable sources to ensure that forests and other ecosystems that absorb emissions in the EU are not degraded. The processes of revitalization of degraded forest areas and the protection of wetlands and peat bogs will contribute to improving the efficiency of CO<sub>2</sub> absorption from the atmosphere and help to achieve negative emissions.

### What can you do?

- Plant trees - they are the best CO<sub>2</sub> sinks.
- Check if wood and paper products are certified as being sourced from sustainably managed forests (e.g. FSC).
- Save paper and remember to put used paper in segregated waste.
- If you are a farmer, limit the use of artificial fertilizers that deplete the soil.
- Choose organic products.
- Think about changes in your diet. Limit your meat consumption - meat production has a high carbon footprint and high methane emissions.
- Do not destroy forests and wetlands.



## Interesting facts

- <https://www.un.org/en/actnow/facts-and-figures>

## Food

- [Three billion people](#) cannot afford a healthy diet. Two billion are overweight or obese. Food systems generate one-third of all greenhouse gas emissions and are responsible for up to 80% of biodiversity loss.
- [17% of all food available at consumer levels is wasted](#). This amounts to a big waste of resources used in production, such as land, water, energy and other inputs, and unnecessary greenhouse gas emissions. By reducing food waste, you can save money, reduce emissions, and help preserve resources for future generations.
- Meat and dairy provide just [18% of calories](#) consumed, but use 83% of global farmland and are responsible for 60% of agriculture's greenhouse gas emissions.
- Shifting to healthy diets that include sustainability considerations can contribute to reductions in environmental impacts on land, energy and water use.
- [A diet that is higher in plant-based foods](#), such as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in animal-based foods, has a lower environmental impact (greenhouse gas emissions and energy, land, and water use).



## Home energy

- Electricity drives our lifestyles. Although some 750 million people in the world still lack access to electricity, for the rest, everything from a computer to a television to a refrigerator needs energy.
- The energy supply sector (electricity, heat, and other energy) is the [largest contributor to global greenhouse gas emissions](#), responsible for approx. 35% of total emissions.
- Globally, [residential and commercial buildings](#), consume over half of all electricity.
- Phasing out fossil fuels for [home heating](#) is crucial, for instance by banning on new gas-fired boilers and introducing electric heat pumps.

- [Increasing the thermostat setting](#) from 24°C to 28°C during the cooling season can reduce annual cooling energy use by more than a factor of three for a typical office building in Zurich, Switzerland.
- [Energy demand for cooling](#) is the fastest growing end-use in buildings, with ten air conditioners expected to be sold every second over the next 30 years.
- Emissions from air conditioning and refrigeration are expected to rise 90% from 2017 levels by 2050.
- Being mindful of the living space you need is important, too. In developed countries, the average living space per person has dramatically increased over the past decades.
- Switching to [renewable energy sources](#), such as solar, wind or hydroelectric power, also means less pollution and new and better jobs. Currently, around 80% of global energy and 66% of electrical generation are supplied from fossil fuels.



## Transport

- In most high-income countries, personal transport is the lifestyle domain with the largest contribution to the overall [lifestyle footprint](#).
  - The world's roadways are clogged with vehicles, most of them burning fossil fuels. Fossil fuels power the ships that carry trade and the airplanes that allow us to travel.
  - [Greenhouse gas emissions from the transport sector](#) have more than doubled since 1970, with around 80% of this increase coming from road vehicles.
  - [Around 10% of the global population](#) account for 80% of total motorized passenger-kilometres, with much of the world's population hardly travelling at all.
- 
- But we do have alternatives to driving that can make a difference. Walking, biking, urban public transit and trains help reduce air pollution and greenhouse gas emissions.
  - [Switching to an electric car](#) can help reduce emissions, improve air quality and boost green jobs – if the electricity is not powered by fossil fuels. By achieving a 60% share of battery-electric and plug-in hybrid vehicles on the road, more than [60 billion tons of CO2 could be saved](#) between now and 2050.
  - Domestic and International aviation is responsible for about [10% of global emissions in the transport sector](#), and an estimated [1% of the world population](#) is responsible for more than half of these emissions.



## Fashion

- Being stylish does not mean being wasteful. Buying fewer clothes, shopping second-hand, or upcycling, i.e. creating new clothes out of old ones, helps save water and reduce waste.
- [In the last 15 years](#), clothing production has doubled while the number of times a garment is worn before being discarded has decreased by 36%.
- The fashion industry (clothing and footwear) produces [more than 8% of the greenhouse gases](#) and [20% of global wastewater](#) annually.
- It takes about [7,500 litres of water to make a single pair of jeans](#) -- from the production of the cotton to the delivery of the final product to the store.
- [85% of textiles end up in landfills or are incinerated](#) although most of these materials could be reused. Every second, the equivalent of one garbage truck full of textiles is landfilled or burned.
- Some [93 billion cubic meters of water](#) -- enough to meet the consumption needs of five million people -- is used by the fashion industry annually.

## Waste

- Every year, an estimated [11.2 billion tonnes of solid waste](#) is collected worldwide, and decay of the organic proportion of solid waste is contributing about 5% of global greenhouse gas emissions.
- Where waste cannot be avoided, recycling leads to substantial resource savings. For every tonne of [paper recycled](#), 17 trees and 50% of water can be saved.
- [Recycling also creates jobs](#): the recycling sector employs 12 million people in Brazil, China and United States alone.
- [Only 9% of all plastic waste ever produced has been recycled](#). About 12% has been incinerated, while the rest – 79% – has accumulated in landfills, dumps or the natural environment.



## Water

- Water is a precious resource: [Less than 3% of the world's water is fresh \(drinkable\)](#), of which 2.5% is frozen in the Antarctica, Arctic and glaciers. And [humans are misusing and polluting water faster](#) than nature can recycle and purify water in rivers and lakes.
  - Using water smartly can help us ensure a steady flow of clean, safe water.
  - You can save water by taking shorter showers, turning off the tap when brushing your teeth, installing a low-flow toilet, and many other ways.
- 
- Using a refillable bottle, bringing your own reusable bag, and asking the restaurants you frequent to stop using plastic straws helps reduce plastic waste.
  - Around the world, [one million plastic drinking bottles are purchased every minute](#), while up to [5 trillion single-use plastic bags are used worldwide every year](#). In total, half of all plastic produced is designed to be used only once – and then thrown away.
  - From 2010 to 2019, [e-waste generated globally](#) grew from 5.3 to 7.3 kilograms per capita annually. Meanwhile, the environmentally sound recycling of e-waste increased at a much slower pace - from 0.8 to 1.3 kilograms per capita annually.





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- With one shower of about 10 minutes a day, an average person consumes the equivalent of over [100,000 glasses of drinking water](#) every year.
- [Severe water scarcity affects about 4 billion people](#), or nearly two thirds of the world population, at least one month each year.
- [Agriculture is by far the largest water consumer](#), accounting for 72% of annual water withdrawals globally. Shifting towards a plant-based diet is one of the most impactful actions one can take to save water.

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Key competences for people 50+

**Course: Entrepreneurship, Module 2**  
**"Ecology in my life"**



Household budget -  
ecological perspective



## Plant-based diet

Research from the University of Oxford in 2021 showed that in Europe, Australia and the USA, switching to a plant-based diet results in savings of 25-29 per cent.

## A bicycle instead of a car

- Giving up or limiting the use of the car results in savings of several hundred zlotys per month.
- It also reduces air pollution - passenger cars in Europe generate more than 60% of all CO2 emissions from road transport.
- Regular cycling affects good physical shape, stimulates and improves the work of the heart, lungs and circulatory system, reduces the risk of cardiovascular diseases.



## Collecting rainwater

- Rainwater is not suitable for drinking, but it can be used for watering the lawn, garden, washing and cleaning.
- By collecting rainwater, you can save up to 50% of drinking water.
- During a 10-minute rain, approx. 180 liters of water can be collected from a 120 m<sup>2</sup>-roof. That's what it takes to take 5 showers, do 6 washing or flushing the toilet 30 times.

## Make full use of the food you buy

- About 1/3 of food worldwide is wasted. This is a huge burden on wallets and on the climate.
- Food production requires large amounts of water, land and energy.
- Before shopping, it is important to consider how much food you actually need, and only stock up on products with a sufficiently long shelf life.
- Applications, e.g. Too Good To Go, thanks to which you can buy surplus food from various stores and restaurants at attractive prices.



## Limiting clothing purchases

- The 2015 documentary *The True Cost* revealed that humanity consumes around 80 billion new clothes a year, 400 per cent more than 20 years ago.
  - One of the reasons for this is the chain stores - so-called fast fashion, i.e. cheap clothing produced for little money that takes into account current trends, is quickly marketed and the unsold surplus ends up in landfills.
  - Some chain stores introduce as many as 50 collections a year.
- 
- Low production costs are associated with practices that degrade the environment and employing workers in poor conditions, threatening their health and life.
  - Washing clothes that are mostly plastic increases the amount of microplastics in the oceans and seas.
  - According to data from 2017, up to 35% of microplastics comes from washing synthetic fabrics (International Union for Conservation of Nature).



## Quit smoking

- Cigarettes have a negative impact not only on health and finances, but also on the environment.
  - One of the most common forms of man-made pollution is littering the environment with cigarette residue.
  - As much as 65% of all cigarette butts are thrown into the environment.
  - Cigarette butts often end up in the sewage system and from there go into rivers and oceans.
- 
- Due to the content of harmful organic compounds: nicotine, derivatives of pesticides or metals, cigarette butts pose a threat to marine ecosystems.
  - Filters used in cigarettes are mostly composed of cellulose acetate fibres, a type of bioplastic that can take several decades to decompose.
  - E-cigarettes are also harmful - batteries contain dangerous substances such as mercury and lead.



## Drinking tap water

- Around 1.2 million plastic bottles are used every minute on Earth.
- Approximately 91% of plastic is not recycled.
- The composition of tap water is no different from that in bottles, and is sometimes more favourable in terms of mineral concentration. These include the calcium, magnesium, phosphorus, sodium, sulphur, copper and potassium that humans need. The presence of calcium magnesium is indicated by limescale deposited in the kettle, which is often mistakenly regarded as a sign of poor water quality.
- It is possible to buy a reusable bottle, such as a glass one, to fill with tap water.
- Such water is cheaper (up to 600 times cheaper).

## Disconnecting unused devices from the power supply

Phantom charging is responsible for wasting 30% of household energy.

Phantom charging is a phenomenon in which appliances consume electricity even when switched off.



## Conscious shopping

- In Poland, two-thirds (almost 70%) of missed purchases are grocery purchases.
- The second most common is stimulants (31%).
- 28% of Poles admit to buying unnecessary clothes.
- Restaurants (22%) and hobbies (19%) are the next expenses Poles describe as ill-considered/hasty.

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Key competences for people aged 50+

## Course: Entrepreneurship Module 3: Projects in My Life



## What is a **project**?

*A temporary, gradually refined undertaking aimed at achieving a unique result or solving a specific problem.*

From: M. Kapusta, *Zarządzanie projektami krok po kroku*. Warszawa: Edgard, 2013, ed. I, p. 8.

### Key features:

- Focus on achieving a unique and specific goal
- Limitation of time - with a clearly defined start and end (schedule)
- Coordinated, joint and interrelated activities carried out in a team
- Specified budget and resources (e.g. human, equipment, financial resources, know-how, etc.)

R. Luecke, N. Oparska (trans.), *Zarządzanie projektami małymi i dużymi: podstawowe umiejętności pracy zgodnej z budżetem i terminarzem*. Warszawa: Wydawnictwo MT Biznes, 2006, p. 9.



## What elements does the **project** consist of?

- The need to implement the project
- Project recipients
- Main goal
- Actions (and specific objectives)
- Risk of failure to achieve project assumptions
- Schedule
- Project effects
- Project management
- Staff (including volunteers)
- Cost estimate (budget) of the project

## Stages of **project** management:

1. Initiating,
2. Planning,
3. Executing,
4. Controlling and monitoring,
5. Closing.



## Problem analysis

The analysis of problems allows for an in-depth understanding of them, and thus - finding the most effective solution.

Tools:

→ **problem tree** - a pictorial way of presenting the logic of a given situation

The problem tree allows you to analyze and visualize the links between the main problem, its consequences and root causes; shows cause and effect-relationships.

→ **tree of objectives** - a visual way of presenting the intervention logic

## Goal analysis

Setting goals using the **SMART method** helps to define goals correctly, which increases the chances of achieving them. The name is an acronym consisting of the English words:

**S**pecific

**M**easurable

**A**chievable

**R**elevant

**T**ime-bound



## Specific

- The goal must be clearly and specifically defined
- We precisely describe the goal, not the way to achieve it
- Understandability of the message

## Measurable

- Indicators
- Quantifiers



## Achievable

- Is the given goal achievable, e.g. within the set time?
- Determining the necessary resources
- The goal should also be **attractive** and **ambitious**

## Relevant

- An important goal is the basis for a sense of meaning and motivation to work
- Each team member should feel that they play an important role in achieving the goal
- A goal has value for those who pursue it



## Time-bound

- Setting a deadline for the set goal
- Setting a deadline for its achievement
- Determination of specific start, end and milestone dates
- Adoption of realistic assumptions: the time to achieve the goal can be neither too short (pressure, threat that the goal will not be achieved), nor too long (decrease in motivation)

## Project Schedule

Gantt chart - the most common tool for presenting the time dependencies of the project. Visualizes the project schedule and related tasks/events in the project lifecycle using a bar chart.

The bars of the graph represent tasks, and their length reflects the amount of time needed to complete these tasks.

The Gantt chart may consist of the following elements:

- The date and duration of each task
- Tasks
- Task owner
- Milestones



## Creating the Gantt chart

1. Specify the time period - set the start and end date of the project.
2. Add tasks to the chart - for each task, it is also good to set its start and end date, duration.
3. Determine the dependencies between individual tasks in the project.
4. Set milestones - "checkpoints", specific points in time that represent the completion of larger groups of tasks and serve to prioritize them. These can be: team meetings, project approvals, task start, endpoint of a project stage, etc.

Source : <https://asana.com/pl/resources/gantt-chart-basics>

## Project budget - definition

**Project budget** - „is a financial plan for the implementation of the project or a numerical expression of the plan of activities in the project, enabling the measurement of project performance in financial terms. It is also referred to as the breakdown of costs, presented in tables, for the use of activities carried out in the project.”

Source : [https://mfiles.pl/pl/index.php/Bud%C5%BCet\\_projektu](https://mfiles.pl/pl/index.php/Bud%C5%BCet_projektu)



## Step by step: project budget

1. Once the **goals** of the project are set, the scope of work needed to achieve them should be defined. The scope of the project describes what final products we want to achieve and when. We need to consider factors such as **available resources**, time constraints, and what we don't want to achieve (if something is outside the scope of the project, it can also potentially be over budget).
2. Create a **list of the final products** of the project and break them down into smaller elements, e.g. if the project product is publishing an article on a blog, it can be divided into **components**, e.g. drafting, proofreading the article, designing images/graphics, sharing on social media, etc.
3. Make a list of the **resources needed** to deliver the final products, e.g. team members (maybe some work needs to be outsourced?), training, equipment, work space, data collection, professional services, travel costs, etc.

## Step by step: project budget

4. Estimate the cost:
  - **Estimating from scratch** - estimate the cost of each element separately and add them together
  - **Backward estimation from a certain amount** - it consists in selecting the amount and spreading it over the final products and milestones of the project. It will work in a situation where we want to check what we can achieve within a certain budget
  - **Estimating by comparing budgets of similar projects, by analogies**
  - **Estimate by considering different scenarios** - the average cost of different scenarios can then be taken as the budget





A budget document should include several key elements:

- **A list** of the elements that make up each end product of the project and the required resources along with the cost of each.
- **A timeline** indicating when you will need each resource and when you will spend the funds.
- **A person** responsible for each element of the budget. For example, you can write that the assistant editor is responsible for monitoring the hours worked by freelancers and the invoices received from them.
- **Clear documentation** of what part of the company's budget will be paid for which item. For example, your marketing budget might pay for video ads, and your IT budget might pay for a software update.
- **The total cost** of the project. If necessary, you can include the individual amount of budget available in each department.
- **A place** where once the project starts, you can monitor the actual cost against the planned cost on an ongoing basis.

Source : <https://asana.com/pl/resources/project-budget>

## Risk management

**Project** risk management is a series of activities aimed at identifying and reducing or eliminating threats that could affect the successful implementation of the project.

Project risk is typically:

- **operations** that will *not* be *successful* and may lead to losses or hinder the achievement of the goal,
- **operations** whose result *is not known* - it can be better or worse, but - unlike the *previous* risk - here we can see not only a threat, but also an opportunity.

It is necessary to recognize *all threats and focus on identifying factors that may threaten the smoothness of project implementation*, achievement of goals, but also those that represent an opportunity. Risk can be identified based on various methods, e.g. by brainstorming or using the Delphi method (seeking advice from experts).



After identifying the risks, you can create the so-called register of threats, i.e. a list of threats that may occur in the project. Sample questions that will help you create such a record:

- *What are the chances of this risk occurring?*
- *What is the probability of this risk occurring?*
- *What will be the impact and severity of this risk?*
- *What is our response plan for this risk?*
- *Given the likelihood and impact, what is the priority of this risk?*
- *Who is responsible for this risk?*

Don't worry if we can't answer all your questions right away. Some answers will emerge during the next steps.

Source : <https://asana.com/pl/resources/project-risk-management-process>

## Project results

The effects of the project can be divided into three categories that result from each other:

- **products**
- **results**
- **impact**

**Products** are all countable goods and services that will be created as part of our project. Number of printed training materials or books, number of trainings, number of consultations, number of internships, number of beneficiaries of training, internship, conference, workshop, etc.

**Results** are all the immediate and direct benefits that the beneficiaries have derived from participating in the project, and more specifically in a given **product**. The result may be, for example, raising the level of knowledge or acquiring new skills or changing attitudes.

Source: <https://aktywny.blog/2015/06/03/produkt-rezultat-efekt-oddzialywanie-czym-to-jesc/>



We divide the

- **Hard results** - easy to measure: increase in knowledge and skills among beneficiaries, measured e.g. through tests, certification, subjective feelings of participants;
- **Soft results** - difficult to measure: change of attitudes, breaking barriers, increasing motivation, increasing interest in a certain topic.
- **Quantitative and qualitative results** - this division applies to indicators, but it can also be applied to project outputs, e.g. cultural projects. For example, the product "theatrical performances" can be converted into a "high-quality theatrical performance", and the quality will be confirmed by the number of positive reviews or the number of famous artists involved in the production.

The **impact** is the long-term effect of the fact that the beneficiaries of our project will find themselves back in their communities. The impact is defined in the long term and usually extends significantly beyond the end date of the project. We usually refer to it as an estimation because there are no mechanisms to measure it. We can only observe it. The logic of the entire project and the selection of appropriate activities tell us what the impact will be.

**Through products we achieve results that have a certain impact.**

Source: <http://wid.edu.pl/2018/03/wskazniki-produktu-rezultatu-projektach-ue/>

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Key competences for people aged 50+

## Course: Entrepreneurship Module 3.2: Personal Projects





## Personal projects

### Definition:

"any kind of activity that requires planning, formulating goals, organizing activities".

Sikora, K. (2005). Zmiana osobowości w ujęciu psychologii projektów osobistych. In: A. Niedźwieńska (red.), Zmiana osobowości. Wybrane zagadnienia. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego, p. 77.

### Typology:

Inter- / intrapersonal

Short- / long-term

General / more specific

Feasible/impossible

The projects most often concern education, professional work, children/family, household, leisure time, social life, health, and other activities of everyday life.

*Personal projects are not just what people plan, it's something more concrete - what people work on. Projects can range from afternoon plans to lifetime plans, from simple tasks such as taking out the garbage to very complex tasks such as maintaining a relationship in crisis.*

*The project, although it can be described in a simple sentence ("I want to...", "I plan...", "I intend to..."), is in fact a process in which the phase of project formulation, planning, implementation, evaluation of the operation effects and possible modification can be distinguished.*

*The project is assessed by the person who implements it - it can be perceived as easy/difficult, important/unimportant, giving/unsatisfying, etc. At every moment of their life, a person is involved in many projects of varying complexity, advancement, time range and different - subjectively perceived - importance.*

Sikora K. (2008). Projekty osobiste - samoregulacja ukierunkowana na rozwój. In: Niedźwieńska. (red.) Samoregulacja w poznaniu i działaniu, UJ, Kraków, pp. 104-105.

<https://core.ac.uk/download/pdf/250299874.pdf> (accessed November 18, 2022)



## Self-motivation

"**Motivation** refers to the mental sphere of a person, it is internal, attribute-based, it is a process of regulation that controls activities so that they lead to the achievement of a specific result, goal."

Jasiński Z. (2006). Podstawy zarządzania operacyjnego, Oficyna ekonomiczna, Kraków, p. 249.

**Self-motivation** is motivating and stimulating oneself to act.

## To increase your level of motivation, you can:

- Change the perception of a given task,
- Change the conditions, e.g. environment,
- Change your approach to the task,
- Change your usual way of dealing with a given task, try a different approach,
- Make changes in yourself,
- Change the reward (or designate one),
- Changing the "stick" – e.g. telling someone what you are going to do and what your goal is – will make it harder to fail in a task that someone else knows about.



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