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## **Dramaturgy is everything Psychology of great trainings**

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### **Abstract**

Trainings have many objectives and purposes. Knowledge transfer is an obvious one. Knowledge often raises awareness and not more. Weeks later, the content is forgotten. A change in behaviour is what many trainings aim at and fail to achieve. Most people remember the content and the ideas of great movies. The movie moved them. They remember their feelings and the message of the key scenes. The ingredients to deliver content and reach the hearts of the audience have been known by the theatre and moviemakers for centuries. This knowledge, the dramaturgy, can be used to deliver trainings that the audience will remember and talk about years later.

Trainings are much more than the readout of PowerPoint slides, the so-called “assisted reading”. The world of trainings changed significantly during the last years, driven by the demands of the COVID-19 pandemic. A training is often in the “tension” field, to get the attention of the audience and competes with other demands. Today’s working environment is shaped by fast changing work demands embedded in a changing work environment.

Trainings, theatre plays and movies have many common elements. An audience joins for a limited time to listen, receive input and hope for entertainment. The audience shall benefit and in the best case applies what was presented, taking the main message with them. This main message depends on the intention of training, of what shall be transported. Based on the context there might be other distractions such as texting and internet surfing.

Live online trainings have other demands than in-person trainings. Live in-person trainings offer direct interaction with the audience via verbal and non-verbal methods. Methods to gain and keep the attention of the audience are different in live online trainings.

After a while the audience will remember only the elements that were emotionally moving. Evoking emotions is the domain of moviemakers and the training context benefits from their methods.

Some topics have the reputation of being boring in the training context. Examples are information security and data protection trainings. A generic security training will be used as example for this paper. The methods and tools for captivating live in-person and live online trainings are demonstrated in a practical manner. This paper provides a recipe to attractive and captivating trainings with content that sticks.

**Keywords:** Live online trainings, dramaturgy, movies, security

### **1. Introduction**

Live online trainings are challenging for both the trainer and the audience. Adapting methods from the blockbuster movie industry and technical equipment from the music and stage performance will bring any live online training to a level where the audience will remember the content of the training.

The COVID-19 pandemic forced nearly everybody to spend and work extensive hours in front of the computer screen. Many people were forced not to leave their homes and work from home, which has its own challenges.

The extensive hours looking at stamp-size image of colleagues and customers coined the term “Zoom Fatigue”. To avoid any association with the online conference product with the same name the term “online meeting fatigue” will be used hereafter.

## 2. Online meeting fatigue

A study [1] by the Institute for Employment and Employability (IBE), identified the main stress factors and their solution for online meeting fatigue. The study identified that the missing communication is a stress factor. The top five factors are related to auditory and visual aspects.

For the visual aspects, the study reports that the participants do not have the ability to perceive non-verbal clues and cannot see facial expressions.

The symptoms of online meeting fatigue are more likely to appear in the form of psychological impairments such as difficulty concentrating, impatience, being annoyed and a lack of balance. Apart from headaches and back pain, direct physical disorders such as pain in the limbs or stomach are (so far) rarely observed.

The greatest stress is caused by a lack of social and informal exchange (no non-verbal communication, no small talk). The fatigue is also caused by technical deficiencies and organizational framework conditions of the participants. The feeling of being more closely observed and sitting on a salver plays a subordinate role.

The way out was found as time limits for meetings and breaks between meetings and in meetings are mentioned as a useful way to avoid zoom fatigue. A moderation that is humorous and involves every participant can ensure a good structure in meetings and thus reduce stress.

Tools with a "Together-Mode" or change of the viewing direction are less helpful. The following tables show the detailed study results.

Table 1. Major stress factors online meetings

Item	Reported by
No ability to perceive non-verbal cues M	70 %
Increased effort to concentrate due to poor sound quality	55 %
No small talk with others	52 %
No networking over coffee	51 %
No facial expressions to be seen	46 %

Table 2. Major fatigue symptom

Item	Reported by
Reduction in concentration	86 %
Impatience	50 %
Annoyance	50 %
Lack of balance	25 %
Headache	30 %

Table 3. Proposed solutions

Item	Reported by
Limit meeting time	77 %
Breaks between meetings	82 %
Humorous moderation	55 %
Facilitation involving all participants	45 %
Limit of the number of participants	40 %

The online meeting fatigue, the stress factor, its symptoms and the solutions need to be addressed for live online trainings.

## 3. Challenges

Almost everyone in the home office is annoyed by web conferences and online meetings. Everyone who gives a presentation, gives a lecture, faces the challenge of providing the participants with high-quality content and at the same time entertaining them.

The main challenge is to keep the audience interested and to transfer the content of the training in a memorable way. The contact with the trainer is via a small image on a computer screen. If the individual participant is not reached the interest and attention is lost. In particular, information security trainings are perceived as boring. [5]

#### **4. A definition: education, training, awareness, coaching and consulting**

The terms trainings, education, awareness and coaching are often used interchangeable. The following definition shall differentiate them. This section defines for the purpose of this paper the scenarios:

- Education
- Training
- Awareness
- Coaching (one-to-one)
- Consulting

##### *4.1 Education*

The term “education” and what it encompasses depends in in which context it is used. The Council of Europe defines education as follows [2]:

“Formal education refers to the structured education system that runs from primary (and in some countries from nursery) school to university, and includes specialised programmes for vocational, technical and professional training. Formal education often comprises an assessment of the learners' acquired learning or competences and is based on a programme or curriculum which can be more or less closed to adaptation to individual needs and preferences. Formal education usually leads to recognition and certification.”

##### *4.1 Training*

Training refers to off-the-job processes of personnel development in which employees should acquire or refine skills.

The implementation of training measures in organizations takes place in five steps [3]:

- a) Defining the training goals: The current and target status are determined. When determining the target state, the interests of the organization must be aligned with those of the individuals. Not only current but also future needs should be determined. The basis for formulating the target state is, for example, organizational and work analyses or expert surveys (Delphi technique). The basis for the as-is analysis is the survey of the existing competencies of the employees, e.g.
- b) Deriving criteria for checking the learning success: As far as possible, the target state must be determined precisely so that an evaluation of the measures is possible.
- c) Development of the training measure: The training measure is coordinated with the training goals in terms of time, content and methodology. When designing the training measure, particular attention should also be paid to promoting learning transfer.
- d) Implementation of the measure.
- e) Review of learning success: The success of the training is reviewed (evaluation) in line with the training goals.

##### *4.3 Awareness*

In the awareness scenario information is delivered to the audience. The intention is only to make the audience aware. The concept of awareness has little impact and does usually not lead to behaviour changes. In most western countries speeding is unlawful and is a kind of personal risk assessment: “What are the consequences if I speed now and will they catch me?” In the context of information security awareness alone does not change anything [4].

##### *4.4 Coaching*

The term coaching may trigger thoughts of sport coaches. In this context the profession of a business coach is the reference. A professional coach will never suggest solution or give recommendation. The client and the coach work at eye-level. The coach does not need to be a subject matter expert. Coaching is a process and the coach masters this process. Coaching is the process of accompanying a professional client to find own solutions to an issue or problem.

##### *4.5 Consulting*

In the consulting scenario the consultant provides information to the client on areas where the client has no or little expertise. The client's objective is to benefit from the knowledge of the consultant. This scenario is not at eyelevel. The client receives a service from a body with a higher level of information than the client itself.

## 5. Training Types

In the context of this paper the main characteristics of trainings are divided into:

- Live in-person trainings
- Live online trainings

The focus is on live online trainings with a human trainer teaching an online audience.

### 5.1 Characteristics live-in-person training

A live online training uses technical means to simulate and/or mimic a physical training room interactively. One main difference to an onsite in-person live training is that the trainer has little or no influence on the setting at the delegates location. The setting may vary from a company or private office that is under control of the delegate to a notebook located on a kitchen table where the meals are under preparation.

### 5.1 Characteristics live online trainings

The typical live online training set-up consist of a trainer location and a participant's location. The trainer location can be a home office or training room at a company. The participant location can vary from office, home office or even a café on a beach with internet connectivity. The trainer sees the individual participant as stamp-size image on the computer screen if the cameras of the participants are enabled.

## 6. Live in-person training vs. live online training

The challenges differ between live in-person trainings and live online trainings. We will focus on the live online trainings and the trainer perspective. The trainer controls the set-up in best case the trainer has full control The trainer cannot control and has no influence on the room where the audience and the participant is located. The trainer controls only the own environment and not the participant environment.

Table 4. Environments controls

Environment element	Trainer site	Participants site
Internet connectivity	Partially to full	No control
Microphone	Full control	No control
Speakers (or headset)	Full control	No control
Camera	Partially to full	No control
Background noises	Partially to full	No control
Lightning	Partially to full	No control
Side activities	Full control	No control
Amount of screens	Full control	No control
Screen size	Partially to full	No control

## 7. Technical considerations

Online trainings depend to a much larger extent on technical systems, infrastructures and services. Not all of these components under the full control of the trainer.

In a live in-person training the trainer can rescue nearly every technical failure by returning to analogue tools such as white boards, flip charts, moderation walls, post-it notes and marker pens. These analogue back-up tools are not available in an online training. If the digital equivalent fails the whole training is at risk.

Using the laptops built-in microphone and camera is pre-destined to fail. The participants expect a good audio and video quality.

### *7.1 Microphone and Audio*

The audio is the main transfer channel for the content. The use of a professional external microphone is a must. The use of a headset is a personal choice. It might be helpful in noise environment, however the environment from the training is transmitted shall be quiet and free of interruptions. The major online conference platforms provide audio enhancements.

The audio is more important than the picture. Bad sound is perceived as very tiring. The microphones built into the laptop are usually of a low quality. With external microphones, a distinction is made between USB and XLR connections. A USB microphone can be connected directly to the PC. An XLR microphone requires an operating voltage of 48 volts, which is provided by a simple adapter or a mixer.

Go close to the microphone! Most microphones work best when speaking from a short distance, less than 10 centimetres.

### *7.2 Camera and Video*

The video quality is important even if secondary to the audio quality. A good quality web cam simplifies the set-up at the trainings location. Camera with built-in intelligence allows the trainer to move around and zoom in or out with a simple gesture.

### *7.3 Internet link performance*

A video transmission in a good quality demands a high internet bandwidth when compared to simple internet browsing. The minimum recommendation from the platform provider shall be fulfilled with 50% reserve to be on safe side.

### *7.4 CPU performance and dedicated graphic processor*

An entry level net book cannot deliver the performance required to deliver online trainings. A dedicated graphic processor frees up the main CPU from intense video formatting work. It shortens also the time to edit a video recording of the training.

### *7.5 Conference platforms*

The COVID-10 pandemic created the need of reliable online meeting and conference platforms (conference platform hereafter). The different providers cover different needs. Some platforms scale very well to large audiences while others are rated as very secure. In the context of live online trainings, rather than webinars, a typical audience size is 8-20 people. This size allows addressing individual's needs.

### *7.6 Support tools*

Online tools can mimic the set-up of a conventional onsite training environment. Most tools provide free versions with limited capabilities. These tools simplify the interaction with the audience. The tools support activities in real-time such as:

- Online voting
- Electronic quizzes
- Option collections (word cloud)
- Collaboration tools, such as whiteboards

More importantly than the amount of the used tools is that the trainer masters the selected tool. Discovering features during a live online training results in the audience losing attention.

## **8. Room considerations**

The room in which the trainer delivers the training in front of the camera(s) and the microphone(s) requires attention. The room will impact the training, negatively or positively. The audience may see an entire professional training room or a kitchen as background.

### *8.1 Background*

What do I want to reveal about my home or surroundings to the world? An alternative is a virtual background adapted to the work context. The virtual backgrounds require a more powerful processor.

### *8.2 Lighting*

Good lighting is important. Most cameras can handle low light better than a bright light from a window, for example. Additional lighting is usually helpful. Ring lights are unsuitable for people who wear glasses. The glowing ring is reflected on glasses and eyes.

### *8.3 Camera position*

The culture of an organisation steers whether the audience or an individual attendee switches on the camera or not. In a live in-person training the trainer perceives feedback from the audience in non-verbal and verbal way. Often the non-verbal signals provide more information about the audience and how the training is perceived than the verbal comments.

For the camera view the trainer personality may have also an influence:

- What perspective do I want from myself to show?
- How “close” do I want to be to the other participants?

In an online training environment these signals are missing. The audience, if the cameras are switched on, has the size of stamps. Recognising facial expressions is impossible.

### *8.4 Recording*

The web conferences can usually be recorded. The consent of the participants is required for this recording. So that they can decide for themselves whether they want to participate in the training with the recording.

## **9. What to avoid**

Often the content of in-person training is moved to an online platform and delivered to the audience without adaptation to the online environment.

### *9.1 Adaptation areas*

The training duration shall be adapted to the online environment. A single session shall not be longer than 90 minutes followed by a 15-minute break.

### *9.2 Attention and distractions*

The participant sits in a self-selected environment. This may range from a private home office to a table in a café. The participant will be distracted by the environment. The trainings need to address this. E.g. By interactive elements to bring the participants attention back to the screen and the training.

## **10. Plan a training like a movie**

A movie uses a story board before the actual filming takes place. An live online training is similar to a movie and a story board simplifies the planning and creates the structure of the training.

### *10.1 Planning effort*

The effort to prepare a training can easily be underestimated. An old rule of thumb says one minute of training requires on hour of preparation. This includes the draft, the rehearsals and updates.

### *10.2 Online challenges*

The online environment is significantly different than the in-person training environment. In case of an in-person training the trainer has sometime very limited influence on the location. The live in-person training elements that can be influenced by the trainer are:

- Room size
- Seating arrangement (cinema, plenary, circle)
- Room lighting
- Space and location in which the trainer can move. Location of the power spot.

All the above is not available in a live online training.

### *10.3 Bringing dramaturgy to online trainings.*

There is no “one-size-fits-all” recipe for online trainings and their dramaturgy. The audience learns on different perception channels. The main channels are auditory and visual.

## **11. Online training structure**

The structure of an online training shall be similarly arranged to a movie with an opening part, the main part (training) and the end:

- Check-in
- Main training
- Check-out

### *11.1 Check-in or ice breaker*

The purpose of the check is to prepare and bring the focus and attention of the audience to the training. The main section delivers the training itself. The check-out prepares the audience to leave the training and return to the activities from before the training. The check-in can be as simple as a prepared set of questions:

- How many coffees or teas have you had already?
- How many hours did you spend in meetings today?
- Are you in the office or working from remote?

These question may sound profane. Their advantage is everybody can provide an answer - the training session begins with a personal question that everybody can answer and builds a relationship with the audience. The question and the collection of the answers can be very simply done with online tools. Whether built-in to the conference platform or using dedicated specialised online applications. Not all questions will work with every audience in all environments. The check-in questions must be adapted to the audience.

### *11.2 Main training*

The main training delivers the content to the audience. The detailed structure of the main training part is discussed in a separate chapter.

### *11.3 Copyright notice*

Audio and visual information not created by the trainer underlie in many cases a copyright legislation. In case handouts, the training content or even a recording is provided to the audience it must be ensured that the correct licenses are used. Copyright infringements can turn out very costly.

### *11.4 Check-out*

The purpose of the check-out is to release the audience from the training and provide a path the day-to-day activities they were doing before the training. The checkout can be a set of questions such as:

- What will you do after the training?
- Was the training relevant to your job?
- Was the duration suitable?

Attention needs to be given if the checkout contains also a first evaluation of the just passed training. An evaluation might be the task of trainings section in the organisation.

## **12. Audience**

Knowing your audience is a key success factor of any training whether in-person or online. The gathering of information about the audience is mandatory. In most cases the title and type of trainings sets the frame. Information that can be gathered with an internet research:

- Company background
- Main competitors
- Current challenges business area of the company
- Recent press releases

- Names and background of key persons

The purpose of this research is to get some limited knowledge about the company and the current hot topics in the industry. Playing out this information in a sensible way as trainer offers the opportunity that the audience perceives the trainer as “one of us”. This lowers the borders between the audience and the trainer.

### 13. Dramaturgy elements

As the main channels for live online trainings are audio and video the dramaturgy must use elements that are suitable to the channels. The trainer has his voice as his main instrument to reach out to the audience. The other auditory elements are any that can be transmitted on the audio channel: speech, noise and music.

The structure and timing of the training contribute to the success. Success in this case means: was the content understood by the audience, and did they take in the messages that were provided.

#### 13.1 Loops

Loops are an element to keep the brain of the audience busy. Not every loop needs to be closed. With a loop the trainer invites the participants to develop an outcome by themselves. It can be a statement or an open question. This question or statement triggers a trans-derivational search. It is usually referred to as an unconscious search process in which possible deep structures of one's own experience are derived from the surface structure of a sentence. Examples are:

“Feel a feeling that you never felt before!” The participant searches the own memories for the known feelings in order to find the feeling that was never felt.

“If one knows the password, it is possible to enter the inner realm of the Vatican in Rome.” The participant waits for the answer to be told by the trainer. The trainer may or may not reveal the secret password that allows to the Swiss guards to open the door to the Vatican.

“Last summer I had a wonderful experience on a 92-year-old wooden sailing ship at the Baltic sea”. The participant is curious to hear more.

In the nested loops, different inner states, themes and stories are interwoven and not just lined up. This creates a dense network of references. With the corresponding complexity, the network structure can no longer be followed by the consciousness of the listeners. However, the unconscious can perceive this complexity very well. There are several ways to build nested loops; one is a symmetrical structure around the information core.

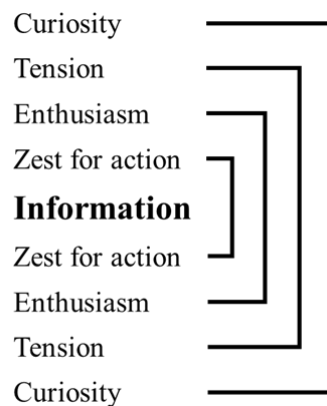


Fig. 1. Loops (© own work)

This structure is suitable, for example, to announce an exercise or to convey an important message.

Loops can be used to create excitement for the audience: “When will the answer come?”, “What's next?”. A loop that was not closed keeps the brain busy after the end of the training.



The following is an example of a closed loop. The computer hacker, who was discovered from the police, who received a notice, who ran away.

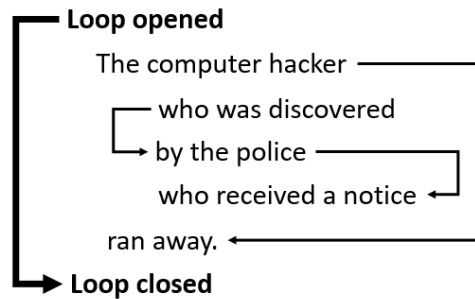


Fig. 2. Loops (© own work)

### 13.2 Story telling

Stories have kept the history of humankind alive until today [6]. The audience loves to listen to stories they can relate to. Knowing the audience is important. Using stories from the aerospace industry for an audience of sailors is a guarantee to lose the audience.

### 13.3 Real life stories

Nobody is interested in the presentation of pure facts and reading aloud the content of a PowerPoint slide. The audience wants to know the trainer and wants to relate with the trainer. A life is full of stories. It takes just a few ideas to use the own stories in a training.

### 13.4 Images

Images support the learning for the more visually oriented people. Images are a dramaturgy element, especially when the content is unexpected or does not fit into the context of the training or environment.

Images are one method to steer the mood of the audience. The used image must be appropriate to the culture of the audience. The trainer's own images are ideal because there are no copyright issues. A series of three photos serves as example for many elements discussed herein

The images show the beach boardwalk of a small village at the Baltic sea close to Kiel. (By not stating the name the audience will ask quietly: "Where is that?")



Fig. 3. Keep distance sign beach boardwalk (© own work)

A story is built around the image. The context is an information security training: "Keeping distance saved lives during the pandemic. Keeping distance saves information. Keep your distance from responding to phishing emails, opening attachments from unknown senders and clicking on suspicious links."

An interaction with the audience could be a question “Where was this photo taken?”. An ideal response tool is an online survey with a word cloud. The audience enters anonymously their answers and everybody see immediately what was entered.

The image shows a stone with a natural opening collected at a beach. These type of stones is known as hagstone or adder stone.



Fig. 4. An adder stone (© own work)

The story built around the image is: “The purpose of information security is to support the business. To secure the business information and to keep the business up and running. In the good old days, shamans were the healers. The medical doctors of their time. They used tools. One tool is the adder stone. The stones are held in high regard among druids and shamans. These stones are considered to hold magic power to relax critical situations. Today we use also tools to relax security events and incidents. What are tools and people to call in our organisation for security incidents? And no, no adder stones.”

The interaction with the audience is verbally, visual or using online tools. In this case, a word cloud is useful. The entire audience sees what the others remember. The participants feel their contribution is recognised and visible to everybody.

This image serves as checkout at the end of the training.



Fig. 5. Looking back to summarise a training day (pixabay 835085)

“We had a busy training day. Busy as the traffic on main streets. I was your tour guide today and would like to look back to the start of this day. Please summarize what are the key takeaways for you?”

The words are chosen carefully in this example. They tell the audience; the training is over for today. The audience receives the instruction to go mentally to the start of the training. And the last point is a call for action to summarise the learnings.

#### 14.5 The 3P Method (adopted from Carlos Manuel da Silva Costa Salgado)

This method uses and plays with emotions of the participants. Through the use of voice, storytelling and images, the mood and atmosphere in training is deliberately driven into the "basement". Afterwards, the participants are brought out of the "cellar" back into the light. The method must be mastered, otherwise the audience is “lost” and may leave with negative emotions.

- Step 1: Push down
- Step 2: Push up
- Step 3.: Push up

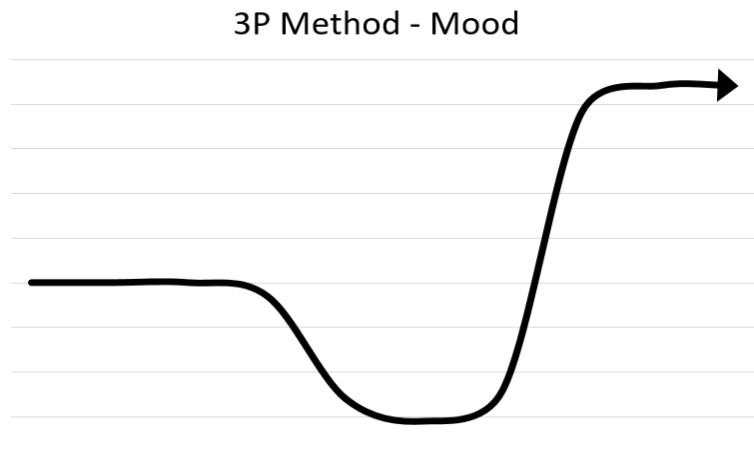


Fig. 6. Steering the mood of the audience (© own work)

The actual content used to steer the mood of the audience first down and then upwards must be adapted to the audience.

In a commercial environment, a story about the losses in profit in the first quarter of year may work to push the moods down. The introduction of new products can be used to push the mood upwards. In a non-commercial environment, the announcement of a re-organisation will push the mood down. Whereas the introduction of a lower weekly working time will push the mood up again.

This method needs to be mastered. The risk is that the trainer cannot bring the mood back up, and this results in a negative evaluation of the training.

Controversial subjects of the country and audience have no place in a training. Also the use of such themes is risky and differs from the language and cultural background. Not every element will work for all audiences.

#### 14.6 Present like Steve Jobs

The Apple computer founder Steve Jobs was famous for his product presentations. He followed the 10-20-30 rule. Ten slides, twenty minutes and 30-point font size. This format originated from Guy Kawasaki [7], an early Apple Macintosh computer evangelist, with the task to increase the software portfolio for the Macintosh.

## 14. Stories for information security trainings

Information security as any other field has its own language. A language that is difficult to understand for people not working the field. In the following information security, terms are translated using everyday analogies. The audience can relate to the private life and understand the content. The daily life delivers stories everybody can relate to that can be used for training, in order to get the focus of the audience to the content.

### 14.1 *Advanced persistence threat*

The National Institute of Standard and Technology (NIST) [8] defines an advanced persistent threat (APT), as follows:

“An adversary with sophisticated levels of expertise and significant resources, allowing it through the use of multiple different attack vectors (e.g., cyber, physical, and deception), to generate opportunities to achieve its objectives which are typically to establish and extend its presence within the information technology infrastructure of organizations for purposes of continually exfiltrating information and/or to undermine or impede critical aspects of a mission, program, or organization, or place itself in a position to do so in the future; moreover, the advanced persistent threat pursues its objectives repeatedly over an extended period of time, adapting to a defender’s efforts to resist it, and with determination to maintain the level of interaction needed to execute its objectives.”

A non-technical, non-security aware audience is lost when this single sentence is pasted on a PowerPoint slide. Images are helpful together with a story.



Fig. 7. Beavers at work as analogy for APT (© own work)

“You may have seen or heard that only two living creatures design their environment. Humans and beavers. An advanced persistent threat used hack tools to bring the attacker inside a company network for a long time. The attacker does everything to stay in the network and computer systems. Once beavers accept a natural environment they do everything to survive and to shape their home to the beaver needs. It may take the work of many nights, even weeks to follow their plan to bring down a tree, Beavers will stay in their habitat even if humans disturb them.

### 17.02 *Looking the PC when leaving the workplace*

In a professional environment the PC is typically locked automatically after 10...15 minutes. The window of opportunity is short. The analogy is looking the door of a house or car when leaving. The transfer of locking a PC in the personal life does not need any preparation time. It in can be used on the fly in a security training.

### 17.3 *Installing software and operating system updates*

A managed environment installs updates with automated processes and the user does not need to act. The situation is different in the home office. Private equipment is used for business purposes. Unpatched systems and internet routers may expose business data to risks.

As an analogy, the car maintenance example can be used in countries where cars are the main transport method. In countries with a low car density it will not work.

#### 17.4 Your breakfast orange juice is at risk or how to explain IoT

A story about IoT and orange is simple by looking at the transport from the tree to the consumer: “Many people enjoy a glass of orange juice for breakfast. Orange juice is usually transported as deep frozen concentrate. The ship container might be at sea for weeks. The temperature is controlled on a per container basis with a small Internet of Things (IoT) device. These devices are subject to attacks. If successful a full load of a ship container around 20 metrical tons are lost.”

Around this short story an entire IoT training can be designed. The check-in can be done with an audience online survey interaction about breakfast. The concept behind IoT devices can be explained and how the people can protect their IoT device at home.

### 15. Results and discussion

The described elements were developed and used for online live information security trainings. The invited audience were all employees at EUMETSAT. The trainings aimed at a broad audience and were not intended as expert trainings. In the years 2021 and 2022 more than 4000 people attended the new live online trainings. In that period, despite the COVID-19 pandemic, the security behaviour at EUMETSAT improved significantly. The security culture was assessed in 2019 using an online survey with 50 questions. The survey was repeated in 2022 with improvements in nearly all areas.

The following areas were analysed on the levels organisation, group and individual.

Table 5. Security culture assessment items

Organisation	Group	Individual
Work- and technology design	Communication	Attitude
Training	Leadership	Motivation
Organisational culture	Problem management	Perception
Organisational structure		Values
		Knowledge

Example: Security culture improvements



Fig. 8. Security culture improvements

The figure 6 demonstrates the principle improvements with introduction of live online trainings following the principles laid out in this paper.

## **16. Conclusions**

Any trainer must master both the technical environment and dramaturgy in order to provide a successful training that will hold and benefit the audience. The following points are key take-aways:

- The trainer must have a thorough understanding of the online conference platform, the microphone and camera. The audience can be lost easily with a bad audio or video quality.
- The use and evocation of emotions is a success factor.
- Live online trainings can be designed in a way the audience will remember them. For that the trainer can use the dramaturgy from the theatre and movie industry. The use and evocation of emotions is a success factor.

There is no single recipe for a successful training in all environments and contexts. In particular, story telling needs adaptations to the environment. Fundamentally, it needs to be understood that the ability to design good training requires effort, investment and time.

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