

THE GUIDELINE

How to implement digital wellbeing in
adult education



Co-funded by the
Erasmus+ Programme
of the European Union



The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Introduction.....	4
What is “digital well-being” then?.....	5
Digital hygiene.....	5
Chapter I - DIGITAL WELL-BEING – as the conscious use of new technologies..7	7
Threats of digital imbalance.....	8
The fear of exclusion, or the FOMO issue.....	8
Ways to deal with FOMO.....	11
Educators to FOMO.....	12
How to achieve digital balance?.....	12
Step by step:.....	13
Slow Content.....	15
Digital inspirations - learn on the shoulders of giants.....	16
Chapter II - Implementing digital wellbeing in the work of a trainer - a case study	18
Good practices and solutions.....	23
Results.....	24
A few words at the end.....	25
Chapter III - How much time to spend in front of a mobile device for work and	27
education?.....	27
Lack of concentration.....	28
Problems with fitness and health.....	28
Problems in direct relations.....	29
Information overload.....	29
Addiction.....	31
Recommendations.....	32
Time windows.....	33
Chapter IV - Information about applications moderating time on each webpage,	35
programe.....	35
Applications.....	36
Chapter V - What apps and programs can help us achieve digital wellbeing?...47	47
Chapter VI - Technological Occupational health and safety.....	59
Chapter VII - Portugal Case Study.....	69
What means do people have to access the internet?.....	71
How much time do Portuguese people spend online?.....	71
What do Portuguese users do on the internet?.....	72
What content do Portuguese people consume on the internet?.....	74
The use of social media in Portugal.....	74
Digital Risk and Well-being.....	76
Chapter VIII - Progressive digitization in everyday life. E-state - case study from	80
Estonia.....	80
Internet elections.....	83
E-banking.....	86
Cyber security.....	87

**Chapter IX - Toolbox - Existing applications and useful links for enhanced
online security..... 89**



Introduction

Digital well-being - a state worth taking care of when using technological goods. Due to the amount of time we now spend using our phones, scrolling social media and other social profiles, the topic is especially important. Failure to properly balance in using technology at the right moment can affect our physical, mental and emotional health. That is why it is so important to stop for a moment and explore the topic of "digital balance", understand if we are in the right place or perhaps we need to make some changes in our lives. Fortunately, we have many ready-made tools and solutions that will help us with this. What can be a problem and a limitation for us is only ourselves, because whether we use the acquired knowledge or use the given solutions depends only on us.

However, before we refer to the balance in technology, it would be worth considering the concept of well-being. According to the PWN encyclopedia, well-being psycho. *subjectively perceived by a person feeling of happiness, prosperity, satisfaction with the state of life*¹. The concept itself, as well as its development, appear in the social consciousness quite late - *it becomes a basic value only in the post-industrial, information society, which is sometimes also called the post-modern society*² – According to sociologist Barry Smart, postmodernity is (...) *a period extending from the mid-1970s (...)*.³ The time when this topic began to be noticed should not be particularly surprising, due to the fact that for quite a long time there was no thought about how a person can feel luck, and how it should work over it. Currently, the issues are being discussed more and more often, especially now, when we talk a lot about building self-esteem, taking care of your health, especially in the context of mental health. We're trying to develop everything to make our lives better. We are increasingly being told to think about ourselves and focus on ourselves. Until recently, such slogans would be called selfish, and putting one's peace above household duties would be accused of laziness. However, the world has changed a lot in recent years and what used

¹ <https://encyklopedia.pwn.pl/haslo/dobrostan;3893293.html>

² Andrzej Mirski; Welfare as a social and economic category in State and Society IX: 2009 No. 2

³ 2012 | Management of spatial resources of the city in [postmodern world](#). | 11-17 The essence and features of postmodernity [Agnieszka Bugno-Janik](#)

to be (or seemed to be) is now slowly no longer being so. When there are so many stimuli around us that still attack us and penetrate our mind at any time of the day, it is important to take care of rest, calming down and calming our mindfulness.

The theory of well-being is about finding time for yourself, taking care of your comfort and self-esteem. It is important here to take care of your development and balance between the most important aspects of life. In everything we do, we do not forget about ourselves and we do not overlook ourselves in any area of everyday life.

What is “digital well-being” then?

Digital well-being is nothing more than digital balance - it is a state in which we try to find a balance between our lives and the life that takes place through new technologies.

Technology that surrounds us from every side has a huge impact on our everyday life and basic functioning. Most of its aspects are in this technology - in a mobile phone, in a laptop, in a tablet. Very often, we save everything we do in them. It's when we photograph moments, send messages, post on social media. We stare at screens for hours, browsing websites, watching the lives of our friends, acquaintances and stars. We are absorbed by the virtual world, and yet we have known for years that if something absorbs us in that way, we are most often dealing with addiction. However, in this case it is difficult because technology is very helpful and necessary for us. It is thanks to it that we can have constant contact with people we cannot see too often, find the recipe for the cake, watch trips to the country we have always dreamed of. What's more, it is used for work. How then to determine whether it is needed, whether it is an addiction or simply, whether modern days just looks that way.

Digital hygiene

The first to respond to these doubts was the principle of "digital hygiene", which *is a set of activities and attitudes that are to ensure safe use of electronic devices*

*and modern technologies in such a way that it does not pose a threat to our life and health.*⁴ It is a broader concept than digital well-being, because it comes out apart from the sphere of using technology and tells us how to live in order to more easily bear the effects of overload with the use of digital technologies. It draws attention to the aspects of physical health and the impact on the deterioration of health due to the overuse of telephones and computers. It also assumes planning a "digital detox" from time to time, i.e. completely cutting off the use of phones / computers.

⁴ <https://www.gov.pl/web/cyfryzacja/czym-jest-cyfrowa-higiena>



Chapter I - DIGITAL WELL-BEING – as the conscious use of new technologies

The topic of digital balance explores the issue of digital hygiene and adds new solutions. It tells us how to use new technologies in a balanced and safe way. Giving a sense of comfort, taking care of our well-being. It does not assume that we will give up new technologies completely, it does not tell us about discontinuing them, but about ways that will facilitate our proper functioning based on digital solutions.

There are many definitions of this phenomenon, as many as 34 (!), after reading them all and gathering them together, we will get something like this: ***it is a state of personal well-being experienced through the healthy use of digital technology.***⁵

There are also several other definitions that cover very important aspects, such as: according to Google: *the state of satisfaction that people achieve when digital technology supports their intentions; according to Gui. Fasoli and Carradore: a state in which subjective well-being is maintained in an environment characterized by an excess of digital communication. In conditions of digital well-being, individuals are able to direct the use of digital media to a sense of comfort, security, satisfaction and fulfillment.*

As you can see, there is nothing here about giving up technology, and moreover, there is no information about limiting it. What is important in them is the place of a human being when using them. We are supposed to do it in such a way that it gives us fulfillment and a sense of comfort that does not evoke negative emotions. Which, of course, does not preclude the need to take care of the amount of information we receive and how to verify it. Everything has its limits, in the place where we start to feel bad, we are overstimulated and our attention is too distracted. That is why it will be so important to know the subject, explore it and analyze your condition and the impact of technology on our well-being and health. Only after assessing these issues will we be able to figure out where new technologies have a negative impact on our well-being.

⁵ <https://digitalwellbeing.org/what-is-digital-wellbeing-a-list-of-definitions/>

Threats of digital imbalance

1. Wasting time - using the phone without observing the rules of digital balance can cause us to unknowingly waste time on unnecessary movements on the Internet. Unfortunately, many websites and portals work in such a way as to keep our attention as long as possible. They show us a lot of content that may interest us, and thus we can scroll for hours on the screen and watch materials that are attractive to us, but do not translate in any way to our development or work.
2. Increased tension - caused by the fact that we spent too much time misusing/unnecessarily using technology and therefore did not do what was important to us. Excessive use of social media or other portals is very hard to stop. Especially if we have a problem with self-control. Lost time and failure to complete the task will weigh on us and contribute to increased stress and tension.
3. Fatigue - if our brain has to deal with too many stimuli, it can easily be overused, which can lead to general fatigue and a weakening of the quality of perception. If we expose ourselves to too much messaging, it can lead to poor performance at work, irritability, as well as negative effects on mental health. Our brain is an organ that we should take special care of and do everything to give it time to rest and regenerate. That is why it is so important to use the phone as long as we and our mind need it. That doesn't mean we can't watch a movie, a series, or memes with funny pictures. This means that we have to do it as long as we need it: to work, to relax, but not until our brain is overstimulated and asks us for a moment of rest.
4. FOMO (Fear of Missing Out) - literally fear of being left out, due to numerous studies and the connection with social media, we will discuss it in more detail in the next subsection.

The fear of exclusion, or the FOMO issue

Social media allows us to follow the latest events in the lives of our friends, as well as popular artists and athletes in almost real time. However, staying up to date with the content you want can lead to pressure and anxiety. It happens that we follow social media right after waking up, during meals, meetings with friends, at

the cinema or before bedtime.

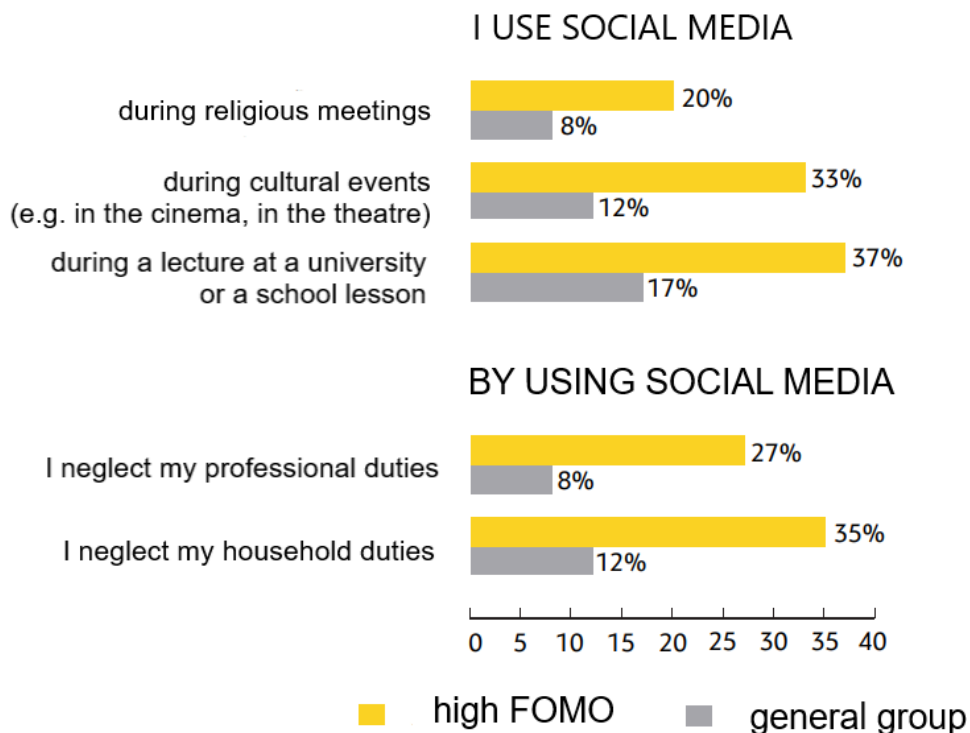


Fig. 1. Excessive use of social networking sites among Polish Internet users.
Source: FOMO. Poles and the fear of disconnection — research report, 2018

In this context, the topic of FOMO began to appear more and more often. The term was originally coined by marketing strategist Dr. Dan Herman in 1996 and popularized in 2004 by investor and author Patrick J. McGinnis. At the time, however, none of them were referring to social media, rather they meant the *fear of not taking advantage of all available opportunities and at the same time losing the expected joy*.⁶ In 2013, scientists proved that there is a strong relationship between web use and FOMO syndrome⁷.

Along with the aforementioned research, the term began to be understood as the fear that at a certain moment someone is having amazing experiences in which we do not participate. What's more, new technologies not only gave the opportunity, but also created the desire to be in constant communication with the

⁶ Anna Jupowicz-Ginalska, Justyna Jasiewicz, Małgorzata Kisilowska, Tomasz Baran, Aleksander Wysocki - FOMO. Poles and the fear of disconnection — research report, 2018

⁷ Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell – Motivational, 47 emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4), 2013.

world. Getting to know both the lives of celebrities and friends often contributes to the destruction of your own self-esteem, which results from constantly comparing yourself to others.

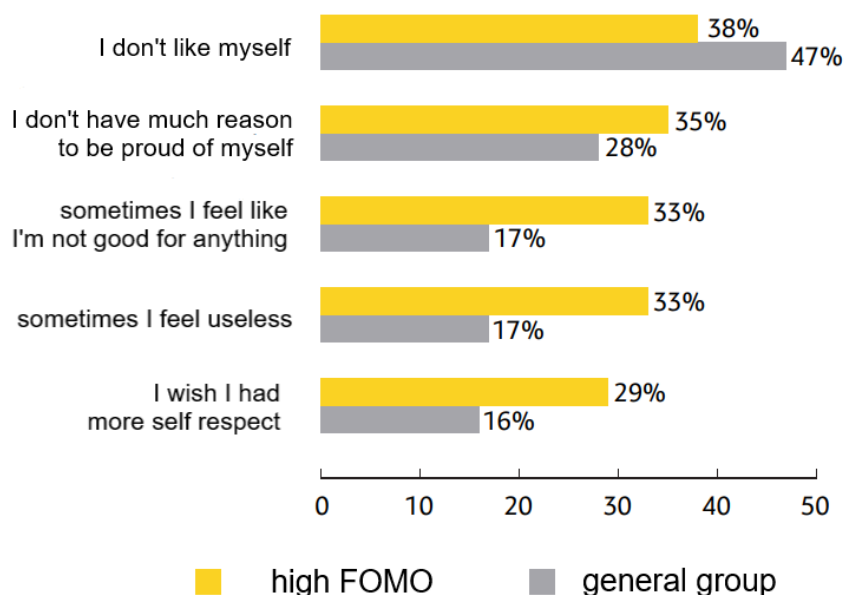


Fig. 2. Self-esteem and FOMO among Polish Internet users Source: FOMO. Poles and the fear of disconnection — research report, 2018

FOMO can also lead to addiction, which is confirmed by research results⁸ conducted in a group of 1060 randomly selected Poles aged 15 and over. They showed that in 1/5 of respondents suffering from the syndrome, lack of access to social media caused nausea, sweating, abdominal pain or dizziness.

Although currently FOMO is most visible in the case of social media, for decades this problem has also been present in other spheres, e.g. in video games. The syndrome manifests itself in them in fear of missing an opportunity (e.g. taking part in an event or promotion limited in time) or being cut off from the group (e.g. in the absence in online competitions).

⁸ Anna Citko, Irena Owsieniuk – Epidemiology and the consequences of fear of missing out (FOMO). The role of general practitioners in early diagnosis, treatment and prevention of FOMO in teenagers and young adults, 2019

This shows that FOMO is a natural and common phenomenon, it cannot be fully eliminated. The medium it concerns is constantly changing. However, we can use ways to deal with the syndrome.

Ways to deal with FOMO

Knowing everything is not a requirement

We must realize that being on constant alert is not necessary. Not all assimilated information is worthy of our attention.

Setting priorities

It is worth determining which things are most important to us and focusing on them. This can be, for example, family, interests, dreams or other goals. A good way is to introduce a daily schedule that will allow us to focus on our needs and limit making decisions under the influence of emotions.

Work on self-esteem

In many cases, FOMO is the result of a lack of self-confidence. The key to building self-confidence is appreciating your own strengths, progress, and successes, rather than focusing on what others are doing.

Interpersonal relations

Another aspect leading to FOMO is the feeling of loneliness. That is why it is important to focus on building relationships with loved ones, as well as people who inspire us.

Limit your time with social media

Notifications about new photos, stories, videos or messages effectively distract our attention. It's a good idea to set aside a specific time to view new content and muting notifications at other times.

Educators to FOMO

The approach of trainers and teachers also plays a key role in dealing with the syndrome. It is important that they observe and react appropriately to the situation in their group. A good solution is to introduce activating forms of education⁹. Avoiding the lecture style of teaching, focusing on workshops, teamwork and discussion can stimulate creativity and build relationships.

It is also important to create the right learning environment, where there will be a place to rest from social media. This will be helped by the joint introduction of rules, e.g. regarding the time and form of contact with the educator. Being available at any time will probably be well received by the group, but it may have a bad impact on the educator's life balance.

How to achieve digital balance?

Now that we know what "digital well-being" is and what it can lead to if you do not apply this theory to your own life, it is worth considering how to introduce this balance into your everyday life, which includes: private life, business life and issues related to working with other people. The latter should be particularly emphasized by people who professionally deal with education and training, because they can help in maintaining the digital balance of their students or charges.

Now that we know what the basic rules are according to the theory of digital balance, we must completely change the approach to using technology in all aspects of functioning in society.

Let's try to organize our work and that of others in such a way that it is not permanently absorbing. Let's set specific contact and communication times. Do not expect anyone to look for information, prepare for classes between training sessions. Let's not send engaging emails when it suits us, e.g. late at night or in the evenings. Such behavior on our part not only disturbs our digital well-being, but also affects those with whom we cooperate. Let's take care of the comfort of all

⁹ Anna Jupowicz-Ginalska, Justyna Jasiewicz, Małgorzata Kisilowska, Tomasz Baran, Aleksander Wysocki - FOMO. Poles and the fear of disconnection — research report, 2018

of us and follow certain rules. Everything for our health and for our and others' efficiency.

Step by step:

1. Find out how you use your device - before you start implementing the principles of digital balance in your life, think about how much you need it and, above all, in what aspects. What matters here will be: how much time you spend browsing individual applications, how often you unlock your phone to check notifications, how many notifications come to your phone. After analyzing such issues, you can prepare an action plan that will help you work through the next problems.
2. Set yourself boundaries - analyze what content you get and which of them you really need. Turn off notifications from apps that don't matter much. In social media, find accounts that you still follow and are no longer interesting to you or evoke negative emotions in you. Turn off anything that might distract you.
3. Make a few simple changes to your screen - start by organizing your icons. Sort and group them. Those that you rarely use, move to another page, or hide them in a larger subfolder. Keep on display only what is important and what you want to see. Limit yourself to what is most necessary!
4. Master your inbox – in email, messenger and other social media. Every time you open your inbox and see unnecessary messages, or worse, those that are still waiting for a response, negative emotions affect you. Close all unnecessary conversations. Sort the rest of the messages, clean them. If there are senders from whom you do not want to receive messages - block them or redirect them to spam.
5. Use the search bar to navigate your device - try not to open the search engine to find the information you need. Every time you open it, you will see content that may interest you and will redirect your thoughts to unnecessary tracks. Create a search box on your phone's desktop where you can directly enter the topic you are interested in. Thanks to this, you will avoid the trap in which the search engine wants to catch you.
6. Try single-tasking - when you're working, reading, doing other things, don't use your phone. Don't allow yourself to do many things at once. Such activities tire

the mind and create unnecessary distraction. What's more, they make you not do anything 100%. When you glance at your phone while reading a book, every now and then you lose the thread and have to go back to the previous page. When you are unnecessarily distracted at work, you can make a mistake that can have tragic consequences - it causes unnecessary stress.

7. Disconnect more often – do not use the telephone unless necessary. If all your needs have been met with this bound, put your phone down and do something else. Allow yourself a moment without technology. You can plan it in advance: set a function on your phone that will mute it from all notifications at certain times - this solution will make it easier for you to enter the time without a phone.

8. Relax for a better night's sleep - try not to use a smartphone at bedtime. When using the phone, we must remember that blue LED light negatively affects our sleep, delaying the process of falling asleep, because it has twice as harmful an impact on the secretion of melatonin than the yellow light of traditional light bulbs.

9. Leave work whenever you want - these days the topic of work is very often intertwined with everyday life. Many business issues we solve using social media or we use an e-mail box on a mobile phone that serves us as private and business. This causes a state in which we are constantly at work and cannot break away from it. You need to try to keep it to a minimum and only work during working hours. Use a different phone for it - also for online matters or after leaving work, turn off some applications and notifications. You don't have to do it yourself, many phones have features that will take care of it automatically.

10. Create device-free zones and hours – this is a topic worth discussing with the whole family. Agree that at certain times and/or places you do not use smartphones. Try not to let anything distract you while you spend time together. This will benefit your relationships, but also your digital balance.

11. Minimize your device use when you're with others - A very common (and sad) sight is when a group of friends get together and they're all still staring at their phones most of the time. Assume that you do not use your phone in company. You don't browse, you don't respond to notifications. It's best to turn them off for now. You can also ask other people around you to do the same. Spend time together talking and prove to yourself that you don't need a phone for this.

12. Put the phone out of sight and out of mind - if you know that the phone is distracting you and you can't do something because you are still curious about "what's up", put it far away, out of sight. Perhaps this will make it easier for you to forget about it, although for the time when it is not needed.

13. Familiarize yourself with Slow Content, which we discuss in more detail in the next section.

Slow Content

Currently, news services are dominated by catchy titles and short content that is easy to read on small screens of phones and then scroll the screen further. Thus, as recipients, we are flooded with a stream of messages, in the vast majority of which we are not interested at all. Communing with such content is like having a quick lunch at a fast food restaurant. We get carried away with solutions known from TikTok or Instagram, which are also increasingly used by other websites (including news).

The answer to this is Slow Content¹⁰, an approach referring to the idea of Slow Food, focusing not on speed and quantity, but on the quality of materials and real value for readers. For us as the audience, this means spending more time on factual, fact-checked articles, at the expense of numerous messages of lesser priority or quality.

Messages classified as Slow Content (or so-called Slow Journalism¹¹ promoted by the Delayed Gratification magazine), allow you to deepen your knowledge and develop. It is worth betting on topics that genuinely interest us. Choose specific creators to support and build relationships with them, which has become much easier thanks to social media. However, let's limit their number to a minimum so as not to get lost among notifications and take care of Digital Well-being.

What if we are authors ourselves? Let's create materials that focus on uniqueness, exploring a selected topic and verified information. Thanks to this, we will gain credibility and value, it is a great way to stand out from the competition. It is also important to approach the technical side of the text, maintain its transparency, use

¹⁰ <https://slowcontent.org/>

¹¹ <https://www.slow-journalism.com/slow-journalism>

short sentences, divide it into paragraphs and avoid errors. Even the best article can fail if it is not properly edited.

Digital inspirations - learn on the shoulders of giants

The largest technology companies are looking more and more closely at the idea of Digital Wellbeing and consistently introduce it to their strategies. Corporations such as Google or Apple have recognized the importance of our well-being for years, and the methods they introduce can be not only an interesting solution, but also an inspiration.

In phones manufactured by Samsung, we can meet the "Digital Wellbeing" function¹², which allows you to monitor the time spent in front of the screen or the number of notifications displayed. Thanks to the "Sleep Mode" we will mute messages and sounds at night, and the "Focus Mode" will allow us to concentrate on one task, disconnecting us, for example, from social media messages. Samsung also cares about healthy habits of children and teenagers through the educational program CyfrOFFy kONtakt¹³ addressed to parents and teachers.

Similar solutions have also been introduced by Apple (Screen Time¹⁴) and Google (Digital Balance¹⁵). The second of these giants can also boast of the Experiments with Google platform¹⁶, which includes test functions presented e.g. by users. So far, we could see the Post Box application that facilitates control over notifications or the Morph program that shows on the screen only programs related to the selected activity (e.g. sports or work). Currently, the functions of Digital Detox (converts scrolled materials into kilometers) and Anchor (long scrolling makes the screen gradually flooded with virtual water) are being tested.

¹² Digital wellbeing for the sake of your life balance -
<https://www.samsung.com/pl/explore/wellbeing/take-care-of-your-digital-wellbeing-and-achieve-a-balance/>

¹³ CyfrOFFy kontakt - our educational program -
<https://www.samsung.com/pl/explore/wellbeing/well-connected/>

¹⁴ Use Screen Time on your iPhone, iPad or iPod touch -
<https://support.apple.com/en-us/HT208982>

¹⁵ Manage how you use your Android phone with Digital Balance -
<https://support.google.com/android/answer/9346420>

¹⁶ Experiments with Google –
<https://experiments.withgoogle.com/collection/digitalwellbeing>

Since Digital Wellbeing is not indifferent to technology companies, it should not be indifferent to us either. We can use the new features of our devices and software to navigate the Internet more efficiently and to have greater control. In other words, we can use the technology for our purposes as well as cut ourselves off from it when it is no longer needed.

Chapter II - Implementing digital wellbeing in the work of a trainer - a case study

How to shape healthy digital habits in trainers and their adult trainees?

Shaping healthy digital habits in trainers and their adult trainees is crucial for promoting digital wellbeing. By modeling and encouraging positive behaviors, trainers can help individuals develop a healthy relationship with technology. Here are some strategies to shape healthy digital habits:

1. **Self-reflection and awareness.** Trainers should begin by reflecting on their own digital habits and assessing areas where improvement is needed. By developing self-awareness, trainers can identify their own strengths and weaknesses when it comes to technology use. This self-reflection will enable trainers to better guide trainees towards healthy digital habits.
2. **Set clear boundaries.** Trainers should establish clear boundaries around technology use for themselves and encourage trainees to do the same. This includes defining specific times and places for technology usage and creating device-free zones or designated technology-free periods. By setting boundaries, trainers and trainees can reduce dependency on technology and foster healthier offline activities.
3. **Practice mindful technology use:** Encourage to practice mindfulness while using technology. This involves being present and aware of own digital behaviors, including the time spent on devices, the apps used, and the content consumed. Mindful technology use allows individuals to make intentional choices and avoid mindless scrolling or excessive screen time.

4. **Prioritize human connection:** Emphasize the importance of maintaining real-life connections and relationships. Encourage to balance digital interactions with face-to-face interactions. This may involve scheduling regular in-person meetings, engaging in social activities that don't involve technology, and being fully present during conversations.
5. **Set realistic goals:** Trainers can guide trainees in setting realistic goals for their digital habits. This may include reducing screen time, limiting social media usage, or implementing device-free breaks. Help trainees break down their goals into achievable steps and provide support and accountability in their journey towards healthier digital habits.
6. **Promote digital hygiene:** Teach trainees about good digital hygiene practices, such as regularly updating software and apps, using strong and unique passwords, and being cautious of phishing attempts. Emphasize the importance of regularly reviewing and managing privacy settings across different online platforms.
7. **Encourage digital decluttering:** Help trainees declutter their digital spaces by organizing and deleting unnecessary files, apps, and emails. This practice not only promotes a sense of digital order but also reduces digital distractions and enhances overall productivity.
8. **Foster digital balance:** Educate trainees about the importance of achieving a healthy balance between online and offline activities. Encourage them to engage in hobbies, physical exercise, and other offline pursuits that bring joy and fulfillment. Promote the idea of unplugging and taking breaks from technology regularly.
9. **Provide ongoing support and education:** Trainers should continue to provide ongoing support and education to reinforce healthy digital habits. Offer resources, workshops, or regular check-ins to address emerging digital trends, new challenges, and opportunities for growth. Create a supportive environment

where trainers and trainees can share experiences and exchange tips on maintaining digital wellbeing.

10. **Lead by example:** Trainers play a crucial role in modeling healthy digital habits. By demonstrating positive behaviors, trainers inspire their trainees to adopt similar practices. Consistently showcase mindful technology use, respectful online communication, and healthy boundaries. Trainees are more likely to adopt these behaviors when they see them modeled by their trainers.

In summary, shaping healthy digital habits in trainers and their adult trainees requires self-reflection, boundary-setting, mindfulness, goal-setting, and ongoing support. By implementing these strategies, trainers can help individuals develop a balanced and mindful approach to technology use, ultimately promoting digital wellbeing.

How to transfer the knowledge about digital wellbeing to adult trainees and how to put it into practice

When it comes to transferring knowledge about digital wellbeing to adult trainees, it's essential to adopt a comprehensive approach that combines education, practical application, and ongoing support. Here are some steps to effectively transfer knowledge about digital wellbeing and put it into practice:

1. **Create awareness:** Start by raising awareness about the importance of digital wellbeing. Explain the potential risks and challenges associated with excessive technology use, such as digital addiction, mental health issues, and privacy concerns. Provide real-life examples and statistics to emphasize the need for digital balance.
2. **Education and training:** Design training sessions or workshops that cover various aspects of digital wellbeing. Topics may include managing screen time, setting boundaries, practicing mindfulness in the digital age, protecting personal information, and developing healthy online habits. Offer interactive sessions with hands-on activities to engage trainees and make the learning experience more impactful.

3. **Discuss risks and strategies:** Engage trainees in discussions about potential risks they may encounter online, such as cyberbullying, phishing, or mis- and disinformation. Teach them practical strategies to mitigate these risks, such as identifying fake websites, recognizing suspicious emails, and reporting inappropriate online behavior. Encourage trainees to share their experiences and seek advice from peers and trainers.
4. **Provide resources:** Share reliable resources and references on digital wellbeing. Provide trainees with access to informative websites, articles, videos, and podcasts that address topics like digital literacy, online safety, privacy protection, and mental health. These resources will serve as references for further learning and support trainees' ongoing efforts to maintain digital wellbeing.
5. **Practical exercises:** Integrate practical exercises to reinforce the concepts learned during the training. For example, conduct group activities where trainees develop personalized digital wellness plans, setting goals and strategies for managing their online activities and minimizing distractions. Encourage trainees to reflect on their digital habits and identify areas for improvement.
6. **Implement accountability mechanisms:** Establish accountability mechanisms to support trainees in their digital wellbeing journey. This can include regular check-ins, peer support groups, or digital wellbeing ambassadors within the organization. Encourage trainees to track their progress, share successes and challenges, and seek guidance when needed. Consider using digital tools or apps that promote healthy technology use and provide insights into screen time and app usage.
7. **Ongoing support and reinforcement:** Digital wellbeing is an ongoing process, so provide continuous support to trainees. Offer follow-up sessions or workshops to address emerging trends, new risks, and evolving best practices. Encourage trainees to share their experiences and insights with each other to foster a community of digital wellness advocates.

8. **Lead by example:** As a trainer, it is crucial to lead by example and demonstrate healthy digital behaviors. Model good practices such as setting boundaries, practicing device-free time, and being mindful of online activities. Trainees are more likely to adopt these behaviors when they see them in action.

9. **Evaluation and feedback:** Regularly evaluate the effectiveness of the training program and gather feedback from trainees. Use surveys, interviews, or focus groups to assess the impact of the knowledge transfer process. Adjust the program based on the feedback received, incorporating suggestions and addressing any gaps in understanding or application.

By following these steps, you can effectively transfer knowledge about digital wellbeing to adult trainees and help them implement healthy practices in their digital lives. Remember that continuous support and reinforcement are key to ensuring long-term success in maintaining digital wellbeing.

During the preparations for the implementation of the digital wellbeing principles, taking into account the limitation of the time of using mobile devices, we focused on how to encourage the "mentees" to change their habits and behaviors, so that they will start to put their mobile devices aside and digital activities more often replace in by different activities.

Due to the fact that since the creation of the Internet we are called information society (*by definition, an information society is one whose most important features are the production, collection and circulation of information, and thus understood is an obvious manifestation of a post-industrial society¹⁷*), we must bear in mind that we should not, and even cannot, try to completely limit the use of digital solutions. They are something very useful and necessary, bringing many positive issues into our business and private life. The key, however, is not to lose yourself completely in it and to find what makes it easier for us to move away from them. Painless, frustration-free and soothing.

¹⁷ M. Golka, Information Society - What Is It?, 2005

People like us, whose task is to educate others, often become some kind of authority. We have the opportunity to use this acquired knowledge in the field of digital wellbeing to improve the quality of life of others.

Good practices and solutions

During our trainings and meetings, we started to implement new solutions and encourage participants to practice them in their everyday lives in the context of learning and more:

1. Taking paper notes during training - first of all, it is a method that makes it easier to remember the acquired content - writing down stimulates more senses, makes it easier to focus on the topic, but also (most importantly) if we do not take notes on a digital device, it will not be another time spent in front of a screen that emits negative blue light.
2. Greater focus on getting to know each other - building new relationships - during training, as trainers, we have an impact on what we spend training time on; we can plan more activities to get to know each other and build new relationships. For the participants it will be a great learning how to talk with another person and open up to others. Usually it is much easier to do under controlled conditions, with an imposed theme.
3. Limiting the use of mobile devices during classes - only to the situations indicated by the trainer - at the beginning of the training or cooperation, we can set specific rules. A total ban on using phones during the training, unless at the express request of the instructor (e.g. it will be needed to perform some work or learn an application, etc.). You can also try to introduce the principle of limiting the use of telephones during breaks, e.g. by imposing the principle that in free time everyone is supposed to meet and talk to two new people. In order to achieve this goal, each participant will be forced to limit the use of mobile devices.
4. Dedicating part of the training time to preparing for the next meeting - controlled research - if during one day of training it turns out that participants will have to do some "homework", we can try to complete the training several dozen minutes earlier and let everyone actively search for information during this time .

Thanks to this, they will not have to spend extra time with a mobile device during their free time.

5. Determining specific hours of communication with the trainer outside of classes - you can clearly specify that contact with you is possible only at selected times, e.g. *I am available every day from 6-7 pm, otherwise please do not contact me as it interferes with my digital wellbeing*. Moreover, if someone, despite the request, contacts you at a different time, it is important not to respond immediately, but to wait until the agreed hours.

6. Limiting the sending of information and materials outside the training time to a minimum - even if we forget something, we will remember something after some time, let's not talk to the participants outside the agreed hours. Each message we send at a different time will call them unnecessarily to their digital devices and occupy their heads, perhaps for more than one glance at the phone to read our message.

7. Encouraging participants to spend time together outside the training date - if participants establish new relationships, meet new people, it will be easier for them to divert their attention from the digital world. It is important to go beyond this world and keep in touch with the other person beyond the blue screen.

8. The use of new training methods, such as role-playing (with elements of RPG sessions), presenting short stagings (with elements of acting workshop), the use of art techniques (using various methods: scrapbooking, collage etc.), the use of board games - all in order to show the participants something new, which may encourage them to discover new passions and interests beyond the digital ones in the future.

9. If possible, organize part of the training outdoors, in mind of idea of *grounding, i.e. seeking contact with nature, the earth, spending time in the bosom of nature*,¹⁸

Results

After introducing these principles during training, we noticed various reactions, not all of them were positive. It's hard to tell adults how to live and make them follow

¹⁸ Maciej Dębski – Fonolandia. Guide "How to use digital media responsibly and safely", 2018

rules that don't quite suit them. We must remember that many people are currently addicted to the use of mobile phones and imposing restrictions on them can negatively affect their well-being, caused by something like withdrawal syndrome. Therefore, we must approach this subject very carefully. It is best if we create common rules at the beginning (we mentioned this in the previous chapter), which all participants and leaders will be obliged to comply with. Perhaps one of your ideas will not meet with enthusiasm and you will not be able to use it in one of the groups, but some tips are completely on your side, so don't give up and try to use what is possible.

Despite the astonishment of the groups as to some solutions, it was very soon noticeable that the methods met with great enthusiasm. For example, the obligation to meet two new people during each break. Suddenly, the participants were talking to each other, it was hard to tear them away from these conversations when the training was already underway. Each of the described methods turned out to be very positive after implementation. After asking the participants what their impressions of the training were, they all unanimously said that it was well organized and that they had a great time and were happy to meet new people. Of course, no one directly said that it was a matter of using mobile phones, but we as coaches know what could have influenced it and why.

A few words at the end

Activities of this type actually act as a subliminal message, we do not explicitly say that the training will be conducted using a method that limits the use of digital devices, because it may encourage participants to rebel. Instead, let's just introduce these principles into our training and try to instill these methods in the participants, hoping that it will translate positively into their later lives.

Let's also remember about ourselves! As socially engaged people, often associated with non-governmental organizations dealing with the education of others, we forget about our own digital well-being. Let's implement its principles in our work and in our lives, thanks to this we will be more persuasive in what we do and it will be easier for us to induce others to follow these rules. It can also be

crucial for our professional work, as a lack of well-being is often associated with premature burnout and mental health problems.

Technological development is good and it is worth using it, but in moderation and maintaining the right balance

Chapter III - How much time to spend in front of a mobile device for work and education?

In the previous chapter, we discussed the dangers of overusing digital devices and not adhering to digital wellbeing. We now turn to examples of the negative results of neglect.

Failure to maintain proper *savoir-vivre* while using digital media and mobile devices can lead to addictions, as well as direct threats to our mental and physical health or even life.

Suffice it to say that before the outbreak of the coronavirus pandemic, an adult US citizen spent an average of about 11 hours in front of a screen, while during the pandemic this number increased to 19 hours¹⁹. Neither our body nor mind is prepared for the amount of information we absorb during that time.

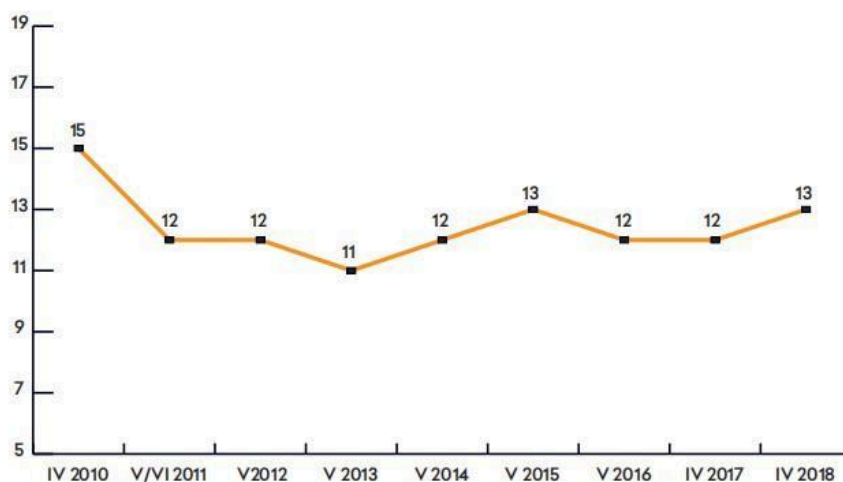


Fig. 3. Average number of hours spent online per week. Source: Fonolandia. How to use digital media responsibly and safely²⁰

It is therefore necessary to understand that failure to comply with the principles of digital wellbeing can affect every element of our lives. Even eating meals while

¹⁹ <https://people.com/human-interest/average-us-adult-screens-study/>

²⁰ based on CBOS research results. Feliksiak M. (2018). Using the Internet. CBOS Public Opinion Research Center Foundation. Warsaw. Available at www.cbos.pl/SPISKOM.POL/2018/K_062_18.PDF

being absorbed in a digital screen can have negative results - lead to choking or ulcers (insufficient chewing of food causes it to stay in the stomach and rot). Everything matters.

Lack of concentration

Using a smartphone or other mobile devices right before falling asleep can result in poor quality and too little sleep, fatigue, as well as unfavorable conditions for brain development. This translates into problems with concentration, without which the acquisition of information (absorption and memorization) and the reliable performance of work or home duties becomes an increasingly difficult challenge. Such behavior poses a risk of disturbing the biological clock or insomnia.

It is also often the cause of traffic accidents resulting from lack of concentration, often combined with the use of a smartphone while driving a vehicle or walking on the streets (it is worth recalling here that, according to the law, using a telephone in both in these cases is punishable by a fine in Poland).

The decrease in attention along with the lack of a wide field of vision (the eyesight is focused on the screen) favors the oversight of road signs, traffic lights and warning sound signals. This violates the basic principle of limited trust in all traffic users, often with lethal results.

Problems with fitness and health

Excessive use of digital devices, such as smartphones, tablets or laptops, usually goes hand in hand with deterioration of the condition. Time spent in front of screens is time that people in previous generations would have devoted to physical activity - walking, gardening, playing sports, etc. Meanwhile, the widespread sedentary lifestyle today is directly related to an increased risk of obesity and other diseases of the body.

Our eyes also suffer from this, which over time can become the cause of myopia or dry eye syndrome, which is caused by a decrease in the frequency of blinking when looking at a screen. This can lead to irritation, burning, itching and eye

fatigue. These are the hints that the body sends to us demanding a break from electronic devices.

The specific position of the body while staring at the screen causes headaches, shoulder and back pain, in the worst result, regular, long-term bending will cause degeneration or postural defects. The latter may lead to text neck²¹, i.e. curvature of the spine around the neck, which often affects people working in the office or using mobile devices.

Problems in direct relations

We got used to the idea that thanks to technology it is much easier for us to keep in touch with loved ones, regardless of the distance between us. That's true, but excessive use of the digital-only communication option can impair our conversational abilities in direct relations. Interestingly, such a fate is less common for extroverts, who are positively affected by this form of communication, while deepening self-isolation in introverts²². In other words, whether digital devices enhance contacts in real life or rather evoke the feeling of loneliness is a highly individual and ambiguous matter.

Related to this topic is also the issue known as phubbing²³, i.e. the phenomenon of ignoring the environment or company by focusing on using a mobile device, such as a smartphone, while interacting with other people. The word "phubbing" comes from the combination of the words "phone" and "snubbing", which perfectly describes the characteristic behavior when someone's attention constantly returns to the screen, instead of focusing on, for example, the interlocutor. Phubbing can lead to isolation and deterioration of interpersonal relationships.

²¹ Sunil Neupane, U.T. Ifthikar Ali, A. Mathew – Text Neck Syndrome - Systematic Review, 2017

²² Maciej Dębski – Fonolandia. Guide "How to use digital media responsibly and safely", 2018

²³ Estefanía Capilla Garrido, Tomayess Issa, Prudencia Gutiérrez Esteban, Sixto Cubo Delgado –A descriptive literature review of phubbing behaviors, 2021

Information overload

*Information overload syndrome*²⁴ is a phenomenon consisting in a huge increase in the amount of content and information that a person receives, and which the brain is unable to process and use effectively. Lecturers started using the term as early as 1962 (e.g. Bertram Gross book *The Managing of Organizations*), then popularized in 1970 by futurologist Alvin Toffler²⁵ in his best-selling book *Future Shock*.

Information overload leads to many negative effects, such as deterioration of the accuracy of decisions, decrease in the effectiveness of decision-making, tendency to skip key information, attention deficit, increased stress levels, increased blood pressure, impaired vision, indigestion, frustration and confusion in life, impaired ability to decision-making, increased aggression, and trouble concentrating and sleeping.

²⁴ D. Bawden, L. Robinson – Information Overload: An Overview. In: Oxford Encyclopedia of Political Decision Making, 2020

²⁵ <https://tofflerassociates.com/about/the-toffler-legacy/>



Fig. 4 Every minute online in 2022²⁶

Addiction

The use of digital media can lead to addiction, manifested, among others, in difficulties with self-control, withdrawal symptoms, and loss of interest.

According to M. Griffiths²⁷ the criteria for behavioral addiction are:

- preoccupation - a situation in which a given behavior dominates other activities;
- mood modification - the effect brought by a given behavior;
- tolerance - increasing demand for a given behavior;

²⁶ <https://localiq.com/blog/what-happens-in-an-internet-minute/>

²⁷ M. Griffiths – Does internet and computer addiction exist? Some case study evidence, 1997

- withdrawal symptoms - mental or physical symptoms occurring in situations of inability to perform a given activity;
- conflict - experiencing negative emotions as a result of engaging in a given behavior;
- relapses - returning to uncontrolled activities despite their destructive impact on health and social relations.

It is also worth mentioning the study on alcohol abuse in the context of FOMO²⁸, in which the CAGE questionnaire was used, consisting of four questions regarding the respondents' relationship with alcohol. Compared to the data from 2021, there was an increase in the number of people admitting to feeling remorse and shame for drinking and the need to reduce alcohol consumption.

Researchers noted that the increase was more pronounced among women and the elderly, which may be related to the COVID-19 pandemic and its effects, such as lockdowns and changes in everyday life. On the other hand, the study showed a decrease in alcohol consumption among young people without a partner or children. Researchers suggest that it is worth looking at how strategies for coping with tension influenced the emotional experiences of the subjects, such as shame or guilt. There was also an increase in the number of subjects who were annoyed by comments about their drinking, with differences related to gender and FOMO levels.

Awareness of the impact of electronic devices on the tendency to addiction is growing every year. Let's add that the WHO (World Health Organization) has included gaming addiction in the 11th edition of the ICD (International Classification of Diseases)²⁹, and the American classification of mental diseases and disorders DSM-5 recognized it as a disorder requiring further research³⁰. For humanity, this is still a very fresh problem that we are just learning to deal with.

²⁸ Anna Jupowicz-Ginalska, Małgorzata Kisilowska-Szurmińska, Katarzyna Iwanicka, Tomasz Baran Aleksander Wysocki, Martyna Dudziak-Kisio, Ksenia Wróblewska, Anna Borkowska, Marta Witkowska - FOMO 2022. Poles and the fear of disconnection - research report, 2022

²⁹ www.who.int/features/qa/gaming-disorder/en/

³⁰ <https://www.psychiatry.org/patients-families/internet-gaming>

How much time to spend learning and working with the use of mobile devices

Digital wellbeing is a topic that does not exist without touching the issue of time. Regardless of the methods and ways of using mobile devices, we need to consider how much time we spend on them and at what times. It is worth remembering that all the time spent in this way counts here, regardless of whether it is our work or activities outside of it. If we want to take care of our physical health: good sleep, eyesight, skin, proper posture, mental health, state of mind and interpersonal relationships, we must think about introducing restrictions and strive to spend as little time as possible in front of mobile devices.

It is worth replacing the hours spent in their company with sports, reading, spending time outdoors, meeting other people. We should try to do everything to go beyond the virtual world and allow ourselves a complete rest from it. This does not mean that we should demonize mobile devices and technological achievements in this area, but we must be aware that they are not completely safe for us, and our body is still learning how to live in this digital world.

Recommendations

Studies show that the average adult spends more than 8 hours a day in front of a screen, and some of us even more. In the case of children and adolescents, this is a range of 3 to 7 hours a day, while in preschool children this time can be up to 2 hours a day.

The American Academy of Pediatrics (AAP) recommends that people under 18 months of age should not use screens at all, and children ages 2 to 5 should limit screen time to a maximum of one hour a day. For children and adolescents aged 6 to 18, it is recommended that it does not exceed two hours a day. The situation is similar in adults, who, however, find it much more difficult to maintain these proportions, often due to professional duties.

For people who work in front of a computer, there are techniques that can help reduce the negative effects, such as stretching and looking away from the screen, and the use of eye protection programs.

Time windows

The introduction of time windows can help you control the time spent in front of screens. Research on FOMO³¹ from 2018 showed that limiting the time spent on social networking sites to 10 minutes a day (per platform) resulted in an inconsiderable reduction in loneliness and depression over three weeks compared to the control group.

By setting specific hours of the day when you can use electronic devices, you can control your tendencies and create a new schedule for the day. In this way, we will find a place for alternative forms of spending free time.

Of course, there are many activities worth attention, such as reading books, playing board games, painting or developing other interests. In both cases, we gain the opportunity to gain knowledge, develop our language and creativity.

It is also necessary to find time for physical activity such as cycling, swimming, jogging, nordic walking, etc. In case of problems with fitness, do not be discouraged, even performing simple exercises at home or going for long walks can positively affect our health. However, it is worth remembering to maintain a certain regularity, thanks to which we will gradually get our body used to more and more effort.

Setting clear work and study hours will help you better control your screen time. It is also a good idea to establish when we start and finish work, taking into account breaks during the day. This will also contribute to better organization and avoid prolonged screen time.

³¹ Melissa G. Hunt, Rachel Marx, Courtney Lipson and Jordyn Young – No More FOMO: Limiting Social Media Decreases Loneliness and Depression, 2018

Chapter IV - Information about applications moderating time on each webpage, programe

In today's digital age, we are constantly bombarded with distractions that can affect our productivity and ability to concentrate. The internet is full of activities that can hinder our work and personal life. Fortunately, there are several applications available that can help us better manage our time by moderating the amount of time we spend on each webpage or program. These tools can be very helpful in improving productivity, time management, and reducing digital distractions.

There are several applications available that can help you moderate the time spent on each webpage or program. Here are some examples:

RescueTime: Time management application that tracks the time you spend on various websites and applications and provides detailed reports on your productivity. It is also possible to set goals and alerts to help you manage your time more effectively.

StayFocusd: Google Chrome extension that helps you stay focused by limiting the time you can spend on certain websites. You can set a daily time limit for each site and the extension will block access to the site once the limit is reached.

Cold Turkey: Productivity tool that allows you to block distracting websites and applications for a set period of time. You can set customized schedules and create a list of sites and applications you want to block.

Focus@Will: Productivity application that plays music to help you stay focused while working. The music is based on scientific research and is intended to increase concentration and productivity.

Freedom: Tool that allows you to block distraction websites and applications on your computer, tablet, or smartphone. You can create customized schedules to help you manage your time more effectively.

RescueTime

RescueTime is a time management application that tracks the time you spend on your computer, mobile device, or tablet. It runs in the background and records the time you spend on different websites, applications, and tasks without any manual input.

Once RescueTime is installed, it will start monitoring your computer activity and provide detailed reports on how you spend your time. The reports are customizable and can be broken down by day, week, month, or year, giving you a comprehensive view of how you use your time.

The reports generated by this application are very detailed and can help you identify patterns in your behavior, such as how much time you spend on social media, email, or specific applications. This information can be useful in identifying time-wasting activities or areas where you can improve your productivity.

In addition to tracking, RescueTime also allows you to set goals and alerts to help you stay focused. For example, you can set a goal to spend a certain amount of time on a specific task or website, and RescueTime will alert you when you've reached your goal or exceeded your time limit.

This application also offers a feature called FocusTime, which allows you to block distracting websites and applications for a set period of time. This can be useful if you need to focus on a specific task and want to avoid distractions.

Overall, this application is a powerful tool for anyone who wants to better understand how they spend their time on their computer or mobile device. It's easy to use, highly customizable, and provides a wealth of data that can help you make better use of your time.

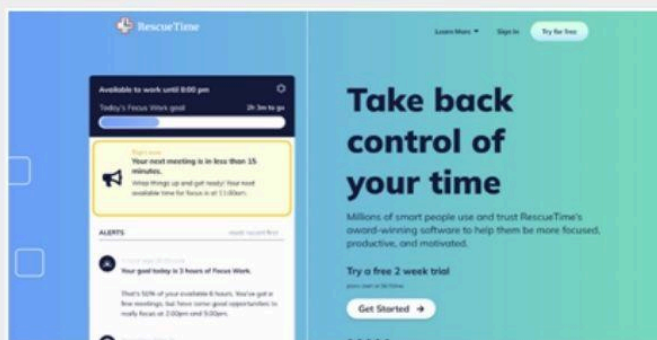


Fig. 5. Screenshot - RescueTime

Advantages

1. **Time tracking:** provides a detailed description of how you spend your time on your computer or mobile device, allowing you to identify areas where you can improve your productivity.
2. **Goal setting:** sets productivity goals and tracks progress towards achieving those goals. This can be a powerful motivation to focus on the task and make the most of your time.
3. **Website blocking:** allows you to block access to websites and applications during the workday, helping you stay focused and avoid activities that waste time.
4. **Insights and reports:** provides detailed reports and perspectives on how you spend your time, identifying patterns and making changes to improve productivity and work habits.
5. **Multi-platform functionality:** available on desktop and mobile devices.

The RescueTime app can be a powerful tool for increasing productivity, time management, and reducing digital distractions.

StayFocusd

StayFocusd is a free Google Chrome extension used to set limits on the time spent on certain websites. It was created to help users stay focused while working on their computer.

After installing the StayFocusd extension, you can set a daily time limit for any website that distracts you. For example, you can limit your time on social media sites like Facebook or Twitter to just 30 minutes per day.

When you access a site for which you have set a time limit, StayFocusd begins tracking the time you spend on that site. Once you have reached your allotted time limit, StayFocusd will block access to the site for the remainder of the day.

StayFocusd also includes a "Nuclear Option" that allows you to block access to all sites except those you have explicitly allowed. This can be useful if you need to focus on a specific task without any distractions.

In addition to the time limit functionality, StayFocusd also includes various tools. For example, you can set a "Workday" schedule that blocks access to sites during certain hours of the day.

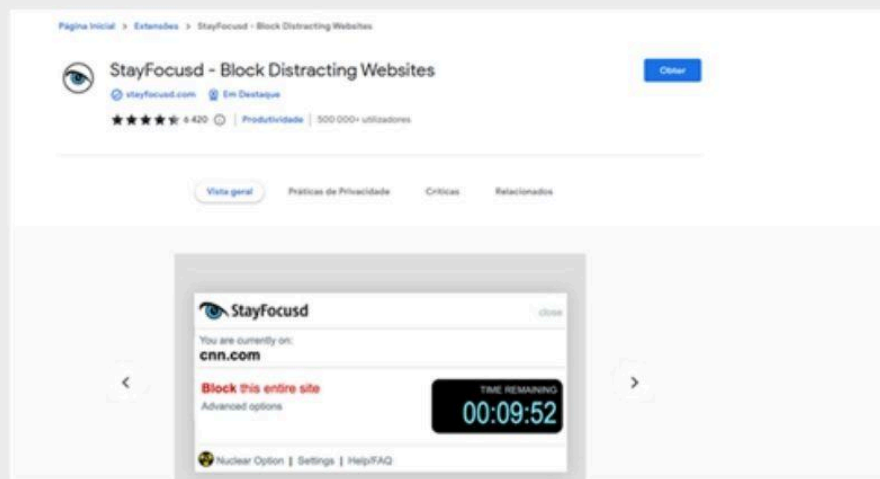


Fig. 6. Screenshot - StayFocusd

Advantages

The StayFocusd application offers several advantages to users who wish to improve their productivity. Some of its advantages are:

1. **Website blocking:** Allows blocking access to websites during the workday, helping to stay focused and avoid situations where time is wasted.
2. **Time limits:** Establishes time limits on how long one can spend on certain websites or web pages, managing time more effectively and prioritizing work.
3. **Customizable settings:** Personalizes settings according to individual needs, such as setting specific time limits or blocking access to certain websites or web pages.
4. **Password protection:** Protected by a password, preventing the extension from being disabled or removed during the workday.
5. **Multi-platform functionality:** Available on mobile devices and computers, allowing for management of website access and time limits across all devices.

The StayFocusd application can be a useful tool to improve concentration and effectively achieve goals.

Cold Turkey

Cold Turkey is a productivity tool that also blocks distracting websites and applications for a specified period of time. It was developed to help you stay focused and productive while working.

After installing Cold Turkey, you create a custom block list of websites and applications that you do not want to access during your workday. You can choose to block specific websites, entire categories of websites (such as social media or entertainment), or specific applications.

You can set a timer that blocks access to certain sites/programs for the amount of time you choose, ranging from a few minutes to several hours. During the blocking period, you will not be able to access the websites or applications, regardless of how many times you try.

Cold Turkey also offers a "Frozen Turkey" feature, which completely blocks access to the Internet for a defined period of time. This can be useful if you need to focus on a specific task.

In addition to the blocking features, Cold Turkey also includes various tools to help you stay focused and productive. For example, you can create a custom schedule that automatically blocks websites or applications during certain hours of the day, or set up a motivational message that is displayed when you try to access a blocked website.

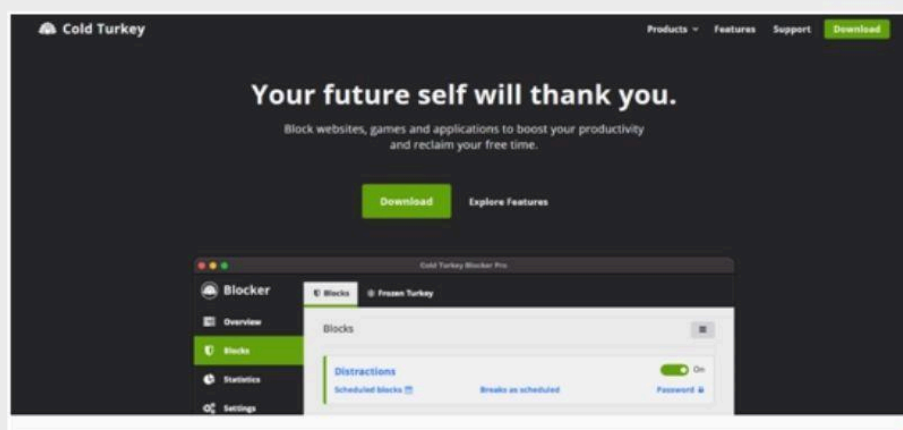


Fig. 6. Screenshot - Cold Turkey

Advantages

Some of the advantages of using the Cold Turkey application are:

1. **Website blocking:** Blocks access to websites during the workday, helping to stay focused and avoid wasting time.
2. **Scheduled blocks:** Schedules website blocks in advance.
3. **Customizable settings:** Customizes settings according to your needs, such as setting specific time limits or blocking access to certain websites or applications.
4. **Password protection:** Can be password-protected.
5. **Motivational messages:** Provides motivational messages and reminders to help stay focused during the workday.
6. **Break reminders:** Includes break reminders to help avoid burnout and promote a healthier work-life balance.

Focus@Will

Focus@Will is a streaming music service created to increase concentration, productivity, and creativity while working. It uses specially developed music to help you stay engaged and is based on scientific research into the effects of music on the brain.

When you sign up for Focus@Will, you can choose from a variety of music channels, each of which is intended for a specific type of task or activity. For example, there are channels for writing, reading, coding, and more. You can also customize the experience by selecting the intensity level of the music and choosing from a variety of different genres.

The musical tracks used by Focus@Will are created using a technique called "neurolinguistic programming," which involves using specific patterns of sound and rhythm to stimulate different parts of the brain.

In addition to the music tracks, Focus@Will also includes other features, such as a "Productivity Tracker" that shows you how much time you've spent on each task, and a "Mood and Energy Tracker" that allows you to evaluate your mood and energy levels throughout the day.



Fig. 7. Screenshot - Focus@Will

Advantages

The Focus@Will application offers several advantages to users who want to improve their focus and concentration while working. Some of the advantages are:

1. **Personalized music:** Provides a personalized playlist of music based on individual needs and preferences.
2. **Scientifically designed music:** The music in the Focus@Will playlists is scientifically developed to enhance concentration and focus, incorporating principles of neuroscience and psychology.
3. **Variety of music genres:** Offers a variety of music genres to choose from, including classical, pop, electronic, and more, allowing you to find the music that works for you.
4. **Customizable settings:** Customize settings to suit your needs, such as adjusting the tempo or volume of the music, or setting a timer for your work sessions.
5. **Multi-platform functionality:** Available on desktop devices, allowing you to access your music playlist.

Scientifically proven results: Studies have shown that using Focus@Will can improve focus and concentration up to 400%, making it a valuable tool for increasing productivity and performance.

Freedom

Freedom is a productivity tool that also blocks access to certain websites, applications, and online services. It was created to increase productivity and focus by removing digital distractions.

With this tool, you can create personalized block lists of websites, applications, or online services that distract you. You can also choose to block access to the entire internet if necessary.

Freedom allows you to schedule blocks in advance, which means you can set it to block certain sites during a specific time frame. This can be particularly useful in helping you stay focused on the tasks you need to complete.

One of the main features of Freedom is that it is multi-platform, meaning it works on all your devices, including your office computer, laptop, tablet, and smartphone. This means you can create custom block lists on all your devices and stay productive no matter where you are.

Freedom also has a "Locked Mode" feature that makes it impossible to turn off the application during a certain period of time, helping you stay focused even when the temptation to check your email or social media is strong.

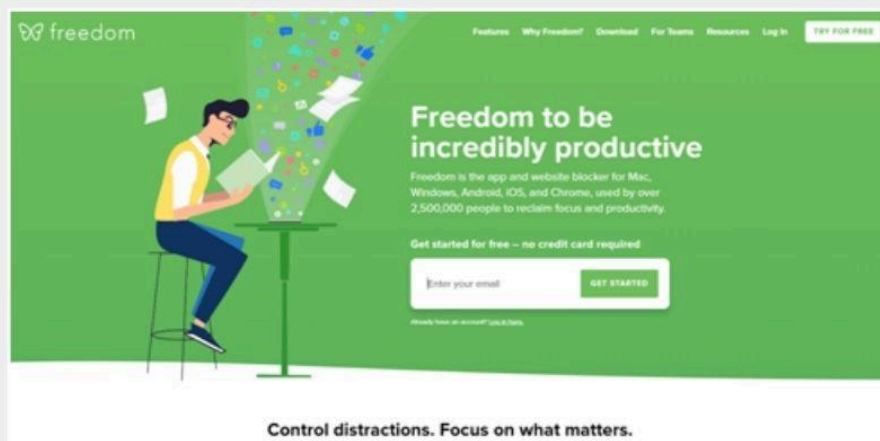


Fig. 8. Screenshot - Freedom

Advantages

This application offers several advantages, such as:

1. **Website and application blocking:** Blocks access to distracting websites and applications to increase concentration.
2. **Scheduled blocks:** Allows for pre-scheduling of website and application blocks, effectively planning your work day.
3. **Customizable settings:** Can be customized to meet your specific needs, such as setting specific time limits or blocking access to certain websites or applications.
4. **Multiplatform functionality:** Freedom is available on desktop and mobile devices.
5. **Device synchronization:** Freedom synchronizes your settings across all devices simultaneously, ensuring website and block settings are consistent across platforms.
6. **Increased focus and productivity:** By reducing digital distractions and increasing focus, Freedom contributes to a significant increase in productivity and goal achievement.

Importance

Time moderation applications are important for several reasons:

- **Improved productivity:** These applications can help you stay focused and avoid wasting time on websites or applications that are not related to your work, by blocking or limiting access to distracting sites or applications.
- **Better time management:** Time moderation applications can help manage your time better by setting specific limits on how much time you spend on each website or application, prioritizing work activities.
- **Reduced distractions:** Digital distractions can be a major source of productivity loss and can affect your ability to concentrate and focus.
- **Improved work-life balance:** Spending too much time on digital devices can lead to burnout and affect your work-life balance. These applications promote a healthier balance between work and personal life.

In conclusion, these previously mentioned applications can be incredibly beneficial for improving productivity, reducing digital distractions, and promoting better time management. These tools (RescueTime, StayFocusd, Cold Turkey, Focus@Will, and Freedom) offer a variety of features and functionalities to help users stay focused on task execution. By using these applications, users can identify areas for improvement, set goals, and make changes to their work habits to be more productive and achieve their goals more effectively. Overall, these tools are valuable resources for those looking to increase their focus and productivity in today's digital world.

References:

- "RescueTime: Automatic time-tracking software." RescueTime, Inc., 2021, <https://www.rescuetime.com/>.
- "StayFocusd - Chrome Web Store." Google LLC, 2021, <https://chrome.google.com/webstore/detail/stayfocusd/laankejkbhbdhmipfmgcngdehlhfoji>.
- "Cold Turkey - The Toughest Website Blocker." Cold Turkey Software, 2021, <https://getcoldturkey.com/>.
- "Cold Turkey - The Toughest Website Blocker." Cold Turkey Software, 2021, <https://getcoldturkey.com/>.
- "Focus@Will: Music to help you concentrate." Will Henshall, 2021, <https://www.focusatwill.com/>.
- "Freedom - Block Websites, Apps, and the Internet." Freedom, Inc., 2021, <https://freedom.to/>.

Chapter V - What apps and programs can help us achieve digital wellbeing?

Currently, technology plays a very important role in the lives of most people. However, it is important to ensure that technology effectively enhances our lives and does not become a distraction. Our digital well-being can be influenced by the choices we make, the content we see, the interactions we have with others, and the time we spend with technology.

The concept of digital well-being is associated with the proper use of technological resources. Most people develop a dependence on technology, which harms areas of life such as:

- Studies;
- Work;
- Food;
- Physical activities;
- Interpersonal relationships;
- Sleep.

Therefore, it is important to focus on the conscious use of these tools, extracting the good without harming the quality of life. Below are some applications that can be useful for digital well-being.

Tangerine

Tangerine is an application that allows you to create and maintain new habits during your daily life. In the app settings, you can choose from options for frequency, periodicity, and daily reminders to develop a new habit.

In addition to providing a space to record your daily mood, by conducting a daily evaluation of your day. In the paid version of the application, there are graphs available that show the evolution over time.

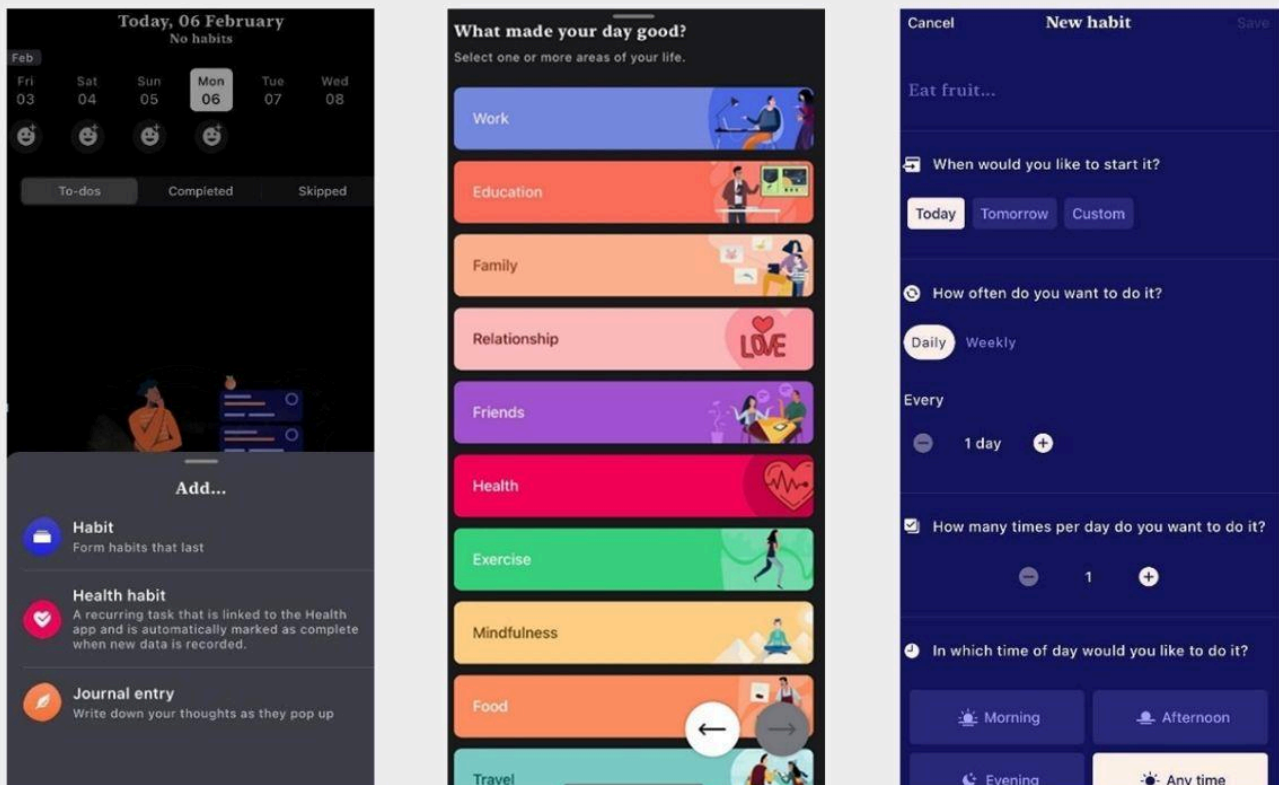


Fig. 9. Screenshots - Tangerine

The application has the following functions:

- You can select any of the 3 options that appear;
- Let's select the option to create a habit.
- After clicking on "habit," you give a name to the activity. You choose the start date, frequency, and periodicity;
- You also choose the time of day when you will do the activity and the option to create a reminder so you don't forget;
- Finally, you click on "save activity";
- Each created activity will appear on the main screen of the app, dividing activities between done, postponed, or to-do.
- Choose one of the emojis that describe how your day was. Tap the arrow to proceed;
- Next, choose which areas of your life contributed to your evaluation. That is, what made your day great, good, bad, etc.

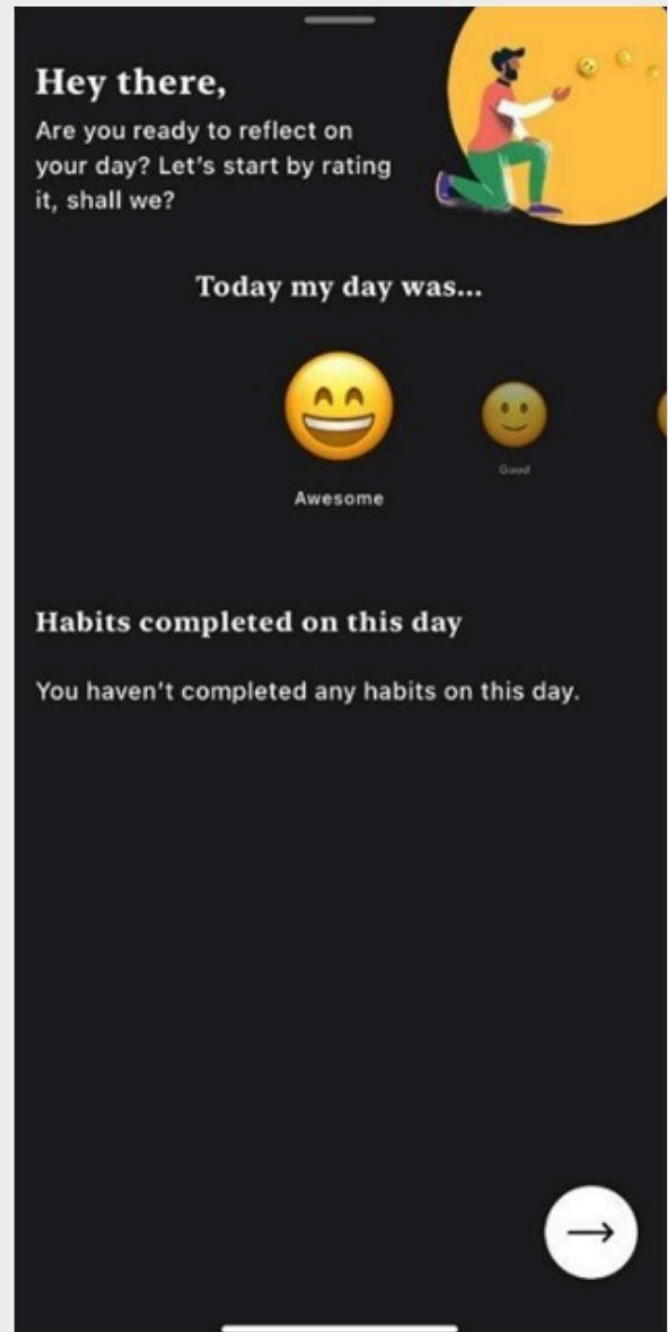


Fig. 10. Screenshot - Tangerine

Post Box

Post Box is an Android application that hides all notifications received on the phone and only displays them to the user at a predetermined time, helping to minimize distractions during the day. You can choose the frequency of sending alerts between one, two, three, or four times a day. After making the choice, the user must determine specific times to receive notifications.

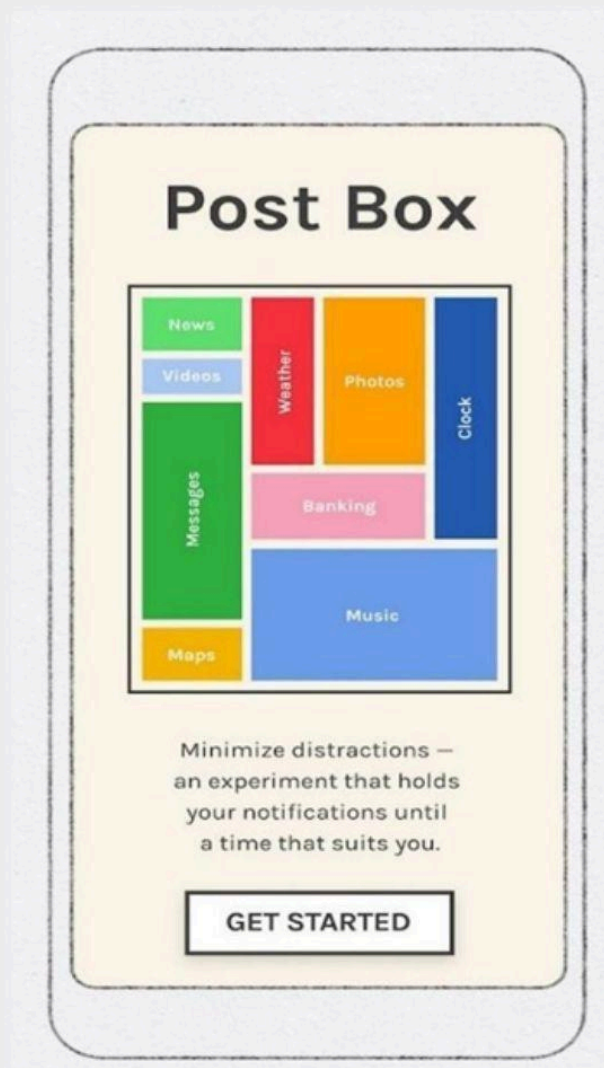


Fig. 12. Post Box

Unlock Clock

Unlock Clock is an Android application that installs a wallpaper on the home screen that displays a large counter indicating the number of times the user unlocks their phone during the day. Every time you unlock the phone, the animation increases a number on the wallpaper, that is, the number on the screen will increase. The goal is to raise awareness about excessive phone usage, often without necessity.



Fig. 11. Unlock Clock

Desert Island

The Desert Island is an application that brings a challenge. The user must choose seven applications that they consider indispensable and spend 24 hours using only these. All other apps will be locked and cannot be used. After selecting the apps and activating the Desert Island, only the list of programs will be displayed on the screen after unlocking. In the end, a report reveals how many times each software was used. It is also known whether the user was able to use only the 7 chosen apps or if they gave in and opened another app that was not part of the plan.

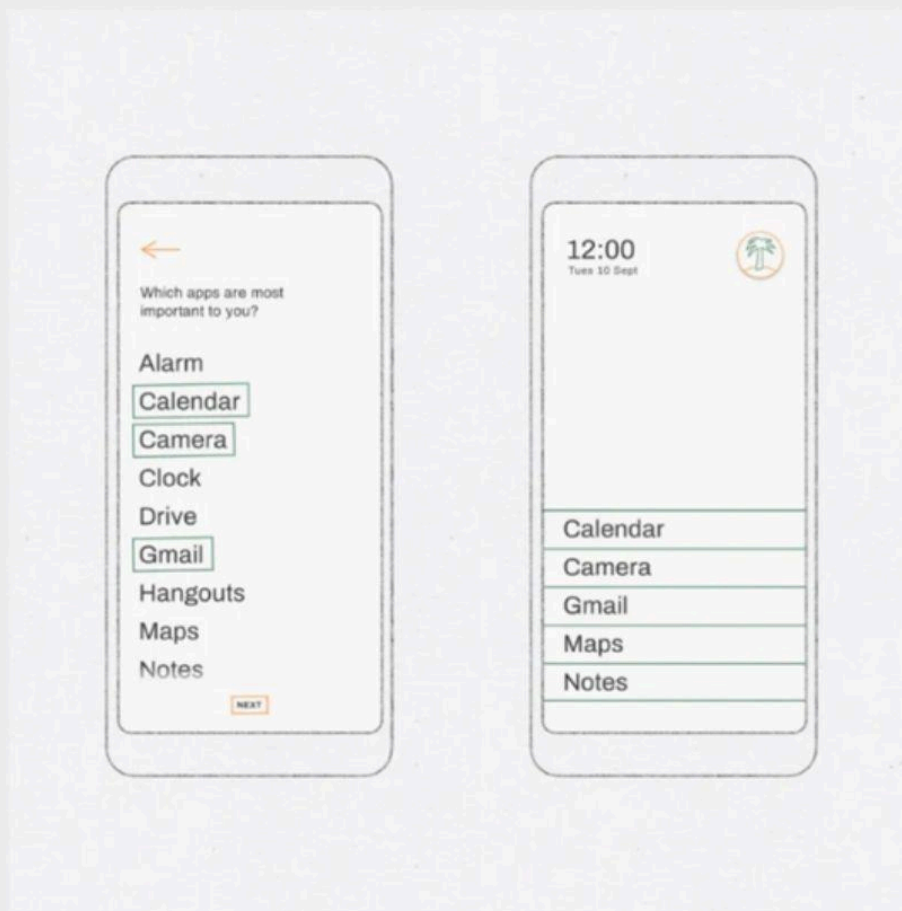


Fig. 13. Desert Island

Morph

Morph is also a launcher that allows you to have at hand the applications that are useful to you in the context you find yourself in. For example, when you're working, you'll have only work-related apps on your screen, and when you go for a run, you'll see the important apps for that activity. The goal of the app is to help the user stay focused on their tasks, eliminating the use of unnecessary services at that moment.

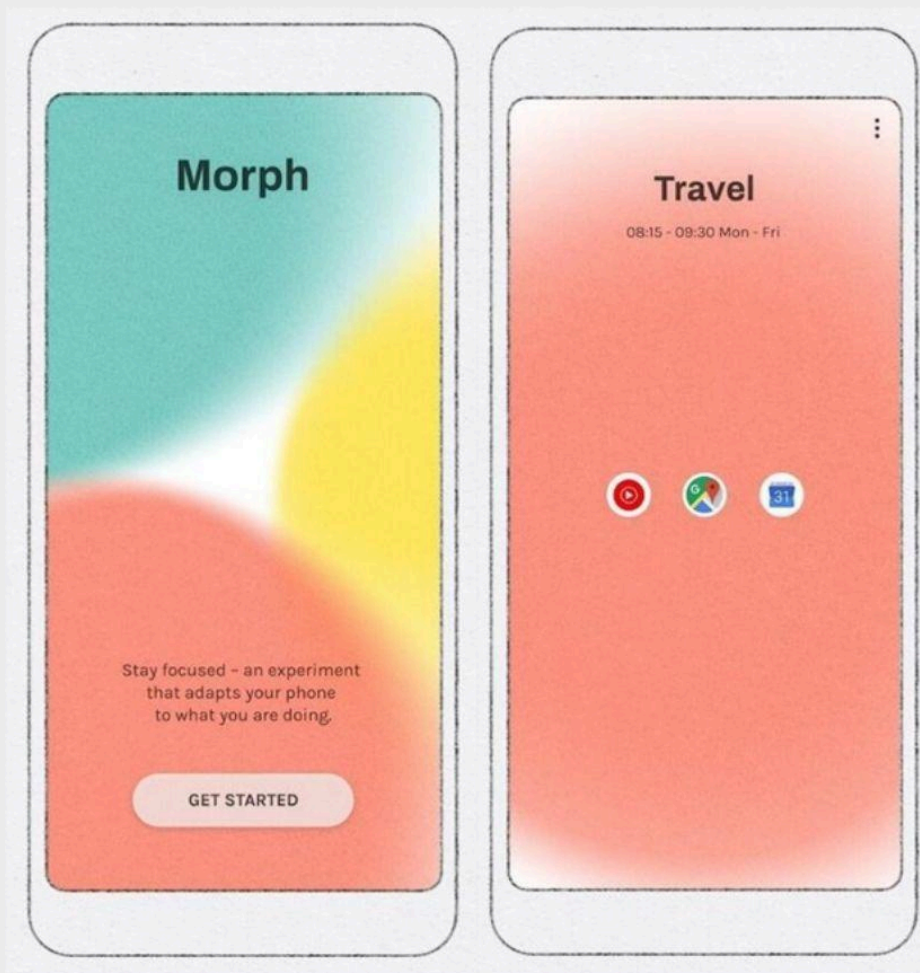


Fig. 14. Morph

ActionDash

ActionDash is a free application that promises to help users better manage their time with their smartphones. It is a "Digital Wellbeing" tool that monitors the time spent by users on certain types of apps. The program is even capable of sending daily summary notifications about usage.

The app has a very intuitive interface that shows the minutes and hours spent on each app on a daily basis. Additionally, users can even check weekly and monthly numbers for the program.

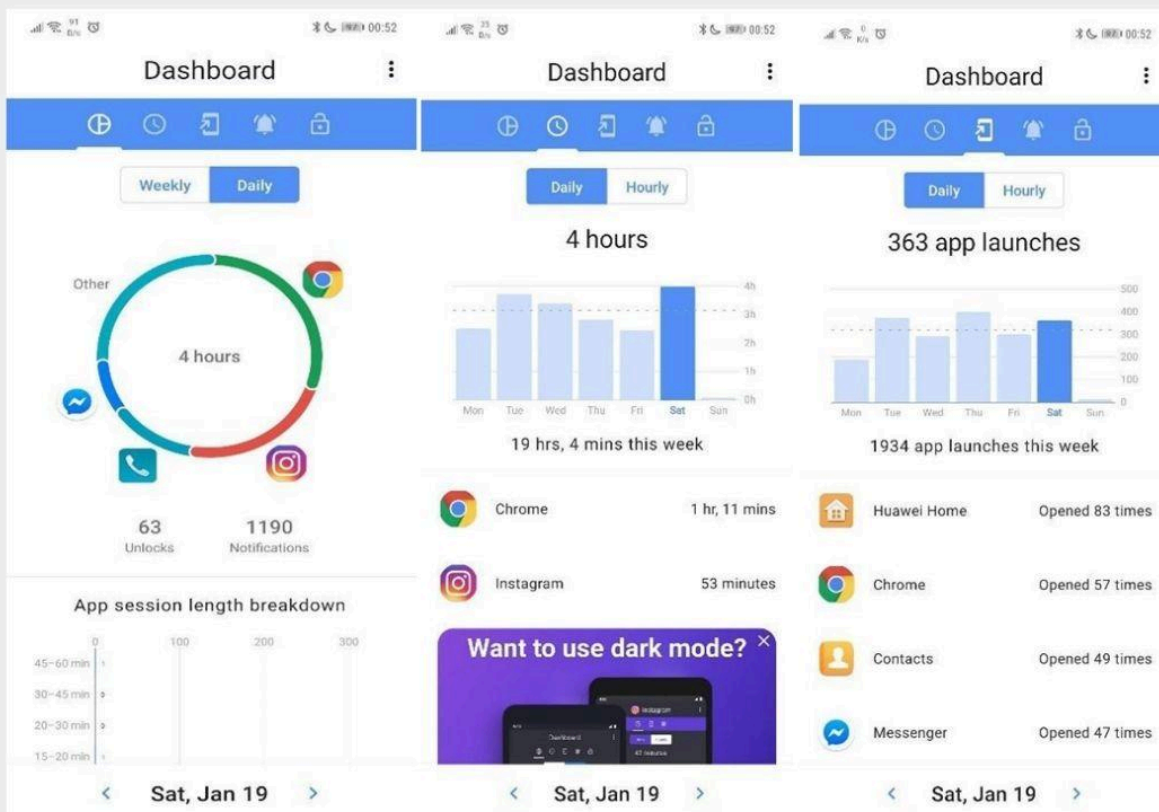


Fig. 15. Screenshots - ActionDash

Digitox

Digitox is an application that allows users to become aware of the amount of time spent daily on their devices and also allows them to create daily usage limits. It is a free tool that can be very useful for reducing daily screen time on a mobile device.

Attentive

Attentive is a friendly guide to healthy smartphone habits. With science-backed tips and techniques, learn to spend less time on your phone and avoid digital distractions, so that your phone truly serves you and improves your productivity, health, and happiness! For greater control over your time. To improve focus and flow. For less stress, better mental health, and greater well-being. To achieve your screen time goals, visualizing and celebrating your achievements is crucial. The Activity feature allows you to see your personal growth at a glance. It's a perfect habit tracker to stay motivated and on course for better phone habits. Feel great about making progress!

Benefits:

- Greater control over time spent;
- More space for focus and flow.

Digital detox

Stepping away from digital devices can be beneficial for your mental well-being, but digital detox doesn't necessarily mean completely avoiding your phone. Instead, it involves setting limits and ensuring that you use your devices to benefit you, rather than harm your mental and physical health.

How to start the digital detox process:

- Digital fasting: Try giving up all digital devices for a short period of time, like a day or even a week;
- Recurring digital abstinence: Choose one day of the week to be device-free;
- Specific detox: If a specific app, website, game or digital tool is consuming too much of your time, focus on restricting your usage time;
- Social media detox: It is recommended to restrict or completely eliminate the use of social media for a specific period, so you can take care of your emotional health.

References:

- Google criou apps para bem-estar digital. (2019, outubro 2). Shifter. <https://shifter.pt/2019/10/google-apps-bem-estar-digital/>;
- Canaltech. (s.d.). O que é bem-estar digital? [Blog post]. <https://canaltech.com.br/apps/o-que-e-bem-estar-digital-aplicativos/>
- Hospital Israelita Albert Einstein. (s.d.). Bem-estar digital. <https://vidasaudavel.einstein.br/bem-estar-digital/>
- WeLiveSecurity. (2019, julho 1). Bem-estar digital: em busca de um uso saudável da tecnologia. <https://www.welivesecurity.com/br/2019/07/01/bem-estar-digital-em-busca-de-um-uso-saudavel-da-tecnologia/>
- TechTudo. (s.d.). Como criar hábitos: app Tangerine ajuda a controlar tempo no celular. <https://canaltech.com.br/apps/como-criar-habitos-app-tangerine/>
- TechTudo. (s.d.). Post Box: app ajuda a gerenciar notificações e evitar distrações no celular. <https://www.techtudo.com.br/tudo-sobre/post-box/>
- TechTudo. (s.d.). We Flip: aplicativo ajuda a controlar uso excessivo do celular. <https://www.techtudo.com.br/tudo-sobre/we-flip/>
- TechTudo. (s.d.). Desert Island: aplicativo ajuda a se desconectar do celular. <https://www.techtudo.com.br/tudo-sobre/desert-island/>
- TechTudo. (s.d.). Morph: app muda o visual do celular para ajudar no bem-estar digital. <https://www.techtudo.com.br/tudo-sobre/morph/>
- Oliveira, V. (2019, janeiro 21). App gratuito leva uma das novidades do Android Pie para qualquer celular; veja. Olhar Digital. <https://olhardigital.com.br/2019/01/21/noticias/app-gratuito-leva-uma-das-novidades-do-android-pie-para-qualquer-celular-veja/>
- Pplware. (s.d.). Controlar o tempo no Android com o ActionDash. <https://pplware.sapo.pt/smartphones-tablets/android/controlar-tempo-android-action-dash/>
- Phosphorus Apps. (s.d.). Aplicativos para bem-estar digital. <https://phosphorus-apps.github.io/>

- Attentive Digital Wellbeing. (s.d.). App Store.
<https://apps.apple.com/us/app/attentive-digital-wellbeing/id1559421907>.

Chapter VI - Technological Occupational health and safety

The rapid innovation of technology is affecting all corners of business operations – and workplace safety is no exception. Advances in nanotechnology, robotics, data analytics, video, and telecommunications are allowing employers to improve workplace safety in various ways, such as better monitoring of employee health, reducing physical stress, and keeping personnel out of harm's way.

For this reason, investing in OHS technologies is not only essential but also a duty of all companies, according to Article 162 of the Consolidation of Labor Laws (CLL).

Remote work is known to have many advantages; however, it is necessary to be aware of the consequences that excessive use of technology may have on workers.

Vision

Vision is one of the most essential senses for the vast majority of living beings. The eye is a complex organ with a high degree of development, fundamental to perceive everything around us.

Excessive use of technology can cause:

- Dry eyes;
- Tired eyes;
- Irritation or itching.

The eyes can become less lubricated with natural tears, that is, drier. However, there are other associated problems. The lack of lubrication can cause eye injuries resulting from the effort of focusing on screens, whether from mobile phones, computers, or tablets.

What to do to protect your vision:

1. Take breaks every hour:

Stand up and focus on something at least 5 meters away. Don't use this break to pick up your phone.

2. Blink more often:

Make the effort to blink more often to counteract the natural tendency to stare at the screen and thus lubricate your eyes.

3. Look for screen protectors:

There are various screen protectors that reduce reflection and eye discomfort.

4. Adjust the brightness level:

By adjusting the brightness level, you avoid straining your eyes while looking at the screen.

5. Well-lit environment:

Ensure that the location where you are using the technological device has sufficient light. You should avoid dark environments with the screen brightness at maximum.

6. Place the screen at eye level:

It is essential to keep the computer screen at eye level and avoid being too close to the screen.

Incorrect Postures - Back Problems and Tendinitis

Working on a computer is a sign of modern times. Although it is a more comfortable job, there are still some health risks associated with it, such as muscle pain. Good posture and organization at work are essential to maintain comfort and prevent injuries, improving health and professional performance.

Wrong postures and repetitive movements lead to damage in the musculoskeletal system. These injuries can be episodic³⁷, transient³⁸, persistent³⁹, or even irreversible.

The body areas most affected by incorrect posture when a person is sitting and looking at a computer are:

- Wrist;
- Elbow;
- Back;
- Neck;
- Lumbar.

People who work on computers spend a lot of time in the same position and tend to make repetitive movements, which contributes to the development of these injuries.

There are some conditions that increase the risk of musculoskeletal injuries related to computer work:

- Sitting incorrectly;
- Making repeated movements (using the mouse);
- Spending many hours in the same position;
- Older age;
- Lack of physical activity;
- Working under high levels of stress.

There are **4 factors** that facilitate adopting a correct working posture when sitting at the computer.

³⁷ They appear and disappear naturally

³⁸ They disappear with rest or change of activity

³⁹ They are maintained during rest periods

- 1- The desk
- 2- The computer
- 3- The chair
- 4- The work environment

Desk

If the chair's arms do not allow you to pull the chair forward so that you can put your legs under the desk, remove the arms or raise the desk.

Computer

You should keep the mouse close by so that the wrist is straight, not bent or strained, and also use the mouse gently to reduce the pressure it exerts on the fingers.

Regarding the keyboard, it should be placed in front of you with a space of 10 to 15 centimeters between the edge of the desk and the keyboard, allowing you to support your forearms while typing. Poor posture in these situations can cause tendinitis and make it difficult to perform tasks on the computer.

Chair

During seated work, the individual should follow these instructions:

- Support the back;
- Keep the thighs parallel to the floor and the knees at the same level as the hips;
- Support the feet on the floor;
- Keep the back straight.

Work Environment

When sitting in front of the computer, it is necessary to:

- Keep the objects you use close by;
- Be careful when talking on the phone and typing on the computer at the same time.

To prevent this type of injury, you should:

- Take regular breaks;
- Give yourself massages;
- Be attentive to the first signs of pain.

Weight

With the increase in remote work after the pandemic, the topic of nutrition arises as a warning regarding the consumption of certain foods. A study conducted by Fiocruz in 2020 showed that the consumption of sweets and chocolates increased by 63% with the increase of people working remotely. People being at home more tend to eat more.

Work schedule and pace have a great impact on eating habits and the quality of daily meals. With weight gain, some consequences may arise such as:

- Diabetes;
- High cholesterol;
- Hypertension;
- Respiratory problems;
- Impotence and infertility.

Therefore, it is important to maintain a healthy diet and not give in to the fact of working from home. It is also important to exercise to strengthen muscles and prevent diseases.

The relationship with technology is getting closer and at an accelerated pace. However, even though all these resources facilitate communication, increase efficiency, and offer various training options, there is a price to pay for it.

The use of technology brings concerns to our bodies, and there are diseases caused by technology use such as:

Monophobia

Monophobia is a term used to describe the fear of being without contact with one's phone. Typically, this condition appears in pre-adolescents and adolescents, as they are the biggest consumers of this type of technology and spend more time on social media.

It is not always possible to identify the cause that leads people to feel anxious when away from their phone or computer.

Some of the symptoms that can help identify this condition include:

- Feeling anxious when away from the phone for too long;
- Taking multiple breaks at work to use the phone;
- Waking up in the middle of the night to check the phone;
- Charging the phone multiple times to ensure it always has battery;
- Taking the charger with you whenever you leave the house.

How to avoid dependence:

- Gradually decrease phone usage;
- Place the phone away from the bed while charging;
- Avoid using the phone for the first 30 minutes after waking up.

Google Effect

The Google Effect is the name given to the human neurological shift that causes us to retain information less intensely when we know we can easily find it online.

The origins of this name are associated with the company whose platform receives over 3 billion visits per day. This feat consists of a change in the way the brain processes the information that comes to us, selecting what is relevant to store in memory and what is not.

Today, information is available everywhere and it is necessary to define standards and filter what should or should not be stored. Because humans know that they can find answers at any time, they make less effort, which leads the brain to store information less intensely, forgetting it shortly thereafter.

Phantom Vibration Syndrome

Phantom Vibration Syndrome occurs when a person feels or senses their phone vibrating, but when they pick it up, they realize there's nothing on the screen, or even when they hear the phone ringing, but upon picking up the device, there is no incoming call.

Most of the time, it happens when the person has a desire to use the phone for some interaction.

Some actions that can help reduce the feeling of Phantom Vibration Syndrome are:

- When driving, don't keep the phone in your pocket;
- Put the phone on airplane mode;
- Switch pockets for the phone;
- When sleeping, leave the phone in another part of the house.

In a study conducted by Rorhberg, 68% of people have had or currently have Phantom Vibration Syndrome.

Sleep Disorders

Sleep disorders occur when people use electronic devices with the aim of falling asleep faster, but the effect is contradictory. The lights and sounds emitted by television, computer, mobile phone, etc... keep the body in a state of alert, causing the body to produce less melatonin⁴⁰. In addition to this, it is possible for the person to suffer from insomnia.

The different types of sleep disorders are:

- Insomnia;
- Sleep apnea;
- Sleepwalking;

⁴⁰ Melatonin is a hormone produced by the pineal gland in the brain, which has the main function of regulating the circadian rhythm, promoting sleep at the end of the day.

- Sleep paralysis;
- Restless legs syndrome.

References:

- Banco Santander Totta. (2022). Doenças tecnológicas. Retrieved from <https://www.santander.pt/salto/doencas-tecnologicas>
- Salon Line. (2021). Doenças causadas pelo uso excessivo da tecnologia. Retrieved from <https://www.salonline.com.br/doencas-causadas-pelo-uso-excessivo-da-tecnologia>
- Tua Saúde. (2022). Nomofobia: o que é, sintomas e tratamento. Retrieved from <https://www.tuasaude.com/nomofobia/>
- Interprev. (2020). Posturas ao computador. NewsHealth Interprev 2020. Retrieved from https://www.interprev.pt/wp-content/uploads/2020/04/POSTURAS-AO-COMPUTADOR_NewsHealth_Interprev_2020_protegido.pdf
- Exame. (2021). Saiba como se proteger de doenças trazidas pelo home office. Retrieved from <https://exame.com/bussola/saiba-como-se-proteger-de-doencas-trazidas-pelo-home-office/>
- Chubb. (2022). 4 technologies to improve workplace safety. Retrieved from <https://www.chubb.com/us-en/businesses/resources/4-technologies-to-improve-workplace-safety.html>
- Safeopedia. (n.d.). Occupational safety & health technology (OSHT). Retrieved from <https://www.safeopedia.com/definition/1479/occupational-safety--health-technology-osht>
- Vivo Meu Negócio. (n.d.). Saúde e segurança no trabalho. Retrieved from <https://vivomeunegocio.com.br/saude/expandir/saude-e-seguranca-no-trabalho/>
- Saúde Abril. (2021). Como a tecnologia pode apoiar a saúde do trabalhador. Retrieved from <https://saude.abril.com.br/coluna/com-a-palavra/como-a-tecnologia-pode-apoiar-a-saude-do-trabalhador/>

- Tua Saúde. (2022). Consequências da obesidade. Retrieved from <https://www.tuasaude.com/consequencias-da-obesidade/>

Chapter VII - Portugal Case Study

In today's digital age, where people are increasingly immersed in the digital world, digital well-being has become a topic of utmost relevance in Portugal. We will explore the importance of this concept and provide statistical data on the use of digital tools in Portugal. Based on this information, we can better understand the impact of the digital world on people's lives and the need to promote a healthy and balanced use of these technologies. We will analyze how digital well-being can be a fundamental component to ensure that individuals can make the most of the opportunities offered by the digital world while preserving their mental and emotional health.

In 2017, Portugal stood out for the creation of the National Initiative for Digital Skills (INCoDe.2030), a national program aimed at promoting digital development, digital inclusion and literacy, and the qualification of the active population. Its goal is to position the country among the leading European countries in the field of digital competence.

The importance of digital means and usage was already evident, but the context resulting from the Covid-19 pandemic and the need for confinement imposed a new way of life and numerous challenges, making the central role of connectivity, digital social interactions, and digital skills more evident. The pandemic exposed the vulnerabilities of the digital space, difficulties in harnessing the full potential of the digital world due to access issues or lack of digital skills, and the impact of misinformation on society, highlighting the importance of bringing the domains of digital skills and digital inclusion to the forefront of the debate.

During the Covid-19 pandemic, it became even more evident that intensive use of social media presents an illusory perception of mastery of the digital world when a significant portion of the population needs to acquire basic skills for better digital communication and interaction (Moreira et al., 2020; König et al., 2020). This complex scenario has demanded rapid progress in the adoption of ICT, impacting business models, education, public service delivery, and the way we communicate and consume information, emphasizing the urgent need for all individuals to have

access to ICT and digital skills to utilize them. However, the accelerated use of ICT has further highlighted the social divide that, in the context of the digital era, presents itself as a digital divide, highlighting a new social classification: the digitally included and digitally excluded.

Regarding the processes of technology appropriation and new social relationships in the digital world, it is evident that quantitative surveys on internet access or lack thereof are significant but insufficient to understand the complexity of use by actors. Therefore, more qualitative and quantitative studies are needed on the factors that generate the digital divide. This new classification (digital divide) is shaped by social, economic, educational, cognitive, and other factors. In this perspective, considering the challenge faced in Portugal, a country with just over 10 million inhabitants and an average age of 45, being the third country in the European Union (EU) in terms of the ratio of elderly to young people, this study aims to understand the complexity of social relationships and the multiplicity of configurations inherent to them and expand the knowledge and understanding of new social relationships with a focus on digital skills training to enhance the digital literacy of Portuguese citizens.

Given the transformations that the digital world is undergoing, particularly the diversity of interaction frameworks that social networks are fostering in developed societies, this research project, developed in Portugal, aims to increase knowledge about the use of social networks in Portugal and understand the practices, profiles, and strategies of social media usage in Portugal.

According to the latest statistical data collected on the population (2021 Census), Portugal has approximately 10 million inhabitants.

Currently, **in Portugal, there are approximately 8.73 million internet users, of which 8.05 million are social media users, representing 78.5%** of the population. **The average age of internet users is around 46 years old**, indicating an aging population, with the highest percentages being above 45 years of age.

15.3% of users are between 45 and 54 years old, 14.1% between 55 and 64 years old, and the majority, 23.1%, are over 65 years old.

On social media platforms in Portugal in early 2023, 90.6% of the total population aged 18 and older were present.

In a broader sense, 92.2% of the total internet user base in Portugal (regardless of age) used at least one social media platform in January 2023.

What means do people have to access the internet?

In early 2023, there were 17.54 million internet connections via mobile phones in Portugal. However, it should be noted that there may be more than one internet connection per person, for example, personal or professional (including multiple mobile phones per inhabitant), so it is natural for these numbers to exceed the total population.

The **Android operating system dominates the access, with a share of 68.23%** in November 2022.

Of the 8.73 million internet users, a large majority own a mobile phone (98.2%) or a personal computer (79.4%) to connect.

Here is the percentage of **users who own each device in January 2023:**

Mobile phone owners: **98.2%**

Personal computer owners: **79.4%**

Tablet owners: **47.4%**

How much time do Portuguese people spend online?

Internet users in Portugal continue to **spend nearly 8 hours online per day**, although there has been a decrease in online time (7 hours and 37 minutes - 19 minutes less than last year). They spend 7 more minutes on digital TV (3 hours and 5 minutes), 3 minutes less on social media (2 hours and 25 minutes), and online press gained 4 more minutes of Portuguese people's attention compared to 2022, reaching 1 hour and 13 minutes.

The time spent on streaming music, listening to online radio, podcasts, or playing console games has increased.

Out of the total time spent on the internet, **3 hours and 42 minutes are through mobile phones and 3 hours and 56 minutes are through computers.**

Therefore, digital trends indicate that despite having more mobile phones and mobile connections, computers continue to be widely used in Portugal.

What do Portuguese users do on the internet?

The majority of users in Portugal use the internet for:

Activities	2023 data from 2021
Searching for information	80,5%
Looking up how to do something	68,6%
Keeping up with news and current events	67,3%
Contacting friends and family	66,1%
Seeking new ideas and inspiration	61,3%
Listening to music	61%

Activities	2023 data from 2022
Searching for information about vacations, travel, destinations	60,6%
Learning more about products or brands	60,5%
Occupying free time	52,4%
Watching videos, TV shows, and movies	51,2%

Most Visited Websites in 2023

1. Facebook (64.4 million visits/month in 2023)
2. Pornhub (62.9 million visits/month in 2023)
3. A Bola (54.3 million visits/month in 2023)
4. Sapo (50.2 million visits/month)
5. Google (48.5 million visits/month in 2023)
6. Xvideos (47 million visits/month in 2023)
7. Youtube (38.1 million visits/month in 2023)
8. Other websites in this ranking include CMJORNAL.PT; Público.pt, JN.pt, Expresso.pt, IPMA.pt, and Netflix.

What content do Portuguese people consume on the internet?

Video content reigns supreme, making it a continued digital trend for 2023.

Data shows that a **large portion of users (92%) watch videos** of any kind, 54.6% watch music videos, and 37.7% watch comedic or viral videos.

Online TV is an option for 86.4% of users, who spend an average of 1 hour per day watching. Online gaming entertains 65.1% of users, predominantly using smartphones.

Interest in audio is growing but still not a significant share: **34.2% of users listen to music online, 24.1% listen to radio or podcasts.** Only 8.2% listen to audiobooks.

Another important statistic for entrepreneurs: **21.5% of users access online banking or home banking.**

Cryptocurrencies are in the "pocket" of 17.5% of Portuguese users.

The use of social media in Portugal

The **use of social media continues to grow**, according to data analyzed by Datareportal. 78.5% of the population (8.05 million) uses social media, although they may not be unique users, compared to 83.7% last year (the data may not be directly comparable due to constant changes in data collection methods by social media platforms).

Once again, **women lead in terms of social media access: 52.2% compared to 47.8% of men.** Only Twitter shows different results in terms of gender, but these data may be unreliable as they are based on account names and activity rather than information provided directly by each user.

Regarding published content: **70.09% of posts contain photos, while 17.76% are videos.** The average page interaction rate on Facebook is 0.11%, which is far from desirable.

Platforms	Users (millions)	Advertising reach compared to internet users in Portugal	Evolution advertising reach 2022-2023
Facebook	5.9	67,6%	-0,8%
Messenger	4.5	52,7%	-4,2%
Youtube	7.43	85,1%	+2,2%
Instagram	5.3	60,7%	-3,6%
TikTok	3.24	37,1%	+14,5%
LinkedIn	4.3	49,3%	+7,5%
SnapChat	1.1	12,6%	• 10,6 (10,6% increase in the last quarter of 2022)
Twitter	1.9	21,8%	+35,7%

Platforms	Users (millions)	Advertising reach compared to internet users in Portugal	Evolution advertising reach 2022-2023
Pinterest	2.06	23,6%	

Source: Datareportal.com

The data shown in the table indicates that the digital **trend for 2023 will be to use YouTube, Facebook, and Instagram to reach your target audience, given the volume of users they impact.**

Most used social media platforms

TOP 10 most used social media platforms in Portugal (by monthly number of users):

1. WhatsApp 87.8%
2. Facebook 83.9%
3. Instagram 81.6%
4. FB Messenger 71.6%
5. TikTok 46%
6. Pinterest 38.1%
7. LinkedIn 35.2%
8. Twitter 35.6%
9. Telegram 31%
10. Snapchat 16.8% of users used at least one social media platform in January 2023.

Digital Risk and Well-being

The increase in technology use may have an impact on how individuals organize their daily routines, as also evidenced by PORDATA (2019). Excessive internet use

involves the interaction between different biological, psychological, social, and online activity factors. Although technology use can be beneficial at all levels, excessive use has negative consequences on the individual's academic/work, social, family, and personal life.

Despite the potential health risks, the internet offers multiple benefits/good habits and should not be seen as a completely criticized and negative device for society:

- The internet enables faster communication, has an interactive nature, and provides great support for learning;
- The internet has become important for the social context, especially for older individuals, as it influences their well-being, improving life satisfaction and psychological well-being;
- Regarding students, they can obtain various benefits from using the internet for educational purposes. The internet can be seen as an important means to increase life satisfaction among more vulnerable social groups—people with low economic status can use it as a means to increase perceived social support (e.g., Facebook), which, in turn, reduces stress levels and increases psychological well-being. This means that the internet can be seen as an indirect benefit to health. However, one of the negative consequences of problematic internet use that has been pointed out is sleep quality, which interferes with other areas of individual functioning. Sleep is essential for health and overall positive functioning, as it plays a crucial role in maintaining vitality and mental health, as well as the individual's perception of psychological and subjective well-being. It has been found that young people with problematic internet use experience poor sleep quality and tend to have excessive daytime sleepiness.

Technology is becoming increasingly present in individuals' daily lives, attracting both younger and older generations. Thus, problematic internet use can be understood as a way to compensate for the lack of social support and to escape from problems and reality. As a result, people are exposed to certain risks inherent in internet use, raising the need to study the consequences of its use on individuals' sleep quality and well-being. Studies on the relationship between problematic internet use and well-being (Pereira, 2021) have been conducted.

We live in a world dominated by social media. Mobile devices, specifically smartphones, are so integrated into our daily lives that we have the impression that we have always lived with them. Smartphones are gaining more and more functionalities, providing numerous benefits by making communication faster and more optimized, automating practical life tasks such as paying bills, shopping, etc. In my opinion, they have the great advantage of facilitating quick access to different areas of knowledge.

The internet is a means, not an end. In other words, people do not become dependent on the internet itself, but rather on their online activities. In this sense, there are different areas that can potentially contribute to excessive use: **online gaming, social media, multimedia, shopping, research, among others.**

On the other hand, according to several studies conducted in Portugal, it is possible to identify a risk profile associated with excessive technology use: young people with mood alterations, sleep disturbances, disordered eating behaviors, social isolation, low self-control, permissive or authoritarian parenting style, academic retention, and lack of physical exercise.

In Portugal, digital well-being is of utmost importance, especially considering the growing use of technology and online education. Promoting digital well-being is essential to ensure that people can enjoy the benefits of the digital world in a healthy and balanced way. By investing in online education and providing appropriate resources, we can empower individuals to make the most of digital opportunities while developing essential skills to protect themselves from potential risks and negative impacts.

With the increasing use of media, online education presents a significant cost advantage. By opting for digital means of education, organizations and individuals can save on expenses related to travel, accommodation, and physical materials. Additionally, online education allows reaching a broader audience, eliminating geographical barriers and facilitating access to quality content at a more affordable cost. Thus, online education becomes an attractive and efficient option for acquiring knowledge and professional development.

References

- Pereira, B. F. A. (2021). Relação entre o uso problemático da internet, qualidade de sono e bem-estar: Um estudo em jovens adultos [Relationship between problematic internet use, sleep quality, and well-being: A study in young adults]. Universidade Católica Portuguesa, Braga.
- Datareportal. (n.d.). Retrieved from <https://datareportal.com/>
- Relatório sobre o digital para 2022: a utilização da internet e das redes sociais em Portugal [Report on digital for 2022: Internet and social media usage in Portugal]. (n.d.).

Chapter VIII - Progressive digitization in everyday life. E-state - case study from Estonia

The state of digital life in Estonia can give statistic overview. Approximately 78 percent of the population in Estonia were social media users or 1.04 million social networking users in Estonia in 2022. This figure was projected to increase to 1.06 million social media users in 2027. (<https://www.statista.com/statistics/568898/predicted-number-of-social-network-users-in-estonia/#:~:text=In%202022%2C%20there%20was%20an,social%20media%20users%20in%202022>).

But digital trends and evolving in reality are faster than estimations. 1.07 million social media users were already in January 2023. Data of top social media platforms indicates that there were 929.0 thousand users aged 18 above using social media in Estonia at the start of 2023 which was equivalent to 87.3 percent of total population aged 18 and above at that time. More broadly, 87.5 percent of Estonia's total Internet user base regardless of age used at least one social media platform in January 2023. 52.8 percent of social media users were female and 47.2 percent were male.

A total of 1.94 million mobile phone connections were active in Estonia in early 2023, with this figure equivalent to 146.8 percent of total population.

1.22 million Internet users were in Estonia at the beginning of 2023, when Internet penetration stood at 92.3 percent. The total Estonia's population was 1.32 million in January 2023. Data shows that Estonia's population decreased by 3,076 (-0.2 percent) between 2022 and 2023. 52.5 percent of population is female, while 47.5 percent is male. 69.7 percent lived in urban centers and 30.3 percent lived in rural areas. (<https://datareportal.com/reports/digital-2023-estonia>).

Analytics indicate such trends:

- Double-digit growth in social media users
- Big gains for YouTube, Instagram, and TikTok
- New insights into the world's social media preferences
- The rise of social commerce
- Significant increases in the cost of social media ads
- Some uncomfortable truths ab

Facebook was the leading social media website based on number of visits in Estonia in 2022, with a share of around 70 percent of all social media site visits. Twitter ranked second with around nine percent of all Estonian social media site visits

(<https://www.statista.com/statistics/1165914/market-share-of-the-most-popular-social-media-websites-in-estonia/>).

Facebook users in Estonia in 2023

Data published in Meta's advertising resources indicates that Facebook had 690.4 thousand users in Estonia in early 2023.

However, Meta has made important changes to the way its advertising resources report audience reach data over recent months – including making significant revisions to its base audience data for Facebook – so the figures shown here may not be directly comparable with figures published in other reports.

Overall, Facebook is the most popular social network, followed by Twitter, Orkut and Rate.ee. The Russian minority is active in their social media use. Some research suggests that they are also frequent users of their own language communities, especially *odnoklassniki* (Одноклассники), which is used very frequently by more than 40% of Russian speaking social media users. However, as observed in other countries, even the most popular applications like Facebook or YouTube do not engage every social media user.

Socialbakers statistics show that Facebook penetration in Estonia is about 40% in relation to the country's population and 51% in relation to the number of registered Internet users. The total number of Facebook users in Estonia is over 500,000. The age group of the largest users (28%) in 2013 was 25-34, followed by users in the 18-24 age range – which represent a quarter of all users.

According to research undertaken by the Estonian Business School Estonian businesses are just starting to use social media for business purposes. 38% of researched companies believe that social media is very important for their company's future.

In Estonia, Facebook is considered to have the biggest potential as an SME channel (78% use Facebook to promote their business, Blog use is 11% and YouTube use is 5%). They consider that the primary benefits of using social media are to present their company to customers, increase website visits and develop new client relationships.

[\(https://businessculture.org/eastern-europe/estonia/social-media-guide/\)](https://businessculture.org/eastern-europe/estonia/social-media-guide/).

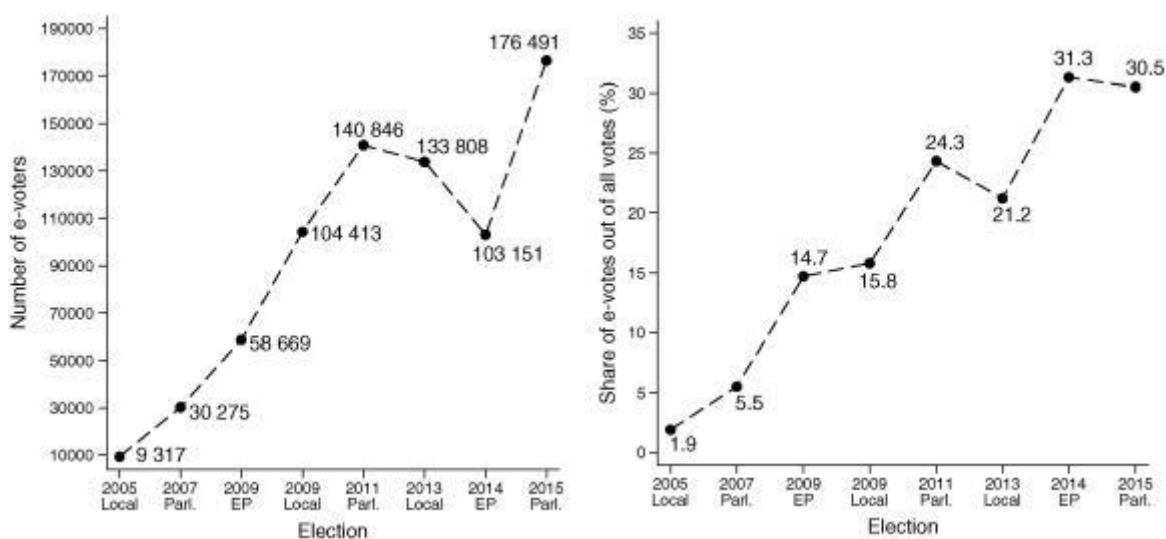
Internet elections

Estonia is the first and still the only country with nationwide internet elections. The latest general elections in the first week of March 2023 saw a record in casting votes online compared to physical votes – 51% of people voted through their computers.

(https://e-estonia.com/online-voting-the-future-of-democracy-or-a-niche-trend-mihke-l-slovak-professor-and-researcher/?fbclid=IwAR1rbRkE_ncK8cHAcgvE2CYRVouLip_h215PJWlcWPEQi58XqGJJNIELzVeM).

E-voting has become a widely used voting mode in Estonia. However, the aggregate number of e-voters might disguise a situation where the technology has not diffused across societal boundaries, but instead is only being increasingly used by a distinct subpopulation of well-resourced, technologically savvy voters. Real diffusion over time would mean that voters from a broad cross-section of the population, regardless of their social status or level of resources, use e-voting.

Since 2005, Estonia has e-enabled elections where eligible voters could cast binding ballots over the internet. Internet voting has been used for local, national and European elections. The number of e-voters in the first e-enabled election was only 9317. However, the number increased in each succeeding election, reaching



176,491 in the 2015 national elections.

Fig. 16. E-voting statistics in Estonia, 2005-2015

Dynamics of e-voting in Estonia, 2005–2015.

Source: <https://www.sciencedirect.com/science/article/pii/S0740624X1630096X>

The experience of e-voting usage in Estonia shows that technology should not be considered as a hurdle, but as an enabler for political participation. The caveat is that technology only provides an efficient mode for participation; structural hurdles that inhibit participation in general, regardless of the mode voting, will most likely stay unaffected. However, technology itself does not seem to exclude anybody, as the skeptics have suggested.

E-voting has diffused among a wide and heterogeneous group of Estonian voters, and has not just become an exclusive form of participation for a privileged few. That Estonian e-voters are a widespread and heterogeneous group was convincingly shown by the model fit, which went from excellent to extremely poor. Therefore, new voting technologies are not necessarily exclusive, as early studies on e-voting have suggested, but are inclusive for a wide range of voter types.

A prerequisite for casting an electronic vote is a credit card sized electronic ID-card, which are compulsory for all Estonian residents. Using digital identification, voters can use their personal computers when connected to the internet and equipped with a smart card reader, to cast an electronic vote.

E-voting itself involves three steps:

- * first, the user opens the website and with their ID-card and first PIN-code to identify themselves, enters the system;
- * second, after the system has verified the identity of the voter, it displays the list of candidates by party in the voter's respective district;
- * third, by clicking on a candidate's name and then entering their second PIN-code, the voter casts their vote.

On the technical side, e-voting requires internet access and a minimum level of computer literacy, both of which are not universal in Estonia. However, the act of e-voting is no more difficult than other online activities, such as banking or shopping.

Data from eight e-enabled elections between 2005 and 2015 in Estonia, were used to investigate changes to the profile of e-voters and contrast them to those voting by conventional means. Owing to the aggregate share of e-voters increasing with each election, with one third of voters now casting their vote remotely over the internet, there was a lack of conclusive evidence regarding whether the new voting technology had diffused homogenously among the voting population, or remained a channel for the resourceful and privileged. These findings show that diffusion has taken place, but not until after the first three e-enabled elections. Thus, internet voting has the potential to be used by a wide range of voter types, bridge societal divisions, and emerge as an inclusive innovative voting technology. (<https://www.sciencedirect.com/science/article/pii/S0740624X1630096X>).

Internet voting helps alleviate the risks that come with postal voting and electronic voting machines. It also allows to decrease the cost of voting on paper by almost 50 %. And voting on the internet represents also a great opportunity to participate for those who are, for example, living abroad. Same works for those who find it difficult to go to a polling station on election day.

By constantly enhancing all the security aspects connected to Internet voting, non-voting is only an issue of political disaffection. People always have the possibility to participate if they want, and as they should. But trust issues can't lie in technology when you live in a digital society. Safeguarding participation also protect the democratic legitimacy of politics and decision making – a goal that every statesman globally should strive towards. (<https://e-estonia.com/when-will-other-countries-join-estonia-in-voting-on-the-internet/>).

E-banking

99% of banking transactions in Estonia are done online. It is hard to overstate the enormous role Estonia's banks have played in creating and promoting the nation's e-government solutions. Banks not only wholeheartedly embraced e-ID, encouraging customers to use their ID cards for secure transactions, even giving away free card readers, they also helped move the population online by developing and offering high-quality internet banking services.

Users of bank services benefit from the convenience of having user-friendly online services available 24/7, a vast improvement over typical banking hours. Estonia's e-banking system is simple, secure, and practically instantaneous.

Based on regulatory changes in 2017, opening a bank account is now possible online using an e-ID or e-Residency card, a video interview recording, and facial recognition technology. Banks are working hard to develop technical solutions that will allow them to welcome clients from anywhere without a face-to-face meeting by enhancing the security of customer identification. (https://e-estonia.com/solutions/ease_of_doing_business/e-banking/).

Cyber security

Several Estonian companies have created a vast suite of cyber ranges and exercises to train employees in all kinds of organisations. Regular workers in all sectors require cyber hygiene training to strengthen the resilience of their organisation, while IT and cybersecurity specialists can practice defending their servers against malicious attackers. Last but not least, C-level managers can hone their decision-making skills and test how their organisation behaves under attack – a valuable asset to make sure you are ready for an actual attack.

Digital resilience and cyber hygiene are undoubtedly two topics that will play a much bigger role in the area of youth and adult education alike, so it's worth preparing for it already today.

To name one organisation, CR14 (Cyber Range 14) is a foundation established by the Estonian Ministry of Defence, whose responsibility is to offer and develop cybersecurity training. They serve both domestic and international partners:

- Estonian Cyber Range (Estonian Government and other public sector organisations)
- NATO Cyber Range (NATO member states)
- Open Cyber Range (companies, startups, the entire private sector; OCR will be also implemented on NATO innovation and startup programs)
- Classified Cyber Range

(<https://e-estonia.com/solutions/cyber-security/cyber-range-exercises/>).

KSI is a blockchain technology designed in Estonia in 2007 and used globally to ensure networks, systems, and data are free of compromise, all while retaining 100% data privacy.

A blockchain is a distributed public ledger – a database with a set of pre-defined rules for how the ledger is appended by the distributed consensus of the participants in the system. Due to its widely witnessed property, blockchain

technology makes it also impossible to change the data already on the blockchain. Country is using blockchain on a national level.

With KSI Blockchain deployed in Estonian government networks, history cannot be rewritten by anybody and the authenticity of the electronic data can be mathematically proven. It means that nobody – neither hackers, nor system administrators, nor even the government itself – can manipulate the data and get away with it. (<https://e-estonia.com/solutions/cyber-security/ksi-blockchain/>).



Chapter IX - Toolbox - Existing applications and useful links for enhanced online security

In an increasingly connected world, maintaining a high level of security while engaging in online activities is crucial. Protecting sensitive information, defending against cyber threats, and safeguarding privacy have become paramount. Fortunately, numerous applications and online resources are available to help individuals enhance their online security. Here we will explore a variety of existing applications and provide useful links that can help you stay safe and secure in the digital realm.

Virtual Private Network (VPN)

A VPN is a valuable tool for securing your online presence by encrypting your internet connection and providing a private tunnel for data transmission. Here are some reliable VPN services:

NordVPN (<https://nordvpn.com/>): NordVPN offers robust encryption, a large network of servers worldwide, and additional features like double VPN and Onion Over VPN.

ExpressVPN (<https://www.expressvpn.com/>): ExpressVPN provides excellent speeds, a wide range of server locations, and a user-friendly interface, making it a popular choice among users.

CyberGhost (<https://www.cyberghostvpn.com/>): CyberGhost focuses on user-friendliness and offers strong security features, including ad-blocking and malware protection.

Password Managers

Using unique and complex passwords for each online account is vital. Password managers assist in generating strong passwords and securely storing them. Consider the following options:

LastPass (<https://www.lastpass.com/>): LastPass enables password generation, storage, and autofill across multiple devices. It incorporates advanced security features like two-factor authentication (2FA).

1Password (<https://1password.com/>): 1Password offers secure password storage, synchronization across devices, and the ability to store other sensitive information like credit card details and secure notes.

Dashlane (<https://www.dashlane.com/>): Dashlane emphasizes simplicity and provides password management, digital wallet features, and dark web monitoring for potential breaches.

Two-Factor Authentication (2FA)

Implementing 2FA adds an extra layer of security to your online accounts. It requires a secondary verification method, such as a code sent to your mobile device. Many popular online platforms offer 2FA options, including:

Google Authenticator (<https://authy.com/>): Google Authenticator generates time-based one-time passwords (TOTP) for use in 2FA. It supports numerous online services and is available for iOS and Android.

Authy (<https://authy.com/>): Authy is a widely-used 2FA app that supports multi-device synchronization, making it convenient for users with multiple devices.

Microsoft Authenticator (<https://www.microsoft.com/en-us/account/authenticator>): Microsoft Authenticator offers 2FA functionality for Microsoft accounts, as well as compatibility with other platforms.

Antivirus and Antimalware Software

Protecting your devices from malware and viruses is essential. These reputable antivirus and antimalware solutions can help you maintain a secure digital environment:

Norton (<https://us.norton.com/>): Norton provides comprehensive antivirus and antimalware protection, along with additional features like a VPN and password manager.

Bitdefender (<https://www.bitdefender.com/>): Bitdefender offers powerful antivirus and antimalware capabilities, real-time threat monitoring, and privacy-focused features.

Malwarebytes (<https://www.malwarebytes.com/>): Malwarebytes specializes in detecting and removing malware, including ransomware, adware, and spyware.

Web Browsers with Enhanced Security

Choosing a secure web browser is crucial for protecting your online activities. Consider using the following options:

Mozilla Firefox (<https://www.mozilla.org/en-US/firefox/>): Firefox emphasizes

We suggest to share with adult learners these useful links for security online:

1. Password Managers:

- LastPass: <https://www.lastpass.com/>
- 1Password: <https://1password.com/>
- Dashlane: <https://www.dashlane.com/>

Comment: Password managers help you generate and store strong, unique passwords for all your online accounts, reducing the risk of password-related vulnerabilities. They also provide features like autofill and secure password sharing.

2. Two-Factor Authentication (2FA) Apps:

- Google Authenticator: <https://authenticator.google.com/>
- Authy: <https://authy.com/>
- Microsoft

Authenticator:

<https://www.microsoft.com/en-us/account/authenticator>

Comment: 2FA apps provide an extra layer of security by requiring a second authentication factor, usually a time-based one-time password (TOTP), along with your password. They are essential for securing your online accounts.

3. Virtual Private Network (VPN) Services:

- NordVPN: <https://nordvpn.com/>
- ExpressVPN: <https://www.expressvpn.com/>
- CyberGhost: <https://www.cyberghostvpn.com/>

Comment: VPNs encrypt your internet connection and route it through secure servers, protecting your online activities from prying eyes and enhancing your privacy. They are particularly useful when connecting to public Wi-Fi networks.

4. Antivirus and Anti-Malware Software:

- Avast: <https://www.avast.com/>
- Malwarebytes: <https://www.malwarebytes.com/>
- Bitdefender: <https://www.bitdefender.com/>

Comment: Antivirus and anti-malware software helps detect and remove malware, viruses, and other malicious software from your devices, ensuring your system remains secure. Regular scans and real-time protection are important for maintaining a safe digital environment.

5. Browser Extensions:

- HTTPS Everywhere: <https://www.eff.org/https-everywhere>
- Privacy Badger: <https://privacybadger.org/>
- uBlock Origin: <https://ublockorigin.com/>

Comment: These extensions enhance your browsing security by enforcing HTTPS connections, blocking unwanted tracking, and filtering out malicious advertisements. They improve your online privacy and protect against potential threats.

6. Encrypted Messaging and Communication Apps:

- Signal: <https://signal.org/>
- Telegram: <https://telegram.org/>
- WhatsApp: <https://www.whatsapp.com/>

Comment: These apps offer end-to-end encryption, secure messaging, and voice/video calls, ensuring your conversations remain private and protected. They prioritize user privacy and are widely recognized for their security features.

7. Secure Email Services:

- ProtonMail: <https://protonmail.com/>
- Tutanota: <https://tutanota.com/>
- Hushmail: <https://www.hushmail.com/>

Comment: These services provide encrypted email communication, protecting your messages from unauthorized access and surveillance. They prioritize user privacy and offer features like self-destructing emails and advanced encryption.

8. File Encryption and Storage:

- VeraCrypt: <https://www.veracrypt.fr/>
- Cryptomator: <https://cryptomator.org/>
- Sync.com: <https://www.sync.com/>

Comment: These tools allow you to encrypt files and store them securely, ensuring that only authorized users can access the encrypted content. They provide an

additional layer of protection for sensitive data stored on your devices or in the cloud.

9. Privacy-Focused Search Engines:

- DuckDuckGo: <https://duckduckgo.com/>

Contact



Kre-Aktywni:

Łódź/Poland

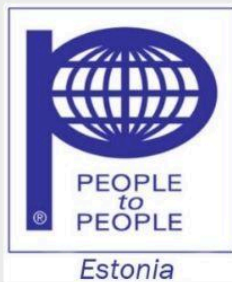
e-mail: kreaktywni@onet.pl



Previform:

Ponte de Lima/Portugal

e-mail: geral@previform.pt



People to People:

Tallin/Estonia

e-mail: office@ptpi.network

Project Website:

