



flow^{XP}

**EXPERIENCE THE SKILLS AND TRENDS
OF THE FUTURE OF WORK, **TODAY.****

An experience created and powered by:

Eidos
www.eidosglobal.org

**impacto
digital**
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Welcome to FLOW!

On behalf of **Impacto Digital** and **Eidos Global**, we want to thank you for joining us to #Flow, an experience designed to deeply understand, through different challenges, the impacts the “*Future of Work*” (FoW) will have in our societies particularly on young people.

Just like when we are embarking on a new adventure, we want **#Flow** to be a starting point for exploring the unknown: the main objective of each stage is to work as a spark for the participants, to inspire them to embed new skills and to explore **how the Future of Work (FoW) is shaping the world we all thought we knew once.**

During the game, our desire is to create an unfettered and cozy atmosphere fostering a supportive environment in which participants and volunteers have the opportunity to ask questions, blunder, and above all to challenge themselves.

The objective of this road map doc is to explain to all of you, the basic concepts of FoW, to guide you through the design principles used to create this game and of course to illustrate how this experience works and how it is facilitated.

Flow’s best feature is its flexibility: the experience is designed and tested to adapt from a 20’ game to a full 10-day-long adventure. So please, don’t use this guide as a recipe but as an orientation guide: use what works for you and discard, change or improve what doesn’t.

Excited?!

Hands-on!

Chapter I

What is Flow?

Even though the Future of Work is being widely discussed in high level academic and international policy-making agenda, **most of the information is still unknown to the people most affected by it: youth.**

We know that young people can lead this historical change, and create a future where **jobs are meaningful vehicles for a more equal, sustainable and ethical world.**

The FloW XP is an **interactive and modular experience** on the future of work which enables youth to develop new skills and communicate their thoughts. Each station has been designed by specialists to be fun, engaging and meaningful and can be further adapted to your own needs. We've implemented this experience with students from high school and university, as well as with corporate executives.

What does the concept of “future of work” mean?

The fast development of new technologies opens a variety of challenges to the world: ‘How should we deal with the obsolescence of jobs? How can we identify the skills needed for these dramatic changes? Who is responsible to assume the training of workers?’ These are a few of the countless questions waiting for an answer.

So, ‘FoW’ is a concept used to describe the consequences (whether they are good or bad) of the rapidly developing technology and its effects on existing (and non-existing) jobs. Furthermore, it includes the exploration of the various skills required to prepare humans for this upcoming future.

Some organizations argue that in the future there will be many fewer jobs in the world, so we should study policies like Universal Basic Income or decrease working hours. Others believe that lots of new jobs are going to appear, so we should focus on training and job reconversion strategies.

While discussions go on, we know something for sure: **big changes are coming and you need to be ready for them.**

What is this experience all about?

Big changes demand different skills set for people to thrive. The Flow Experience is a multi station-game experience on the future of work designed for participants to **put into practice the most important skills** they need to develop in order to be prepared for the **Future of Work**.

But why did you design an experience instead of just giving a lecture?

*“For the things we have to learn before we can do them, we learn by doing them”
-Aristotle*

Because we strongly believe the best way to teach new knowledge to someone is through an experience in which you can sense with your body and through your emotions and not just by memorizing new information. The more you think something through (“turn it over in your mind”), while paying attention to what you are doing, the more likely you are to remember it. Therefore, we designed this integrated game with a narrative story that unifies the five stations. Every step is designed to be an immersive experience and also a pedagogic and education instance. Hands-on!

Before start reading the second chapter we want you to answer these questions.

Think of your daily journey to your job, school or any activity you do. Think of jobs involved in that journey (bus driver, ticket collector, etc). How many of those tasks do you think will be performed by machines in the next 5 years?

1. What do you think will happen to those people?
2. Which are the skills you believe are the best for us to be better prepared for the FoW?
3. Do you feel you are prepared for the FoW?
4. What can be done to ensure more people are ready for the FoW?

Chapter II

Which skills are you going to be addressing and... come on ;) just explain the game to me.

Like we mentioned before, Flow is a game compound by different stages. Each one of these has different challenges the participant needs to solve by putting in practice different skills the Future of Work will demand us to have developed. You don't have to implement them all! You can choose the ones that better fit your needs. But which skills are we looking for to foster and why?

In order to identify the skills to focus on during the experience, we conducted a meta-analysis of all reports around "skills", "future jobs", "future of work" that have been released.

The aim was to identify the most mentioned skills in the most recent literature, out of a list of over **70 mentioned skills** - including SocioEmotional, Digital, Cognitive, Hybrid, and Technical-specific skills.

A summary of the stations

Escape room

There are no longer infallible recipes to solve complex problems. We must cross, then, the logic and the lateral; the confidence in the team with trying new things; the focus with the tangential proposals. Time and its scarcity should not despair: what matters is discovering how to move forward. Under the modality of an escape room, participants must solve logic and lateral thinking challenges, using digital and analog resources.

Skills: Creativity, Complex Problem Solving, Cognitive Flexibility.

Moral Lab

Morality is a classic issue in social science that has been resumed in contemporary debates, in response to new ethical dilemmas linked to scientific and technological innovation. Moral Lab Station is inspired by MIT's experiments and other global institutions that are engaging in this discussion. Through a "choose your own adventure" format, participants will have to solve uncomfortable moral dilemmas, reflecting on some of the most controversial issues of the 21st century.

Skills: Complex Problem Solving, Critical Thinking, Emotional Intelligence

Collaborator

The FoW presents us with new challenges that seem impossible to solve: one is no longer enough. In order to overcome this mission, good teamwork is essential. Give and receive help, propose improvements, organize priorities and build agreements are some of the key practices to achieve this. A futuristic room or open space in which through a collaborative multi-player video game, easy to replicate collaboration challenges and complex collaboration tasks the participants will have to complete a set of missions.

Skills: Effective communication, Emotional Intelligence, Leadership, Collaboration.

Alternative Future Interactive Space

What is your idea of the future? This station invites participants to challenge the standardised idea of how the future should look like. Green, orange, female-led, older, rural... many different futures open the door to creating new jobs and the meaning of work in our society. A station to relax, engage, discuss and learn.

Skills: Collaboration, Critical thinking, Emotional intelligence.

Innovation Lab

Innovation is not about finding the best idea. We believe it is about adapting and improving constantly. And for long events it is good to change the station as the days pass, and this station shows this process. An open doors innovation station invites the participants to engage with the development of the stations and get involved with the process.

Skills: Creativity, Critical Thinking, Collaboration, Emotional Intelligence, Cognitive Flexibility.

Trends and Skills of the Future of Work

The Future of Work Experience has an **integrated design** with a narrative story that unifies the five stations. Every step is designed to be an immersive experience, but also a pedagogic and education instance.

We wanted to make sure that the learning experience was relevant and accurate, so we dedicated the first months of the process to research. **We focused on three major elements: Trends, skills and Sustainable Development Goals (SDGs).**

Trends

The world is undergoing major transformations, some of them have an impact on the future of jobs, employment, and markets, as well as on each other. The **2017 Pearson and Nesta Report "The future of skills"** highlights seven megatrends, and we selected 4 from that list.

- **Demographic change:** Ageing population. People live longer, fertility rates are dropping in many countries. New values of a different generation are shaping consumption and work behaviors.
- **Technological change:** Artificial Intelligence (AI), Digitalisation, Internet of things, Automation. Technology can replace, amplify and creates new human tasks in jobs.
- **Environmental Sustainability:** Climate change, Green Economy, Adaptation policies. Human societies will need to innovate in the way we relate to nature. Food, energy, and shelter depend heavily on this.
- **Globalization:** Integration of markets, Migration, Gig economy.

SDGs

As part of the experience, participants will get a chance to interact with new knowledge and information regarding their own future and the planet.



Skills

In order to identify the skills to focus on during the experience, we conducted a meta-analysis of all reports around "skills", "future jobs", "future of work" that have been released by private, public and international organisations since 2015 (for a detailed list, visit the Bibliography at the end of the Guide)

The aim was to identify the most mentioned skills in the most recent literature, out of a list of over 70 mentioned skills - including SocioEmotional, Digital, Cognitive, Hybrid, and Technical-specific skills. The following is a list of those skills and a common definition based on the same references review.

Complex problem solving

Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Creativity

The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

Effective Communication

Communication involves articulation, oracy, clarity, being a good listener and using appropriate non-verbal resources to transmit messages.

Critical Thinking

Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Emotional Intelligence

Recognize their own emotions and those of others, discern between different feelings and label them appropriately, use emotional information to guide thinking and behavior, and manage and/or adjust emotions to adapt to environments or achieve one's goal(s).

Leadership

Practical skill encompassing the ability of a person to enlist the aid and support of others in the accomplishment of a common task.

Collaboration

Working cooperatively with others towards achieving a shared goal.

Hands-on!

On the following pages, we will explain to you how to replicate these sets of experiences wherever you are.

Do I need to do all the stations for the experience to make sense?

No. Flow is a modular experience. That means that you can implement only the stations you need. To make that decision take into consideration the space you have.

Where should every station go?

For answering this question you should consider the following items:

- Which stations do I want to replicate?
- How big is the space I have?
- Does it already have any walls or rooms? Is it an open space?
- How is the flow of participants going to be? Does the tent/room have many entrances? And exits?

Escape room

Intro

Have you ever been to an Escape room? If not, stop everything you are doing and go to one RIGHT NOW ;)

Good, now you have a better idea. Escape rooms are not only really fun, but also a great opportunity to challenge participants to use their 21st-century skills in a short period of time, with high levels of stress... just like most demanding jobs in modern times.

In a nutshell: **their skills are going to be the key to ensure they save the day.**

We also brought elements of the Internet of things, data and privacy so participants can get a glimpse of the technology and the way those advances interact to have a real impact on our lives. We use [this](http://bit.ly/Alamazon) (<http://bit.ly/Alamazon>) as inspiration for the narrative.

In this chapter, you will find 2 instructions: how to build an Escape Room and how to use what you have to create your own.

Learning Outcomes	Participants make use of the skills that are crucial for the Future of Work.
Trends	Internet of Things (IoT), Augmented Reality (AR)
Skills	Creativity, Complex problem solving, Effective Communication, Collaboration.
Duration	20 minutes (5 minutes of introduction and closure, 15 minutes of the experience itself).
Decoration	If you decide to create your own: it's up to you! If you go with our narrative: an office in an abandoned factory, where you will find a table, some maps, and posters on the wall.
Materials	If you decide to create your own: it's up to you! If you go with our narrative, we have two options of Escape Rooms you can do.

On the following pages, we will show you two different options of Escape Rooms, you can choose the one it suits

Option #1

Materials needed

To replicate the experience:

- 1 smartphone with an Android operating system.
- App for the smartphone which you can find in this link (<http://bit.ly/appEscRoom>)
- Posters which you can find in this link (<http://bit.ly/PostersEscRoom>)
- 1 Tablet/phone/computer (besides the smartphone requested on the first point)
- Office decoration.

Step 1: Creating the Room.

The first thing you will need to do is to create the space in which the experience will take place.

Ideally, use an existing room at the venue where you will be hosting the Escape Room. If the experience is set to be done outdoors, you can build a structure made out of OSB or drywall panels with the help of a professional.

Step 2: Setting the challenges.

This Escape Room has 5 main challenges. Our advice is to adapt them to your own context. In the next section, you will find a guide for creating your own Escape Room: we encourage you to use these challenges for creating a new version! And remember to tell us later how it went ;)

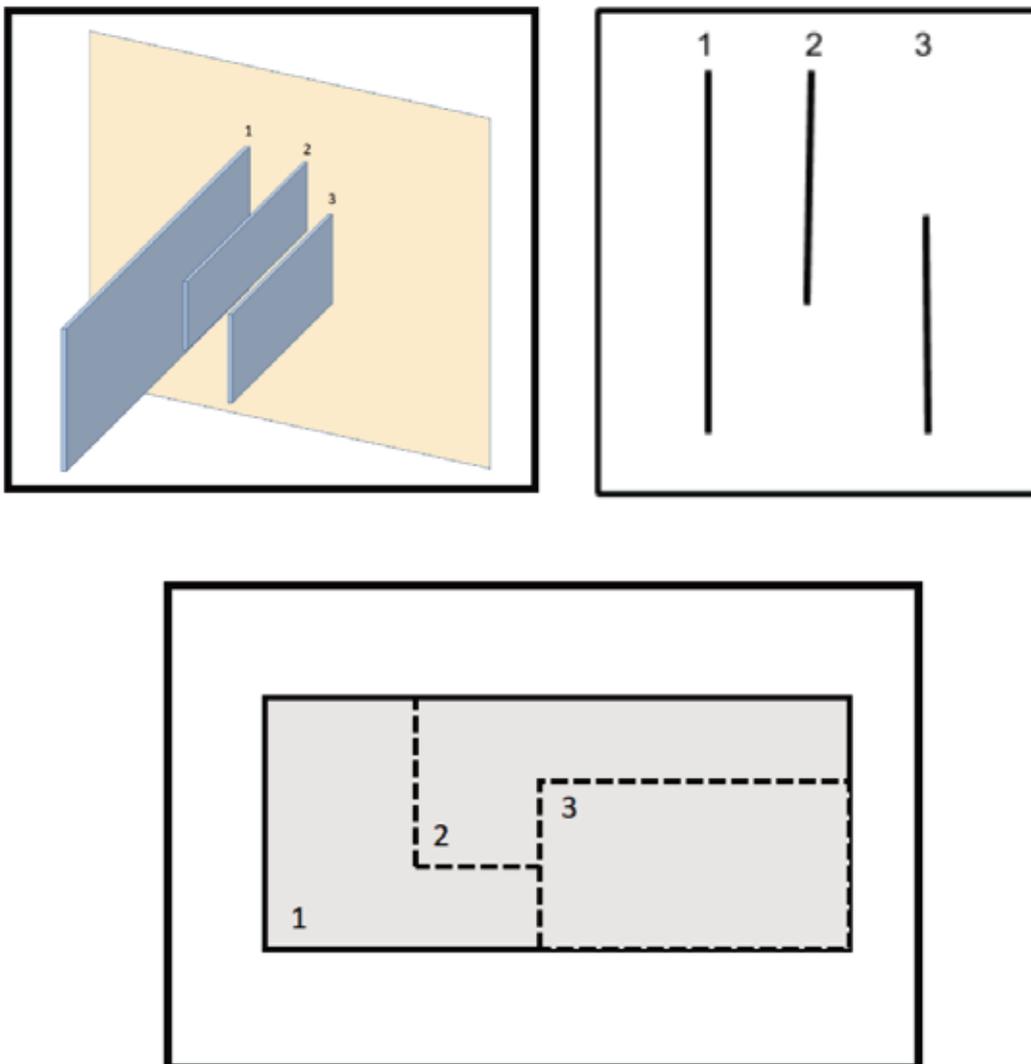
Challenges:

- Find the phone.
- Code in perspective.
- Augmented reality app.
- Translate the words.
- Unlock the tablet.

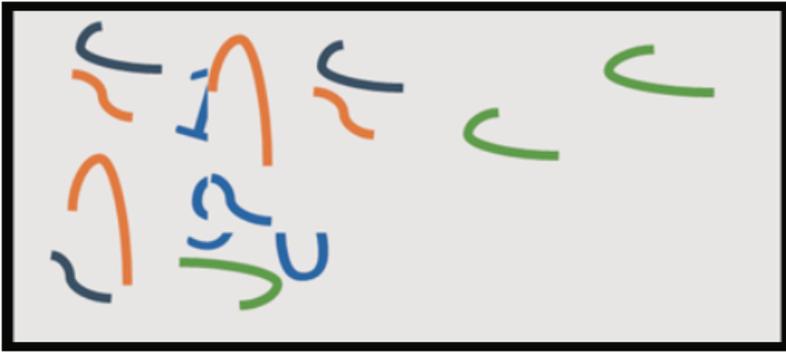
Find the phone: Hide the Android phone in the room. We made a hole in the wall, you can choose your way.

Code in perspective: One of the clues participants will have to discover is the number 1907 on the wall. For this challenge we used perspective.

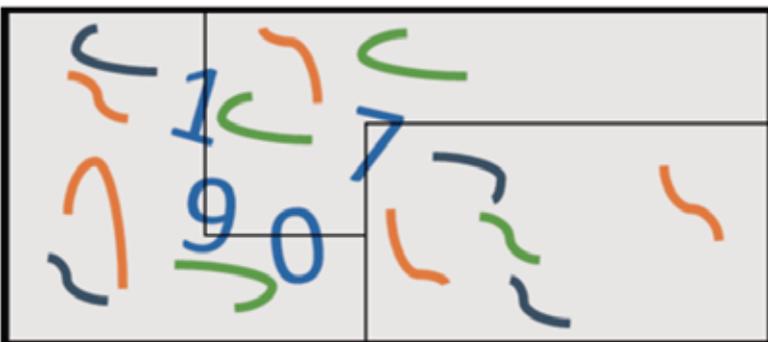
The first step for displaying the riddle is to hang three cardboard panels in the wall, like this:



Once you have done that you can hide a secret message using perspective. For this escape room we hide the code "1907". If you looked at the panels by separated this is what you would see:



But, if you look at them through the right perspective you will find this message:



Set the password:

This code will unlock the Android phone, so you will need to set the password 1907 (or the one you choose) to the phone

Augmented reality app: Once participants unlocked the phone, they will need to use the app previously installed to unlock the new code. This app use the phone camera, to show animated words on the posters previously printed. Each poster show you a different number written in german. Participants will see words when they screen the posters.

For installing the app (.apk) in the android phone: you only need to move it from your computer to the cellphone (like USB drive). After that, look for it in your files and the option for installing will appear when you open the app.

Translate the words: Participants will need to use Google Translator for translating the German words into numbers. With this code they will be able to unlock the last challenge.

In our case we used the code 7375. The order of the numbers was the same as the posters disposition (we double print the poster with the number 7).



Unlock the tablet: Participants will have to type the numbers they discovered in the right way for unlocking the iPad. Once they unlock it an image with the words “Mission Complete” will appear.

Step 3: Explaining the sequence of challenges.

Participants must:

- Find the phone.
- Decode the perspective challenge.
- With this code, they unlock the phone.
- With the app you install, they will be able to see animated words in german on the posters (the words are numbers).

Using Google Translator participants can uncover the code. In our case, the order of the numbers was the same as the posters' disposition.

With that code they unlock the phone/tablet/computer: image with the words “mission complete” appears. You can leave this image open and lock the tablet, they will see this image ass soon they unlock the device.

Step 4: The Rules

- Participants have 15 minutes to solve the challenge.
- They can ask for help if needed.
- They only need to use their brains to complete the mission, they don't need to break or force anything.

Step 5: The story

Madison is a Scout developer. She was the woman in charge of developing the Novus system that holds the participants' personal information.

She knows that the system is very secure. The only way of gaining access to the information is by entering her office and steal the codes hiding in her tablet. One hour ago she called to inform you she was kidnapped by a group of hackers who wants that information.

Your mission is to enter the room, find the passwords that are save in the tablet by solving a set of challenges and unlock it.

Option #2

Full list of materials:

- Cell phone with Augmented Reality app,
- Notebook with information inside,
- White envelope with photos of the posters,
- Empty white envelope,
- Colored envelope with tangram,
- Ziploc bag,
- Shovel,
- Augmented reality posters,
- Map of Germany with marked cities,
- Blank sheets,
- Markers/Pens,
- White shirt with city names stamped.

For this model, we will divide it into five stages:

Stage 0: Introduction & Rules (3' minutes)

Introduction: The following introduction will be given to the participants.

"Anonymity Fighters, an organization that fights for the security of data of individuals, discovered a plan that connects the information collected from household objects connected to the Internet (internet of things) with the databases of the most powerful health providers, making medicines and treatments more expensive.

That discovery triggered the persecution of all the members, so they have to resort to their last hope: You, newly recruited members of that organization. Now you will enter the personal office of Madison Molina, one of the founders of Anonymity Fighters, an expert in encryption systems, fascinated by the German culture and its language. You must solve certain challenges to find a 7-number sequence inside a safe, encrypt it in some way (as Madison would do) and deliver it to the representative of the organization that is camouflaged around you so that it does not fall into the wrong hands.

*Remember that you have only **15 minutes** to solve it, hands-on!"*

Rules:

- The challenges must be solved within this designated space.
- The space and the objects that you will find there are at your disposal, you can open them, take them out, read them, write whatever is necessary to solve the challenges (except breaking things!)
- You have 15 minutes to solve the whole challenge before the Anonymity Fighters organization collapses.
- You can reach out to us if you need some hint or little help. For this, you must make the sound of a bird! You can ask for help 3 times only.
- Number of participants: 4 to 5.

Materiales needed for this stage:

- Printed and laminated instructions.
- Printed and laminated rules.

Stage 1: Logic (7' minutes)

Main goal: Unlock the cellphone.

Sequence:

- 1. Participants will find a cell phone on the table at first sight, along with envelopes (one white and one colored)*
- 2. On the ground, they will see the shovel stuck in the ground and the tip of the bag outward, they will have to dig it up and they will find the notebook.*
- 3. There you will find a tangram, which has part of a hieroglyph and the rest of the pieces will be in the colored envelope. They must arm it and look in the notebook for the translation of the hieroglyph and thus unblock the cell phone.*

Space: Table with the cell phone. The notebook half-buried. A shovel. Decoration like an abandoned factory (as a consequence of the change in the job market)

Materials needed for this stage:

- Cell phone (you will find downloaded the AR app)
- Notebook: in it, they will find the rest of the tangram, encryption and translation systems (Morse code, hieroglyphics, and German)
- Colored envelope: the tangram pieces will be inside
- White envelope: which will be used in the next phase
- Shovel

Stage 2: Augmented Reality (3' minutes)

Main goal: Discover the hidden messages on the posters (through the AR app).

Sequence:

- 1. Once the cell phone is unlocked, they must open the AR app and find out they need to focus the camera in front of the posters.*
- 2. In the four posters, they will find the following information:*
 - drei: 3 in German
 - fünf: 5 in German
 - sieben: 7 in German
 - The safe with the 7-number sequence that must be delivered (8956542)

Materials needed for this stage:

- Cell Phone.
- Posters stuck on the wall.
- White envelope (which is next to the colored one) with printed photos of the posters and behind the logo of the drawn app (works as a hint for them).

Stage 3: Creativity (5' minutes)

Main goal: Send the code to the right person (the representative of the organization that is camouflaged around the escape room)

Sequence:

1. Once they have the data, they should look on the map of Germany and find that in quadrant 3; 5 and 7 there are 3 cities marked.
2. They must encrypt the sequence of the safe. For this, they have paper and a pen. In the notebook, there will be a translation of the numbers into German, numbers in hieroglyphics (used in stage 1) and numbers in morse code. They should find a way to communicate the numbers without the sequence written numerically and put it in the envelope.
3. Finally, they must find the person who they will deliver the information. It will be someone from the team wearing a T-shirt that will have printed the name of the three cities marked on the map.

Materials needed for this stage:

- Map of Germany hanging on the wall (where 3 cities are marked, in quadrant 3; 5 and 7)
- Empty envelope
- Blank sheets of paper
- Marker / Pen
- Notebook (the same as stage 1)
- T-shirt with the name of the three cities marked in the map

Stage 4: Concepts, Trends, and Final Closure (3' minutes)

Skills:

- Creativity
- Resolution of complex problems
- Collaboration
- Effective communication

Concepts and Trends:

- Internet of things: The growth projection of IoT devices has been exponential and it is estimated that by the year 2020 there will be 50,000 million connected devices worldwide. This growth can make the topic of data security lead to a more critical situation in the absence of processes that ensure the integrity and encryption of these. To learn more: *Amy Webb Quantitative futurist* (<http://bit.ly/amywebbQF>)
- Augmented reality.

Final closure:

The objective of this escape room is to test you and challenge you to use those skills that are going to be so crucial in the future of work of the 21st century. First, we had to investigate what those skills were: for that we made a meta-analysis of the publications of private and international entities on the future of work (World Economic Forum, OECD, ILO, McKinsey). From there we got the most data skills by employers: Complex problem solving, Creativity, Emotional Intelligence, Effective Communication, Collaboration.

You had to put all those skills into play to overcome the different challenges in that room.

The other ingredient for this escape room is in the narrative: The mixture of the internet of things and the privacy of the data generated by the objects with which we interact on a daily basis. The narrative thread is based on a dystopian version of a future where artifacts such as refrigerators and microwaves gather information about our habits and our health to large health megacorporations, which could use this information for all kinds of results: from re-educating our behaviors to deny life insurance, social works or health plans. This arises from the last book by Amy Webb, quantitative futurologist and founder of the Future Today Institute.

Create your own Escape Room!

The previous information was a guide to explain how we built the escape room at different implementations, but you can totally come up with new ideas to create your own experience. On the following pages we will give you ideas you need to take into account to do it.

Step 1: find a place. Any room will do it. Traditionally, Escape Rooms have a door you need to unlock to leave the room, but that is not always easy to create, so you can change the mission. For example, you can tell them they have limited time to unlock a tablet before the security guards caught them (like we did).

Step 2: design the riddles. You can come up with different challenges. Here are some ideas to work with hidden messages:

- In a fan participants need to stop.
- In a translucent paper inside a tube.
- Using different perspective to form words.

#Tip!

Design the riddles so that there are different challenges to solve at the same time, so the team can divide tasks.

Interpreting messages:

- You can give them messages in strange languages so they need to translate (using a dictionary or an app translator).
- Anagrams can also work.
- Tangrams, logic sequences or different riddles you can easily find online or invent yourself.

Hidden objects:

- Secret doors.
- False bottoms.
- Buried clues.
- Things inside books.

Go techie:

- Use tablets, smartphones/cell phones or any other device to improve the experience. Use the blocking pin to add a puzzle.
- Create with Arduino. Use sensors to unblock new clues or codes.

Step 3: put everything together. Once you have designed a couple of riddles (you can use 3 or 4 for a 15-20' experience) try to think the order of the game. For example: the numbers you find inside a book open the lock of a safe where you can find a cellphone. To unlock it you need another code, and you should use the cellphone to send a message and end the mission.

Step 4: create a background story and decorate your room! An Escape Room is not only about the challenge, but also about believing you are being part of an adventure. Use everything you have to create that immersive experience.

Step 5: Test and adjust. Once you are ready to ask someone to volunteer and try your game. If you find out there are clues that are too easy or too hard place some more clues until you find the difficulty you are going for.

#Tip!

Double meanings are your best friends. For example, in an Escape Room we left information on whiteboards about the fans of a band. Some post-its had messages like “*How can we stop the fans?*”, which suggested the players should stop the ventilators

How to run the experience

Step 0: Prepare the room with the clues and the setting to resemble what you decided in the narrative.

Step 1: Welcome participants in groups of maximum 5 persons. Introduce the game and explain the rules. Make sure that you start your stopwatch to ensure 15 minutes of work.

Step 2: Participants will now enter the experience. You as a facilitator should remain outside the room, just waiting for them to ask for clues.

Closing remarks

The objective of this Escape Room is to test and challenge you to use those skills that are going to be so crucial in the future of work of the 21st century. First we had to investigate what those skills were: for that we made a meta-analysis of the publications of private and international entities on the future of work (World Economic Forum, OECD, ILO, McKinsey). From there we got the most data skills by employers: Complex problem solving, Creativity, Emotional Intelligence, Effective Communication, Collaboration.

Did you implemented it? Let us know how it worked out! Send us an email...

Moral Lab

The Moral Lab is a space for debate, for the uncomfortable questions to be answered. Through a “choose your own adventure” format, participants will have to solve uncomfortable moral dilemmas, reflecting on some of the most controversial issues of the 21st century. Facilitators need to explain the dilemmas with participants, encourage the discussion and share an explanation.

Learning Outcomes	Participants will engage in discussion regarding highly controversial topics, allowing them to rethink about their knowledge, certainties, and preconceptions.
Trends	Artificial Intelligence. The advance of technologies. Morality.
Skills	Critical Thinking, Complex problem solving, Effective Communication.
Duration	20 minutes
Decoration	You decide!
Materials	You can replicate it without any materials, but the experience gets better as it gets more interactive. For this, you can use a TV or projector, an app like Kahoot and homemade train levers.
Scenario	You can do this activity in a room, but it also works in an open space (especially with teens). People who are walking through end up engaging in the discussion.

How to do it

Preparation: decide the topics you would like to discuss. Here are some suggestions: gender, loyalty, unemployment, interaction with technology, euthanasia, and artificial intelligence. Think of some situations where people should make decisions were what is right and wrong becomes confusing (we will live you some examples later). If you are going to use tech support put the questions in the app. You can use the **Kahoot** free tool online, it's really intuitive!

Step 1: participants enter the room and form groups around a lever. The facilitator presents the first dilemma:

Dilemma: *You are walking alongside the train tracks. Suddenly you realize that a train without brakes advances at full speed towards 5 people who are tied on the tracks. There is no time to untie them, stop the train or ask for help. The good news is that they are next to a lever that activates a detour. The bad news is that on the detour there is a tied person. There is also no time to untie it. What are you going to do? Activate the detour and condemn a person to a certain death? Or do nothing and let the four people die from the beginning?*

Allow participants to think of an answer for 1 minute. When the time is finished, ask them to share:

Important for the facilitator: Clarify the participants do not discuss or make comments until everyone has responded and the discussion space is enabled.

Sharing: what did each one do? Why?

Explanation:

This is what we call a moral dilemma. A scenario where the right becomes diffuse and our moral is challenged. The dilemma you just heard is called "the trolley problem" and was designed by Philippa Foot in 1967. Since then, hundreds of adaptations have been made and used in dozens of scientific experiments.

- Morality as a social construction vs. universal morality.
- Morality as a situated category.
- Utilitarian imperative vs. categorical imperative; The end justifies the means?

Science and religion explain morals in very different ways. For most religions, what is right or wrong responds to divine rules, external to human beings and that is revealed to us, often through a prophet or sacred text.

For the social sciences, however, there is no correct answer about what is right or wrong. Or at least there is not a single answer. Morality is, at the same time, something individual and something social. Just as we do not all agree on what is right in extreme situations, there is enough consensus in society that there are certain things that are wrong, like stealing or killing someone. But those consensuses are simply agreements, which are different

in different cultures and different historical moments. Therefore, from the humanities and social sciences, understanding how people make complex decisions helps us to understand the morality of a given society. From now on, we're going to tell you some stories so you can tell us your opinion. Remember, there are no correct answers!

If you want to know more about the train dilemma, you can watch this video (<http://bit.ly/TE-DxEleanor>)

Dilemma 2: the call center

Among other benefits, a health company offers a support service for the families of the elderly. Every day someone from the company calls the elders, asks them if they took their medication, how they feel and talks with them for a while. With the advance of technology, the company decides to test an innovation in the service. They are testing replacing the call center with artificial intelligence algorithms. Every day a computer calls older people and chats with them. The elderly are not able to distinguish if they are talking to a human or not. Customer satisfaction remains intact and we reduced the costs of not having to pay salaries of people, the elderly get longer conversations over the phone. Now they have to decide whether to replace the entire call center with this new technology, and they hired you as their ethics committee. They are waiting for your recommendation. Do you think that doing so would be incorrect?

Allow time for participants to decide, and then invite them to share.

Sharing: What did each one of you decided? why?

Discussion:

- The new advances in artificial intelligence.
- The development of artificial intelligence raises debates about the scope and limits of supplanting "human tasks" by algorithms. Some examples:
 - Google Duplex (<http://bit.ly/TEDxGoogleDuplex>)
 - Music written by AI (<http://bit.ly/MusicAI>)
 - Biases of the algorithms that reproduce forms of inequality (<http://bit.ly/AlIneq>)

Dilemma 3: virtual harassment

An 18 years old girl is receiving messages insistently from a man she doesn't know and is not interested in. She has already told him that but he keeps on sending messages and even starts becoming aggressive. He is a public person and she decides to upload to her social media screen captures of the conversation. Is that solution right?

Allow time for participants to decide, and then invite them to share.

Sharing: What did each one of you decide? Why? Has anybody been in a similar situation? Discuss how technology is changing the way we relate and the new challenges regarding privacy, gender and grooming.

Dilemma 4: autonomous car

A person is riding a car with one friend, and they decide to let the autonomous car drive itself. In a corner, the car detects a brake failure and needs to make a risky maneuver. The problem is it needs to decide if it's going to prioritize the two people that are in the car or a pedestrian that is just crossing. In fact, the car can estimate that pedestrians or passengers are going to die. Who should the car protect?

Allow time for participants to decide, and then invite them to share.

Sharing: What did each one of you decided? why?

This question is based on the Moral Machine, an experiment developed by MIT to test people's preferences to engage with the discussion about how we program AI that is making moral decisions. You can try the game and find more data about the results in this website. (<http://bit.ly/MMachineMIT>)

Collaborator

The collaborator is a multi-activity station where we invite participants to go through a series of challenges to test their ability to collaborate. Here you'll find the Flow Collaborator, a complex collaboration activity, and a series of simple games you can replicate with any group using some simple items.

This game has been designed in a dystopian not-so-far-away future where the aging population becomes the major trend, and collaboration is the rule. How do workers remain relevant when they have to learn new jobs when they are over 80 years old? How different experiences collaborate to generate results?

Participants will work in groups of five to build a prototype of a vertical garden, as a simulation of a reskilling program occurring in the story.

Learning Outcomes	Participants reflect on the importance of collaboration, and major trends such as population aging, inclusion and reskilling. They will also learn about one of the "jobs of the future" ("Vertical Farm Consultant").
Trends	Population aging. Reskilling. Urban Agriculture.
Skills	Collaboration. Effective communication. Complex problem solving.
Duration	20 minutes
Materials	Ice-cream sticks. Thumbtacks. Cotton thread. Handkerchief or element to tie the participants by their wrists. 10 post-its per participant (40 in total) 4 pens 2 A4 sheets Photo/Sketch of vertical farms.

Narrative

A group of older adults (YOU) participates in an obligatory re-skilling process implemented as a measure to counteract the consequences of population aging in a very distant country (with a life expectancy of 150 years). Today you receive an expert in Vertical Agriculture who comes to train you in how to generate a vertical farm. You are going to have to generate a complete prototype and show it to this person, adjusting to the following context:

You won't be able to talk during the challenge, and the only way to communicate will be by using post-its. Each one of you will have 10 post-its, use it wisely. Also, you will be tied up with by the wrists with one of your colleagues. On the table, you will find these materials to build the prototype, be creative:

- Ice-Cream sticks
- Cotton thread
- Thumbtacks
- Photos and sketches of a vertical farm.

You have 15 minutes to solve the challenge.

Your role

As a facilitator, your role is to oversee participants when choosing their role and hand out the posters, put the hearing protectors on the deaf participant, bandage the blind person (and so on). You will need to take the time and make sure participants have access to the instructions.

When the stopwatch marks 15 minutes of the session, in which the participants may or may not have finished the challenge, you need to call it to an end and share the closing remarks of this challenge (skills and trends).

Step by step

Step 0: Hand out narrative paper to participants, who will read it aloud.

Step 1: Tie them up by the wrists.

Step 2: Leave materials on the table.

Step 3: Begin counting the 15 minutes in which participants should begin building the prototype.

Closure

Talk about trends: Urban Agriculture, Aging Population, Reskilling.

Talk about skills: Collaboration, Creativity, Effective Communication.

IMPORTANT: if participants don't organize themselves in this way they will take longer or some will be left behind. If you see this happening, point it out to the participants.

Remember that this is an activity about collaboration and inclusion.

Once the 15 min. have passed, finish the activity and start the closing remarks.

Closing remarks

Start with questions: *How was it? Did you enjoy it? Did you manage to finish the challenge? What was the most difficult part? And the best?*

Then, continue explaining the inspiration behind the experience. **"Collaborator was designed to answer the question: what would happen if people needed to work for longer?"**

The main trend behind it is the major **demographic change** that is taking place in societies worldwide. People are living longer lives, fertility rates are dropping: hence, the **population is aging**. This has effects on many different aspects of life, but we wanted to focus on the world of work. If people live longer but no new workers join the workforce, one of the options is that the existing Economically Active Population works for longer (there are other options like increase automation, as you can read here <http://bit.ly/ReportP>). Now it is up to you to think of other possible scenarios: what happens with social security? Is it ethically correct for people to be working so many years? What is the impact of this trend in healthcare systems? And leisure?

If you want to know more about the impact of the aging population in the future of work, you can find more at Nesta and Pearson research on the Future of Skills in this link <http://bit.ly/ReportPopulation>

The second component behind this station is skill Collaboration, one of the most cited skills among all employers across the world according to the results of our meta-analysis. Collaboration is more than working with others: it's about organizing resources, complement weaknesses with strengths in order to achieve common goals. It is about **understanding goals and how each individual can contribute towards achieving them**. It is heavily connected with other skills like effective communication and emotional intelligence.

Since collaboration is one of the most important skills in the professional world of the 21st century, it is extremely important that young people today understands when they are working effectively with others, as well as what are the barriers that they face when collaborating. "Given the shift towards an increasingly globalized and networked world, individuals are increasingly expected to work with diverse teams in different locations using collaborative technology (Kanter, 1994; Salas, Cooke and Rosen, 2008)." (OCDE, 2018. Future of Education and Skills: Conceptual Learning Framework).

Finally, the last element of this station is one of the jobs of the future: Vertical Farm Consultant. We learned about it in Cognizant's report "21 more jobs of the future: a guide to getting and staying employed through 2029" (<http://bit.ly/CognizantReport>). Vertical farming is all about bringing fresh food closer to the consumers: "stable, localized farms with aeroponic systems that grow food in controlled environments, and using a fraction of the resources needed in traditional farming". According to the report, the job description is quite low-tech. "You will work with clients (local governments, community leaders) to identify optimal locations for farming sites within neighborhoods and train residents on best

practices for opening and operating the facility. Much of the process is automated through synchronized lighting and nutrient distribution systems, but users must still learn to set up and adjust their farming systems to account for optimizations, system failures and changing consumer preferences. The ultimate goal of each vertical farm is to encourage healthier eating from local sources. As such, you will be tasked with creating educational plans that inform citizens on the health benefits of plant-based diets and how best to prepare meals that meet their time and resource need" (Cognizant, 2019).

Alternative Futures | Interactive Space

Alternative Futures is a space for relaxing, sharing ideas and reflecting on the future. An opportunity to discuss the future of work.

We suggest two different formats to encourage that discussion. The decision on which one to use will depend on the time and resources available.

Option #1 - Samoan Circle

Learning Outcomes	Participants express and exchange visions about the future while consolidating what they have learned in other stations.
Trends	All from previous stations.
Skills	Critical Thinking, Effective Communication.
Duration	20 minutes
Number of participants	Up to 50.
Materials	Chairs organized in, at least, two concentric circles. The inner-circle must have a minimum of 3 and a maximum of 7 chairs.

How to do it:

Step 0: The organization of the space is extremely important. Chairs should be organized in at least two concentric chairs. The inner-circle must have a minimum of 3 and a maximum of 7 chairs.

As participants arrive, you should encourage them to take a seat in the outer circle.



Step 1: Welcome participants and explain the dynamic:

"Welcome to our Samoan Circle. It is a leaderless meeting intended to help the conversation in controversial issues. You can see two concentric circles. The inner circle is the circle of speech, the outer circle is silence. Everyone can join the inner circle to be allowed to speak, an all others must remain silent.

If you have spoken, please free the seat for someone else to join the conversation.

If you want to speak (make a comment or ask a question), find a free chair in the inner circle and sit,

If you want to speak but there are no free chairs, stand behind one so the person sitting knows of your intention.

Everyone can leave and return to the inner circle as often as they wish.

Step 2: Present the discussion. Start with a couple of questions to start the conversation. Select some of the following or make your own:

- *What are, in your opinion, the major trends affecting the future of work in your country?*
- *Imagine you are in the year 2090, looking back to what happened during the last century. How did humanity solve some of the major challenges we experience today?*
- *What is the role of humans in the future of work?*
- *In your opinion, how does the future of work look like in your country?*
- *Can you describe your preferred future?*
- *What is your biggest takeaway from this FLOW experience?*

Option 2 - Speculative design

We used speculative design as the cornerstone of this experience, so participants can feel inspired to think outside the box and suggest futures that are adventurous and positive.

Learning Outcomes	<ul style="list-style-type: none">- Participants understand different trends that can have an impact on the future of work.- Participants make use of their critical thinking and creativity to develop ideas of the future solving the biggest challenges of our time.- Participants change their self-perception so they leave the experience feeling empowered about their opportunities to transform the present to create a better future.
Trends	All from previous stations.
Skills	Critical Thinking, Effective Communication.
Duration	20 minutes.

Number of participants	Up to 50.
Materials	Chairs organized in, at least, two concentric circles. The inner-circle must have a minimum of 3 and a maximum of 7 chairs.

How to do it

Step 0: There should be a board in the open space for people to write down PROBLEMS, FEARS and WORRIES they see about the future and how it will impact us personally and/or professionally. The board should have post-it notes and markers next to it and this inscription at the top:

"BOARD OF CHALLENGES

Share here your biggest worries, fears or problems you see about the future of work. We need to know them before solving them!"

Step 1: Participants arrive and sit in different groups of up to five people. Each chair should have a big piece of paper, markers, some props and a big sign saying "EVERY IDEA IS WELCOMED!".

Once everyone is in the area, the facilitator starts the session.

"Welcome to the year 2090. You have lived the majority of the 21st century now, and you love history.

A lot has changed since the beginning of the century, and now many of the big problems that worried people back then are now solved. You are preparing a visual experience on what happened in the last 100 years: how did humanity solve those challenges?

You will have 15 minutes to create a story about that past/future. Use the problems from the Board of Challenges as inspiration".

Participants will have the instructions written down in their tables as well.

Step 2: Participants harvest problems from the board and bring them back to the table.

They will have 15 minutes to imagine the world they are living where the problems mentioned above have been solved. In order to represent the world, they can use any type of canvas: video, music, art, theater. They will have to show their creation to the rest of the participants.

To make their creations they can use anything in their prop bag, or from the surroundings, from their own background and imagination.

Step 3: Everyone together. During the last 15 minutes, participants present their ideas (with discussions every two groups).

If participants had experienced other stations, they will have tokens gained in each of them. If they don't, they will only have two tokens. Each token represents 30 seconds for their presentations.

Participants showcase their ideas for the future. The Facilitator guides de conversation by asking:

*Who are the winners of that future? Who are the losers?
Are we easily going to distinguish what is wrong from right?*

What is the role of technology? AI? IoT?

What happens with people?

Can you share more details about it?

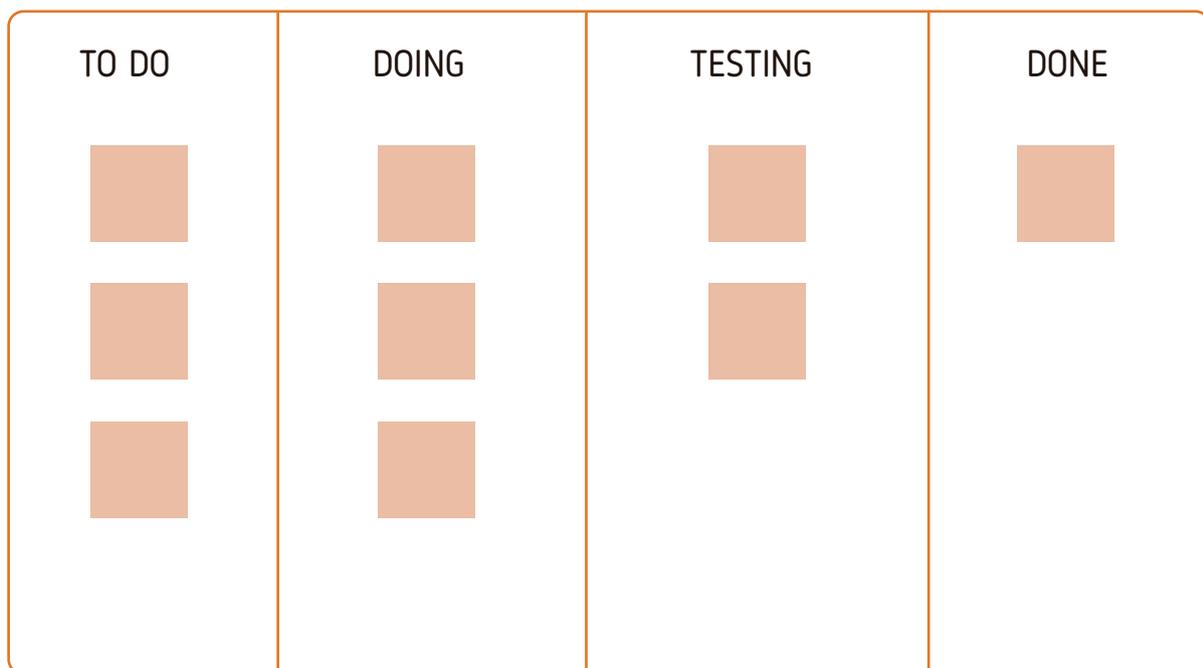
To finalize, participants are invited to share ideas and best props on Instagram

Innovation Lab

If you are going to replicate Flow for several days, you'll have an opportunity to improve your station as participants give you feedback. Set two or three tables in the middle of the room and set your innovation lab there. Celebrate daily brainstorming sessions and involve participants in creating new ideas. Every day, hold a check out meeting to share the progress you are making.

Tips for the Innovation Lab

- For this station, you'll need an innovation leader that gets sure that ideas actually get done.
- Put people from different backgrounds to work together: the best ideas come from diverse groups!
- Assign a responsible for each task!
- Try to visualize all the information. For this you can use a whiteboard and post it to vcreate a list like this one:



For the curious: learn more!

- Cognizant 21 more jobs of the future
- Frey & Osborne (2017) The future of employment: How susceptible are jobs to computerization? Oxford. Technological Forecasting and Social Change, 2017, vol 114 issue C, 254-280
- McKinsey Global Institute (2017) Jobs lost, jobs gained: Workforce transitions in a time of automation.
- Nesta, Oxford Martin, Pearson (2017) The future of Skills: Employment in 2030. <http://bit.ly/2NESTwR>
- Accenture (2018) New Skills Now
- UKCES, University of South Wales, Punkt (XXXX) The Future of Work: Jobs and Skills in 2030
- Bloomberg (2015) The Bloomberg Recruiter Report: Job Skills Companies Want but Can't get
- OECD (2017) Future of Work And Skills
- Singularity Hub, Tony Wagner (2017) 7 Critical Skills for the Jobs of the Future
- Department of Education - UK (2018) Employer skills survey 2017
- Institute for the Future (2018) Future Skills
- ILO - Global Commission on the Future of Work (2019) Work for a brighter future
- Visual Capitalist, Guthrie Jensen (2018) 10 skills you'll need to survive the rise of automation. <http://bit.ly/2CyEgVE>
- World Economic Forum, Boston Consulting Group (2016) New Vision for Education: Fostering Social And Emotional Learning Through Technology
- World Economic Forum (2016) The future of Jobs
- World Economic Forum (2018) Future of Jobs Report

#Remember → Stay in touch ;)

If you have any question, doubt or cool comment on how to implement these experiences, please reach to us, we would be really happy to answer them.

**Please, send us an email to
lucia@eidosglobal.org & alfonso@impactodigital.org**